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Patient-led partner notification for syphilis: Strategies used by women accessing antenatal care in urban Bolivia

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Abstract

Maternal syphilis adversely affects close to one million pregnancies worldwide every year with consequences that may include spontaneous abortion, stillbirth, neonatal death, premature birth, neurological impairment and bone deformities of the neonate. In Bolivia, the maternal syphilis rate has been estimated at 4.3% among women with live births and 26% among women with stillbirths. Partner notification is critical to the prevention of maternal re-infection and vertical transmission of syphilis. Patient-led partner notification, also known as patient referral, is the recommended starting point for partner notification programs in resource poor settings because it requires less infrastructure and provider involvement. Though patient referral requires a higher level of engagement on the part of individuals, few studies have examined, in depth, the process of patient-led notification. Further, we found no studies of this type conducted in Bolivia, a country where culturally acceptable and appropriate interventions are needed to control maternal syphilis.

This study examined partner notification, for the first time, from the perspective of women accessing treatment for maternal syphilis in Bolivia. Semi-structured interviews were conducted with 18 women who had attempted or planned to attempt notifying their partner. The interview guide was designed to investigate the experience of patient-led partner notification for syphilis with particular emphasis on the strengths and capacities of the participants. Accordingly, we applied an existing theoretical model for individual empowerment in the analysis of the interviews with the participants. This emphasis on the positive, solution-finding capacities of the participants allowed us to investigate the ways in which participants took control over an aspect of concern to their health. More studies are needed which examine successful patient-led strategies for partner notification and their connections with long-term health outcomes.

Keywords: Partner notification; Patient referral; Maternal syphilis; Bolivia; Psychological empowerment

Introduction

Syphilis remains endemic in areas of Africa, Asia and Latin America where it is estimated that 11 million of the 12 million new adult cases of syphilis occur annually (WHO, 2001). Syphilis is a bacterial sexually transmitted infection (STI) which, when left untreated, can cause long-term complications of the musculo-skeletal, cardiovascular, and/or neurological systems. Additionally, untreated syphilis has been associated with a significant increase in HIV transmission (Fleming & Wasserhelt, 1999).

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Syphilis can have particularly negative consequences for newborns. It is estimated that maternal syphilis adversely affects close to 1 million pregnancies every year, surpassing other major neonatal infections including HIV and neonatal tetanus (Walker & Walker, 2004). Consequences of maternal syphilis infection include spontaneous abortion, stillbirth, neonatal death, premature birth, neurological impairment, and/or bone deformities of the neonate (Gardella, 2003; Genc & Ledger, 2000). In Latin America, data on STI prevalence are scarce due to passive and unreliable reporting systems (Gerbase et al., 1999). The Pan American Health Organization (PAHO, 2004) estimated that in 2002, prevalence of maternal syphilis in Latin America and the Caribbean ranged from 1.78% in Cuba to 6.21% in Paraguay with an overall regional prevalence of 3.1%. In Bolivia, a study of seven maternity hospitals detected maternal syphilis in 4.3% of women with live births and 26% of women with stillbirths (Southwick et al., 2001). Unpublished data from the Population Council's quantitative partner notification study indicate that the prevalence of maternal syphilis in Bolivia is approximately 5%, with even higher rates in some areas (C. Diaz Olavarrieta, pers. commun., 30 August 2006).

Globally, women's social and economic status in relation to their male sexual partners have conferred an increased vulnerability to STIs and HIV (Heise & Elias, 1995), and gender is increasingly recognized as an important determinant in reproductive health and health-seeking behavior (Currie & Wiesenberg, 2003; WHO, 2002). Due to myriad socioeconomic, biological, and cultural factors, women often carry the greatest burden of STIs (Holmes et al., 1999), and STIs are the second leading cause of disease, death, and healthy years of life lost by women of reproductive age in developing countries (World Bank, 1993).

Bolivia is located in central South America and is one of the most geographically and culturally diverse countries in Latin America. With over 8 million inhabitants, it remains one of only three Latin American countries whose largest population segment is comprised of unmixed Amerindians. The largest of the indigenous groups are the Quechua (30%) and Aymara (25%), with mestizo (mixed white and Amerindian ancestry) making up another 30% of the population. Though health indicators have steadily improved over the last 30 years, in 2003, 55% of the population lacked access to improved sanitation, and in 2002, 21% were undernourished (compared to 28% in 1992). While maternal and child health indicators continue to improve, maternal mortality rates remain unacceptably high. In 2000, there were 420 maternal deaths per 100,000 live births compared to the US 1999 rate of 12 per 100,000.

In 1998, the Bolivian Ministry of Health and Social Welfare upgraded its national maternal health insurance program (the SUMI—Seguro Universal Materno-Infantil) to include screening and treatment for maternal syphilis. Since the mid-1990s the SUMI has guaranteed to all Bolivian women, free pregnancy, labor, and newborn services. However, the program does not cover the cost of syphilis treatment for the partners of antenatal clients, and a review of congenital syphilis programs found the coverage of care to be inconsistent (Deperthes, Meheus, O'Reilly, & Broutet, 2004).

Partner notification, followed by partner treatment, is critical to the prevention of maternal re-infection and vertical transmission of syphilis to the newborn (Gardella, 2003; Schmid, 2004; Walker & Walker, 2004). Since penicillin became available in 1943, partner notification, has been a widely used strategy for preventing the spread of syphilis in the population, preventing re-infection of the identified case (index patient) and preventing long-term complications in the partner(s). The main partner notification strategies are provider referral, in which a health professional notifies the sexual contacts of an index patient; patient referral, where the index patient notifies sexual partner(s) of possible exposure; or contract/conditional referral, a combination of patient and provider referral (Holmes, et al., 1999).

Patient referral is the recommended starting point for partner notification programs (WHO, 1989) and is considered the most feasible for developing countries (Mathews, Coetzee et al., 2002). Still, much of the evidence base for effective partner notification strategies comes from research in industrialized countries (Mathews, Coetzee et al., 2002) and often examines provider referral strategies. These strategies usually depend upon the use of telephone contacts, identifiable street addresses, and staffing to follow-up with the index patients' sexual partners; infrastructure that is not consistently available in Bolivia. Much of the literature related to partner notification in developing countries is concerned with HIV sero-status disclosure throughout regions in Africa and parts of Asia, and we

found no studies that examined patient referral for a curable STI in a Latin American country.

Though there is evidence that women exercise power in different, and often overlooked, situations (Blanc, 2001), the literature on partner notification has rarely examined the ways in which women take control over their own reproductive health and that of their families. The success of partner notification strategies has traditionally been measured by the number of partners presenting for treatment per index patient although it has been recognized that a number of factors make it problematic to accurately count the number of partners that seek treatment due to partner notification (Mathews, Coetzee et al., 2002). The successful strategies that women use to negotiate patient referral are infrequently reported in the research literature though the risks and barriers have been examined extensively (Gichangi et al., 2000; Maman et al., 2001; Moyo et al., 2002). In a South African study of patient referral for STIs, researchers found that although 38–44% of female index patients reported ever having been abused by a sex partner, only 4% reported that they would prefer not to notify a partner in order to avoid abuse (Mathews, Guttmacher et al., 2002). Yet there was no investigation of risk reduction or strategies implemented by participants. Additionally, though several studies have found that women in resource poor settings have comparable patient referral rates to their male counterparts (Koumans et al., 1999; Moyo et al., 2002; Sahasrabuddhe et al., 2002), little attention has been paid to the effective strategies being carried out by them.

In an effort to improve partner notification and ensure a basic standard of care, the Population Council added a patient referral component to a 2004 study that examined the acceptability and feasibility of a rapid strip test for the detection of maternal syphilis. The study, of which this qualitative study is a component to, took place in selected rural and urban health centers across Bolivia. Preliminary results suggest that, with basic standard of care, including counseling on patient referral and a partner notification card, women demonstrate high rates of success (roughly a 75% partner return rate). In a setting in which a majority (82%) of respondents to a nationwide survey reported that the home is a place of "great" or "some" risk for women and children (Davila, 1995), investigation into the successful patient referral strategies put in motion by female participants may deepen our understanding of the dynamics of partner communication and the power that women exert, or are unable to exert, in sexual relationships.

This study examined, for the first time, patient referral from a positive, capacity focused perspective in Bolivia. In contrast to what Kretzman and McKnight (1993) refer to as traditional needs-based assessments, which have the effect of creating "negative mental maps" of communities, the goal of capacity-focused assessments are to purposefully recognize basic community wisdom in intervention planning. By taking this perspective, we consciously place at the forefront the assumption that people in resource poor settings overcome difficulty on a daily basis. This study explored, in-depth, resiliency strategies implemented by study participants. We examined these strategies in order to gain a richer understanding of the phenomenon of patient referral and to contribute to a greater understanding of patient-led STI prevention strategies and their relevance to the lives of women in developing countries.

Method

Research design

We selected qualitative, semi-structured interviews in order to gain a rich description of the phenomenon of patient referral from the perspective of women in urban Bolivia. This method for data collection is often used when the questions that need to be asked are known, but the answers are unpredictable (Morse & Field, 1995).

Participants

This study drew upon participants already enrolled in a larger feasibility and acceptability investigation on the use of new technologies for screening and treatment of maternal syphilis. From this group, 19 antenatal clients, already diagnosed with maternal syphilis, were selected and gave consent to participate in the interviews. To ensure a broader understanding of the experience of partner notification, a diverse group of participants was selected from four maternity hospitals in the provinces of El Alto, La Paz, and Santa Cruz. As shown in Table 1, most of the women were of low socioeconomic status, and many spoke local dialects as well as Spanish in the home. We focused on the diverse experiences of women in *urban* Bolivia and selected participants represented a variety of ages, educational levels, and marital status (Table 2). Of

Table 1
Participant characteristics compared to urban Bolivia

Economic conditions	Participants	Urban bolivians[a]
High	11.1[b]	50.8[c]
Low/Medium	88.9	49.2
Languages spoken at home (women)		
Spanish	100	68.8
Aymara	44.4	12
Quechua	22.2	15.9
Guarani	0	.2

Education	Women	Partners	Women	Men
No schooling	0.0	0.0	13.4	3.2
Grade school	44.4	16.7	38.8	33.4
High school	55.6	38.9	27.3	38.7
Technical/college	0.0	27.8	19.9	24.6
Missing data	n/a	16.7	n/a	n/a

Note. All numbers are expressed in percentages.

[a]Instituto nacional de estadistica—Bolivia. Available from http://www.ine.gov.bo

[b]Participants were considered "High" if the home was constructed of brick, cement, or concrete; the bathroom was tied in to a sewage system; and the home had more than two rooms. All others were classified as "Low".

[c]From 2001 census. Conditions were ranked "High" according to three observations about the home: quality of construction, habitability, and the level of access to basic municipal services. The average of these three rankings returned the result low, medium, or high.

Table 2
Demographic characteristics of participants

Age:	*n* = 18
18–25	8
26–31	4
32–42	6
Occupation	
Housework exclusively	3
Works outside the home	15
Partnership status	
Single/separated	4
Common law married	13
Married	1
Partner notified	16
Partner presented for treatment	14

the 19 interviews, 18 were considered complete and eligible for inclusion based on the criterion that they had notified a partner or they planned to notify a partner in the near future. At the time of the interview, each of the women had received individual counseling on syphilis, treatment completion as designated in the World Health Organization's (2003) guidelines, and partner notification by a psychologist. The timing of the interviews in relation to their diagnosis varied depending on the participant's schedule. All women had at least 1 week to contemplate and attempt partner notification following diagnosis and counseling.

Procedure

Initial approval for data collection was obtained by human subjects review committees at The Population Council in New York and the Bolivian Ministry of Health. The San Jose State University Human Subjects Institutional Review Board approved a subsequent analysis of interview data for the purpose of this study.

Women returning for their second and third doses of penicillin were asked to participate. Before each interview, participants were read the consent form and given the opportunity to ask questions or voice concerns about any aspect of the study. Though the consent forms were written both in Spanish and in local dialects (Aymara, Quechua and Guarani) all the participants spoke Spanish. After signing a consent form, women were asked a series of open-ended questions related to their experience of being diagnosed with syphilis, being counseled on partner notification, and notifying a partner.

As part of a larger feasibility and acceptability study, participants were offered free treatment for their partners and counseling by trained professionals on notifying a partner. Additionally, the participants were offered partner notification cards as part of a larger quantitative study on partner notification strategies. The cards contained information notifying the recipient that they had come in contact with an infection and that they should go to a specific location for care.

Interviews were conducted between December 2004 and January 2005 by a Bolivian female social worker who has worked extensively in women's health and domestic violence and is trained in interviewing techniques. All women were interviewed in a private office at the maternity center after receiving treatment for syphilis. Women who gave consent for the interview to be taped (all of the participants in this study) were recorded and most of the interviews lasted approximately 1 h. All

participants had the opportunity to ask questions of the social worker at the end of the interview. Appropriate referrals to health organizations, such as community-based services for domestic violence and substance abuse programs, were offered as needed.

Interview instrument

We developed the semi-structured interview guide with an advisory group comprised of researchers in Bolivia, Mexico, and the United States. Existing studies on patient referral in developing countries (Gichangi et al., 2000; Maman et al., 2001; Nuwaha, Faxelid, Neema, Erikkson, & Hojer, 2000) informed the scope and content of the questions, specifically those having to do with participants' socio-demographics and attitude toward partner notification. Though PAHO has partner notification guidelines, there is little evidence that these guidelines are implemented in routine practice. Literature on power in sexual relationships (Blanc, 2001; Currie & Wiesenberg, 2003) informed questions relevant to the process and context of communication with a partner. We conducted key informant interviews with professionals in domestic violence in Bolivia, and focus groups with Bolivian women, their partners, and health professionals in order to enhance the interview guide.

We organized the guide into six sections: socio-demographic background, general aspects of partner notification, barriers to partner notification, resilience strategies, partner reactions, and recommended alternatives to partner notification. Questions were open-ended and were often asked as if the participant were going to be giving advice to a friend who needed to notify a partner in order to draw the answers out from an empowered view. To gain a deeper understanding of the context, we also asked women to describe their experiences at various stages and settings; from pre-contemplation of partner notification, to planning the notification, to acting on their plan and the reactions from their partners and any other people that may have been present.

Data analysis

Zimmerman's (1995) model of psychological empowerment provided the overall conceptual basis for analysis of this study. The model explores empowerment—the act of gaining mastery over an issue of concern—at the level of the individual, through three interdependent constructs relating to perceived personal control, participation with others, and a critical awareness of enabling and impeding factors.

All interviews were conducted in Spanish, transcribed verbatim, and then translated into English by one of the members of the research team. Analysis of the transcribed interviews was conducted according to the framework outlined by Morse and Field's (1995) qualitative methods for health professionals. This framework involves the four creative and cognitive processes of comprehending, synthesizing, theorizing, and recontextualizing.

At the beginning of the analysis phase, each interview transcript was read and coded line-by-line using Microsoft Word. Some of the initial codes that emerged included: strategies, benefits, communication, partner character, fear, support, and attitude. Data were then separated by question in order to compare responses across different participants. The dominant categories of themes identified were: motivation for notifying, taking control over the notification, statements about the social context of the disease and notification, and reducing risks. These were compared back to the original interviews in order to ensure fit within the context of the participant's account of her experience. Finally, we went back to the literature to find existing theoretical frameworks that could organize the dominant themes from our analysis.

Results

At the time of the interviews, 16 of the participants' partners had been notified, and 14 had initiated treatment for syphilis. One of the women reported that her partner did not plan to continue with the treatment because he did not believe he had the syphilis infection. Most of the participants (Table 2) identified themselves as 'juntada' or 'concubina' (common-law partner). Some of the women talked about previous marriages or previous partners ($n = 12$), while others stated that their current partner was the only person with whom they had ever had sexual relations ($n = 5$). Many participants ($n = 8$) stated that their current partner was the source of the infection, however a few ($n = 3$) admitted that they most likely had transmitted syphilis to him.

Though the primary focus of this study was on patient referral, several of the participants discussed

individualized strategies involving the health professional. Most women notified their partners in private away from the health clinic. However, four participants notified their partners at the health clinic, and two had the health provider notify him in her presence. Some participants chose to fully disclose to their partners that they were infected with syphilis ($n = 11$) and others withheld information about the infection, telling them to go to the clinic to discuss something with the health provider ($n = 4$). The two who had not yet notified their partners, expressed a strong intent to fully disclose the syphilis infection and stated a plan for doing so in private.

Though most of the partners eventually agreed to the treatment, initial partner reaction to the notification ranged from being calm and understanding ($n = 6$), silence ($n = 2$), denying the possibility of having the infection ($n = 3$), blaming her for the infection ($n = 4$), and/or becoming aggressive with insults and shouting ($n = 3$). Two of the participants reported that their partners left. However, both stated that it was only partly due to the notification and partly due to a bad relationship. Though there was no physical violence reported as a result of the notification, one of the women described her partner as psychologically abusive, both prior to and during the notification, and several of the participants ($n = 7$) stated that they had expected violence or yelling from their partners as a result of the notification. All of the participants reported some negative emotions and/or disruption due to the syphilis diagnosis and/or partner notification including: fear of violence, fear that the infection was like AIDS and could not be treated, fear that they would have an unhealthy baby that they could not take care of, feelings of distrust within their relationship, feeling ashamed, and/or feeling depressed.

Psychological empowerment: intrapersonal, interactional, behavioral

In general, partner notification was described as something a woman could do to protect her health and the health of her family. We used an existing framework of psychological empowerment (Zimmerman, 1995) in order to synthesize the experience of partner notification as discussed by the participants. Zimmerman's psychological empowerment model is described as a nomological network of constructs for measuring empowered outcomes. We used the constructs of Zimmerman's model in this study to examine the process of partner notification and the varying degrees to which women may become empowered by taking an active part in ensuring the health of their families. We found Zimmerman's model to be the best fit for our results because it is concerned with the individual, while at the same time, includes the sociopolitical and contextual factors in which the individual acts. This framework incorporates three constructs *intrapersonal*, *interactional*, and *behavioral*. The conceptual and behavioral processes involved in partner notification which emerged from the interviews included: ones attitude about partner notification and her perceived self-efficacy (intrapersonal), an interpersonal and social analysis of her specific context (interactional), and the actions she took to implement the notification (behavioral).

Intrapersonal

The *intrapersonal* construct encompasses the internal aspects of self-efficacy and beliefs about one's ability to achieve a set goal. From the data, this construct includes the themes of (a) participants' attitudes about partner notification, (b) their perceptions of personal responsibility, and (c) the cost vs. benefit perception of risk discussed in the interviews. Though expectations of a partner's reaction to notification were generally negative, attitudes toward partner notification were mostly positive and were constructed as a personal obligation—something a woman must do in order to prevent re-infection, ensure a healthy baby, and/or be honest with her partner. Several participants acknowledged that women will be afraid to tell a partner because he will not understand her, he will hit her, or he will blame her. However, they said even these women must notify their partners. As one of the participants said: "*Yes this is a responsibility, telling him that we both have to get treatment and then we have to be more careful.*"

Having a sick baby was seen as both an emotional and economic risk for many of the participants, making partner notification a valuable preventive tool. In most of the interviews, women discussed a lot of fear in relation to the syphilis infection and its potential to affect her health or the health of her unborn baby. Most participants emphasized concern for the health of the baby, as one woman stated: "*since I am pregnant, the worry had been for the child, the baby, more than anything else.*" One woman illustrated the stress that was caused due to

the presence of the infection and how willing many of the participants were to take action to ensure the health of the baby:

> I went to the church and I started to cry so much and I was saying to God, you know I can not stand this… don't forget me now, with this. I asked, 'If my baby is born unhealthy I would prefer that you take it because I won't be able to stand it.'

Participants discussed both the perceptions of risk due to notifying a partner and their perceptions of risk due to withholding that information from a partner. In general, participants acknowledged that the partner notification would be difficult and potentially risky to women, however, many prioritized preventing re-infection and having a healthy baby over protecting themselves from a negative reaction from their partner. The intrapersonal contemplation of risk is illustrated in the following participants statement:

> Because…maybe they are afraid of their partner's reaction, it depends how the partner is. He could hit her, maybe he could yell at her, maybe there would be a fight. But if it is that she doesn't want to get re-infected, then of course, she has to tell him.

Potential risks of not notifying a partner included re-infection or delivering an unhealthy child. Several women also rationalized the risk of notification saying that they thought their partners' would eventually find out through someone in their community, and then the reaction would be worse than if they just told them themselves.

> It was a little difficult telling him, but, I had to tell him because if I didn't, and he didn't get the treatment, it would have been my fault. And then if he didn't get the treatment he would just turn around and re-infect me all over again. And if someone hides it from their partner, maybe one day he finds out in some other way.

Regardless of how they perceived their partner responding, many of the women's accounts of their thoughts prior to the communication reflected a perception that notification was the most viable option and the one way in which they could be proactive in protecting their own health and the health of their family.

Interactional

The *interactional* component is described as the critical awareness of the resources and constraints within one's community or social environment, and emerges from the data as (a) her analysis of her partner and (b) the social constraints to notification. Throughout many of the interviews, partner notification was constructed in both interpersonal (dependent on both her and her partner) and social (related to societal and community factors) contexts. Many participants discussed the partner and her analysis of his character (whether he is understanding or not, if he is usually aggressive or jealous) as an important variable in the communication.

In general, the process of notification was described as dependent on the character of the partner and the participant's ability to "*understand her partner*." One participant illustrated this concept, saying:

> The way he is notified depends on the partner. From my experience, there are partners that don't understand and they oppose anything, they don't care if they are infected or not, or if their wife is infected they don't care.

Women discussed different types of partners as those who "*are understanding*," partners who "*don't understand*," and partners who "*have their moments.*" Some of the participants stated that most partners are capable of reacting in both a positive and/or negative way depending upon the skill of the woman and her ability to "*make him understand*." When asked what advice they would give to other women, participants' responses reflected an analysis of their partners and an awareness of how they would respond to the notification at different times of the day, in different settings, and with different attitudes from her. One participant gave detailed advice about notifying a partner and making him understand, saying:

> I would advise other women to find the right way or the right moment for them to talk. And so start with something sweet, something loving. I think that this way he would understand her. This is what I have found with my partner. I looked for the right moment, when he could listen to what I was going to say. Because there are partners that get home and are tired from work and so they start yelling and then there are problems. The partner feels trapped or he says, 'why are you telling me these stupid things?' and

> they feel more and more caught up in other problems at work or at home or with money. But she should wait, I think, and speak with love and with concern, that way he would be more understanding.

In many of the interviews, advice offered by participants reflected a perception of partner notification as a process determined by the woman's ability to control aspects of the notification and her partner's capacity to listen and understand her. Based on these two variables, participants tailored interpersonal strategies for notifying a partner of the syphilis infection, and maximizing the possibility that he would seek treatment. Many women described the knowledge that women have about their partners and how they can use this knowledge to their own advantage to facilitate the notification.

> Many times the wife knows how he is going to react, and I think there are men that just have their moments. For example, when the wife wants to ask for money, she prepares a little food, she waits for him cleaned and bathed; and so it is like this, in order to get something.

Several participants also discussed their understanding of social factors such as being a woman, being poor, being young, and/or lacking education that impact either their ability to implement partner notification or that put them at a greater risk for syphilis infection in the first place. One woman explains:

> Sometimes, because someone doesn't have any money, so they don't go get an exam. Like in my house, I have a sister that has never gone to the doctor to get checked.

Many participants stated that syphilis was more than a personal medical condition, but a disease affecting poor people, people in rural areas, people who are uneducated, and women. Almost all of the participants either directly or through personal accounts, discussed how women are the most vulnerable to STIs due to their partners' infidelity, their economic dependence on men, and/or their status in their relationships. Women discussed this issue in a variety of ways and with different levels of complexity. One woman said that she would advise other women to get regular check-ups by the doctor because, "*men are not saints*." Several others stated that some women have difficulty talking to their partners because some men will not listen to them. One woman, framed notification in regards to gender relations:

> There is always this machismo among men, like they don't value you and they think that they know everything, and they think that they are the boss. But as women, as a wife, we have the right to speak up about these things and to have opinions. And we must, like brave women we must, if we are going to be able to confront these things. And if we are not brave and if we keep having fear, we will always be sick. Always we will be sick with these diseases.

Throughout the participants' accounts, partner notification was constructed as an interpersonal issue dependent upon the woman's ability to critically understand her partner and speak to him in a way that he would understand. However, in several of the interviews, partner notification became also a social issue tied to economic status and the woman's right to communicate important health information.

Behavioral

The *behavioral* component includes the efforts taken toward fulfillment of the individual's goals. Actions that women took to directly influence their health outcomes included (a) notifying her partner of the syphilis infection, (b) planning a strategy to protect her health if her partner refused to seek treatment, and (c) educating family and community members about the infection and its treatment.

Women tailored partner notification strategies to fit their individual situations such that none of the partner notification processes were identical. Actions within partner notification varied according to the amount of information given, the people involved, and the tone and mood of the communication. Women discussed both telling her partner everything she knew about the infection "*just like the Dr. explained it to me*," and withholding certain information from their partners. Several women discussed the strategy of withholding information either about the source of the infection or the fact that it is sexually transmitted similar to the participant below:

> I was thinking that he was going to blame me, so I didn't tell him that this is the disease you have. I thought he would just say to me, 'You, you had your husband before and your husband was sick and so you must have infected me!' This is why I

didn't tell him, "This is the infection you have," I just gave him the card and said to go to the clinic, that the Dr. wants to talk to you.

As discussed in the *interactional* section, many participants emphasized understanding their partners and planning the notification accordingly. This understanding often dictated the tone that she took with her partner during the notification. Women discussed the strategies of both avoiding placing blame during the notification in order to prevent him from getting defensive and, conversely, using blame to tell him directly and leave it to his "*conscience*" to make him get treatment.

Most participants notified their partners one on one, saying that involving other people in the process, even a health provider, would only make things worse. One of the participants explained it clearly: "*Like I said, the discussion is between the couple, it is only between the two of them, not with anyone else. Because with another person it is not the same.*"

Even if a woman chose to tell her partner in private, most of the participants discussed the usefulness of the partner notification card. The card was used as a reminder to her to notify, a way to start the conversation, and a way of making the treatment seem more urgent to her partner. Several participants discussed how they used the partner notification card to increase their credibility much like the participant below:

Perhaps he wouldn't have believed me or maybe I wouldn't have been able to tell him as strongly. But with [the notification card] he felt more obligated. It helped, because I think that he wouldn't have been convinced, he may have said like yeah I'll go some other day. But with this he said, "I have a day off, let's go."

Three of the participants reported that their partner's had not yet received any treatment and one reported that he refused to complete his second and third doses. All of these women discussed at least one strategy that they would implement in order to reduce their risk of re-infection. These harm reduction strategies included moving away from him, insisting on condom use, and refusing to have sex until he is cured. One of the participants described how she would respond to an unwilling partner: "*If he does not want to get the treatment I am thinking I will separate from him. And if he does get the treatment, then I will have to be a little more careful.*"

Beyond the direct actions of notifying a partner, several participants discussed the importance of being proactive in their communities to spread awareness of syphilis infection and the available free treatment for pregnant women. In this respect, women became not only an educator to their partners, but community educators attempting to use their new knowledge to promote the health of others. One participant illustrates this point with the statement below:

Now I feel at peace since we have finished the treatment, you know? And since it seems that it is poor people who don't know about this disease, I am going to go telling people that don't know, that there is help, that there is free help. Since I have received this treatment, I am going to tell them that there is help against this disease.

Several women saw themselves as part of a larger group of people affected by syphilis, and reported an obligation to use their new knowledge to help others. Women discussed their actions of spreading this information to daughters and younger people who are unaware of the infection.

Yes, the doctor explained it all very clearly to me, that this is what you have to do, because not all people know how to do this…And this helped me to teach my daughter how to be careful with herself too.

In summary, partner notification was a difficult process for many of the participants, but also a way for women to gain control over an aspect of their health and the health of their families. Women contextualized the partner notification in their assessment of personal risks and most stated that notifying a partner is something that women must do regardless of how difficult they perceive it to be. The action of notifying a partner was dependent upon the participant's ability to understand her partner and therefore to anticipate the best way to tell him. Additionally, in several of the interviews, partner notification and syphilis infection were connected to larger community and social issues. Women reported taking action to promote health in their communities through notifying their own partners, educating their family members, and spreading awareness among the most vulnerable members of their communities.

Discussion

This study investigated the successful strategies that women in Bolivia use, under specific facilitating conditions, to notify their partners of syphilis infection. Consistent with the findings of the Bolivian study on family violence (Davila, 1995), several of the participants reported some level of fear or negative expectation regarding notifying a partner. Further, huge economic disparities existing in Bolivia mean that most women in the country must overcome difficult life situations, aggravated by lack of resources and poverty, as part of their daily lives. Still, the women in this study rationalized the risk of notification by the perceived benefit of having their partner treated for syphilis and therefore, preserving her health and the health of her baby.

Research examining women's health-seeking behavior has shown that providing healthcare alone is not sufficient to bring about conditions under which women can improve their health (WHO, 2004), and that we must also examine the social and economic conditions that will lead women to utilize these services as an exercise of their rights. In this study, we looked at the social and economic contexts through the eyes of the participants. Throughout the interviews, women illustrated their awareness of constraints within their relationships including: waiting for the right time to notify a partner, notifying him in a way that will not make him angry, and the difficulty women face in a culture of ''machismo''. Additionally, the economic constraints facing the participants were expressed in terms of: the importance of free treatment, the stress that a partner feels coming home from work, her fear of being abandoned with children to take care of, and the stress one woman describes at the thought of having a baby that is sick and she cannot take care of.

Currie and Wiesenberg (2003) caution that health interventions that take into account only the short-term practical needs of women may further contribute to their subordination by ignoring the long-term strategic gender interests. The United Nations has recognized in its Millennium Development Goals, that the empowerment of women and promotion of gender equality are preconditions for the elimination of poverty worldwide. A recent meta-analysis on female-initiated methods for STI/HIV protection has raised important concerns related to their long-term effects on gender relations and female empowerment (Mantell et al., 2006). Mantell and colleagues acknowledge the role of gendered norms in both necessitating the push for more female-initiated methods of STI/HIV prevention and regulating their acceptability in varying cultural contexts. They argue that female-initiated methods still adhere to the rules of gendered norms, even as they push upon the boundaries of those norms toward more equitable and empowered outcomes for women.

In the case of partner notification, initiated by pregnant women in Bolivia, we see a similar tension in outcomes. The participants in this study show us the ways in which women take control over an area of concern to their health and, possibly more important to the female participant, the health of their families. The ways in which the women in this study act are in direct association with their analysis of their position in their partnership. Their ability to negotiate the communication of important and sensitive health information demonstrates at once their power and, arguably, their powerlessness. By using Zimmerman's psychological empowerment model we are taking an active role in drawing attention to the ways in which women express power in their relationships.

In this paper, we used the psychological empowerment model as a preliminary step toward understanding women's empowerment and their ability to protect their health and the health of their families through varying patient referral strategies. While we did not engage in a participant-by-participant analysis of the levels of empowered outcomes for each woman, we began an examination of what is necessary in terms of individually held resources (knowledge, critical awareness of context, social networks) in order for those individuals to gain access to systemic resources (testing, counseling, free treatment for their partners).

As part of a larger feasibility and acceptability study on the use of new technologies for screening and treatment of maternal syphilis, participants were provided access to resources such as counseling by trained professionals on notifying a partner, free partner treatment, and a partner notification card, that, to date, are not widely available to most women in Bolivia. For example, there is currently no widely used protocol or funding to ensure all women receive counseling on the notification of a partner and although the use of partner notification cards has been shown to be an inexpensive, easy to implement strategy, with qualitative data from this

study illustrating their acceptability, it is not yet standard practice in Bolivia.

Additionally, in this study, we included only participants who had implemented or had an affirmative plan to implement partner notification. We chose participants who were already motivated to notify their partners and, by design, did not include the experiences of women who may face even greater barriers to notification. This design was chosen in order to specifically examine the experience of partner notification through the lens of empowerment. Therefore, the results are not intended to argue for non-voluntary partner notification interventions or to argue that all women have the ability to successfully notify a partner. Further, partner notification programs where there is no strategy in place to treat infected partners presenting for care is ineffective and, possibly, unethical.

This study examined a behavior related to resources brought into the relationship within the context of pregnancy. Several women discussed in the interviews that pregnancy changes many things in the relationship. One woman said that her partner would not hit her specifically because she was pregnant. An exploration of the shift in relational power and expectations during the course of pregnancy in Latin America is needed to bring to light the ways in which pregnancy may or may not be a window of opportunity for female-initiated health protection interventions.

Many women in this study discussed several indirect benefits of partner notification: that it strengthened their relationship, taught them how to communicate more effectively, and gave them the means to address fidelity in their relationships. Research is needed to examine how these benefits carry into other aspects of women's lives and to establish best practices to encourage women to communicate important health information in their relationships and their communities. By incorporating a capacity framework in the context of research into women's health, we can begin to see more clearly, the ways in which women are sources of power and influence.

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References

Blanc, A. K. (2001). The effect of power in sexual relationships on sexual and reproductive health: An examination of the evidence. *Studies in Family Planning*, *32*(3), 189–213.

Currie, D., & Wiesenberg, S. (2003). Promoting women's health seeking behavior: Research and the empowerment of women. *Health Care for Women International*, *24*, 880–899.

Davila, A. (1995). *Informe final de la ''Encuesta sobre violencia domestica''*. La Paz: Centro de Informacion y Desarollo de la Mujer.

Deperthes, B., Meheus, A., O'Reilly, K., & Broutet, N. (2004). Maternal and congenital syphilis programmes: Case studies in Bolivia, Kenya and South Africa. *Bulletin of the World Health Organization*, *82*(6), 410–416.

Fleming, D., & Wasserhelt, J. (1999). From epidemiological synergy to public health policy and practice: the contribution of other sexually transmitted diseases to sexual transmission of HIV infection. *Sexually Transmitted Infection*, *75*, 3–17.

Gardella, C. (2003). Sexually transmitted infections in pregnancy: Treatment options. *Current Treatment Options in Infectious Disease*, *5*, 53–61.

Genc, M., & Ledger, W. J. (2000). Syphilis in pregnancy. *Sexually Transmitted Infection*, *76*, 73–79.

Gerbase, A., Toscano, C., Titan, S., Cuchi, P., Gonzales-Salvatierra, R., & Zacarias, F. (1999). Sexually transmitted disease in Latin America and the Caribbean. *PanAmerican Journal of Public Health*, *5*(5), 362–370.

Gichangi, P., Fonck, K., Sekande-Kigondu, C., Ndinya-Achola, J., Bwayo, J., Kiragu, D., et al. (2000). Partner notification of pregnant women infected with syphilis in Nairobi, Kenya. *International Journal of STD AIDS*, *11*, 257–261.

Heise, L., & Elias, C. (1995). Transforming AIDS prevention to meet women's needs: A focus on developing countries. *Social Science & Medicine*, *40*(7), 931–943.

Holmes, K. K., Sparling, F., Mardh, P., Lemon, S., Stamm, W., Piot, P., et al. (1999). *Sexually transmitted diseases*. New York: McGraw Hill.

Koumans, E. H., Barker, K., Massanga, M., Hawkins, R. V., Somse, P., Parker, K., et al. (1999). Patient-led partner referral enhances sexually transmitted disease service delivery in two towns in the Central African Republic. *International Journal of STD AIDS*, *10*(6), 376–382.

Kretzman, J., & McKnight, J. (1993). *Building communities from the inside out: A path toward finding and mobilizing a community's assets*. Evanston, IL: Institute for Policy Research.

Maman, S., Mbwambo, J., Hogan, M., Kilonzo, G., Sweat, M., & Weiss, E. (2001). *HIV and partner violence: Implications for HIV voluntary counseling and testing programs in Dar es Salaam*. Tanzania: The Population Council Inc.

Mantell, J. E., Dworkin, S. L., Exner, T. M., Hoffman, S., Smit, J. A., & Susser, I. (2006). The promise and limitations of female-initiated methods of HIV/STI protection. *Social Science and Medicine*, *63*, 1998–2009.

Mathews, C., Coetzee, N., Zwarenstein, M., Lombard, C., Guttmacher, S., Oxman, A., et al. (2002). A systematic review of strategies for partner notification for sexually transmitted diseases, including HIV/AIDS. *International Journal of STD AIDS*, *13*, 285–300.

Mathews, C., Guttmacher, S. J., Coetzee, N., Magwaza, S., Stein, J., Lombard, C., et al. (2002). Evaluation of a video based health education strategy to improve sexually transmitted disease partner notification in South Africa. *Sexually Transmitted Infections*, *78*, 53–57.

Morse, J., & Field, P. (1995). *Qualitative research method for health professionals*. Thousand Oaks: SAGE Publications.

Moyo, W., Chirenje, Z., Mandel, J., Schwarcz, S., Klausner, J., Rutherford, G., et al. (2002). Impact of a single session of counseling on partner referral for sexually transmitted disease treatment, Harare, Zimbabwe. *AIDS and Behavior*, *6*(3), 237–243.

Nuwaha, F., Faxelid, E., Neema, S., Erikkson, C., & Hojer, B. (2000). Psychosocial determinants for sexual partner referral in Uganda: Qualitative results. *International Journal of STD AIDS*, 156–161.

PAHO. (2004). *Elimination of congenital syphilis in Latin America and the Caribbean: A task within reach*. Pan American Health Organization.

Sahasrabuddhe, V., Gholap, T., Jethava, Y., Joglekar, N., Brahme, R., Gaikward, B., et al. (2002). Patient-led partner referral in a district hospital based STD clinic. *Journal of Postgraduate Medicine*, *48*, 105–108.

Schmid, G. (2004). Economic and programmatic aspects of congenital syphilis prevention. *Bulletin of the World Health Organization*, *82*(6), 402–409.

Southwick, K. L., Blanco, S., Santander, A., Estenssoro, M., Torrico, F., Seoane, G., et al. (2001). Maternal and congenital syphilis in Bolivia, 1996: Prevalence and risk factors. *Bulletin of the World Health Organization*, *79*(1), 33–42.

Walker, D. G., & Walker, G. J. (2004). Prevention of congenital syphilis—Time for action. *Bulletin of the World Health Organization*, *82*(6), 401–402.

WHO. (1989). *Consensus statement from consultation on partner notification for preventing HIV transmission*. Geneva: World Health Organization.

WHO. (2001). *Global prevalence and incidence of selected curable sexually transmitted infections overview and estimates*. World Health Organization.

WHO. (2002). *Integrating gender perspective in the work of WHO*. World Health Organization.

WHO. (2003). *Guidelines for the management of sexually transmitted infections*. World Health Organization.

WHO. (2004). *World report on knowledge for better health: Strengthening health systems*. Geneva: World Health Organization.

World Bank. (1993). *World development report, 1993: Investing in health*. New York.

Zimmerman, M. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, *23*(5), 581–600.