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PMTCT, HAART, and Childbearing in Mozambique: An Institutional Perspective

Abstract

Maternal and Child Health (MCH) units, where VCT/PMTCT/HAART have been integrated with traditional services, play a critical role in the connection between the massive HAART rollout and reproductive behavior. In this article, we use data from semi-structured interviews with MCH workers and ethnographic observations carried out in southern Mozambique to explore this role from the institutional perspective. We find that, along with logistical and workload problems, the de facto segregation of PMTCT/HAART clients within the "integrated" MCH system and the simplistic and uncompromising message discouraging further fertility and stressing condom-based contraception, may pose serious challenges to a successful formulation and implementation of reproductive goals among seropositive clients. Although the recency of PMTCT/HAART services may partly explain these challenges, we argue that they are due largely to cultural miscommunication between providers and clients. We show how the cultural gap between the two is bridged by community activists and peer interactions among clients.

Keywords

PMTCT; HAART; Childbearing; Health Sector; Cultural Competence

INTRODUCTION

Evidence dating back to the early years of the African AIDS epidemic shows that HIV/AIDS tends to reduce fertility at both the individual and the population levels (see Kaida et al. 2006; Lewis et al. 2004; Zaba and Gregson 1998 for reviews of this literature). Birth rates of HIV+ women have been estimated to be 25–40% lower than those of uninfected women (Zaba and Gregson 1998). Much of this reduction is attributable to biological and behavioral proximate determinants, including lower fecundability and greater fetal loss among HIV+ women and lower coital frequency among HIV+ couples due to illness (Lewis et al. 2004). Changes in desire for children may also play a role in explaining the lower fertility of HIV+ women. Studies of fertility intentions among HIV+ individuals in sub-Saharan Africa have produced mixed results. On the one hand, individuals express worries about the possibility of giving birth to HIV+ children, the impact of pregnancy on their own health, and the hardships that their children would face in the event of their death. On the other hand, individuals report a strong desire to bear and raise children, consistent with the high social value placed on children (Aka-Dago-Akribi et al. 1999; Baylies 2000; Cooper et al. 2007; Emenyonu et al. 2008; Moore et al. 2006; Nakayiwa et al. 2006; Rutenberg et al. 2000).

The growing availability of highly active antiretroviral therapy (HAART) and treatment for prevention of mother to child transmission (PMTCT) has changed the social landscape for reproductive decision making in the context of HIV/AIDS. Improved access to treatment means that HIV+ women and couples can expect longer periods of good health in which to bear and rear children, and better means of preventing vertical transmission increase the odds that HIV

+ mothers will have HIV− children. Given the relatively recent scale-up of HAART and PMTCT programs in most of sub-Saharan Africa, empirical literature on how the changed environment affects reproductive decision-making is limited. There is some evidence that the availability of PMTCT and HAART programs mitigate women's concerns about childbearing (Cooper et al. 2007; Emenyonu et al. 2008). However, the interaction of these programs with existing organizational, social, and cultural structures is not well understood. In particular, relationships between health care institutions and their clients in the context of HAART require investigation.

The influence of health institutions on reproductive behavior is well documented for the case of traditional family planning programs. Family planning clinics affect individual birth control use not only directly, through the types of contraception offered and the fees charged for services, but also more subtly and indirectly, through the attitudes of clinic workers toward clients and the comprehensiveness and responsiveness of counseling (e.g., Blanc et al. 2002; Kaler and Watkins 2001; Koenig et al. 1997; RamaRao and Monaham 2003; Wood and Jewkes 2006). Institutional factors, including both organizational structures and staff-client relationships, are likely to shape the relationship between HAART and reproductive decision making as well. In response to the HIV/AIDS epidemic, the World Health Organization and national health authorities have been promoting an integration of HIV testing, counseling, and treatment into existing sexual and reproductive health (SRH) services. Such integration potentially allows for more comprehensive care, makes more efficient use of both financial and human capital, and increases access to care for women whose primary interaction with the health system is through antenatal clinics (Askew and Berer 2003; Orner et al. 2008; Shelton 1999). However, integration of multiple programs under one institutional roof can also strain limited resources and contribute to overwork among staff, which is passed on to clients in the form of increased waiting time and decreased quality of care (Caldwell and Caldwell 2002; Foreit et al. 2002; Mayhew 2000; Maharaj and Cleland 2005; Medley and Sweat 2008; Teasdale et al. 2008).

Given the complexity of drug regimes and behavioral recommendations, health care workers' knowledge and sensitivity also have a strong impact on how women respond to care. The changing recommendations for HAART and PMTCT can produce confusion among health care workers, leading to variation in advice that reduces women's trust in the medical establishment (Buskens and Jaffe 2008; Lanktree et al. 2008). Even where official guidelines are clear, recommendations regarding infant feeding and future childbearing often contradict local understandings of motherhood and womanhood, and the clash between these two systems of meaning can act as a barrier to care. For instance, HIV+ women may be reluctant to discuss childbearing or disclose HIV status with counselors who discourage pregnancy among infected women (Cooper et al. 2007; Feldman and Maposhere 2003). A gulf between medical recommendations and socially accepted practices also contributes to frustration and fatigue on the part of staff (Banda et al. 2008; de Paoli et al. 2002).

This article examines some of these challenges in southern Mozambique, an area where PMTCT/HAART services were introduced recently but are being deployed on an increasingly massive scale. We look at the institutional context of HIV prevention and treatment services through a case study of ongoing integration of VCT, PMTCT, and HAART services into Maternal and Child Health (MCH) units in that area and investigate how the characteristics and constraints of the institutional environment and practices affect provider-client interactions and may shape reproductive choices and behavior.

SETTING

The fieldwork for this study was carried out in 2008 in Gaza province of Southern Mozambique. Fertility in Gaza, as elsewhere in Mozambique, remains high: according to the most recent Demographic and Health Survey (DHS), conducted in 2003, the total fertility rate in Gaza was 5.4 children per woman. Virtually all DHS respondents in the province reported knowing at least one modern method of contraception. About 15% of women of reproductive age were using some form of modern contraception, primarily hormonal methods, and more than three quarters of non-users reported planning future use. Still, desired family size is high (median of 4.3 children), and contraception is largely used for spacing at low parities (Instituto Nacional de Estatística and Ministério da Saúde 2005).

One district of Gaza province was selected for data collection.[1] This district is average for the province in size and socioeconomic characteristics, with the majority of its population living in rural areas but with a sizable minority residing in the district's administrative center. Like in other parts of Mozambique's south, low soil productivity and frequent droughts impair the district's subsistence agriculture, the mainstay of its economy. Partly due to the precariousness of agricultural production and partly because of Gaza's proximity to South Africa, the region's economic powerhouse, the area has historically experienced large-scale labor out-migration, mainly composed of men and directed to Mozambique's more prosperous neighbor. As in other similar settings, this massive labor migration has likely contributed to very high HIV levels. Thus in Gaza province, estimated adult HIV prevalence rose from 19% in 2001 to 27% in 2007, the highest level of all of Mozambique's provinces (Mozambique Ministry of Health n/d). Despite the high estimated prevalence, the coverage of VCT services (recently re-branded as "Counseling, Testing, and Health" services) until very recently remained low. In a representative survey of married women aged 18–40 that we conducted in July 2006 in the district's rural areas, almost 95 percent of parous respondents reported having at least one antenatal consultation before their last births, but only 14 percent of them had ever been tested for HIV (most of them at antenatal consultations).

The district's population is served by several state-run MCH clinics; the largest clinic (hereafter referred to also as the main clinic) is located in the district's administrative center and the others are in rural areas. All the clinics offer a standard array of antenatal, perinatal, and postnatal care and family planning services. The antenatal unit of the main clinic typically sees about 20 first consultation patients per day, but on occasions the daily number of first consultations can exceed fifty. The patient flow in rural clinics is considerably smaller.

HIV testing and counseling and PMTCT/HAART, integrated with other SRH services, were introduced in the district in 2006. At the time of this research, only three clinics, the main clinic and two others located in rural areas within a short distance from the district center, were offering HIV testing and counseling and PMTCT, but three more were expected to start providing these services before the end of 2008. Only the main clinic offered HAART. All women who come for their first antenatal consultations to clinics providing VCT/PMTCT are offered HIV tests; those who test positive are put on a PMTCT routine that ends with the HIV test of their children at the age of eighteen months. CD4 count analysis is performed only at the main clinic; women whose CD4 count drops below 200/mm^3 are supposed to initiate HAART (also administered and monitored at the main clinic). While in the early months after the introduction of VCT/PMTCT/HAART services stockouts of test kits and antiretroviral drugs (ARVs) were frequent, supply of both was fairly reliable by the time of our fieldwork.

[1]To protect confidentially of study subjects, neither the district nor specific health facilities are identified in this article.

All the SRH services provided to women and their children at these clinics are free of charge; the VCT/MTCPT/HAART services offered at the MCH clinics, including all antiretroviral drugs, are also free and fully paid for by a foreign charity. The nurses in charge of VCT/PMTCT/HAART also provide other, standard SRH services. The main clinic has several nurses on its staff (but no permanent physician) with specialized duties (e.g., first antenatal consultations, subsequent consultations, delivery, post-partum care and family planning). Rural clinics, however, typically have just one nurse who offers the entire range of SRH services and, in fact, also provides all general health care.

DATA AND METHOD

The data used for this article were collected in 2008 through semi-structured interviews conducted in Portuguese and Changana by the authors with nurses and support staff of the MCH units already offering VCT/PMTCT/HAART and of those that were to start offering them soon. We also interviewed non-staff activists and workers of an NGO that provides support and counseling for HIV+ pregnant women and mothers in coordination with the MCH clinics. All the interviews were loosely structured around the same main themes—organizational and logistical aspects, mechanisms and content of provider-client interactions, perceived organizational and psychological problems and challenges—but were carried out in the form of a dialog, allowing the subjects to take initiative and to raise and discuss other related themes and issues. In all, the interviews involved thirteen nurses (including those with administrative duties), three nurse's aids (*serventes* in Portuguese), and four community activists and two activist coordinators from a local NGO. This series of interviews was part of a larger longitudinal project on HIV and reproductive behavior. In addition to the interviews, we collected observational data by attending support group meetings for HIV+ mothers and observing social interactions among clients and between clients and providers on clinic premises.

The section below presents the main results that emerged from these interviews and observations. As is always the case of qualitative analysis, we seek to establish dominant patterns and themes in the data rather than produce any quantifiable associations. The results are grouped into themes that we see as critical for understanding the institutional characteristics and constraints shaping reproductive preferences and behavior. To protect informants' confidentiality, we do not identify their names, duties, and the units where they worked, nor do we include any quotes from the interviews.

RESULTS

Organizational consequences of integration of VCT/PMTCT/HAART into MCH services

Our informants were nearly unanimous in their opinion that the addition of VCT/PMTCT/HAART services has greatly increased the burden of the clinic nursing staff, especially considering the high HIV prevalence and therefore large number of clients in need of these services. The PMTCT routine can last two years or even longer—from the moment of first antenatal consultation until the child's HIV test at the age of eighteen months; HAART is offered at the main clinic both during and outside pregnancy and postpartum periods, depending on the patients' CD4 count. Moreover, the MCH clinics routinely offer VCT to the clients' partners, who can also receive HAART there rather that at the district's only Day Hospital. According to our informants, no additional personnel have been hired since the introduction of VCT/PMTCT/HAART, and salaries have not been adjusted to reflect the growing workloads. Nurses typically undergo brief training in VCT/PMTCT/HAART and receive periodic updates on new or additional Ministry of Health guidelines; the nurses from the clinics that were slated to start provision of VCT/PMTCT generally admitted in the interviews that the training that they had received was insufficient, especially in such subtleties as drug

resistance and side-effects. At the same time, the nurses also argued that their overall experience would help compensate for the lacunae of specialized training.

The clinic staff's workload is unevenly spread over time: the flow of MCH clients typically increases around April and May, when wives of labor migrants who get pregnant after their husbands' return for Christmas holidays come for their first consultations, and around September, when those same women give birth. The burden is also unevenly distributed across clinics: clients tend to exceedingly flock to the few clinics that offer VCT/PMTCT, especially to the main clinic, which also provides HAART. According to the informants, the main clinic, located in the district's center and integrated with the district hospital, in addition to providing a full range of services, is perceived by clients as offering better quality of services than smaller rural clinics. Besides, due to the radial structure of public transportation routes, which is centered on the district's center, the main clinic is often more easily and cheaply accessible by public transportation from rural areas than some rural clinics. That women are free to choose a clinic for any SRH services regardless of their place of residence further amplifies the imbalance. As a result, the main clinic consistently exceeds the target sets for first antenatal visits and family planning initiation (no official targets are set for the district and individual clinics for follow-up visits), while rural clinics typically fall short of their targets.

While the informants from the main clinic reported a particularly sharp rise in the patient flow since the introduction of VCT/PTMCT/HAART, the nurses in the rural clinics offering VCT/PMTCT also experienced an increase in their workloads. This increase affected not only the initial antenatal consultations but also follow-up ones. And because women who test positive at the first consultation at a given clinic are expected to return for subsequent consultations and for PMTCT/HAART drugs to the same clinic, the clinics offering VCT/PMTCT/HAART see a disproportionate rise in the share of seropositive clients. The situation was expected to improve somewhat as additional clinics were slated to initiate VCT/PMTCT services, but it is important to remember that most of those clinics are located in areas with no other trained medical personnel and therefore the MCH nurses there provide not only prenatal, delivery, and postnatal services but also a broad range of other health services for the general population.

While, not surprisingly, both the nurses and administrators reported the staff's utmost dedication to provision of best services possible, they admitted that incentives are lacking. The salaries are low (the equivalent of about USD125 per month at the time of fieldwork) and stagnant. Rural nurses are usually given free housing and may also receive occasional gifts and a helping hand in the field or the vegetable garden from their patients and neighbors, but prices of most purchased goods are higher in rural than in urban areas. Besides, rural nurses, typically women of urban background, dislike the lack of amenities, such as electricity, running water, or TV, in the countryside. Periodic training seminars, usually conducted in a district's center or the provincial capital, offer a welcome distraction; they also come with non-negligible per diem and transportation allowances and are therefore much coveted. Although such seminars typically last a week or less, the absence of a clinic's only nurse can be disruptive, especially for seropositive clients, whose clinic visits for drug pick-up are more or less rigidly scheduled. In some instances, the gaps are filled by nurse's aids, who have no formal training, especially in subtleties of PMTCT routines, but who nonetheless are said to be knowledgeable and experienced enough to handle these tasks in nurse's absence.

"Integrated segregation"

Whereas integration of VCT/PMTCT services with other SRH care entails operational benefits for both and an economy of scale that is particularly valuable in resource-poor settings such as the one considered here, one unintended and potentially negative consequence of it is de facto segregation of HIV− and HIV+ clients. Although both the women who test negative and those who test positive have the same standard antenatal registration card, they are channeled

into different service queues. The cards of the HIV− clients are marked "tested," and these women are set on a standard antenatal surveillance routine (although they are expected to repeat HIV tests every three months). Women whose tests come out positive are assigned a number (a combination of province, district, clinic and individual IDs). These numbers are hand-written on the cover of their antenatal card and accompany them through antenatal, delivery, and postnatal care. Seropositive clients' antenatal routine is understandably more complex—and often more burdensome—than that of seronegative clients as, in addition to normal antenatal visits, they are expected to return to the clinic periodically to pick up PMTCT/HAART drugs.

The calendar of PMTCT drug pick-up (every twenty days) is not synchronized with that of routine antenatal care visits (once a month up to 28 weeks of pregnancy and every two weeks after that). But even in routine antenatal consultations, clients are often separated based on their serostatus. In one of the clinics, for example, the registration cards of HIV− and HIV+ women's are kept separately and they are scheduled for antenatal consultations on different days "to avoid confusion." This segregation also continues after delivery as HIV+ mothers and their children receive prophylaxis with ARVs and cotrimoxazol through the Consultation for Children at Risk services while their HIV− counterparts undergo just regular postnatal checkups.

Infant feeding and future childbearing: clashing messages

Ensuring safe and healthy infant feeding is widely recognized as one of the more challenging components of PMTCT programs (UNICEF 2003; WHO/UNAIDS/UNICEF/UNFPA 2004). The clinic staff, following the Ministry of Health instructions, tell HIV+ positive clients to wean their babies at six months and preferably even earlier (and, in fact, to avoid breastfeeding altogether if at all possible) in order to reduce the risk of HIV infection. No specific recommendations are given with regard to pasteurizing or heating expressed breast milk. Seropositive women are instead encouraged to use baby formula and instructed how to prepare semi-solid and solid foods. These instructions are complex, and women require substantial economic and practical resources to comply with them. However, a larger problem with breastfeeding recommendations is the conflicting messages transmitted by the health system: instructions for seropositive women conspicuously clash with the general touting of the benefits of exclusive breastfeeding, which the Ministry of Health, also following the WHO guidelines, officially recommends as the healthiest and least expensive choice of infant feeding.

The combination of practical challenge and cultural conflict is even more present when it comes to reproductive behavior. Family planning counseling begins well before delivery and resumes immediately after childbirth, at the first postpartum consultation. Whereas HIV− clients are offered the standard contraceptive options, usually the pill or injectables, the recommendations that HIV+ women receive focus squarely and exclusively on condoms as a method of dual protection against both pregnancy and re-infection.[2] Although the informants talked about greater acceptability of condoms (which they judged mainly by the increased number of condoms that women picked up at postnatal consultations), they also admitted that using condoms consistently with husbands and other regular partners is hardly possible.

While the providers' instructions on infant feeding pose a serious cultural challenge for seropositive women, in no other aspect of staff-client interactions in the context of VCT/PMTCT/HAART is a culture clash more apparent than in matters of future childbearing. In the clinics we studied, the entire ideological machine of the health sector is geared toward preventing further pregnancies by HIV+ clients. The health sector's antinatalism, broadcast

[2]Our informants typically thought about "re-infection" in terms of increasing virus load rather than of its correct scientific meaning of infection with a different strain of HIV.

and legitimized by the clinic staff, comes in conflict with pronatalism of traditional culture. Although family planning and modern contraceptives have gained in popularity, fertility limitation, especially at lower parities and among less educated rural women, is not yet an acceptable option. The message that HIV+ pregnant women receive at MCH clinics almost from the moment they learn about their HIV test results is clear and straightforward: you should not have any more children after the birth of the child you are now carrying. This message is repeated throughout the entire PMTCT process, which, if counted from the first antenatal consultation to the HIV test of the child at eighteen months of age, can last about two years and for women on HAART may extend well beyond that. While the continuous argumentation in favor of curtailing childbearing, buttressed by the complexity of PMTCT/HAART both before and after delivery, may indeed work to discourage further reproduction, our informants admitted that for most lower-parity women of rural background these recommendations pose an agonizing dilemma. Because MCH clinic-based PMTCT/HAART was introduced so recently, our informants did not have a clear sense of the share of PMTCT clients who come back with a new pregnancy, but they reported that such cases were not uncommon.

Social construction of clients' compliance

When asked about factors that might affect seropositive clients' compliance with recommendations and instructions that they receive at MCH clinics, the informants emphasized the economic challenges. Thus the costs of baby formula and other breast milk substitutes were thought prohibitive, especially for poorer rural women. But by far the most frequently mentioned of challenges facing seropositive clients were the availability and costs of transportation to clinics. While transportation costs affect almost all rural women seeking SRH care (and prevent many of them from adequately receiving it), for HIV+ women these costs are particularly elevated as PMTCT/HAART increases the number of required clinic visits. Another related issue mentioned by informants is the demand on women's time created by PMTCT, especially during the heights of agricultural season, when women's time has a particularly high economic premium. Large distances typically translate into long travel time, aggravated by long waiting lines at the clinic and pharmacy. As a rule, the calendars for antenatal consultations and PMTCT/HAART are not synchronized; to avoid additional travel costs, some interviewed nurses would occasionally allow women to pick up PMTCT/HAART drugs at the time of their routine antenatal consultations, but this accommodation is not practiced widely due to the fear of stock-outs.

The excessive attention to the economic and financial barriers to compliance on the part of providers further amplifies the fundamental cultural disconnect between the health sector and its clients. While not dismissing their clients' cultural preferences and predispositions, our informants tended to think of them as relatively unimportant and easily changeable. Thus the nurses reported nearly universal acceptance of HIV testing at antenatal consultations, especially when compared to earlier times, which they typically attributed to better information and counseling and to increased availability of HAART. Whatever cultural and social barriers might still exist, they were thought to be reduced and even erased by educating clients about the benefits of PMTCT/HAART.

Whereas these explanations are not without substance, they omit the important role of the transition from client-initiated (opt-in) to provider-initiated (opt-out) HIV testing. In fact, while officially voluntary and preceded by pre-counseling, antenatal HIV testing is in practice all but compulsory. While short of direct coercion, considerable pressure is exerted on seropositive clients to comply with the PMTCT/HAART regimens as well. Even attendance at such supposedly voluntary events as support group meetings often becomes obligatory. These meetings are scheduled on the same days as antenatal consultations and all seropositive pregnant women are told to attend them. In at least one case that we observed, the clinic staff

collected the women's antenatal registration cards (which women are supposed to keep) prior to the meeting and returned them only after the meeting had ended. Notably, this indirect coercion is not perceived by the staff as ethically problematic; instead, it is rationalized as a way of helping women to adhere to prophylaxis regimens and other procedures that PMTCT/HAART involves. These systematic, if not always voluntary, activities, along with counseling received directly from the clinic staff, were said also to help clients and ultimately their partners and other family members to understand the rationale for and benefits of avoiding further childbearing and to overcome cultural and psychological barriers to implementing the corresponding instructions. However, as the following section shows, the role of support groups and other informal and semi-formal peer interactions among seropositive women is more complex.

Bridging the cultural gap: *activistas*, *conselheiras*, and client support groups

Activists (*activistas* in Portuguese) typically are seropositive mothers who volunteer to work with other HIV+ MCH clients after undergoing their own PMTCT routine. Some of them are de facto on the staff of MCH clinics as counselors (*conselheiras*); others are involved through an NGO that works in coordination with the clinic staff on reaching out to seropositive pregnant women and mothers. They typically receive a modest salary (c. USD60 per month) paid for by the same foreign charity that funds the MCH clinic-based VCT/PMTCT/HAART services. The specific tasks performed by activists and counselors vary. Some are engaged in *busca activa* ("active search") for non-compliant clients, carrying out home visits to women who were diagnosed HIV+ at their first antenatal consultations but failed to show up for follow-up consultations or to pick up their drugs on scheduled days. These searches require considerable dedication and perseverance and occasionally even enlisting the help of local authorities to motivate women (and their partners) whom clinic staff and activists perceive as particularly "stubborn." Other activists also work as *animadoras* (facilitators) of the earlier mentioned support group meeting for HIV+ clients that are usually held at the clinics once or twice a month. Most participants in such meetings are pregnant women who are diagnosed HIV+ at antenatal consultations. The rest are HIV+ mothers of recently born children, who typically share their PMTCT and HAART experiences with the pregnant women.

There are several aspects in which the bridging and translational role of individual and collective peer support is particularly critical. First, informal interactions with activists and peers help HIV+ women better understand and digest the instructions they receive from the nurses. The nurses' increased client load results in a reduction of time devoted to each client, and some clients, especially those of less educated and rural backgrounds, do not dare to ask the authoritative and harried nurses for clarifications on the sketchy PMTCT instructions that they receive. The more relaxed ambiance of a peer group meeting, not to mention of a one-on-one conversation with an activist, often a woman with a similar background and a similar life story, assuages these fears and makes asking questions easier. Not surprisingly, then, as we observed at the support group meetings, participants often asked basic questions on when and how often the medicine should be taken despite the supposedly clear and exhaustive instructions received just a few minutes earlier in a nurse's office. A large portion of the meeting time deals with postpartum PMTCT, especially with breastfeeding and preparation of semi-solid and solid substitution. The HIV+ mothers who have successfully weaned their babies at or before six months (as instructed by the Ministry of Health guidelines) share their experiences and skills with the pregnant women preparing to give birth and women who have given birth recently.

The value of support groups is not limited to the transmission of knowledge and skills. These groups offer unique opportunities for cultural evaluation and negotiations of PMTCT recommendations, to which the official health sector is generally oblivious. The choice between

breastfeeding and artificial feeding, in addition to practical considerations such as the costs of breast milk substitutes, has a strong socio-cultural subtext because breastfeeding is such a sine qua non of mothering and childrearing (see, e.g., Buskens et al. 2007). These individualized and collective peer interactions also help HIV+ women deal with perhaps the most agonizing quandary that they face—that of future childbearing. In a highly pronatalist cultural environment, where a woman's social status and worth are largely defined by the number of her offspring, the health sector's unqualified directive not to have any more children is difficult to accept for many women, especially for younger and lower-parity ones, no matter how convincing the health rationale for it might sound. The discussions that these women have collectively with their peers at support group meetings and individually with activists (also women like them) produce a more culturally acceptable scenario of waiting for a right moment, when "the doctor says" that they can get pregnant and have another baby. This scenario, usually coming from activists and other more experienced women, is so believable not only because it is culturally more accommodating but also because the activists, mostly young HIV+ women with few children, strongly believe in it themselves.

Finally, the group meeting setting may help to bring some male partners into the discussion of and compliance with PMTCT/HAART. For HIV+ women who may not have the courage to talk about their serostatus and its implications with their husbands at home, the venue of a group meeting may help reduce the gendered communication barriers and at the same time, shield women from their husbands' wrath and abuse that the revelation of their HIV status may trigger. And the presence of someone's husband at the meeting may embolden other participants to talk with their partners about their status and PMTCT at home. It should be noted, however, that at least from our observations, men's participation in support group meetings remained rare in the study area.

DISCUSSION

Our study highlighted the centrality of the MCH clinic venue and the PMTCT and HAART programs that are deployed there for reproductive intentions and behavior of HIV+ women. The psychological impact of PMTCT/HAART experience during and after pregnancy is crucial: what seropositive pregnant women learn through PMTCT/HAART, and what they increasingly share with their partners, sets the tone and the momentum for navigating their infection and its manifestations well beyond the period of direct contact with MCH clinics.

As in other parts of sub-Saharan Africa, rapid expansion of HIV testing in the setting examined here occurs primarily through its integration into maternal and child health care services. While such integration has numerous practical and clinical benefits, its pitfalls should not be underestimated (Caldwell and Caldwell 2002; Rutenberg and Baek 2005). We showed how seropositive gravidae and recent parturients are de facto segregated within this "integrated" system—through distinctly labeled antenatal and postnatal cards, different consultation schedules, and support group meetings. Such segregation may be intended to improve efficiency in provision of the unique services that this segment of MCH clients requires, but one of its untended consequences is greater exposure of HIV positive women to the public eye. In a setting where physical facilities to ensure privacy of provider-client interaction are lacking, everyone knows everyone, and rumors spread quickly, seropositive women, corralled into separate activities with hardly concealed purpose, stand little chance of preserving confidentiality of their status and prophylactic treatment. The public exposure that this segregation creates is often amplified outside the clinic compound, when activists resort to the assistance of communal authorities to enforce compliance. Thus, although the public's increasing encounters with HIV/AIDS, improved knowledge about its pathology and transmission, and greater availability of treatment all work to reduce prejudice and stigma about

HIV/AIDS, the segregation of seropositive clients at MCH clinics may slow down, if not reverse, this process.

The institutional challenges brought to light by our interviews and observations compound the financial and economic barriers to access that have long been identified in the literature, and of which our informants were well aware. The two types of challenges, however, are fundamentally different, and, not surprisingly, the clinic staff tend to notice problems only on the client end. Accordingly, the dichotomy that the clinic nurses see is not of institutional vs. client factors, but rather clients' economic and financial problems (e.g., limited ability to pay for transportation to a clinic or for infant formula or other breast milk substitutes) vs. clients' cultural and social predicaments (e.g., ignorance, fear of husband and relatives, social pressures to conform to dominant childbearing and childrearing norms). Furthermore, the social and cultural problems are typically seen as of lesser importance and amenable to change and eventual solution through systematic education and counseling. Importantly, changing women's reproductive goals and behavior is construed as a task that is culturally equivalent to achieving adherence to PMTCT or HAART drug regimens. The MCH clinic staff recognize the existence of their clients' cultural idiosyncracies that may be incompatible with the official health narrative. However, the nurses' conviction that these idiosyncrasies can be tamed into compliance through methodical instructions and rational argument leads them to ignore the powerful social and cultural forces that constrain reproductive preferences. But even if the staff are right in their conclusion that economics trumps culture and that education facilitates action, their discourse neglects the institutional roots of many challenges to successful PMTCT/HAART adherence and to fulfillment of women's and couples' reproductive preferences and choices.

It should be acknowledged that some of these institutional challenges are due to the recency of PMTCT and HAART programs in the study setting and MCH clinic staff's insufficient proficiency and experience in the subtleties of PMTCT/HAART. As PMTCT and HAART are expanded and routinized, the clinic staff will surely gain the knowledge and experience they now lack thus leading to greater efficiency and effectiveness of services (see e.g., Gimbel-Sherr et al. 2007). However, other critical aspects of their work may not change for the better. Their meager salaries are unlikely to rise substantially, which will continue to undermine their dedication and enthusiasm. While their pay stagnates, their individual workloads will undoubtedly increase. The workload pressure may come not only from the growing numbers of clients but also from the provincial health bureaucrats. At the time of our fieldwork, no specific targets were set for PMTCT or HAART initiation and follow-up at either the district or the clinic levels. However, such targets do exist for more traditional services provided by MCH clinics, such as first antenatal consultations, family planning consultations, and deliveries, and, according to our informants, meeting them is not easy. If such targets are also introduced for PMTCT and HAART, they may impose greater rigor on the provision and recording of these services, but they may also increase the psychological strain on the nurses who will feel obligated to deliver the expected numbers even if at the expense of individually tailored attention and care.

Unlike some other parts of sub-Saharan Africa, in much of Mozambique the rapid expansion of HIV testing did not precede the massive scale-up of HAART but rather has been unfolding hand-in-hand with it. Accordingly, as a concrete and formally diagnosed medical condition HIV infection is not perceived as a death sentence but rather as a treatable, protracted ailment. HIV/AIDS, however, is still a disease like no other known in rural and small-town settings, where treatment for conventional chronic pathologies is rarely available and therefore the amount of continuous monitoring, testing, and medication-taking that HIV/AIDS requires is virtually unparalleled. These bureaucratic and clinical complexities are magnified by lingering etiological and epistemological ambiguities surrounding HIV and AIDS. As our study

suggests, the local medical establishment, while trying to simplify the message about the course, manifestations, treatment, and long-term implications of HIV that it addresses to its clients, does so in a way that may hamper rather than facilitate clients' compliance with the instructions that this message contains.

The conundrum surrounding future childbearing and contraceptive method choice by seropositive women, explored in our study, illustrates how such simplification can be potentially counterproductive. The straightforward instruction to use condoms and avoid any pregnancy in the future, pounded into seropositive MCH pregnant clients starting well before the delivery, may prove both psychologically and practically unsustainable. Moreover, the exclusive reliance on condoms, a method that has lower clinical effectiveness than the pill or injectables, especially in a rural sub-Saharan context, combined with reduced duration of postpartum amenorrhea resulting from early cessation of breastfeeding, can increase the risk of subsequent early pregnancy rather than reduce it.

Our study stressed the role of women's support groups and of activists who typically coordinate these groups' meetings and also work with women individually in adapting these oversimplified directives to the uncertainties and contingencies of real life. Community involvement has been noted to improve coverage of and adherence to HAART and PMTCT in Mozambique as well as elsewhere (e.g., Chandisarewa et al. 2008; Jamisse et al. 2008; Teasdale et al. 2008). However, we see these informal and semi-formal activities not merely as logistical enhancement and extension of formal services, but rather as cultural mediation between two distinct and distant worlds—that of health providers and that of their clients. In western settings, the cultural incompetence of health workers and resulting miscommunication between providers and patients has long been identified as a critical factor in health care, especially for socially disadvantaged groups (Betancourt et al. 2005; Welch 2001). In the setting examined here, community activists and peer networks help bridge the competence gap by culturally "translating" and adapting the directives of the clinic staff.

The findings and commentary presented in this article call for further research on the place of health care institutions in the connections between VCT/PMTCT/HAART and childbearing. As PMTCT and HAART services in the study setting rapidly expand, we intend to conduct a more formal, longitudinal examination of how increased client flow, the segregation of seropositive MCH clinic clients, the simplistic yet coercive directives that these clients receive from health care providers, and the informal input offered through support groups and individual interactions with activists and peers shape women's and their partners' perceptions of their health, their preferences regarding future childbearing, and their ability to fulfill these preferences. Understanding these complex dynamics is critical for the success of PMTCT, HAART, and more broadly for the success of the entire range of medical, behavioral, and social interventions aimed at mitigating the impact of HIV/AIDS.

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