

# **Sociocultural and Behavioral Contexts of Condom Use in Heterosexual Married Couples in India: Challenges to the HIV Prevention Program**

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This article examines sociocultural expectations of sexual behavior and the reasons why not using condoms may be logical to married heterosexual couples in India. Married women who report monogamous sexual relationships with their husbands are a high-risk group for HIV infection in India. Based on the public health model and a population-based perspective on HIV infection prevention, this article illustrates the underlying mechanisms that link the role of women in society, holistic health beliefs, and cultural beliefs about the transmission of HIV with the precursors to nonuse of condoms. The author concludes that promoting condom use requires an emphasis on family health, not only as contraceptives. Challenges for reducing the social stigma and developing a comprehensive policy on HIV prevention and AIDS treatment and care are discussed.

*Keywords:* HIV prevention; AIDS; married couples; condom use; sociocultural context; India

Research on HIV-risk prevention emphasizes the importance of examining population-specific HIV risk factors in sociocultural contexts. Studies are needed to advance our knowledge of how population-specific cultural beliefs influence individual beliefs about the transmission of HIV infection and thus may create barriers to the practice of safe sex behavior, including the use of condoms. Because not using condoms is an HIV risk factor, it is important to know, for example, why Indian married heterosexual women who follow traditional family role values associate condom use with commercial sex workers and are less likely to encourage their husbands to use condoms. To develop effective intervention programs, population-specific studies must address the underlying mechanisms and beliefs that link sociocultural factors and HIV risk behaviors. In doing so, researchers can identify the social- and culture-specific mediating variables appropriate to condom non-use and learn how interventions could affect these variables to initiate changes in condom use to prevent HIV risk behavior. This article focuses on understanding the population-specific beliefs that link the sociocultural context and the HIV risk behavior—not using condoms—among heterosexual married couples in India.

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The author would like to thank three reviewers for their thoughtful comments on an earlier version of this article.

*Health Education & Behavior*, Vol. 31 (1): 101-117 (February 2004)  
DOI: 10.1177/1090198103259204  
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Eighty-four percent of AIDS cases in India are attributed to sexual HIV transmission (other modes of transmission include blood transfusion [3%], injection drug use [3%], vertical transmission from mother to infant [2.6%], and unknown history [more than 7%]).<sup>1</sup> Female-to-male ratio for HIV infection varies from 1:1.2 in high-HIV-prevalent Indian states to 1:3 in low-HIV-prevalent states. A state is categorized as high if prevalence of HIV infection in antenatal women is 1% or more.<sup>2</sup> Heterosexual married women who report monogamous sexual relationships with their husbands are increasingly becoming a high-risk group for HIV. The National AIDS Control Organization (NACO), government of India, predicts that the rate of HIV transmission among heterosexuals in India may increase 2% to 3% per year during the coming decade.<sup>3</sup>

Although the probability of HIV transmission via heterosexual vaginal intercourse is low—about 1 or less per 1,000 sex exposures,<sup>4</sup> the risks of HIV transmission increase exponentially if one partner is exposed to repeated and frequent unprotected sexual acts with an HIV-infected individual during a long time period. Researchers have found that the regular and consistent use of condoms by serodiscordant heterosexual couples may reduce the transmission of HIV infections by 87%.<sup>5</sup> NACO emphasizes the consistent use of condoms as one strategy for reducing the risk of HIV transmission at the population level.<sup>2</sup> Condom use among married couples is, however, low worldwide.<sup>5</sup>

To promote the conscious use of condoms among married couples, it is critical to understand the meaning of the sexual act to both partners as a couple and as individuals within the cultural setting in which the sexual behavior takes place.<sup>6</sup> An understanding of how an individual internalizes the cultural scripts and constructs his or her sense of self and role in the society is essential for initiating changes in sexual attitudes, perceptions, and behavior.<sup>7</sup> Men and women alike may hesitate to adopt behavioral changes that are necessary to reduce their risk of HIV because of real or perceived threats to their culturally sanctioned roles, relationships, and economic survival. No comprehensive study among heterosexual married couples in India has explored how sociocultural factors influence the expectation of sexual behavior, form an individual's beliefs, and link those beliefs with the reasons why unprotected sex becomes meaningful and logical to the individual in that cultural context. This article fills that knowledge gap and examines the key issue from a macro perspective at the population level—the underlying sociocultural factors that influence the sexual behavior-related beliefs and that may act as barriers to condom use in this population. An enhanced understanding of the risks of engaging in unprotected sex can facilitate the development of culturally competent community-based strategies for promoting condom use for HIV risk prevention in India.

This article first describes the population-based perspective pertaining to the public health model as related to HIV infection prevention in the Indian context. Second, the article presents the extent and severity of the HIV/AIDS epidemic in India to illuminate the country's trends in epidemiology and its emergent needs. It then discusses the sociocultural context, social expectations of sexual behavior, and the meaning of condom use in that context and presents the implications of the findings for developing some of the strategies for HIV prevention activities. Published empirical studies and databases, the scientific literature, and presentations at national and international conferences were reviewed to collect data. Empirical and scientific studies on HIV infection and transmission conducted in India were reviewed to gain an understanding of the sociocultural and contextual factors operative within the overall HIV epidemic and to interpret the risks of sexual behaviors. The areas examined included family structure, gender segregation, marriage and procreation, and beliefs and attitudes associated with condom use. In addition, annual reports from population-based HIV and AIDS epidemiology and surveil-

lance databases—created by the World Health Organization (WHO), Joint United Nations Program on HIV/AIDS (UNAIDS), World Bank, and NACO—were reviewed for this article. The first three databases collect data internationally and encompass country-specific data on a wide range of health indicators, including HIV and AIDS; the fourth, data from NACO, pertain specifically to India. Because of the discrepancy between the reported estimates and prevalence data on HIV infection, this article presents data from NACO—the Indian government source for HIV/AIDS data. Finally, the Centers for Disease Control and Prevention (CDC) database, on the links between sexually transmitted diseases and the transmission of HIV, was reviewed to understand the Indian scenario.

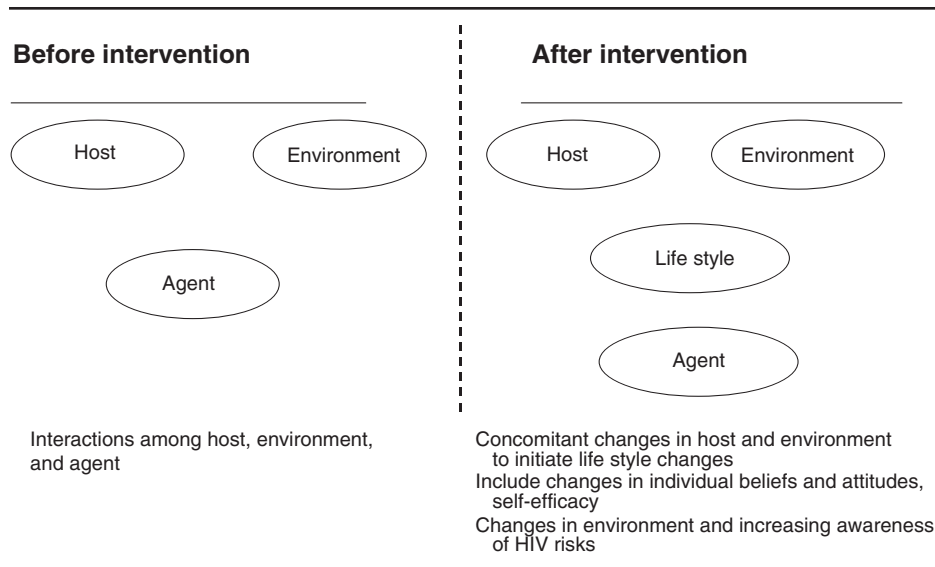
### A CONCEPTUAL FRAMEWORK

The population-based perspective for HIV infection prevention emphasizes changing the prevalence of the risk factors for the entire community rather than screening primarily high-risk groups for intervention.<sup>8</sup> This perspective is especially relevant for examining the HIV/AIDS scenario in India because HIV prevention efforts targeted exclusively to well-recognized at-high-risk groups, such as truck drivers, commercial sex workers (CSWs), and injection drug users (IDUs), may miss other groups of people who are equally at risk for infection but are currently “invisible” to program designers, especially heterosexual married women who have monogamous sexual relationships with their husbands. Also, effective HIV prevention programs in India need to be based on theoretical models that have been shown to be efficacious in research and effective in the field. The emerging theory and practices of population health incorporate the agent-host-environment public health model to explain the interrelationships between multiple determinants of health to develop appropriate health interventions.

Following the public health model, the transmission of HIV in a community is explained by (1) the presence of the HIV infectious agent (virus), (2) the susceptibility of the host (individual) engaging in risk behaviors such as unsafe sex or needle sharing with HIV-positive persons, and (3) the presence of an environment that influences the interactions between the agent and the host.<sup>8</sup> To initiate changes in the susceptibility of individuals to HIV risks, the population-based perspective emphasizes concomitant changes in the individual and the environment for the entire community including those who are potentially at risk for HIV. From this perspective, individual health practices are viewed as influenced and shaped by social expectations and cultural norms, economic conditions, physical environment and living conditions, and personality characteristics.<sup>8</sup> HIV prevention programs to be effective require targeting more healthful lifestyles that include personal habits and decisions within the prevalent sociocultural norms and beliefs. The role of individual and personal lifestyle choices are important determinants of susceptibility to HIV risk. For this reason, population-based and individual-targeted intervention programs are not exclusive with but are complementary in HIV prevention programs.<sup>8</sup>

The population-based framework presented in this article is adapted from L. F. Novick’s public health approach<sup>8</sup> model (p. 29). Determinants of HIV risk behavior before and after initiating HIV prevention strategies are presented on the left- and right-hand side of Figure 1, respectively.

Positive lifestyle changes, as depicted in Figure 1, require concomitant changes in contextual (e.g., social, cultural, and environmental variables) and individual-level fac-



**Figure 1.** Public health approach to HIV infection prevention.  
SOURCE: Adapted from Novick (2001, p. 29).<sup>8</sup>

tors to avoid HIV risks. Theoretical constructs based on social learning theory<sup>9</sup> postulate that beliefs about prescribed societal norms influence and shape health behavior. Unless those beliefs are reconstructed, health behaviors are difficult to change. Although knowledge of HIV risk factors is essential, efforts to initiate changes in behavior also require self-efficacy to challenge the belief system and to translate the knowledge into health practices at the individual level. It is argued that HIV infection prevention programs including promotion of the use of condoms necessitate understanding the sociocultural norms and expectations that influence the beliefs pertaining to the use or nonuse of condoms in India.

### HIV INFECTION AND AIDS: IMPACT IN INDIA

India has one of the highest number of HIV-infected people in the world.<sup>4</sup> In 2001, there were an estimated 3.97 million HIV-infected people in the country, and as of September 30, 2002, a cumulative total of 40,708 AIDS cases had been reported to NACO.<sup>1,10</sup> Cultural stigma associated with HIV testing and the public disclosure of AIDS are linked to underreporting.<sup>2,11</sup> It is feared that as the epidemic progresses, the number of HIV-positive and AIDS patients will increase—a large population in India will be exposed to HIV infection via unprotected sex with infected partners. India has been declared the epicenter of AIDS in Asia, and interventions are urgently needed to prevent an HIV epidemic nationwide.<sup>1,2,12</sup>

### Critical Trends in HIV Prevalence Data in India

Epidemiological data highlight four critical trends for developing HIV prevention programs. First, HIV infection has shifted from the at-high-risk population, described as CSWs, truck drivers, and IDUs; to the bridge population, clients of sex workers, patients

with sexually transmitted diseases (STDs), and partners of drug users; and to the general population, married women and children. As of September 2002, 88.5% of a cumulative total of 40,708 AIDS cases reported to NACO were between 15 and 44 years, and the ratio of female to male was 1:3.<sup>1</sup> A national behavioral surveillance survey conducted by NACO between March and August 2001 reported that 3 of every 4 participants were married—similar to data reported by the census of India in 1991.<sup>13</sup> For this reason, it is essential to include women and especially married women as an emerging at-high-risk group to develop any HIV infection prevention strategies in India.

Second, the prevalence of HIV-infected people throughout India shows that the virus is spreading from urban to rural areas. Because approximately 75% of India's 1 billion people live in rural areas, understanding the reasons (such as more jobs in cities, trucking, and delivery of goods) for the mobility of the population and the pathways through which HIV transmission may occur (e.g., unsafe sex with CSWs during separations from wives) is critical. For the prevention of HIV, obstacles to consistent condom use by a mobile population, mostly men, in social situations (e.g., on the roads) may be different from barriers to condom use by heterosexual married couples at home. Third, the increased number of STD patients in clinics indicates the enormity of the problem of HIV infection. One study conducted in a Delhi clinic found that 21.9% of 319 women presenting with the symptom of vaginal discharge had an STD.<sup>14</sup> In one prenatal clinic, a 4-year prospective study found that 45% of 71 women who were 8 to 10 weeks pregnant had AIDS symptoms.<sup>15</sup> According to a NACO report, the STD prevalence rates vary from 10% to 5% in the general population in urban communities.<sup>2</sup> Fourth, the spread of HIV among the adult population in India varies sharply from state to state. Although overall, 1% of India is estimated to be HIV positive, in five states—Maharashtra (in the West), Tamil Nadu, Karnataka, and Andhra Pradesh (all in the South); and Manipur and Nagaland (in the Northeast)—more than 1% of the adult population is infected with HIV.<sup>2</sup> Unless this differential is taken into account for planning strategies, HIV prevention and treatment efforts will be inadequate in some states and inappropriate in others.<sup>16</sup>

## SOCIOCULTURAL CONTEXT

India's internal diversity of sociodemographic characteristics, traditions, and values can lead to differences in individual health behavior from region to region; create differences in sexual behavior; and thus may either heighten or reduce the vulnerability of heterosexual men and women to HIV infection. India is a linguistically and religiously diverse country. Its citizens speak 18 official languages and hundreds of dialects. According to the 1991 census, the population was 82% Hindu, 12% Muslim, 2% Christian, 2% Sikh, and 0.6% of all other religions.<sup>17</sup> Other population characteristics, such as literacy rates and social customs (including rituals and clothing), vary from state to state.

At the same time, within that diversity, significant sociocultural commonalities are present among the entire population. These commonalities in cultural beliefs are embedded in (a) the role of women in the society and family traditions that influence differential expectations of behaviors for men and women and thus may make decisions to use condoms more community based than individualistic; (b) sociocultural contexts that influence and shape sexual practices; (c) the holistic perception of health, the role of semen in maintaining sexual health, and the possible conflict that may be attributed to condom use;<sup>18,19</sup> and (d) myths and cultural beliefs that HIV infection is transmitted exclusively via vaginal sex, which may overlook other HIV risk behaviors of men who have sex with

men (MSMs) and IDUs in addition to CSWs. These four issues are the focus of an analysis of how beliefs develop in sociocultural contexts, the ways in which these beliefs influence sexual behavior, and how they may create barriers to the use of condoms by married heterosexual couples in India.

### **Role of Women**

The role of women as individuals and as sexual beings, the institution of marriage, and the relationship between procreation and the position of women in the family describe the very premises of the cultural norms and values prevalent in India.<sup>19,20</sup>

#### *Patriarchal Family Structure*

The most common patriarchal family structure in Indian society has two unique characteristics: patrilineal descent, meaning that the family name, succession, and inheritance pass from father to son, and patrilocal residence, meaning that after marriage, a woman lives with her husband in his father's house. This family structure instills the expected sexual behaviors that are most relevant to understanding married women's risk of HIV infection. First, although societal norms do not encourage premarital sexual activity, a double standard is in effect. Unmarried girls are expected to remain virgins in order to maintain their "purity" and to engage in sexual activities with their husbands for procreation and motherhood. Men, on the other hand, are permitted to engage in premarital sex for the sake of gaining "experience" and learning to be sexual decision makers.<sup>19,21</sup> Although the official marriage act in India requires a minimum age of 18 years for women and 21 for men, the law is not obeyed. Because all Indian communities value virgin brides, parents often feel pressured to arrange for their daughters' weddings before or by the attainment of puberty.<sup>22</sup> The early onset of coital activity and repeated sexual intercourse with infected partners further increase young women's chances of contracting the virus, even when they do not express their sexuality outside traditionally defined boundaries. Second, marriage is the institution that gives women permission to initiate sexual relationships with their partners and gain societal identity as members of their husbands' families. If women enter marriage with knowledge of HIV transmission and safer-sex practices, they may be suspected of having engaged in premarital sex. Moreover, because sons are deemed necessary to continue the family lineage, women experience family pressure to procreate after they marry and especially to bear sons. Thus, sexual activity is often not a matter of choice but a duty for married women. Third, because the patriarchal family structure allows only sons to inherit property, married women often find it economically difficult to leave their husbands even in cases of domestic violence.

#### *Law, Rights, and Women*

Ideally, law can be a potent force for changing the existing social structure; for ensuring social rights for women, such as property rights; and for improving the status of women in India. These changes, in turn, could be used as a public health practice tool and to influence social norms for healthy behavior, to identify and respond to threats that can enhance health risks, and to enforce health and safety standards.<sup>23</sup> However, the following examples reveal the gaps in the process in India. (1) A marriage is legal and valid even if

the legal ages of 18 for women and 21 for men are violated. (2) Even when Indian law permits married women to share family property, women often find it difficult to fight social customs and assert their rights within the family.<sup>24</sup> (3) Although reported cases of violence against women, including rape, domestic violence, and dowry deaths, increase every year, legal discourses resulting in convictions remain few because of lapses in investigation and medical reports.<sup>25</sup> (4) Indian law does not even recognize that nonconsensual sex with his wife is a crime for the husband.<sup>26</sup> The interpretation of the law in the dominant social culture within which such justice is sought further reinforces the expected subservient role of Indian women in the society and often shapes the perception of their sexual roles. Unless the links between legal rights and social justice issues, including reproductive health rights, in the context of gender roles in India are established, law as a tool will fail to be an instrument for the empowerment of women.

### **Sexual Practices, Contexts, and Condom Use**

Sexual acts could mean different things to those who participate in them and different things to the same individuals in different contexts and thus could influence the practice of condom use. Beliefs associated with condom use among married women and men are discussed next.

#### *Condoms Are Identified With Contraception*

Since the early 1960s, the government of India's Family Planning and Welfare Department has advocated condoms primarily for use by men and as contraceptives to space births to married couples of reproductive age. Although family planning services have emphasized condom use, this method represented only 2% of all contraceptives used in 1994-1995. The overall use of conventional contraceptive methods did increase from 1% of the total reproductive population in 1970-1971 to 3% in 1994-1995.<sup>22</sup> (These figures for "conventional" methods chiefly reflect the use of condoms, and although they also include such contraceptives as diaphragms, jellies/creams, and foam tablets, the rates of use were so low that they were not reported separately.)

#### *Condom Use Conflicts With the Desire to Procreate*

Precisely because condoms are identified with birth control, married heterosexual couples may be disinclined to use them for HIV prevention. Because procreation is considered the purpose of marriage, women experience societal pressure after marriage to prove their fertility and see no reason to delay childbirth and use condoms as a contraceptive. In 1992-1993, 97% of women did not use any contraceptive before their first child was born.<sup>22,27</sup> In India, women are expected to have at least two sons who survive to adulthood.<sup>19</sup> This expectation influences them to undergo repeated pregnancies in the hope of bearing sons. Because 30% of all child mortality occurs under the age of 5, the fear of losing a child may influence fertility-related behaviors that have an impact on family size, birth spacing, and the nonuse of condoms as a contraceptive.<sup>22,27</sup> Women may not use condoms because of the belief that contraception will interfere with their efforts to establish their position in the family. Such beliefs make it difficult to promote condom use for the prevention of HIV infection.

### *Sterilization Rules Out Contraceptive Use of Condoms*

The fact that in India, sterilization is a far more widely used and preferred method among women shows that the use of condoms, even as a contraceptive, is low. The ratio of men to women who resort to sterilization underwent a dramatic reversal—from 2:1 in 1970-1971 to 1:31 in 1994-1995. During that period, sterilization sharply increased, from 8% to 30.2% of all methods used.<sup>22</sup> The median age of sterilization for women is 27 years and is dropping. Because more than 75% of the total fertility in urban and rural areas occurs between the ages of 20 and 30, this means that women undergo sterilization during their peak reproductive years.<sup>22,27</sup> One decisive factor for wives to undergo permanent sterilization once they have completed their families might be men's reluctance to use condoms. Sterilization may also be preferred by women as a method of contraception to men using condoms. Couples in which either the husband or wife has been sterilized may not be motivated to consider using condoms.

### *Condom Use Is Linked With Commercial Sex Work*

Indians often perceive condoms as devices to prevent conception during “illicit” sexual encounters with female CSWs.<sup>19,27</sup> By consistently using condoms, CSWs could reduce the risk of HIV infection for themselves and their clientele and thus prevent primary HIV infection among the population. However, because condoms are associated with CSWs, married women may think that using condoms with their husbands is not compatible with female virtue. If a woman suggests or insists that her husband use condoms, he may believe that she suspects him of having an STD or being HIV positive already. At the same time, he may accuse her of having extramarital sex and thus defying the institution of marriage (as it is understood in the Indian context). In addition, because of the widespread belief that condoms are for avoiding HIV infection during “illicit” sex with female CSWs, husbands buying condoms in stores for use with their wives may be misinterpreted as seeking sex with CSWs.

## **Health Beliefs and Sexual Practices**

The need to understand how the internalization of individual beliefs about health and illnesses may create barriers to the use of condoms in that particular sociocultural context is described next.

### *Condom Use Is Believed to Interrupt the Natural Flow of Body Fluids*

The cultural underpinning of health beliefs about semen in India may justify and heighten the risk of not using condoms. Scientific research has not yet substantiated this possible link between the cultural health belief system and condom use behaviors. The generalizability of any such link to the entire Indian population must also be systematically explored through studies comparing and contrasting, for example, persons of different ages, educational levels, socioeconomic status, and places of residence (urban versus rural). In the meantime, it is worthwhile to gain an overview of health beliefs that are both common throughout India and possibly relevant to condom use.

In Asian cultures, health is conceptualized as a state of balance with the natural elements of earth, fire, water, air, and metal. Good health results when the individual's body,

mind, and environment function in total harmony, with the universe. Thus, some Indians may prefer to prevent illness by naturally regulating their bodies and synchronizing their various bodily functions to maintain a state of balance and harmony.<sup>19</sup> In India, semen is called *dhatu*, which literally means “metal”—one of the five elements of nature—and is considered the highest expression of virility. Because condoms block the flow of semen and collect it, they are feared to cause an unnatural rise in body heat for men and burns for women. The disposal of semen in condoms is considered a waste of bodily powers that breaks the natural law of harmony, and men fear that condom use can make them ill.<sup>18</sup> The extent to which the characteristics and functions of semen are acknowledged may differ among individuals, and determinants of individual differences may be related to perceived susceptibility, perceived consequences of illnesses, and the availability of information on diseases. Because any open discussions on preconceptions about sex, including semen, sexuality, and sexual practices, are taboo in India, and people’s reluctance to talk about their views reinforces the sensitive nature of the issue, and also indicates the need to explore lay beliefs about health and illness.

The available research has documented that married Indian women have similar beliefs to their husband’s that “body heat” should be discharged only through “natural” sexual intercourse.<sup>19</sup> When their husbands are on the road, women believe that their husbands need sexual intercourse for entertainment and the relief of work pressures and that CSWs could fulfill that need. It may be worthwhile to study if married Indian women share the same belief as do their Thai counterparts: “Prostitutes are Better Than Lovers.”<sup>28</sup> Such beliefs that men must release body heat through “natural” sexual intercourse may also encourage women to undergo permanent sterilization and thus not to use condoms when they have completed their families. Health promotion interventions for reducing HIV-related risks should address the cultural expectations of masculinity and virility and the complementary sexual roles of women, especially in the Indian sociocultural context, where extramarital sex by men, although not actively encouraged, is societally tolerated and accepted by their wives.

### **Cultural Beliefs, Myths, and HIV Transmission**

#### *Marriage Protects One From HIV/AIDS*

Strong cultural beliefs in marriage as an institution and the husband as the protector of family well-being have been found to be the driving force for the belief that a married woman cannot “get” HIV from her husband.<sup>29</sup> This belief may encourage wives not to use condoms even within the apparently contradictory societal acceptance of their husbands’ extramarital sexual practices. In the prevailing social and cultural norms, women may accept the situation as “their lot,” as a punishment for sins committed in a previous lifetime, or as part of their Karma or fate.<sup>22,30</sup> Interpretation of the situation—the husband’s infidelity—as resulting from one’s Karma often seems to be probably the most viable approach to accepting the situation in the cultural context in India. Because women often do not face situations when they have to make a decision, generally, coping strategies include not challenging or not changing the situation but denying or avoiding the problem.<sup>30</sup> Educating women about the HIV risks necessitates providing them family and social support and economic survival skills that will empower them to challenge the husband’s risk behavior, to encourage him to go for HIV testing and treatment, and to protect herself and the family from HIV infection.

*Only Vaginal Sex Transmits HIV*

Because of the widespread belief in India that the sexual mode of transmission of HIV is primarily through vaginal sex, men may not use condoms during anal sex with other sex partners.<sup>19,21</sup> Because men believe they are not involved in any risky sex, they may find no reason to use condoms even in sexual encounters with their wives. Questions about the use of condoms often do not ask about the type of sexual practices involved or the sex partner and hence may miss data on anal sex. The promotion of safe sex must communicate specific and explicit messages on HIV risks and condom use for anal, vaginal, and oral sexual practices.

*MSMs*

A survey on MSMs who were engaged in MSM activities in the past 6 months in five cities—Delhi, Kolkata, Mumbai, Chennai, and Bangalore—reported that overall, 42% of the respondents were between 19 and 25 years and 39% between 26 and 35 years.<sup>31</sup> Because of the stigma associated with same-sex activity, research indicates that MSMs in India often identify themselves as heterosexuals, marry, and engage in occasional sex with their wives to produce children.<sup>32,33</sup> Indeed, the same NACO survey reported that one in four MSMs were married and living with their wives. Moreover, the criminalization of all acts of sodomy under Indian Penal Code 377-B makes “homosexual” practices illegal.<sup>29</sup> MSMs often engage in anal sex practices covertly in such places as secluded parks after dark to avoid police harassment. The use of condoms is rare in such situations, and thus there is a risk for HIV transmission. MSMs, often because of their unsafe sexual practices, are a bridge population between same-sex activities and heterosexual activities with their wives to HIV infection. Because of the sensitivity associated with self-identification as MSMs in the Indian sociocultural context, it is a challenge to collect data on the full extent of the MSMs in the general population. It is promising to note that two studies are being conducted in Chennai and Mumbai that will help to develop appropriate interventions or a public health surveillance programs for this group. Implementation of the condom use program in India requires addressing the sociolegal issues surrounding the risk of HIV infection for sexual practices of men who identify themselves as married heterosexuals but also engage in MSM activities.

*IDUs*

IDU is the method by which infection is transmitted in 3% of all AIDS patients and is regarded as an epidemic in the northeastern Indian states of Nagaland and Manipur.<sup>1,2</sup> The mobility of high-risk groups, such as truck drivers for business and interstate migrant workers for seeking jobs, and the close links of Indian border states with other IDU epidemic countries, including Nepal, Thailand, and Myanmar, raise serious concerns about the further spread of this emerging HIV risk-transmission mode. The lack of knowledge of IDU risks for HIV transmission and the false belief that HIV can be transmitted only by unsafe sexual practices should be emphasized in health promotion strategies.

**IMPLICATIONS FOR HIV INFECTION PREVENTION**

This article suggests issues that have significant implications for developing HIV infection prevention programs in India. First, the ways in which the status of women,

legal discourses, sexuality, and beliefs are constructed and organized in the society are not conducive to condom use among married couples in India. Men and women may thus be vulnerable to HIV risks. Changing the perception of vulnerability to HIV risks within the institutions of marriage and family settings refers to changing these social customs and practices that are often based on the interpretation of culture.<sup>34</sup> This “interpretation” influences the sexual behavior of both men and women and is an important component of lifestyle changes as described in the population-based prevention efforts mentioned in the conceptual model. The gender role constructs and the importance of societal conformation to them have been linked to both women’s and men’s vulnerability to HIV worldwide.<sup>34,35</sup>

Second, as perceptions of gender roles and social relations influence various dimensions of life (e.g., parental family, husband’s family, children) and interact at various levels of intensity (e.g., bearing not only children but sons, availability of support including economic and legal resources), HIV prevention strategies need to address multiple fronts to be effective. The population-based perspective focuses on the interactions between individual, community, and environmental factors for initiating any health-related behavior changes. Changes in attitude and behavior are not immediate and require sustained and continued public health education efforts. Moreover, cultural beliefs and social norms may undergo changes over time due to increased globalization (e.g., via television, movies) and can influence gender roles—and thus, social relations of married heterosexual couples—positively (e.g., increased awareness of HIV risks) or negatively (e.g., false liberal attitudes for sexual practices) and reduce or enhance sexual risk behavior for HIV. Third, accessibility of condoms is a critical issue that influences their use when needed. In a NACO survey, more than one-third (37.4%) reported that it takes more than 30 minutes to procure a condom—the accessibility is more difficult in rural areas than in urban cities.<sup>13</sup> The respondents reported that pharmacies and government family planning centers are the most convenient places to get a condom. Social marketing initiated by the government thus needs to be more accessible to all, regardless of rural and urban locations.

### **Challenges to the HIV Prevention Program**

The urgent need in India is to prevent the transmission of HIV from infected heterosexual men to their monogamous regular sex partners. Although the consistent use of condoms in all sexual acts is considered the immediate strategy, the government of India must focus on ensuring secondary and tertiary care—including the identification and treatment of STD symptoms, HIV testing, and AIDS treatment and care—in policy and funding decisions. It is envisioned that changes in perceptions and beliefs related to societal mores and expectations of sexual behavior require long-term efforts. However, the government needs to evaluate the fundamental barriers to developing HIV prevention programs and to conduct more research on sexuality, traditions, and HIV risks.

### **KEY AREAS FOR ACTION**

Actions to increase awareness of risks for HIV require addressing a multitude of inter-related areas at the individual, familial, and societal levels. Two key areas and some of the strategies that could be intensified in HIV infection intervention programs are suggested.

### **Changing the Environment Surrounding the HIV/AIDS Issues**

To change the environment surrounding HIV/AIDS issues, it is critical to break the silence. Discussion on topics such as sex; sexuality; and sexual behavior issues such as sexual identity, sexual preferences, premarital and extramarital sex, and drug use are still taboo in India.<sup>11,35</sup> The norm of not discussing personal sexual behavior and the inability to connect personal risk to HIV are considered two barriers to initiating open and honest discussions. Findings from the NACO behavioral surveillance survey are useful for developing the content of educational materials.<sup>13</sup> Although three of four respondents in this survey were aware that HIV infection is transmitted through sexual contact, only one in five was aware of the linkage between STD and HIV (and wide variations were reported between the states). HIV risks were still associated with marginalized groups engaging in at-high-risk behavior groups, such as sex workers, truck drivers, and IDUs. Only one-third of the men and one-fourth of the women reported consistent use of condoms in sex with nonregular partners in the past 12 months. Developing awareness and knowledge of transmission and prevention of HIV is vital in India.

#### *Involving HIV+ Persons in Awareness Building*

The support and encouragement of the community are essential to create an environment in which one can gather information on HIV risks and ways to practice safe sex behavior. HIV-positive persons as peers and spokespersons have been powerful in putting a human face on the AIDS epidemic worldwide, spreading messages of vulnerability and relating changes in their life perspectives and situations in the face of an inevitable death from AIDS someday. Particularly in India, with the limited awareness, stigma, and shame associated with disclosing one's serostatus, using this powerful resource must be a priority.<sup>11</sup> One such organization is the Indian Network for Positive Persons (INP+), which has its member organizations in different states.<sup>36</sup> It provides empowerment training to its HIV-positive members that includes community presentations of their life experiences, protecting oneself and others from HIV infection, the consequences of seropositive status, and HIV testing and treatment needs.

#### *Involving Extended Family Members— Men and Women to Discuss HIV/AIDS Issues*

In India, extended family members such as grandparents, in-laws, and older men and women are respected in the community for their life experiences and often are recognized as the gatekeepers to any family-related issues pertaining to the community and the family itself. Relatives such as grandparents, uncles, and aunts often provide both informational and instructional support concerning social norms and family relationships to the younger family members, including married couples who happen to be in the age group most vulnerable to HIV/AIDS. This social network of older men and women, which is an important part of the extended family structure, could be encouraged by HIV/AIDS outreach efforts to reinforce the prevention education messages targeted at younger married couples. In addition, parents who have lost their children may be encouraged to share their experiences to the community. Although stigma and family shame pertaining to HIV/AIDS exists, this strategy must be emphasized as a long-term approach to increase awareness of HIV infection.

### *Using Media to Inform the Population of HIV Risks*

It is vital that the material used for information, education, and communication in India target the general population and not only some groups such as CSWs and interstate truck drivers. The content of the materials targeted for different subgroups and its impact on them needs to be systematically evaluated. For example, fear-based posters showing an extremely sick man in shabby clothes dying from AIDS will not help women and so-called healthy-looking persons (both men and women) with the potential risk for HIV infection. On the other hand, morality-based materials showing CSWs and “loose” women seeking premarital sex will remove the married men and women from the HIV infection scenario. Describing AIDS as affecting the entire family—parents as well as children—and how HIV infection of one can infect multiple sex partners, and the importance of understanding that while traveling and away from home, the husband and wife are still emotionally connected—may portray the consequences of AIDS as a family issue. In the context of HIV-risk transmission modes, anal sex and injection drug use in addition to vaginal sex must be clearly stated for education of the general population. Considering the enormity of the problem of STDs in India, media and outreach efforts need to focus on improving the knowledge of STDs and recognizing their symptoms and consequences, including the increased HIV risks. Although the NACO survey<sup>13</sup> reported that the median age for first sexual intercourse was 21 years for men and 18 for women (the legal ages for marriage), other researchers have indicated that sexual activities start as early as 15 for male and female adolescents.<sup>19,21</sup> While NACO acknowledged the importance of increasing awareness among adolescents of HIV risk behaviors and condom use through school- and university-based approaches, these approaches may have limited success, given the traditional sociocultural norms prevalent in India.<sup>2</sup>

### **Working on HIV/AIDS Issues as Family Health Issues**

Because communities are heavily centered on family life in Indian culture and because AIDS affects not only infected adults but whole families and children, condom use seems to be more appropriate as a way of protecting and caring for one’s family. This family approach may be particularly effective in projecting the vulnerability of both men and women to HIV risks and understanding the combined responsibility of the couple as a unit. Instead of following the punitive approach of labeling men as the agents of HIV infection transmission from their HIV risk behaviors, the family approach must depict the social and economic consequences of HIV infection and AIDS—how the infected parents will miss raising the children and the family.

### *Loving and Caring for the Family: Together and Each Other*

Sociocultural norms in India ascribe nurturing roles to women, whereas men are portrayed as breadwinners for the family. Although the gender role identification may not be applicable universally to all men in India, changing any type of behavioral attitude takes time. Researchers have also questioned if loving and caring for the family may be misinterpreted and will allow men to have more “control” over family issues.<sup>35</sup> The message that Rao Gupta stated so clearly and powerfully must reach out to all: “Gender roles that disempower women and give men a false sense of power are killing our young and our women and men in their most productive years. This must change” (p. 6).<sup>34</sup> Two community-based approaches for reaching out to men are described below.

In Gujarat, a state in western India, a community-based nongovernmental organization (NGO), the Community Aid Sponsorship Program in alliance with Foster Parents Plan International (CASP-PLAN), started an STD clinic for women. The community meetings, however, especially encouraged single men and husbands also to attend. On insistence of the local men that they also needed STD treatment, the NGO later started a "Male Clinic." In another southern city, Chennai, a male-only clinic was started on demand for reproductive health issues including STD treatment. These successful experiences of meeting men's demands for protection, treatment, and family health should be used to establish clinics throughout India.<sup>37</sup>

NGOs are using some other strategies in communities in different parts of India to reach married men and women as teams in family health care. One is *Swaasthya*, which literally means "Good Health," initiated by the Society for Education, Welfare, and Action-Rural (SEWA-Rural). It focuses on activities to promote and improve husband-wife communication on reproductive health issues. In recognition of the societal norms and in-laws' demand to prove fertility upon marriage, SEWA-Rural involved in-laws in its activities from the very beginning. Another strategy followed is organizing a *Nav Dampati Mela* (event for newlywed couples) in the community and inviting all members in the community to attend. A token gift that includes a condom is given to the couple. Information on health issues is also given. Small groups of men and women are also formed for discussion and support purposes. The presence of the married men and women together is, in a way, an acceptance of their societal position as the couple, recognition of their partnership, and an indication of their joint responsibility for the family. Although these efforts are organized particularly at local levels, and assessments of the effectiveness are yet to be established, these initiatives are worthwhile to encourage and follow through.<sup>38</sup>

#### *Delivering a Package of Health Care Services*

Reproductive health issues rather than family planning exclusively concurred with HIV/AIDS issues constituting the first step to expanding the scope of the health service delivery programs in India. Although the government of India has initiated actions in this direction, implementation of this comprehensive plan at all levels—government, health care service providers, patients, and their families—is required for success of the HIV infection prevention program. First, the NACO survey reported that only one-third of the respondents—men and women—were aware of the STD symptoms for men and women.<sup>13</sup> This lack of awareness requires medical and health service providers to have a comprehensive training to recognize the enormity of the prevalence of STDs and the identification of STD symptoms in both men and women. Although drugs for the treatment of STDs are provided by the state AIDS control societies to all STD clinics, the program managers at the government level emphasize the importance of close monitoring of the distribution of drugs to ensure complete and correct treatment.<sup>2</sup> Second, with the increase in the number of seropositive pregnant women in India, vertical transmission from mother to newborn may assume higher proportions. This situation is preventable by following safe sexual practices and controlling blood-mediated spread.<sup>39</sup> Studies conducted on the use of the AZT regimen for the prevention of mother-to-child transmission in 11 hospital centers in 2001 found that it reduced the transmission rate.<sup>2</sup> The operational feasibility and the effectiveness of the AZT regimen, however, also depend on the acceptability of HIV testing, counseling, and breast-feeding and other related issues. Another area of concern is early diagnosis and medical treatment of tuberculosis among the gen-

eral population. Tuberculosis (TB) is the leading cause of death in India killing close to 500,000 people per year.<sup>40</sup> The researchers found that around half of an estimated 3.9 million HIV-infected Indians are also infected with TB. The links between HIV infection and TB must focus on HIV prevention programs in India.

Timely HIV testing and precounseling and postcounseling on protecting oneself and others by practicing safe sex can prevent further exposure leading to new HIV infection. Researchers have found that men, even after learning of their seropositive status, often find it difficult to disclose this to their wives in a timely manner.<sup>11,22</sup> They may not disclose their HIV status because of the stigma put on HIV/AIDS, their own fear of death, and guilt regarding their family responsibilities. Even when the public health issues related to HIV testing may be understood, the social stigma associated with HIV as the consequence of sexually immoral behavior may guide a susceptible individual not to disclose.<sup>11</sup> With more HIV-positive persons developing AIDS in the future and the symptomatic stages of AIDS being more infectious, lack of treatment and care may lead to more HIV infection than is being currently projected. With insufficient resources, the government of India may find attainment of both the objectives—prevention and treatment—competitive with each other. However, with an estimated 3.9 million HIV-positive persons, unless both objectives are pursued, the epidemic will continue unabated.

## CONCLUSION

The critical issue that the NACO confronts for implementation of a condom use program is momentum in formulating policy and planning, developing strategies, and coordinating multidimensional efforts in a timely manner to address the HIV epidemic in India. With diverse patterns of HIV prevalence rates in different parts of India, policy planning requires a population-based approach. Implementation and monitoring of HIV prevention programs at the community levels requires constant and systematic vigilance. Short-term strategies include the encouragement of consistent, routine condom use during encounters with CSWs and casual sex partners. It may take decades to successfully promote, on a wide scale, such long-term behavioral changes as reducing the number of one's sex partners or adopting different perceptions of married men and women's societal roles.

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