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Learning From Success: Global Priorities for HIV Prevention: Thomas Parran Award Lecture

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There are remarkable similarities between the ideals which Thomas Parran espoused nearly 60 years ago and the principles which we now know to be successful in the fight against AIDS globally. These include:

- the importance of separating scientific and medical arguments from those which concern sexual morality, and
- the need to act simultaneously on a number of fronts in order to prevent new infections and in order to ensure that those already infected receive the care and support they need.

While nowadays we might not agree with all of Parran's admonitions-in particular, his use of fear as a means of motivating health seeking behavior and behavior change-his work laid the foundations for much of what is now regarded as good practice when it comes to HIV prevention and control.

This paper will begin with a description of some of the main features of the global epidemic of HIV and AIDS in order to highlight its nature and dynamics, as well as the seriousness of the problem. It will then review some of the principles which we now know to underpin effective work in the fields of HIV-related prevention and care. Third, it will highlight some of the challenges which still remain and some of the diversions which may deflect us from the task of containing and controlling the epidemic. This may be of special relevance to those working in the United States, a country which, despite its wealth, power, and political influence, has still to control its domestic epidemics of HIV and sexually transmitted infections (STIs) among homosexually active men, among injecting drug users, and among blacks and Spanish-speaking people.

The Global Picture

Since the start of the global pandemic, an estimated 14 million people have died from HIV-related disease (2.5 million in 1998), and another 33.4 million are estimated presently to be living with HIV. In 1998, 5.8 million people were infected with HIV, or 11 men, women, and children every minute. Half of all new infections occur amongtake off. In Mumbai in India, for example, the reported prevalence of young people aged 15 to 24, making this an epidemic with particularly serious consequences for future generations.¹ In many parts of the world, the epidemic is completely out of control.

The global epidemic consists of a series of overlapping microepidemics, each evolving with its own dynamics.² While a few countries have been able to slow or arrest the epidemic, in other parts of the world new and sometimes explosive epidemics are beginning to attend clinics for antenatal care, and 3.5% among those under the age of 20. With approximately 4 million people infected with HIV, India is today the country with the largest number of infected individuals. But close by in China, there is a rapidly evolving epidemic of potentially catastrophic proportions. The Chinese Academy of Preventive Medicine has recently estimated that the prevalence of HIV infection in that country increased tenfold between 1993 and 1995 and that by the end of 1997 400,000 Chinese were infected. In the countries of the former Soviet Union, infection rates are still very low but are now rapidly increasing, whereas rates of syphilis are sky-rocketing.

Sub-Saharan Africa remains the region which has been hardest hit by HIV and AIDS and the region with the fastest growing epidemic. It has recently been estimated that over 8% of all people aged 15 to 49 in sub-Saharan Africa are infected with HIV, and it is not unusual to find one in five adults and one in three pregnant women being positive in some African cities.³ In many countries in this region, AIDS is rapidly becoming the leading cause of deaths in adults, and heavily stigmatized and marginalized groups in the majority of Latin American countries. It has recently been estimated that among Kenya, Botswana, Zimbabwe, Zambia, Uganda, and Malawi, AIDS has already had a major impact upon average life expectancy with themselves as 'homosexual' or 'gay', as many as 30% may be HIV concomitant effects for production and the economy. Moreover, the reported rate of infection among people who inject positive, and the reported rate of infection among people who inject the loss of members of the most productive generation, a substantial number of children have been orphaned, and grandparents have had to take on the responsibility of caring for grandchildren when their own between men and women in many countries. In Brazil, for example, sons and daughters have died. AIDS has now become truly worldwide where there exists good surveillance data, the male/female ratio of cases has fallen from just over 16 to 1 in 1986, to 3 to 1 today. In the

Caribbean it has recently been estimated that, in some localities, up to 8% of pregnant women may have HIV infection.

This is not to say, of course, that the epidemic cannot be brought under control. There are signs that in parts of Northern Europe and in Australia, the incidence of new infections has stabilized or may be declining; there is evidence from countries such as Uganda and Thailand that with the right programs the epidemic can be slowed^{3,4}; and there is evidence from Senegal that early effective intervention can keep infection rates at low levels. In Uganda, for example, surveillance testing in urban centers has shown a 40% drop in HIV prevalence among pregnant women over the past 5 years linked to changes in sexual behavior among both men and women. In Kampala, Uganda, for example, 46% of men recently interviewed reported using a condom in their last non-regular sexual encounter, and 31% reported always using condoms with 'casual' partners. Young women report delaying the onset of intercourse, reducing the number of sexual partners, and increasing condom use. In Thailand, there is clear evidence of a decline in the number of visits to sex workers and an increase in condom use among male military recruits. Simultaneously, there has been a decline in HIV prevalence among members of this same age group from 8% in 1992 to less than 3% in 1997.

So What Can We Do?

In a speech before the International Relations Committee of the U.S. House of Representatives in 1998, I described two prerequisites for an effective vaccine to protect against infection. The bottom line for the future is that we need an effective vaccine to protect against infection. The bottom line for the present is that we need to apply what we know works. This does not need new breakthroughs in technology, simply the commitment and political will to act on the basis of what we have already learned. Ask ordinary people what they think is the key to HIV prevention and they are likely to say knowledge about HIV and its routes of transmission. This view has influenced international thinking for the past 10 years of the epidemic and continues to be advocated by those who believe that health education is simply a question of providing people with the facts. In reality, of course, people need much more than information to protect themselves and others against infections. Having attitudes which makes behavior change seem worthwhile and having the skills to negotiate for safer sex and safer injecting practices are also vitally important.

Developing skills in sexual communication and negotiation requires practice and support. This is especially true when it comes to being assertive about your wishes and needs, especially if you are a woman or a younger person. Many societies nowadays deny young people the opportunity to practice skills of sexual and drug-related communication and negotiation. This is why UNICEF decided to promote life skills approaches to education about health and personal relationships in schools throughout the world. Attitudes are hard to change. It is a little difficult mobilizing the resources necessary to respond to the global epidemic, AIDS-related prejudice and discrimination would be rarer, and people would be much more willing to recognize HIV and AIDS are issues which relate to them personally. In order to change attitudes, we need to change perceived norms about safer sex and condom use, perhaps through social marketing and other programs that have been effective in promoting condom use in countries in Africa.

Changing knowledge and attitudes alone (and even providing skills) is quite insufficient to bring about risk reduction. What good is it to a woman in Pakistan or India, for example, to know how HIV is transmitted when she cannot refuse to have sex with an unfaithful husband? What value is this knowledge to a young woman selling sex in the Philippines in order to support her family back home, and who may be offered more money when she has unsafe sex with a client than when he uses a condom? Every day, hundreds of thousands of women find themselves in similar circumstances. Environmental and societal factors also need to be tackled as part of work on HIV prevention. The Ottawa Charter for Health Promotion is one of the first internationally endorsed statements to promote supportive environments for health. These are essential if people are to act on what they have learned, yet too often they are absent. It is now widely understood that societal factors—including social inequalities—render some groups more vulnerable to STDs and HIV than others.

Environmental factors influencing people's vulnerability to HIV and AIDS include famine and natural catastrophes such as those caused by hurricanes, floods, and famine. In each case, people may be forced to live away from their homes in circumstances and conditions that are not of their choosing. Environmental factors also include access to protective technologies such as condoms and clean needles and syringes. They may extend to rules and regulations governing sexual contact within a particular setting or society. It is now known, for example, that introducing formal rules to make sex work in brothels safer can have a dramatic effect on the transmission of HIV and other STIs, as has occurred in Thailand. Moreover, as the late Jonathan Mann so passionately believed, there are good reasons to believe that efforts to promote human rights including freedom from exploitation, freedom from sexual violence, and freedom from discrimination and stigmatization, be it on the basis of sexuality or HIV status, are likely to have beneficial effects.

Both individual persuasion and societal enablement are needed to alter the course of the epidemic. Programs and interventions that only pay attention to one of these variables simply do not work.

Some Key Principles

But where should we begin, and how should we focus our efforts? Beyond this, however, it is important to provide awareness raising internationally, a number of key principles are clear.⁵ First and foremost, we need political commitment stretching from the community to the national levels. Without this, there will be no lasting interest and avoid monotony. Such has been the case in Switzerland, where the epidemic really is, and not where we imagine it to be. Many countries, for example, have spent hundreds of thousands of dollars on HIV prevention among groups which were not significantly at risk, instead of first asking where is the epidemic now, and how it might be controlled. Focusing programs and interventions appropriately is vital when resources are limited. However, it is equally an illusion to think that an exclusive focus on those at highest risk of

Interventions need to be multisectoral and multilevelled, since HIV

HIV infection is operationally feasible and can contain the epidemic. does not respect the boundaries between one government department and another. Joint action is needed by the public, private, and voluntary sectors to prevent new infections and to provide support and care to people already living with HIV disease. Collaboration between different government departments is a key part of such a response. Nongovernmental and community organizations have a key role to play in reaching people living with, and affected by AIDS, and in combatting the stigmatization and discrimination that often accompanies the epidemic.

People living with HIV and AIDS have much to contribute to program development and implementation. Not only does their active involvement enhance community participation and 'ownership' of the epidemic, it helps minimize its potentially negative effects. There is a considerable body of research to show that when a public health threat succeeds. However, reducing societal vulnerability requires political commitment at the highest level. All too often, politicians and policy responses are unpredictable. Programs and activities that offer visibility to people living with HIV and AIDS, and which allow seropositive people to contribute to prevention efforts, are essential. They can put to rest unrealistic fears and reduce levels of fear, stigma, and discrimination.

been discovered with respect to investment in young women's education.

The Role of Technology

So far, and in keeping with many of the commitments that Thomas Parran's work some 50 years ago, I have emphasized the profoundly social nature of the global epidemics of HIV and AIDS. I will now, however, to consider the promise of new technology. When HIV and AIDS first appeared, there were few new options in the global struggle against AIDS.

A vaginal microbicide. Work to develop a microbicide for vaginal and/or rectal use has been stepped up recently, and a substantial number of products are in a state of advanced clinical development. Ideally, a vaginal microbicide needs to be inexpensive, safe, stable, and easy to store. It needs to be widely available without prescription, active as it is inserted and for a long time afterward, pleasure enhancing, pleasant to use, and effective against HIV and other STIs. A product with all these qualities never be found. Nevertheless, ones that satisfy several of these requirements may well become available in the next few years.

When appropriately used, the female condom offers a safe and effective means of reducing the likelihood of acquiring a STI.⁶ It offers women a means of protection over which they have greater control and is a form of protection that some men welcome. In 1998, representatives from 15 countries in Eastern and Southern Africa met in Pretoria to discuss how best to include the female condom within condom promotion more generally. The response was overwhelmingly enthusiastic and confirmed earlier findings from UNAIDS-supported studies in Costa Rica, Indonesia, Mexico, Senegal, and Thailand, all of which had indicated the potential of this new technology as a means of preventing HIV transmission.⁷ It is vitally important that the female condom is made more widely available so as to enable those women who want to use it to protect themselves.

In the last few years, significant advance has been made in relation to the mother to child transmission. The ACTG 076 regimen using zidovudine has been shown to be effective in reducing mother to child transmission by about two-thirds in the needs to be inexpensive, safe, stable, and easy to store. More recently, a trial in Thailand using a shortened regimen and costing less than a tenth of the cost of the longer course reduced the rate of mother to child transmission during birth by half. Among a group of women provided with safe alternatives to breast milk, mother to child transmission was reduced to 9% compared with a developing country norm of up to 35%. The effectiveness of this more easily affordable regimen should encourage health authorities in developing countries to start planning for the prevention of mother to child transmission using such a regimen. There are major challenges still to be faced however. These include how best to make available widespread voluntary counseling and testing and safe and affordable breast milk substitutes for mothers with HIV, while at the same time continuing to promote breast feeding for babies born to HIV-negative women.

Postexposure prevention (PEP). The administration of zidovudine after percutaneous exposure to HIV can significantly reduce the risk of infection. While zidovudine is currently the only drug for which efficacy data exist, several industrialized countries are now using double and triple antiretroviral therapy as a preventive measure. This kind of intervention is likely to have enhanced antiretroviral activity and may deal with HIV strains that are possibly resistant to zidovudine. It should be made readily available to health care workers who have been accidentally exposed to HIV. There has been much recent debate about the use of antiretroviral drugs as a means of prevention following sexual exposure to HIV. While this form of treatment is available from some centers in Europe and the United States, there is as yet no reliable data to indicate whether it can prevent the sexual transmission of HIV infection. Important questions remain to be answered about the costs of this kind of intervention and its likely impact on safer sexual behavior.

Some Diversions

There has been much progress in the fight against AIDS over the last decade and a half. The challenge now lies in 'scaling up' globally what has been learned so far. Across the world, communities and nations with HIV and AIDS are still denied basic human rights and freedoms. are beginning to move from denial and victim blaming to more inclusive responses in which people with HIV and AIDS are recognized and that of our United Nation's partners, HIV antibody testing is still as having a key role to play in prevention and care. Those countries used as a means of selection in employment, as a means of making which have had the greatest success in reducing new cases of infection decisions about the quality of health care people will receive, and to have been among the first to make this transition. However, caution is necessary, lest we be lulled into a sense of false security about what the future may hold. In particular, I would like to highlight a number of factors that hold the potential to disorient program planning and development and which may deflect international efforts to prevent

It is necessary to guard against the tendency to see HIV and AIDS as

HIV transmission from achieving their goals.⁵

purely scientific or medical issues. The social dimensions of HIV and AIDS are at least as important as the biomedical aspects, and we need to maintain our investment in social and educational programs concurrent with our investment in immunology, virology, and pharmacology. While priority must be given to identifying and making available an effective vaccine, people need education and support in making the behavioral changes to protect against infection. The medical and social dimensions of HIV and AIDS are very much interconnected. It is important to recognize the futility of efforts to privilege biomedical above social and educational issues, or vice versa.

There has been much talk recently about the 'science' of HIV. I am sometimes very worried when I hear calls for evaluation using prevention, particularly among those who would seek to identify only the most rigorous, but artificial, of procedures such as the largely nonexistent social 'magic bullets' to protect against infection. randomized controlled trial. We can come to know what works in HIV. Bringing about and supporting behavior change (or consolidating prevention in many different ways. Global experience teaches us that already safe behaviors) is in fact as much an art as a science. As multilevelled, frequently complex programs are those most likely to be explained earlier, there are no 'interventions' that, regardless of success. These are exactly the kinds of activities it is most difficult to context, bring about predictable behavioral results. Instead, there are evaluate using scientific designs that seek to isolate the effects of principles for success in program design which need to be scaled up individual variables (such as a discrete educational program or a and applied in diverse settings across the world. This has implications particular style of peer education) on individual behaviors. for the kinds of evaluation we should be undertaking in the field of HIV-related health promotion.

Recent years have seen a normalization of much HIV-related work, but experience shows that prevention efforts must be sustained if there is not to be a rise in infections among the newly sexually active, as well as among those for whom earlier messages have lost their relevance. The enhanced availability in some countries of potentially more effective therapies requires us to develop new prevention messages, including those that address some of the 'new myths' about AIDS. At a meeting on this issue coorganized by UNAIDS and the UCSF AIDS Research Institute in 1998, some of these myths were discussed. They included the myth that a nondetectable viral load equates to noninfectiousness, the myth that since a cure for AIDS is close there is no need to practice safer sex and safer drug use, and the myth that there is no need any longer to aggressively invest in HIV vaccine development. When there is a need to balance budgets, it can be tempting to cut that for which there is little public demand and, as Thomas Parran himself discovered, STI prevention is rarely a popular issue among politicians and the public at large. But such action is shortsighted, since it will lead to only greater problems in the future for which funders and policy makers will ultimately find themselves called to account.

Conclusions

When AIDS was first identified in the early 1980s, the world reacted with disbelief. A not uncommon response was for countries and individuals to claim that AIDS simply could not happen to them. Religion, national character, the strength of the family, all were said to protect against what in retrospect we understand to be a sexually transmitted and blood borne disease. As time passed, these initial responses were replaced by those which sought to blame 'others' for the disease—first foreigners and later those (such as injecting drug users, sex workers, and homosexually active men) who were socially marginalized within their own society. Only because of courageous action by individuals and governments have more effective, just, and socially inclusive responses emerged. And only through coherent programs of action and education that distinguish scientific moral considerations have we begun to control HIV and AIDS.

I often hear people complaining that AIDS is 'too political.' There are some compelling reasons for this, not only because HIV is transmitted through very private behaviors on which there is a wide spectrum of opinions in society, and not only because it chronically affects young adults who speak up for their rights, but above all because effectively countering the HIV epidemic and its consequences requires tough choices—such as on sex education for children and STIs are on the political agenda and that technically sound policies that respect human rights become the norm. I believe that only in this way will we remain true to the best principles that guided Thomas Parran's work as Surgeon General of the United States of America.

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