Partner Notification and Focused Intervention as a Means of Identifying HIV-Positive Patients

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Partner notification as a means of contact tracing human immunodeficiency virus (HIV)-infected persons remains controversial. It is argued against by many gay activists, while primary public health officials and leaders in ethnic communities continue to support this as a means of identifying unknown cases.

Human immunodeficiency virus-positive patients were interviewed to determine if partner notification could be a useful instrument. Based on interviews, patients at risk of infection through heterosexual contact were able to identify most of their sexual partners; the majority of these patients were women. Twenty-two of 22 women infected heterosexually were able to identify all of their sexual partners. Five of 8 heterosexual men were able to identify all of their sexual partners, but these men were infected through intravenous drug use. Six of 44 homosexual men interviewed were able to make these identifications.

Two focus groups of homosexual men who were HIV-positive patients were organized; each was asked one question. Men in group B were asked if they could identify HIV-positive persons whom they suspected were not in a treatment program. Men in group A were asked if they they thought they knew HIV-positive persons still practicing unsafe sex. Thirteen of the 14 patients in group A were able to identify 30 persons they felt were still practicing unsafe sex; 17 of 30 tested HIV-positive and 9 were unaware of their status. The 14 patients in group B indentified 15 persons they felt were HIV-positive; 11 were found to be HIV-positive and 8 were unaware of their status. These findings suggest that partner notification definitely has a role in heterosexual contact tracing, and focused intervention is a more cost-effective approach to early intervention. (*J Natl Med Assoc.* 1998;90:542-546.)

Key words: partner notification ◆ human immunodeficiency virus ◆ early intervention

Since the first cases of human immunodeficiency virus (HIV)-positive patients were reported in 1981, the number has increased. Just as we are more capable of differentiating subtypes and types by virology and epidemiology, we also should appreciate the other long tested tool of epidemiology: partner notification.

This article focuses on two useful tools in identifying HIV-positive patients that arguably will lead to earlier identification of infected persons. The purpose of these two studies was to determine whether these instructions would allow identification of persons at an earlier stage than as measured by their CD4 count.

Based on patient interviews, it became obvious

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that patients knew or at least felt that they were aware of other HIV-positive persons who had not been tested or were not receiving treatment. During the same year, two focus groups of 14 patients were organized. In the first group, patients were asked if they felt they knew people who were HIV-positive and were still practicing unsafe sex, and if so, would they be willing to approach and have them come to an interview with only the identifying patient and persons they identified. This was voluntary. In the second focus group, patients were asked if they could identify friends or acquaintances who were suspected of being HIV-positive but had not been tested. Patients in both focus groups attended a treatment advocacy program and rehearsed their approach before contacting anyone.

The purpose of having two focus groups was to determine a difference in yield and compare both to the yields of present anonymous and confidential testing programs, which average 1.5 positive individuals per 100 persons tested. This method is known as focused intervention. Its purpose is to identify or find HIV-positive persons by having clients identify people they feel are at high risk of being HIV-positive.

In a separate process, it was also noted that female patients were infected primarily through heterosexual contact. Unlike men, women who were infected by men were able to identify their male partners, making partner notification a useful instrument in this situation.

A program was inaugurated to identify the male partner(s) of all women who identified a heterosexual act as the mechanism for HIV infection. The goal was to identify the male partners of HIV-positive women whose route of HIV transmission included heterosexual contact. The specific aims were to: 1) determine if HIV-positive men could be identified from HIV-positive women, and 2) identify other female contacts from those males who were found to be HIV-positive. The study period was December 1994 to December 1995. Concurrently, all patients, men and women, were asked if they thought they could either identify others they felt were still engaging in unprotected sex or identify persons they suspected as being HIV-positive who were not aware of their status or had never been tested.

MATERIALS AND METHODS

In the first study, women enrolled in a university hospital acquired immunodeficiency syndrome program were queried about their sexual contacts. All information given was voluntary. Assistance was obtained from the Public Health Investigation unit of the Los Angeles County Department of Health Services. Excluded were any women not wishing to participate, teenagers <18 years, and transgenders.

Female patients were surveyed about their sexuality to determine the route of infection. Although the Public Health Investigation Unit was interested in all sexual contacts of all women, the focus of this study was on women whose history raised the suspicion of possible HIV infection/exposure by heterosexual encounters. These men were contacted and offered free HIV testing. Of those who were found to be positive, further contact tracing was done to identify other women. All information obtained was given voluntarily.

In the second study, 28 patients were approached and asked one of two questions to determine if either question had a likelihood of better results. Patients were asked: 1) whether they could identify friends/acquaintances who they felt were still engaging in unprotected sex, or 2) whether they could identify friends or acquaintances whom they felt were HIV-positive and had not been tested. All contacts were made by the clinic director with the patient, or by a Public Health Investigator of the Los Angeles County Public Health Investigation Unit.

The identities of individual contacts were provided to the OASIS Clinic Director or to the voluntary contact, the follow-up unit of the Los Angeles County Department of Health Services for contact tracing. Patients were contacted discreetly, and no mention of the source was made unless specifically requested by the index case. All contacts identified were offered free HIV testing and were counseled on places to seek treatment should they test positive. Some contacts preferred to go to an anonymous test site. Thus, the data reflect those who participated in the program.

RESULTS

Tables 1-3 reflect data from the partner notification programs, and Table 4 shows data from the focus groups. This process is referred to as focused intervention.

In a 12-month period, 85 HIV-positive women were identified. Of the 85 HIV-positive women interviewed, 68 (80%) reported exposure by sexual contact. Thirty-seven (54%) of these women were

Table 1. Familiarity With Sex Partners of Human Immunodeficiency Virus (HIV)-Positive Women Reportedly Infected Via Heterosexual Contact

	No. (%)
Women infected heterosexually	68
Women who knew all sex partners	61 (89.7)
Women who knew all partners and how to contact	53 (77.9)
Male partners found and interviewed	46
Male partners who were HIV-positive	33 (71.79)
Men who were unaware of their HIV status	9
Men who were aware of their HIV status	23

Table 2. New Female Contacts From Human Immunodeficiency Virus (HIV)-Positive Men

	No.
Women contacted from the 9 men who were unaware of their status	14
No. found to be HIV-positive	6
Of these, no. unaware of their status	6
Women contacted from the 23 men who were aware of their status	31
No. HIV-positive	22
No. already aware of their status	14
No. unaware of their status	8

unaware that their partner was a "closeted" bisexual. Fourteen of 68 were aware that their partner was bisexual, and 17 identified intravenous drug use as the route of their infection. Many were unsure of their partners' sexuality.

The vast majority (89.7%) of women knew the identities of all of their sexual partners during the previous year. Fifty-three women (77.9%) knew how to contact their partners. From these women, 46 male contacts were identified and interviewed (Table 1).

Forty-six male partners were identified, successfully located, and interviewed. Thirty-three (71.7%) were HIV-positive and 13 were HIV-negative. Almost all of the positive contacts had continued to be sexually active. Among the HIV-positive contacts, 9 (27.3%) were unaware of their HIV status.

Table 2 shows the status of the nine men who were unaware. All nine of these HIV-infected men were still sexually active; they could name more than 57 women they had had sexual relations with during or since the time of their relations with the women who named them as contacts. Fourteen of these were contacted, and 6 (43%) were unaware of their HIV positivity. Table 2 also shows the contacted men who already knew their status. Twenty-three of 24 who were still sexually active named 51 other women. Thirty-one of these women were contacted, and 22 were found to be HIV-positive. Fourteen of the 22 (64%) were aware of their status; 8 (36%) were not aware of their status.

Table 3 shows that at least among this group of women, physical abuse did not occur. It documents the number of patients participating in the focused intervention interviews and shows the number of contacts found by those patients offering to identify persons they felt were participating in unprotected sex. Table 4 also shows the number of HIV-positive persons found through patients who suspected others of being HIV-positive.

DISCUSSION

Partner notification is a long tested public health tool. Its usefulness is well-documented and accepted in sexually transmitted disease treatment. Fear of breaches in confidentiality have made it a less welcomed tool in reporting HIV transmissions and is strongly argued against by gay activists. Pavia et al[1] studied all persons reporting to be HIV-positive over a 2-year period. They found infected drug users to be more likely to cooperate than gay men, and they named more partners. Women were more likely to cooperate than men.

Marks et al[2] concurrently showed that among gay men, the likelihood to disclose decreased in direct proportion to the number of partners, and nondisclosure occurred as often in conjunction with unprotected receptive and insertive male intercourse.

In North Carolina, a randomized trial of partner notification was conducted, comparing voluntary disclosure by the patient (patient referral) versus notification by public health counselors (provider referrals). In this trial, referral was found to be much more effective.[3]

As shown in Table 3, none of the women in this study reported physical abuse by their male sexual partners. The issue remains, however, of whether disclosure is worth the risk of an abusive act. Given

Table 3. Physical Abuse on Women When Partners Were Notified

	No.
Women involved	53
Women who had questioned their partners previously	8
Women whose partners had denied HIV exposure	6
Women who reported physical abuse on contacting male partners	0

Table 4. Focus Intervention

	No.
Group A	
Patients who felt they knew people stilll practicing risky sex	13
Persons they identified	30
Those found to be HIV-positive	17
Those (of the 17) unaware of their status	9
Yield	9/30 (30%)
Group B	
Patients who felt they had friends or acquaintances who were HIV-positive	14
Persons they identified	15
Persons who were HIV-positive	11
Persons who were aware and in treatment	0/11
Persons who were aware and not in treatment	3
Persons who were unaware of their status	8

the fact that her male partner might be HIV-positive and also sexually active with other women who are unaware of his status, isn't it better to end this cycle and prevent the other women from becoming positive, or to alert those women who may be positive while they are still healthy? This does not mean that physical abuse is not a problem. Among mentally ill women, physical and mental abuse abounds. It also occurs among substance-abusing couples, if the husband is a substance user. None of the patients, however, reported such behavior during this contact. On several occasions, infected female patients set out with guns after the male partners. We believe that partner notification should be used in ethnic communities, especially when the heterosexual women who are at risk endorse the idea.

Partner notification is an important public health instrument that has been tried and tested. Human immunodeficiency virus is a public health concern. In all efforts, this participation was voluntary. We argue strongly against any form of mandatory reporting, but great gains can be made using this maximally on a voluntary basis.

Over a 1-week period, all male patients with a sexually active lifestyle were seen and questioned. Sixty-seven percent admitted to, on occasion, not being "safe," as they understand the term. Eighty-four percent of men felt they could identify friends and associates who were still practicing unsafe sex. None of the patients said they would refuse to help identify those persons if a structured program existed that would allow for someone to contact them discreetly. To continue spending limited resources on programs that yield a 1% return on identifying and treating HIV-positive individuals, such as anonymous testing, seems odd when mechanisms such as partner notification allow for identifying more patients at their healthiest stage.

Over a 9-month period, we studied women who came into our clinic as a result of partner notification versus those referred by other sources. During that time, we saw a total of 13 African-American women who were all referred by sources other than partner notification. Their initial CD4 counts ranged from 5 to 720 (average: 156). In contrast, eight HIV-positive women who were referred by partner notification during the same period had an average CD4 count of 411. With the emergence of protease inhibitors and triple therapies, it is even more crucial to identify people at their healthiest stage. Partner notification and contact tracing can aid in doing this.

Just as the benefits of partner notification strongly outweigh any negatives, a focused intervention program has numerous benefits which far outweigh any weaknesses. In Los Angeles County, the anonymous testing program conducted >3000 tests in a 1-month period. Forty-five (1.5%) HIV-positive patients were identified. Considerable manpower was required for such a small yield. In a focused intervention program, we start by using patients who wish to participate as the index case. By working from this perspective, all persons contacted are potentially at a higher risk than average. We are then focusing on those individuals who are at greater risk of contracting HIV as well as those indi-

viduals who may already be HIV-positive and are at greater risk of transmitting the disease unknowingly to another person. In addition, because those persons who are engaging in unsafe practices can be identified, we make better use of behavior change programs by identifying these individuals as enrollees.

We were able to identify a significant number of HIV-positive individuals by using the OASIS Clinic patients as index cases. This is true regardless of whether they were asked if they thought they knew individuals who were HIV-positive and had not been tested or were not in the health-care system, or if they could identify individuals whom they felt were still engaging in unprotected sex.

Fourteen patients were able to identify 15 persons they felt were HIV-positive. When contacted, 11 of 15 were positive. Eight of the 11 were unaware of their status, and the remaining three were aware but were not receiving any kind of medical intervention. This result was achieved by having one person interview the patients and conduct a follow-up session with the 15 named individuals. That is a significantly better yield than the 1.5% from anonymous or confidential testing. These numbers may be better than expected, since the patients identified were those thought to be knowledgeable by the clinic director. Without these interviews, the contacts would not have been identified and disease transmission would not have been stopped.

CONCLUSION

Based on our data, we argue strongly for both partner notification and focused intervention for identifying HIV-positive individuals in addition to anonymous testing and confidential testing programs. The role that partner notification and contact tracing may play is enormous and should be used to the fullest.

Literature Cited

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