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Barriers and solutions for timely initiation of antenatal care in Kigali, Rwanda: Health facility professionals' perspective

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ABSTRACT

Objective: timely initiation of antenatal care (i.e. within the first trimester) is associated with attendance of the full recommended regimen of antenatal visits. This study assessed social and behavioural factors that affect timely initiation of antenatal care in Kigali, Rwanda from the perspective of health facility professionals.
Design: health facility professionals involved in antenatal care provision were interviewed on their perceptions about untimely initiation of antenatal care based on open-ended questions. These one-on-one interviews were tape recorded and transcribed for analysis.
Setting: interviews were performed in June and July 2011 at Muhima Health Center in Kigali, Rwanda.
Participants: 17 health facility professionals with a wide range of skills and experience levels were selected from the 36 total staff members of Muhima Health Center based on their participation in and knowledge of antenatal care.
Measurements and findings: inductive content analysis was used to group responses from these qualitative interviews with the goal of creating a conceptual map around barriers and solutions for untimely antenatal care. Qualitative responses were coded to identify the most common themes and sub-themes following a consensus methodology. The health-care professional interviews identified five themes as barriers to timely initiation of antenatal care: (1) lack of knowledge; (2) experience with previous births; (3) issues with male partners not willing/able to attend the clinic; (4) poverty or problems with health insurance; and (5) antenatal care culture. As potential solutions to these hurdles, the following themes were identified: (1) maternal/community education and sensitisation; (2) incentives to attend antenatal care visits; and (3) tracking the content and recommended number of antenatal visits.
Key conclusions: qualitative results indicate that behavioural contextual interventions may help overcome antenatal care barriers. The Rwandan Government and health facilities should work together with target communities to improve antenatal care compliance, taking into account the solutions suggested by the health facility professional interviews.
Implications for practice: study findings suggest that there are specific solutions to increase adherence with timely initiation of antenatal care in Rwanda, including education and sensitisation, modifying couples' HIV testing policies, addressing costs of antenatal care, and tracking the number of recommended antenatal visits.

Introduction

Despite worldwide support for safe motherhood initiatives as laid out in the Millennium Development Goals (MDGs), maternal mortality and morbidity remain pressing public health concerns, yet they affect primarily those in developing regions. Maternal mortality rates in developing regions are fifteen times higher than those in developed regions (WHO et al., 2012). Further, of the estimated 287,000 maternal deaths that occurred in 2010, over half were in sub-Saharan Africa. The lifetime risk of maternal mortality due to pregnancy complications is higher in sub-Saharan Africa than in other parts of the world in part due to higher fertility rates, poorer nutritional status of women, and higher prevalence of vulnerable health conditions (Nikiéma et al., 2009).

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While there has been little success in reducing the maternal mortality ratio in sub-Saharan Africa, many maternal deaths are preventable using proven interventions. About 60% of maternal deaths are caused by factors that can be detected and addressed during the antenatal period, including hypertension, HIV/AIDS, and pre-existing medical conditions and infections (Baleta, 1999; Chege et al., 2005). Although antenatal care does not diminish the likelihood of complications during birth, it is a strong predictor of delivery in a health institution that is better equipped to respond to complications and critical health problems. Maternal mortality would significantly decrease if all women had access to care for preventing or treating pregnancy and birth complications; however, there are many barriers to maternal health care in developing countries. Many countries with high maternal mortality ratios lack the infrastructure and trained professionals to provide quality maternal health services. Additionally, poverty, gender inequalities, weak health systems, lack of political will, and cultural barriers prevent women from receiving the care they need (Hunt and Bueno de Mesquita, 2000).

Within sub-Saharan Africa, Rwanda's maternal mortality ratio remains one of the highest, at 340 deaths per 100,000 live births (WHO et al., 2012). Following the escalation of conflict and genocide in 1994 in Rwanda, rates of maternal mortality increased and have not declined substantially since then. Rwanda has adopted the WHO model of antenatal care, which recommends a regimen of four antenatal visits for women without pregnancy-related complications or risk factors—one visit during each trimester of gestation and the final visit immediately preceding delivery (WHO and UNICEF, 2003). Recent estimates show that 98% of pregnant women in Rwanda attend at least one antenatal visit before their pregnancy comes to term (UNICEF, 2010). Yet even though the number of antenatal visits women attend per pregnancy has increased substantially in the past years, most women still do not obtain the four recommended antenatal visits. Additionally, in a study of antenatal clinics in six Rwandan districts, 48% of the women in the cohort attended antenatal care for the first time in the third trimester, whereas only 5% started in the first trimester (Van Geertruyden et al., 2005). Starting antenatal care late decreases the ability of health-care professionals to identify potential complications during pregnancy or treat sexually transmitted infections, HIV, malaria or anaemia (Birungi et al., 2006). Importantly, timely initiation of antenatal care is a strong predictor of the total number of antenatal care visits attended in Rwanda (Hagey, 2012).

Previous studies conducted in sub-Saharan Africa suggest that demographic, socio-economic and behavioural factors are associated with antenatal care attendance. A study of health-care facilities in KwaZulu-Natal, South Africa documented that access to antenatal care depends on various circumstances: time and cost of travel to a health-care facility, quality and cost of antenatal services, age, parity, access to social support, previous experiences with the health-care system, and understanding of the importance of antenatal care (McCray, 2004). Additionally, a study on maternal health care across sub-Saharan Africa found that maternal age, education, urban residence, and household income were all associated with lack of care (McTavish et. al., 2010). One study in Ghana found that antenatal care attendance was determined by the presence of pregnancy complications and by maternal cultural perception of illness (Addai, 2000). Thus, it appears that both biomedical and cultural factors impact attendance of antenatal care. These studies suggest the need for continued research to understand the specific contextual, socio-economic, cultural, and behavioural factors affecting women's access to and attendance of antenatal care.

The objective of this study was to identify barriers and solutions affecting timely initiation of antenatal care as perceived by health facility professional in Rwanda. Health facility professionals involved in antenatal care provision at Muhima Health Center in Kigali, Rwanda were interviewed on their perceptions about untimely initiation of antenatal care to help identify barriers that will need to be addressed to solve this problem.

Methods

Participant selection

In June and July 2011, the principal author (J.H.) conducted interviews with 17 out of the 36 health facility professionals working at Muhima Health Center in Kigali. These health facility professionals include both health and social services professionals involved in the delivery of health care and/or education to women during their antenatal care. All health facility professionals involved in antenatal care were approached and agreed to participate. In a concurrent study the principal author interviewed 90 patients delivering at Muhima Hospital during a one-month period who also had at least one antenatal visit at Muhima Health Center. An interview questionnaire was used to collect information on the number of antenatal visits women received, the months in which they attended their visits, information about their pregnancy and antenatal care experiences, and their reasons for missing antenatal visits (Hagey, 2012). Those quantitative findings are not strictly comparable to the open-ended data from the providers, so they will be briefly summarised in the discussion but will be reported in detail elsewhere. The study was approved by the Yale University Human Investigation Committee, and the Centre Hospitalier Universitaire de Kigali (University Teaching Hospital of Kigali) Ethics Committee.

Setting

Muhima Health Center serves a catchment area of approximately 31,815 people within the city of Kigali, Rwanda (Muhima Hospital Office of Statistics, 2011). The Health Center began its activities as a dispensary for Muhima Hospital in 2000, but became an independent health-care site in August of 2008 (Muhima Health Center Office, 2011). Both the hospital and health centre are government run facilities overseen by the Ministry of Health of Rwanda, but also receive funding from outside organisations. Antenatal visits in Kigali are part of the primary care services performed at health centres, whereas deliveries are generally performed at the larger district hospitals. Some health centres in Kigali have the equipment to perform births on site, transferring their patients to the district hospitals only if complications arise; however, Muhima Health Center transfers all their patients to Muhima Hospital for birth. Muhima Hospital was formerly the central obstetrics hospital in Kigali, and complicated pregnancy cases are still referred to that hospital for better birth outcomes. Because of its partnership and proximity with Muhima Hospital, Muhima Health Center attracts women from outside Muhima Sector for antenatal care such that they can be transferred to Muhima Hospital for delivery, thus leading to a more diverse patient population, including patients presenting with more complicated pregnancies.

The government provides all preventive services, including antenatal care, but out of pocket payment is required for curative services, which includes costs related to delivery services. The Rwandan government's institution of *mutuelles de santé*, or community-based mutual health insurance, has helped to improve financial access to these curative health-care services within primary, secondary and tertiary publicly owned health-care facilities (Rwanda Ministry of Health et al., 2009). Members of *mutuelles* pay an annual fee of 1000 Rwandan francs, and then pay a 10% service fee for each visit to a health centre or hospital