Forum Interview

with Walter Dowdle

AIDS (Acquired immunodeficiency syndrome)

*World Health Forum* interviewed Dr Dowdle in 1985 (Vol. 6, No. 4, pp. 330–336), when world public opinion was focusing on the rapid spread of the emerging pandemic. Five years later, Dr Dowdle has kindly consented to share with *Forum* readers his view of the progress made since then and the difficulties encountered.

*Dr Dowdle, would you say that the AIDS epidemic has advanced in the way you expected, or have you been surprised at all?*

The AIDS epidemic is following more or less the lines that were already developing at the time of our previous interview. There have been some surprises, however. There has been a slower progression of HIV infection in some countries and a more rapid progression in others, particularly in regard to heterosexual transmission. The epidemic continues to be highly variable, depending on the country.

*In 1985 you gave some basic advice on how to avoid AIDS. Has anything changed since then?*

Nothing has changed in our knowledge of the ways in which AIDS is transmitted. At that time there was considerable concern among lay persons and in the media about mosquito transmission and other supposed ways, such as eating utensils and casual contact, in which one might contract the AIDS virus. None of that is true. The same basic routes of transmission remain: sexual activity, contaminated blood (either by the sharing of unclean needles among intravenous drug abusers, accidental exposures to infected blood by health care workers, or the transfusion of untested blood), and from mother to child during pregnancy or childbirth.

*When we talked before about health care workers contracting AIDS, the risk was not
Dr Dowdle has, over the years, served on a number of committees, editorial boards and steering groups. He has been a member of the WHO Expert Advisory Panel on Virus Diseases since 1966, and has been active in WHO’s Collaborating Centres for Influenza and for Virus Reference and Research at the CDC. He is a world authority on influenza and herpes viruses and Legionella. In the last few years he has been responsible for building up CDC’s capability in handling AIDS, and is a world authority on its public health aspects. Dr Dowdle served as President of the American Society for Microbiology (1989). He is the recipient of the CDC Medal of Excellence (1978), the Presidential Executive Rank Award (1984, 1989) and a number of other awards.

So the risk is minimal?

The risk is minimal but it is real. The individual health worker must take certain precautions, such as wearing gloves and observing strictly the appropriate safety guidelines. Whether in an operating room or a nursing setting, precautions cannot be emphasized too strongly. Guidelines have been published and should be followed.

But the “social” kind of transmission is inexistent even for health workers.

That’s a very important point. One of our major successes over the years has been getting the public to accept the fact that transmission in the course of normal social activities—shaking hands or having meals together—just does not occur. We have made real progress in this direction. And when I say “we” I’m including the media which has played such an important role in educating the public.

Previously you said that the media had been doing a positive job. How do you see media coverage now? Have there been some negative effects, or is it still good?

By and large it’s still good. There are some extremely knowledgeable reporters in the AIDS field. Occasionally there are irresponsible forays into more sensational reporting by uninformed reporters, but generally we have a remarkably well educated group of professionals. Anyone who has been interviewed recently by some of these experienced journalists realizes that he or she has been talking to experts.

Five years ago you told us about a small group of 31 men in the USA who had
antibodies in 1979–80 and who had been followed up for five years. Two of them then had AIDS and another eight had illnesses related to AIDS, and the remainder had no signs of disease. Can you tell us what has happened to them now?

The study has now been expanded to a much larger group. After 11 years about 50% have been diagnosed with AIDS and another 35% have AIDS-related conditions.

But the longer perspective has changed, I believe?

That certainly has changed. Based on most long-term studies, 80–90% of HIV-infected people will have AIDS or AIDS-related conditions after 10 years. However, in biology it is impossible to state an absolute certainty. A small number of infected people have been HIV-positive for much longer than 10 years and still have no symptoms of AIDS. In addition, there are other individuals who, for one reason or another, have been sexually exposed to infected persons for years—that is, they are in situations where the virus would usually be transmitted—and yet they have not acquired infection. They remain HIV-negative.

Can any common factor be identified in HIV-positive people who don’t develop AIDS? Do they have an innate trait that protects them?

There are, of course, opportunistic infections which one might say are co-factors in terms of the severity of the disease, but these infections are the result of decreased immune function and decreased immune function is the result of HIV infection.

Since AIDS-related symptoms and related opportunistic infections are manifestations of HIV infection, the clinical disease can take many different forms. Why some infected persons require a longer time than others for symptoms to appear is not known.

So there is no advice to be given to HIV-positives who would like to do something for themselves to avoid developing AIDS?

Well, as we talked about last time, it is clear that healthy life-styles certainly enhance general well-being. But any specific co-factor for AIDS is still speculation.

Have you had any cases of seroconversion back to negative?

There have been some reports of seroconversion back to negative, but they have to be treated with circumspection. Sometimes these reports suggest a fairly precipitous reversion; one would have to question such results. The half-life of antibodies is such that a total loss in a matter of weeks would be unexpected.

Have you come across any ostracism of AIDS patients and HIV-positive persons?

There are still individuals who believe that the virus is some sort of payment for wrongdoing. Certainly that idea is not as prevalent as it once was—perhaps because of increased heterosexual transmission, but more likely because of a much better general understanding on the part of the public. When something is better understood, it is less feared.

Has the success of risk-reduction programmes been confirmed since 1985?
The dramatic drop in incidence that we had already seen at that time among high-risk homosexual men in the USA has continued. With the change in behaviour of this group of men, the high incidence rate back in 1982 and 1983—as much as 20%—is now less than 1–2% in many groups under study. Not only HIV infection but also other sexually transmitted diseases have been reduced considerably.

Would you say that this is the result of the homosexual community in certain cities getting together and really trying to do something for themselves?

Yes, there’s no question about that, in developed countries at least. We have not seen a similar decrease in sexually transmitted diseases and other risk behaviours in the heterosexual population. Probably it has not yet become clear to the heterosexual population that they are at risk, because they do not see their friends dying as people in the homosexual groups do.

How much closer are we to a vaccine or a really effective treatment than we were five years ago?

In terms of a vaccine, one might say that we are closer. One reason is that a virus isolated in monkeys has been shown to be a very good model for HIV. This is a very encouraging finding. The model has already been useful in providing a better understanding of some of the basic concepts of developing a human vaccine. A vaccine, if successful, is still many years away. In terms of treatment, AZT is being used quite widely. It has been show to lengthen life among those who have the severest form of the disease. This is a very positive step. Research on similar drugs that interfere with virus replication is under way. Of course, clinical management of opportunistic infections has advanced enormously.

Does this drug, AZT (azidothymidine), just delay the end or does it really improve the quality of life for people who take it?

It improves the quality of life. At one time, used in very high dosage, it was accompanied by serious adverse reactions. Now physicians have learned better how to administer the drug and can ameliorate many of the side-effects; it is also being used much earlier, before the symptoms actually occur.

That leads me to a question that we discussed before, whether people should get tested or not. At that time you said that there were numerous moral, ethical and health advantages in knowing whether or not one was positive. On the other hand, we now know that HIV-positive persons often meet problems with employment, visa applications, insurance, and so on. Do you still feel that people should get tested if they are in doubt?

Yes, even more so. In addition to the benefits that such knowledge can bring, drug treatment is now available. As soon as an individual finds out that he or she is positive, the physician can monitor the course of the infection and, at the right time, can administer appropriate medication. It’s a very definite advantage to know.

Is AZT available on a wide scale?

Yes, it is readily available. The biggest problem is the expense. It has gone down in price and presumably will continue to do so, but it is still very expensive, particularly for patients in developing countries.
Forum Interview

The readers of World Health Forum include health policy-makers, health workers, and ministerial staff. What is your message to them?

The only real tools that we have against the transmission of the virus that causes AIDS are a change in behaviour and a clean blood supply. We have to keep getting the behaviour message across in every possible way we can; we still have to rely on changes by individuals themselves.

How good are all the medical and paramedical professions in getting that message across?

I think that they all, especially the media, have done a remarkable job in disseminating appropriate information. People now have a reasonably good knowledge of the routes of transmission and the effects of the virus. The real question is, how to translate that knowledge into behavioural change. On this front we have not done all that well, except in the homosexual population where there has been a remarkable change in behaviour. People have to take up the battle themselves. Nobody else can do it for them: it’s an individual decision.

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HIV infection control in health care settings

Precautions in relation to blood and other body fluids

Since blood and other body fluids are capable of transmitting HIV and other infectious agents, nurses should always treat all blood and body fluids as if they were infectious.

- Handwashing. Hands and other parts of the body that have been contaminated with blood or body fluids should be washed thoroughly with soap and water. Hands should also be washed immediately after removal of protective gloves.

- Gloves and other attire. Nurses should wear gloves of suitable quality for all direct contact with blood and body fluids. When gloves are not available, other methods should be used to prevent direct contact with blood: for example, forceps, a towel, gauze or, if these are unavailable, even a leaf may be employed to hold a bloodstained needle or syringe. If gloves are not disposable they should be changed, washed, and disinfected or sterilized after contact with each patient. When injuries from sharp instruments are possible (e.g., when they are being cleaned), extra-heavy-duty gloves are recommended and the instruments should be handled with extreme care.
During procedures in which there may be splashing or suspensions of blood (e.g., during surgery or childbirth), the eyes, nose, and mouth should be protected with a face shield or mask and glasses, and gowns or aprons should be worn.

- **Needle-stick and other sharp injuries.** Methods should be devised to reduce the risk of needle-stick and other injuries from sharp instruments, which should always be handled with extreme care. The handling of anything sharp should be reduced to a minimum. To prevent needle-stick injuries, needles should not be recapped, bent, broken, removed from disposable syringes, or otherwise manipulated by hand. After use, needles and other sharp instruments should be placed in puncture-proof containers located as close as possible to where they are to be used and then handled as infected material.

- **Mouth-to-mouth resuscitation.** Although HIV has been recovered from saliva, there is no conclusive evidence that saliva is involved in HIV transmission. Nevertheless, to reduce occupational exposure to HIV, mouthpieces, resuscitation bags, or other ventilation devices should be used if available when resuscitation is necessary. Resuscitation equipment should be used once only and discarded, or be thoroughly cleansing and disinfected. Mouth-to-mouth mucus extractors should be replaced, if possible, by electrical hand-operated or foot-operated suction machines.

- **Isolation.** If the precautions described are taken, isolation of HIV-infected patients is not necessary unless they have other infections for which isolation is indicated.

Isolate the infection, not the patient.


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