Sexual Transmission of HIV/AIDS: The opportunity is far from equal

May 11, 2010 By Joseph Sonnabend, MD

Sean Strub just told me that a Canadian court has ruled that a gay man who was the insertive partner in anal sex was not at significant risk for AIDS**.** **A detailed account of** the trial includes the evidence presented that insertive anal sex carries a very low risk of transmission, which one expert said was comparable to that of protected anal sex between an HIV negative receptive partner and an HIV positive insertive partner. Sean recognizes that this ruling is of the greatest importance, but I very much fear that it will be ignored

There are implications that I hope will now be discussed. But I'm not holding my breath that there will be any attention given to the fact that heterosexual men who are not exposed to blood or blood products, and have never been receptive partners in sexual intercourse are not at significant risk in the developed world. One can only hope that researchers and funders will finally wake up to the realization that if this is not also true in Africa, a study of the difference with the developed world could add to our understanding of the pathogenesis of HIV disease.

So much has been invested in creating views of this disease that conform to various prejudices and fears and in finding ways to exploit it for whatever kind of gain, that it sometimes seems too much to hope that we will ever be able to correct the many misperceptions of HIV/AIDS. Scientists are not necessarily free from prejudice themselves, or maybe they just accommodate to the preconceptions of their funders.

The Canadian court ruling is really significant. It's an acceptance, at least in Canada, of something many of us who were on the front lines already knew thirty years ago. For perhaps different reasons gay men leading the community AIDS response and researchers and funders who could not all necessarily be counted on to protect their interests came together in creating a view that AIDS was an "equal opportunity" infection in the US and Europe.

Risk is more precisely defined by sexual acts rather than by sexual orientation. The increasing use

of the term “men who have/had sex with men” to designate a group at risk is an advance. Heterosexual men may also have been a receptive partner in anal sex and if infected pose a risk to others when they are insertive partners.

Those of us who knew that the risk of getting the disease was very far from equal across the board were given no voice. How could prevention education, targeted to those most at risk, receive the urgent support that it so much needed with a view that risk was equally shared? And isn’t it an obvious research priority to sort out the mystery of why the insertive partner in sex is at risk in Africa but not here? Of course you would have to first recognize that there was a difference before asking the question.

The epidemic in the US was first seen among gay men. Before too long cases began to appear in women and most were categorized as having been sexually transmitted. The numbers of heterosexually transmitted infected women have continued to increase but in the US and Europe, women very rarely have been shown to have transmitted AIDS to their male partners, at least with sufficient efficiency to create a heterosexually transmitted epidemic.

Despite this, reports continue to portray men as being at significant risk of infection from their female partners. The exaggerated reports of an impending heterosexual cataclysm have somewhat abated today, although, both in the US and in Europe heterosexual men are still portrayed as being at significant risk from heterosexually transmitted HIV infection. Maybe the Canadian ruling heralds a change to these perceptions of risk.

It’s important that the distinction be made between individual risk and risk to the public health. There is no evidence to justify a claim that men are unable to contract this disease from women. However, what has become clear is that the efficiency of such transmission is so low that it could not sustain a heterosexual epidemic. From a public health point of view transmission will essentially stop with the infected woman. Of course there remains the tragic possibility of transmission to the unborn child, or during childbirth. Fortunately it is now possible to considerably reduce this risk.

The situation in Africa is invariably brought up as evidence of more efficient female to male transmission. It is indeed evidence of more efficient female to male transmission in Africa. If we had recognized that this is not the case in N America and Europe, this might have served as a basis for research into pathogenesis and possibly have lead to newer modalities of management and prevention.

In 2001 POZ published an article on the issue of the exaggerated risk of female to male sexual transmission when a group of women in New York very publicly rejected the idea that they posed a significant danger to their male partners.

In 1998, I with Richard Berkowitz, a patient and collaborator, wrote an article on this issue. I'm reproducing it here as it does refer to substantial evidence supporting the extremely low risk of sexual transmission from women to men, as well as some steps taken by public health officials to exaggerate this risk.

It also records a curious episode in AIDS reporting by the New York City health department. Until the 1990s very few men had been recorded as having acquired AIDS from their female partners. In all of the first decade of HIV/AIDS only 92 out of 30, 210, or 0.3% of HIV positive men were in this category. But in a single year, 1991, 58 cases were reported, that is 60% of all reported in the previous ten years. The surge in cases continued. But remarkably, although the surveillance reports were available to the public those reporting and commenting on the epidemic just did not look, or for whatever reasons chose to remain silent.

There was no surge in heterosexually transmitted infections among men. There was a change in how the risk category was determined. Until the 1990s the health department had wisely re-interviewed men who initially stated they had acquired HIV from heterosexual sex. There was an understanding that some men may not have been comfortable in admitting to sex with men or to IV drug use. In fact what was found was that many of these men had indeed been using IV drugs or had sex with other men.

Then, sometime in the 1990s the health department dropped the additional interview. From then on whatever risk the man stated was what was recorded. All this went on without a comment, and at the end of the day was a factor in depriving those most at risk from the targeted prevention education they so much needed.

You would have to look at reports published in the 1990s to fully see all of this, as in subsequent reports some numbers for earlier years have been altered. Fortunately these earlier reports are easily available.

Our article addresses public perceptions prevalent in the 1990s. These remain largely unchanged today, although, as the heterosexual epidemic has not materialized, reports to the public on the danger of such a risk have moderated. I hope, but am not holding my breath that the recent Canadian court ruling will change this further.

Looking at what we wrote so many years ago I realize that a really important point needs to be clarified to prevent misunderstanding.

In line with the Canadian ruling, it is insertive intercourse that carries a very low risk, whatever the sexual orientation. Equally, it is receptive intercourse, not sexual orientation that carries the greatest risk. This means it would be misleading to say that heterosexual men are at low risk for sexual transmission of AIDS, but correct to say that people who are never receptive partners in sexual intercourse are at low risk.

This is what Richard Berkowitz and I wrote in 1998:

Heterosexual Men and AIDS

In the mid 1980's, the government and AIDS fundraising organizations began to disseminate a terrifying warning that AIDS was about to be unleashed upon the sexually active heterosexual population. Men were infecting women who in turn were infecting their sexual partners. The result would be a catastrophic heterosexual epidemic.

In fact, there never was any evidence to support this doomsday scenario in the U.S. and Europe. While women indeed do get AIDS from sex with HIV-infected men, and in increasing numbers, their ability to spread the disease sexually is so inefficient, at least in the United States and Europe, that

a heterosexual epidemic involving men has always been virtually impossible. The spread of sexually transmitted AIDS essentially stops with the woman and her infant(s). This is tragic and warrants every effort to target prevention education to stop it. Fortunately treatment can very substantially reduce mother to infant transmission

Increasingly, in recent years, there have been periodic reports in the media claiming that it is impossible for AIDS to be transmitted heterosexually. This is untrue and is a dangerous contention. This misunderstanding may stem, in part, from the frequent failure of public health reports to distinguish male-to--female from female-to-male transmission and to lump all heterosexually acquired cases together. While heterosexually acquired AIDS is a serious and growing threat to women, it is far from clear that the same is true for heterosexual men. In this article, we are going to focus on the extremely small risk of heterosexual men acquiring AIDS from sex--a key link if there were to be a heterosexual epidemic.

By now, many people are realizing that the doomsday scenario has not happened. Nonetheless, the government and organizations raising money for AIDS have not changed their tune. In fact, the NYC Health Department (NYCDH) seems committed to maintaining this illusion. Since 1991, there has been a disproportionate increase in reports of men getting AIDS from sex with women. The NYCDH is quite willing to claim that this represents a real increase rather than a result of changes in the way cases are reported and investigated.

The significant increases in the reports of heterosexually transmitted AIDS in men that started around 1991 was an important development in the picture of the AIDS epidemic in NYC, which strangely enough, went almost completely unnoticed. Certainly there was no media recognition of these remarkable reports, all of which were available to the public.

Until this time, the NYCDH had recorded very few men who had acquired AIDS from a female sexual partner, although this publicly available information had been largely ignored or underplayed. But when pointed out, a common response to the fact that there were so few cases of heterosexually transmitted AIDS in men was “just give it time and these cases will occur”.

Then around 1991, this prediction seemed to come true in New York City, but strangely in only some boroughs. The numbers of men acquiring AIDS from their female sex partners started to surge. As reported in the NYC AIDS Surveillance Update, published in April 1997, for all of the first decade of the epidemic, the total number of cases heterosexually transmitted to men was 92--out

of a total of 30,210 men, or 0.3 percent. But, in a single year, 1991, there were 58 cases, about 60% of the total number of cases in the previous 10 years!

In each subsequent year the numbers kept jumping; 193 cases in 1993, 271 in 1994, and 305 in 1995. As noted this dramatic increase was unreported, and probably unnoticed by journalists reporting on the epidemic in New York.

(Added in 2010: Unfortunately some numbers in earlier surveillance reports have been retroactively altered in reports published many years later).

In contrast to the sudden increases seen among heterosexual men, heterosexually transmitted AIDS in women had shown a steady increase since the beginning of the epidemic. "AIDS in Boroughs and Neighborhoods of New York City", was published in 1997 by the NYCDH and showed that in Brooklyn, before 1991, 442 women acquired AIDS from their male sexual partners; but between 1991 and 1996 there were 1,483 cases--about a three-fold increase. But remarkably, only 19 men in Brooklyn were infected through heterosexual intercourse before 1991, but between 1991 and 1996 that number skyrocketed to 410--a twenty-fold increase! In Staten Island, there were no cases of heterosexually transmitted AIDS in men before 1991, but 20 between 1991 and 1996.

For the city as a whole, the total numbers of heterosexually transmitted cases before 1991 compared to the total numbers between 1991 and 1996, showed a twenty-fold increase for men, but only a 3-fold increase for women.

If so many more heterosexual men were getting infected after 1991, why were their female sexual partners not showing a similar increase? What on earth could account for this sudden surge in heterosexually transmitted AIDS in men but not in women?

As AIDS awareness grew among heterosexuals, the proportion of cases reported among heterosexual men appeared to increase dramatically. Could the millions spent on the untargeted "America Responds to AIDS" educational campaign have been such an abysmal waste? Are

heterosexual men determined to prove that AIDS does not discriminate? What on earth was happening and why were these ominous developments ignored by reporters who have access to the same AIDS surveillance reports produced by the NYCDH every quarter that we reviewed?

Of course, the rather banal answer most likely is that the NYCDH statistics portending an explosion of AIDS among heterosexual men was an illusion: an artifact of shoddy AIDS surveillance practices in this city.

From the earliest days of the epidemic, it seemed clear that female to male transmission of AIDS was extremely inefficient and unlikely to be able to sustain a heterosexual epidemic, at least in the U.S. and Europe. Instead of a biological evolution of the epidemic, the explanation for the sudden surge in reportd heterosexually transmitted cases among men after 1991, probably results from changes in the way the NYCDH investigated and reported new AIDS cases. The neglect by the press of the reported huge surge in heterosexually transmitted cases in men starting in the early 1990s may just be an example of the huge omissions, misinformation and bias that has too often characterized AIDS reporting.

Dr. Donald Capra, is an eminent immunologist at Southwestern University, in Dallas, who has studied heterosexual AIDS. He too was bewildered by the sudden increase in cases among heterosexual men and received the following explanation from Dr. Polly Thomas, of the Office of AIDS Surveillance, NYCDH:

"In men, cases reported as heterosexually infected have been highly likely to turn out to have another risk if investigated by the Health Department. As a result, men were not categorized as “infected through heterosexual exposure” until completely investigated. In 1993, our policy changed. Men claiming (or reported with) heterosexual transmission are placed in that category before an investigation. As a result, numbers in that category (males infected heterosexually) greatly increased--although they remain a very small portion of all AIDS cases in men in New York City."

Around the same time, Michelle Cochrane, a researcher who was investigating AIDS epidemiology in NYC, was also puzzled by the explosion in the number of cases among heterosexual men. The following is excerpted from her book “When AIDS began” as comments

and notes taken at an interview with Rosalyn Williams, the AIDS Surveillance Coordinator at the NYCDH.

"When I was conducting interviews in the city during December 1994, I received a tip from an anonymous informant that there had been a profound shift in the way in which the NYCDH was reporting heterosexual cases of AIDS... "

Cochrane: In reviewing (NYCDH) surveillance reports for the last several years, I've noticed that the number of male heterosexuals reported with AIDS has increased dramatically. I was wondering if you could explain the reason for this increase, did you have a change in surveillance staff, or was it related to the 1993 change in the definition of AIDS, perhaps? Something must have changed. "

Williams: "No, there was no change in surveillance staff... (The number of) 250 heterosexual males as of 1994 reflect a change in policy. I think it was in mid 1993, we stopped investigating all claims of AIDS in heterosexual cases. Women are automatically classified as such, but based on our experience with men, we investigated all cases through a pretty extensive review...and most of the men did have another risk...[W]e thought, 'Why don't we just treat them like the women? Other places like Florida were classifying (similar cases) as heterosexual men; why was New York City using a different classification

Cochrane:"...was it related to the change in the definition of AIDS in 1993?"

Williams: "...(It) had nothing to do with the change in the case definition...

Cochrane: "And you said most of those men had other risks?"

Williams: "Based on our experience--most had another risk."

Cochrane: "So how do you establish a male heterosexual case of AIDS now?"

Williams: “Basically, if a client makes a claim.”

Has the health department abandoned its pursuit of accuracy and for some reason no longer considers the possibility that men lie about sex and IV drug use? The initial caution shown by the NYCDH in verifying cases in men claiming they got AIDS from sex with a woman has been amply supported by several studies. In a study entitled “Increasing frequency of heterosexually transmitted AIDS in Southern Florida: Artifact or Reality?”, it was found that with further follow-up, which included medical record reviews and interviews that one third of cases originally categorized as heterosexually transmitted, had to be taken completely out of the heterosexual exposure category. The majority of these were men. Similarly, in a mode-of-transmission validation study entitled, “Redefining the Growth of the Heterosexual HIV/AIDS Epidemic in Chicago”, it was found that 85% of cases originally reported as heterosexually transmitted, were reclassified into different categories that did not involve heterosexual contact. Again, most of those cases miscategorized were men.

In 1986, a great deal of publicity was given to an apparent outbreak of AIDS in male U.S. military personnel stationed in West Germany which they attributed to sex with female prostitutes in major German cities. Eminent authorities made dire predictions.

However, it was soon realized that no German men had contracted AIDS from prostitutes and that there were very few HIV-infected prostitutes in Germany. In the case of the servicemen, the price for telling the truth about homosexuality would have been dismissal and loss of medical benefits. It would be naïve to assume that men will always be truthful regarding stigmatized behaviors, such as homosexuality and IV drug use.

In our interviews with the NYCDH., Dr. Thomas now said that the increases in heterosexual men were “affected a little bit, not very much” by their decision to stop investigating men claiming heterosexual contact as their only risk. She went on to indicate that these large increases in heterosexual men could be attributed to an epidemic of crack cocaine use and sexually transmitted diseases that occurred in the late 1980’s. But she had previously said that men claiming heterosexual transmission “have been highly likely to turn out to have another risk if investigated by the Health Department”.

So, if they stopped re-interviewing them how can she be sure that the situation is different now?

We really cannot know how much the crack and STD epidemic contributed to the increased numbers and we cannot dismiss this. But we have to allow that the increased numbers in heterosexual men with AIDS after 1991 are largely an artifact resulting from a failure to accurately ascertain risk behaviors.

Even with the present inflated numbers, only 3 percent of AIDS cases among men can be attributed to heterosexual transmission in NYC. If we simply look at the first ten years when interviewing standards were more stringent, the percentage of heterosexually transmitted cases among men was at most 0.04 per cent (using the figures published in 1991.) This means that 4 out of every ten thousand cases of AIDS in men were acquired from sex with women. As the previously cited studies have shown, where intensive investigation into risk factors were conducted, including reviews of medical charts, interviews with doctors or family members, etc., many cases in men categorized as heterosexually transmitted had to be taken out of the heterosexual exposure category.

Why does not pursuing the most accurate surveillance practices matter so much? Quite apart from the fact that it is just plain wrong, it may well weaken the desperately needed efforts at targeting AIDS prevention to those who need it most. This most definitely includes heterosexual women at risk from sex, but does not include heterosexual men who do not use IV drugs or crack cocaine, are not hemophiliac or who have not received blood or organ transplants. Furthermore, as there is a street-level realization that these groups of heterosexual men are not getting AIDS in any meaningful numbers, trust is lost in the authorities who overstated a risk. The serious danger here is that other warnings that are in fact real, such as the risk to women, will be discredited.

What kind of pressures could have led disparate groups to present AIDS as posing an equal risk to everyone? Organizations were fond of phrases such as “Viruses don’t discriminate” or “AIDS is an equal opportunity disease.” Maybe fundraisers believed that the only way to obtain sufficient funds for AIDS research was to frighten heterosexual men because society at large was not responding to a disease that was predominantly affecting gay men and IV drug users. Maybe groups representing gay men felt that they could exact some compassion if the risk was perceived to be shared with heterosexual men. Maybe groups representing family values liked the idea that sex outside marriage could be lethal. Maybe some well-meaning liberals thought that the only way that heterosexual men would use condoms was if men believed that women posed a risk to them. But even if scaring heterosexual men was successful in making research funds available, it is likely that money raised on a false premise will not always be put to the best use.

The most important consequence of misrepresenting reality is that it has hampered--and continues to hamper-- essential intensive targeted prevention education, and promotion of condom use which at this time is all we have that is known to be able to curb the spread of this disease. We must focus our attention where the epidemic is occurring; that is in IV drug users, homosexual men and heterosexual women, but not in heterosexual men who do not use IV drugs.

Back to 2010: When this all began, during the dark bewildering years, those of us who were most familiar with what was going on, while not understanding why, had a good idea of who was getting sick. Hundreds of friends and patients were getting sick and dying and we soon had a pretty good idea who was at greatest risk. In 1981 Jim Curran who headed the CDC response to the epidemic told me to just take care of my patients and leave the sleuthing to him. He had no interest in what I and my patients could have told him.

Instead a picture of risk was created that was molded by a mixture of preconception, fear and fundraising needs.

Why should there have been, and continues to be in the US such a need to inflate the risk of transmission of this disease from women to men?

The perception that fundraising could only be effective if the risk was to include heterosexual men was definitely a factor. Is it also possible that in the US some gay men might have felt that compassion towards those affected would be more likely if the risk for disease was seen to be shared?

Some gay groups in the US have been quite vociferous in objecting to the depiction of AIDS as a gay disease. But cases acquired by homosexual contact still remain by far the largest category. It is difficult to understand the reluctance of some gay men in the US to accept this, particularly since it is crucial to the success of targeted prevention education.

Another factor that’s never considered is that in building a picture of the relative risks of various sexual acts people are asked to be frank about the most intimate and private details of their lives. This is incredibly intrusive. To unquestioningly rely on such self reported data is sure to produce a distorted picture of the distribution of cases by risk category. On matters of sex, it’s probably true to say that we can deceive ourselves, let alone those questioning us.

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