

Barriers to Men's Participation in Antenatal and Prevention of Mother-to-Child HIV Transmission Care in Cameroon, Africa

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Introduction: Men's role in HIV prevention is pivotal to changing the course of the epidemic. When men participate in Prevention of Mother-to-Child Transmission (PMTCT) programs, their knowledge of HIV increases, their behavior becomes supportive, and their receptiveness to HIV testing increases. In Cameroon, Africa, multiple efforts have been implemented that encourage men to "follow" their wives to obstetric/PMTCT care and to undergo HIV testing. However, only 18% of men have participated in this care.

Methods: As a quality improvement initiative, a survey was administered to identify men's knowledge and attitudes regarding antenatal care (ANC), PMTCT, and HIV. The survey consisted of a questionnaire with an emphasis on identifying barriers to men's participation in PMTCT programs and obtaining HIV testing. A convenience sampling method was used, and no participant identifying information was collected.

Results: Men's participation in ANC/PMTCT is affected by sociocultural barriers centered in tribal beliefs and traditional gender roles. The barriers identified included the belief that pregnancy is a "woman's affair"; the belief that a man's role is primarily to provide financial support for the woman's care; the man's perception that he will be viewed as jealous by the community if he comes to clinic with his pregnant wife; and cultural gender-based patterns of communication.

Discussion: Most men consider accompanying their wife to ANC/PMTCT a good practice. Yet fewer men actually do this, because they feel that the provision of finance for ANC registration and delivery fees is their most important role in supporting their wife's pregnancy. Health care workers should encourage individuals and community leaders to build upon the traditional value of financial responsibility, expanding a man's involvement to include supportive social roles in obstetric care, PMTCT, and HIV testing.

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INTRODUCTION

"When men take action to prevent HIV infection they can change the course of the epidemic. And the very actions that prevent HIV infection also promote the sexual and reproductive health of both women and men."

—United Nations Population Fund ¹

The HIV/AIDS pandemic remains a major public health challenge in sub-Saharan Africa. Cameroon has one of the larger HIV epidemics, with an estimated half million adults living with HIV.² In Cameroon, AIDS is the most common cause of mortality, accounting for 21% of deaths.³ The HIV/AIDS pandemic in sub-Saharan Africa has become a women's health issue, with women accounting for 60% of people living with HIV.⁴ In Cameroon, 170 women are HIV-infected for every 100 HIV-infected men.²

In many African countries, widespread testing of women for HIV infection remains an elusive goal, with their primary access to HIV testing and education occurring at antenatal care (ANC) visits and through Prevention of Mother-to-Child Transmission (PMTCT) programs.⁵ HIV testing of men also remains challenging, with an estimated 6.1% of men in sub-Saharan Africa having ever been tested for HIV and receiving the results.⁶ One strategy to increase HIV testing and counseling in men is to include male testing in ANC. Yet barriers often prevent the inclusion of the woman's husband in ANC/PMTCT care.^{7,8}

This article reports a quality improvement effort designed to identify barriers to male participation in ANC/PMTCT and HIV testing. The project consisted of a descriptive and convenience survey of men to identify their knowledge and attitudes regarding ANC, PMTCT, and HIV. Although the original intent of this project was a specific public health program improvement effort intended only for the agencies involved, some of the findings that emerged from the survey evaluation might be of use to other programs. The purpose of this article is to present the barriers identified to men participating in their wives' ANC and obtaining HIV testing in sub-Saharan Africa.

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BACKGROUND

Cameroon is a country in sub-Saharan Africa. The climate varies with the terrain, from tropical forests along the coasts to semiarid plains in the north. The population is more than 17 million, consisting of many tribal groups, each having its own language and customs.

In Cameroon, the first cases of HIV/AIDS were reported in 1986. Until 2000, there were limited interventions addressing HIV. In 2004, a national population-based survey showed large regional variations in HIV seroprevalence (from 2.7% in the north to 8.0% in the southwest and 8.6% in the northwest). Among women, the highest prevalence of HIV infection is in the northwest region (11.9%), with 8.0% of ANC attendees being HIV infected.⁹

The Cameroon Baptist Convention Health Board (CBCHB) is a private, faith-based health care system consisting of five hospitals, 24 health centers, and 43 primary health centers. In 2000, the CBCHB received a grant from the Elizabeth Glaser Pediatric AIDS Foundation to initiate PMTCT services.¹⁰ This program currently functions in more than 400 health facilities in six of the 10 regions of Cameroon, including CBCHB, government, private/occupational, and other nongovernmental organizations. In 2008, more than 95% of pregnant women receiving ANC at facilities with CBCHB-supported PMTCT services accepted HIV testing.

Mbingo Baptist Hospital (MBH) serves as the primary health care center for a population of approximately 2300 individuals living in the Mbingo Village, Boyo Division, Fundong Health District, northwest region. Mbingo Village inhabitants primarily belong to the Kom kingdom. A kingdom is ruled by a *fon*, the head of the traditional government, who is considered the secular and religious leader. A village is a self-governing community and presided over by a village head who is assisted by a council of elders.

MBH serves as a tertiary referral center for an estimated population of 8500 individuals living in the Mejang Health area of the Fundong Health District. MBH provides a variety of health services, including outpatient (acute and chronic) care and a 250-bed inpatient service. ANC clinics are held twice weekly, with 230 to 250 women registering

yearly. The obstetric unit consists of 20 beds with between 650 and 700 deliveries yearly.

A unique and active part of obstetric activities is the PMTCT program that presently includes nine counselors and support staff. This staff provides PMTCT support services to 68 facilities within 100 km of MBH.

Men's Involvement in the MBH PMTCT Program

The PMTCT program has always assumed that HIV/AIDS activities will be more effective if men are involved in their wives' care. The staff has continually encouraged men to "follow" (accompany) their wife to ANC. Men have been invited to and included in general ANC/PMTCT educational sessions, as well as one-on-one counseling. Multiple activities have been instituted to encourage men's participation, including providing a token monetary incentive to any man who follows his wife to the first antenatal clinic; performing free HIV testing to any man who comes to ANC; and sending invitation letters to men for HIV testing if their wife attends ANC. Beginning in 2004, the Men as Partners (MAP) program was instituted.¹¹⁻¹³ MAP was originally sponsored by the Action for West African Region (AWARE) Project and uses strategies to involve men in ANC/PMTCT. Despite all of these efforts, the observed percentage of men participating in ANC/PMTCT activities has not exceeded 18.0%, which is consistent with findings of studies conducted in Cameroon, Ivory Coast, Burkina Faso, and other African countries.^{14,15}

METHODS

Integration of a gender focus in quality improvement initiatives has been shown to identify and address gender-related barriers to providing care.¹⁶ As a part of quality improvement activities, the PMTCT program selected to survey men living in MBH's catchment area. Using previous surveys approved by the CBCHB Institutional Review Board (IRB), the authors developed a questionnaire to identify men's knowledge and attitudes regarding ANC, PMTCT, and HIV. The questionnaire was then reviewed by multiple consultants, staff, and community members for technical and cultural input. After modifications, the questionnaire was pretested in a focus group of men who had characteristics prevalent in the community. The final survey modifications were made with the input of the focus group.

The questionnaire consisted of open-ended questions; responses were categorized into text variables developed from staff, experts, and focus group recommendations. After training, the PMTCT staff verbally administered the survey in Pidgin English and recorded the men's responses. No staff member was interviewed for the survey.

A convenience methodology was used for the sampling. Every evening over a 2-week period, staff members went

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house to house, and farm to farm, meeting with each man who was home. The survey was explained, and the man was interviewed for eligibility to participate in the survey. Eligibility criteria included being age 18 years and over (the age of maturity), residing in the household with his wife or wives, and having fathered at least one child. If the man met these criteria, he was invited to participate in the survey, and verbal consent was obtained. No man declined to participate, but some men did not wish to respond to select questions, which was honored.

The CBCHB IRB, the district medical officer, and the local village heads and elders reviewed and approved this survey before it was conducted. This was a descriptive survey in which no identifying data were gathered. Verbal consent was approved by the CBCHB IRB, and signed informed consent was not required. The CBCHB IRB approved this manuscript for publication.

RESULTS

A total of 252 men completed the survey. Table 1 shows the demographic data of the participants. Survey participants were between 18 and 60 years of age with an average age of 49 years. Only 44 men (17.5%) had no education.

All men with no schooling were farmers, and 95 (76.6%) of the farmers were 40 years of age and older. Twenty-eight (11.1%) of the men had two or more wives. Of the men practicing polygamy, 21 (75.0%) were farmers and 22 (78.6%) were 50 years of age and older.

Table 2 presents the men's knowledge of ANC activities. The responses of four men were excluded because their age was unknown. Every participant was able to identify one (or more) ANC activity. Men with the greatest knowledge of ANC were 20 to 39 years of age. The activities most often identified were weighing, testing blood, and testing urine. Of the 136 (54.0%) men who identified blood testing as an ANC activity, 127 (93.4%) knew that HIV was one of the tests conducted.

Men were asked if they thought it was "good" or "not good" to accompany their wife to ANC and to provide a reason for their opinion. Four men elected to not respond to this question. More than two-thirds of the men (67.9%) responded that it was good to go to ANC visits with their wife. Of all men, 109 (43.3%) said that they had accompanied their wife at least one time (Table 3). Only those men responding positively identified that they had ever accompanied their wife. The proportion of men accompanying their wife increased as age increased.

The 171 men who said it was good to go to ANC with their wife were asked to give their reasons (more than one response could be provided). Forty-nine (28.7%) identified that accompanying the woman would help the man learn and increase their knowledge of ANC activities; 33 (19.3%) said that this would show true love and keep the woman happy; 47 (27.5%) said that this would encourage and support the woman during the stress and discomfort of

Table 1. Demographic Characteristics of Men in Cameroon, Africa, Participating in a Survey of Knowledge and Attitudes Regarding Antenatal Care, Prevention of Mother-to-Child Transmission, and HIV (N = 252)

Demographic Characteristic	n (%)
Age group, y	
18–19	1 (0.4)
20–29	23 (9.2)
30–39	71 (28.2)
40–49	55 (21.8)
50–59	69 (27.4)
60 and over	29 (11.5)
Age not identified	4 (1.6)
Highest level of education, y	
No education	49 (19.4)
1–6	70 (27.8)
7–12	76 (30.2)
13 or more	57 (22.6)
Religious denomination	
Baptist	176 (69.8)
Catholic	42 (16.7)
Presbyterian	12 (4.8)
Other	3 (1.2)
None/traditional	19 (7.5)
Occupation	
Farmer	124 (49.2)
Health worker	48 (19.0)
Builder	40 (15.9)
Business	23 (9.2)
Teacher	7 (2.8)
Pastor	4 (1.6)
Driver	4 (1.6)
Other	2 (0.8)
No. of wives	
1	221 (87.7)
2	24 (9.5)
3	3 (1.2)
5	1 (0.4)
Not identified	3 (1.2)

pregnancy; 47 (27.5%) said it can help both to know their health status; and eight (4.7%) said that both could also be treated for any infection. Only two men did not provide any reason for why they were supportive of accompanying their wife.

Of the 62 (36.3%) men who thought it good but had not gone to ANC, 34 (54.8%) said that their work would not allow time, which was compounded by the long waiting time in the clinic. Twelve men were supportive but said that tradition was not conducive to going to ANC. Sixteen men provided no reason.

Seventy-seven (30.6%) men responded it was "not good" to go to ANC. The primary reason identified by men was the belief that pregnancy is a woman's affair (n = 33; 42.9%). In addition, 16 (20.8%) said it was not their custom to participate in ANC; one (14.3%) said it would be shameful to accompany the wife to ANC; and 10 (13.0%) said there would be no one to care for the home. Seven (9.1%) men gave no reason for this opinion.

Table 2. Men's Knowledge of Antenatal Care Activities Relative to Age in Cameroon, Africa (n = 248^a)

Age Grouping, y (n)	Men Identifying Antenatal Care Activity n (%)							
	Take Weight	Test Blood	Test Urine	Give Medication	Tie Hand (Take BP)	Health Education	Listen to Fetal Heart	Palpate Abdomen
18–19 (1)	1 (100)	1 (100)	1 (100)	0 (0)	1 (100)	1 (100)	0 (0)	0 (0)
20–29 (23)	21 (91.3)	17 (73.9)	21 (91.3)	11 (47.8)	11 (47.8)	9 (39.1)	9 (39.1)	7 (30.4)
30–39 (71)	45 (63.4)	57 (80.3)	50 (70.4)	36 (50.7)	38 (53.5)	32 (45.1)	27 (38.0)	19 (26.8)
40–49 (55)	33 (60.0)	27 (49.1)	25 (45.5)	31 (56.4)	24 (44.4)	14 (25.5)	9 (16.4)	6 (10.9)
50–59 (69)	38 (55.1)	24 (34.8)	28 (40.6)	35 (50.7)	27 (39.1)	24 (34.8)	6 (8.7)	15 (21.7)
≥60 (29)	12 (41.4)	10 (34.5)	10 (34.5)	9 (31.0)	11 (37.9)	10 (34.5)	6 (20.7)	3 (10.3)
Total (n = 248)	150 (60.5)	136 (54.8)	135 (54.4)	122 (49.2)	112 (45.2)	90 (36.6)	57 (23.0)	50 (20.2)

BP = blood pressure.

^aFour men did not identify their age.

Of the 28 men in polygamous relationships, 12 (42.9%) said that they had ever accompanied their wife(s) to ANC. Of the 224 men in monogamous relationships, 77 (34.4%) identified they had ever attended ANC with their wife.

The men were asked a number of questions concerning HIV, including if it is important to know the mothers' HIV status in pregnancy. One hundred and forty-two (56.4%) men knew that the mother's HIV status was necessary to provide counseling. This knowledge decreased as age increased. Ninety-eight (39.0%) men said that the HIV status should be known so the mother and baby can receive treatment.

Of the men who self-identified as health workers, only 12 (25%) knew that it was important to identify the mother's HIV status to determine if antiretroviral medicine is required at delivery. Twenty-five (9.9%) of all men did not know why the HIV status of the mother should be known, with all but one of these men being more than 40 years of age.

Questions were also asked about providing antiretroviral medicine to a pregnant mother. One hundred seventy-six (69.8%) men knew that antiretroviral medicine taken by HIV-infected women would reduce the transmission of HIV to the baby. Only two (4.2%) of the health care

workers did not know that giving medicine to an HIV-infected mother and her baby will reduce transmission. Yet 48 (19.1%) men thought that antiretroviral medicine could "cure" HIV in the mother. Finally, 28 (11.1%) men said they did not know why giving medication to pregnant HIV infected women was important.

A series of questions was asked about what men believe is their role in their wife's pregnancy. One hundred eighty-five men (73.4%) said that their role is to pay the ANC/delivery fees, and 189 (75.0%) men said they thought that a woman needed additional assistance in cooking and caring for the family when pregnant.

The men were specifically asked if financial support was adequate support for the man to provide to his pregnant wife. Table 4 presents the men's responses.

Although 163 men (64.7%) responded that financial support is all that is required of the man, 84 men (33.3%) thought that a woman did need additional support. Five men gave no opinion.

The men were asked how they thought that their community viewed men who participated in ANC. One hundred sixteen (46.0%) thought that the community perceives it normal behavior. Eighty-five (33.7%) said that the community did not think it normal. However, 114 men (45.2%) expressed concern that the community sees such men as being jealous and overprotective of their wife. Yet 55 men (21.8%) said that this is an act of responsibility and love. Only one man said it was seen a weakness of the man.

Finally, the men were asked if they had ever been tested for HIV. Two men did not wish to answer the question. One hundred forty-seven (58.3%) said that they had at least one HIV test. Of the 103 men who had not been tested, 38 (36.9%) said they did not have the test because of lack of sickness, being faithful, and knowledge of their wife's negative status. Only five men (4.9%) expressed a fear of learning the test results. Twenty-three men (22.3%) identified other barriers, such as lack of time, lack of money, and not knowing where to go for testing.

Table 3. Men's Self-Report of Attitude and Participation in Their Wife's Antenatal Care Relative to Age in Cameroon, Africa (n = 248^a)

Age Grouping, y (n)	n (%)	
	Yes, it is Good	Ever Go to Antenatal Care
18–19 (1)	0 (0)	0 (0)
20–29 (23)	16 (69.6)	8 (34.8)
30–39 (71)	55 (77.5)	23 (32.4)
40–49 (55)	39 (70.5)	26 (47.3)
50–59 (69)	43 (62.3)	37 (53.6)
≥60 (29)	18 (62.1)	15 (51.7)
Total (n=248)	171 (67.9)	109 (43.3)

^aFour men did not identify their age.

Table 4. Men's Self-Report of Their Opinion Regarding the Adequacy of Financial Support in Pregnancy and Reasons for the Opinion in Cameroon, Africa (n = 247^a)

Opinion Regarding Financial Support	n (%)
Financial support is all that is required of me because:	
My spouse is fine with this and doesn't complain	72 (29.1)
This is all I can give and my wife understands	72 (29.1)
I do not have any explanation	14 (5.7)
This is what the health worker recommended	5 (2.0)
More than financial support is required of me because:	
A woman needs more support during pregnancy	49 (19.8)
I know I am supposed to do more than just provide financial support	19 (7.7)
My spouse looks dissatisfied and unhappy	12 (4.9)
I do not have any explanation	4 (1.6)

^aFive men did not respond to this question.

Thirty-seven men (35.9%) elected to not respond to why they had not sought HIV testing.

Of all men, 126 (50.0%) suggested that the PMTCT program provide further education and counseling to the general population on the importance of HIV testing. Finally, 86 men (34.1%) suggested that free testing be offered to everyone who wished HIV testing.

Though not asked, some men volunteered that they do not think that their wife has the right to information about their test results; however, they think that they need to know their wife's HIV status.

DISCUSSION

The men had a better knowledge of ANC activities than expected. Many men identified activities that take place outside of the examination room, such as taking weight, blood pressure, and testing both blood and urine. They were less knowledgeable of the activities that take place within the examination room, such as palpation and listening to the fetal heart. The reason may be that men are rarely allowed into the examination room, even if requested. At MBH, there is only one ANC examination room, which is small and crowded with barely enough space for the examination table. This limits the number of staff and family which can enter the room and contributes to the long waiting time identified by the men. It could also be caused by a bias of some of the health workers, who may not see a reason for the husband to be in the examination room. However, no man identified that the MBH staff attitude was negative toward their participation in ANC.

Almost 79.0% of these men were supportive about accompanying their wife to ANC and thought this behavior was acceptable. There was an age influence, with the men under 40 years of age being more receptive than the older men who viewed ANC as solely a woman's affair. Yet putting this supportive attitude into practice remains difficult for many men, because of traditional gender roles and perceived community norms. Traditional

gender expectations have been previously identified to negatively impact men's participation in AIDS prevention and care.¹⁷ It is also clear that the man's occupation places barriers to accompanying his wife to the ANC. Many men reported that the demands of their work do not permit them to go to ANC.

The proportion of men ever accompanying their wife to ANC was greater than expected and increased with age. We did not ask if these men actually participated in ANC activities, and some of them may have left their wife in ANC and gone elsewhere to then return after the ANC visit. It is possible that some men, especially older men, may have had their own medical appointments while their wife attended ANC.

Polygamy is a traditional practice in Cameroon and has been identified as a barrier to male involvement in PMTCT.¹⁸ When a man has more than one wife, it may not be possible to accompany each wife to clinic. If he accompanies one wife and not another, problems may arise between wives. However, the data in this survey do not support this, because a higher proportion of men in polygamous relationships reported that they had accompanied their wife to clinic than had men in monogamous relationships.

In some cultures, it is often said that it is a "weakness" or sign of bewitchment for a man to follow the wife to clinic.¹⁸ In this survey, only one man specifically identified this. However, many men did say that they think the community perceives a man as being "jealous" when he goes to ANC with his wife.

Men primarily identified that their responsibility was to pay for ANC/obstetric care. Many men stated that they do not think that the woman should expect more than this in terms of their participation in ANC and delivery. As found in other studies, whatever the man does for his wife during pregnancy, no matter how small, was considered to be additional support of the woman in her pregnancy.¹⁹

Traditional communication patterns were revealed by men saying "this is all I have to give and my wife understands" and assuming that their wife is aware of the family's economic limitations. Men also thought that a woman will keep silent as to her needs and be appreciative of whatever the man does, because she knows what the man can provide. Finally, men identified that a woman is viewed as being satisfied and happy when she does not complain. These culturally based communication patterns between men and women have been identified in other studies.²⁰⁻²³

Studies have shown a range of men's awareness of HIV testing at PMTCT sites, with the highest percentage being 60.6%.²⁴ In this survey, more than 50% of these men knew that HIV testing was part of ANC activities. Many men knew that antiretroviral medicine taken by the mother and baby decreased mother to child transmission. Yet we found gaps in the knowledge of HIV/PMTCT and agree with the men's suggestion that further education

and counseling is needed. Although studies have shown an improvement in men's and women's basic knowledge of HIV since 2005, the levels identified in 2007 remain well below the global goals.²⁴

Men's fear of having an HIV test has been shown to present barriers to their obtaining HIV testing and to women's health care.^{25,26} In this survey, the reported fear of HIV test results was low (2.0%). The reasons for not having a test were more reflective of inadequate knowledge of HIV and HIV testing. We also found that the cost of HIV tests, as well as the availability and accessibility of HIV testing facilities, remain barriers to men having HIV testing. MBH has often subsidized HIV testing, reducing the cost to as little as 700 CFA (\$1.50 USD), yet most families live on less than 450 CFA (\$1.00) per day, making even this small cost a barrier.

It is concerning that 35.6% of men who had not been tested declined to identify why they had not had a HIV test. PMTCT counselors have noted that when men seem uncomfortable with HIV discussions they simply keep quiet and do not participate in the session, leaving their wife to solely discuss HIV and HIV testing. This "silence" comprises a barrier requiring further investigation.

Two possible data biases in this study are age and education. In this sample, 157 (62.3%) men were 40 to 60 years of age, which is a higher proportion than expected. By Cameroon Ministry of Health estimations, men 20 to 64 years of age compose 38.5% of the male population. Within this 20- to 64-year-old grouping, 41.1% are 20 to 29 years old; 24.7% are 30 to 39 years old; and 34.2% are 40 to 64 years old. In this survey, the comparable groupings were 9.1%, 34.2%, and 60.7%, respectively. Therefore, the 20- to 29-year-old grouping was less than expected and the 30 to 39 and 40- to 60-year-old groupings were more than expected. The staff has observed that many men return to their villages, enter stable relationships, and get married at an older age, but questions were not asked to verify this impression. In addition, the level of education was higher than expected. In this population, the rate of school attendance (82.6%) is consistent with the male literacy rate (84.7%) of Cameroon. However, government data indicate that the average years of school attendance for men is 3.5 years, which is lower than in this sample, where 55.8% had seven or more years of schooling. The presence of MBH as a local employer may account for this. Nonetheless, we believe that the men's responses are reflective of the general attitude and knowledge of men in the northwest region, because the responses are consistent with staff experience and the comments provided by local consultants and focus groups.

SUMMARY AND RECOMMENDATIONS

Many men in this region of Cameroon have supportive attitudes about participating in ANC/PMTCT. However, their behavior may not reflect this attitude. Men believe

that their primary role in their wife's pregnancy is to provide financial support for ANC and delivery. Almost 60% of men had been tested for HIV and had some knowledge, though incomplete, of HIV and HIV testing.

Expanding men's role to include other types of social support faces cultural barriers. These barriers also make pregnant women uncomfortable in seeking additional support from their husband. We found that the barriers hindering men's full participation in ANC/PMTCT can be summarized as the belief that pregnancy is a "woman's affair," the understanding that the primary responsibility of a man is financial, and traditional communication patterns in which men and women do not fully express themselves.

Based upon this survey, the MBH staff is trying to increase both formal and informal educational efforts concerning HIV/PMTCT in the general and hospital communities. These efforts have begun by portraying men as responsible participants, not obstacles, in providing ANC/PMTCT care; encouraging the village and community leaders to build upon the present cultural expectation that a man's role is one of financial responsibility and expand this expectation to include additional social support of women; continuing to encourage men to participate in ANC/PMTCT activities, including HIV counseling and testing; and providing further education about PMTCT/HIV, including the need and reasons for HIV testing, to all MBH staff and the general community.

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