

Strategy for the Second Wave

Learning from India's Experience with HIV/AIDS

A Conference Report of the
CSIS Task Force on HIV/AIDS

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Cover photo: (L-R) Bates Gill, CSIS Freeman Chair in China Studies; Kathleen Cravero, UNAIDS; Teresita Schaffer, CSIS South Asia Program; William Brencick, Department of State; Subhas Salunke, Director, Maharashtra General Health Services

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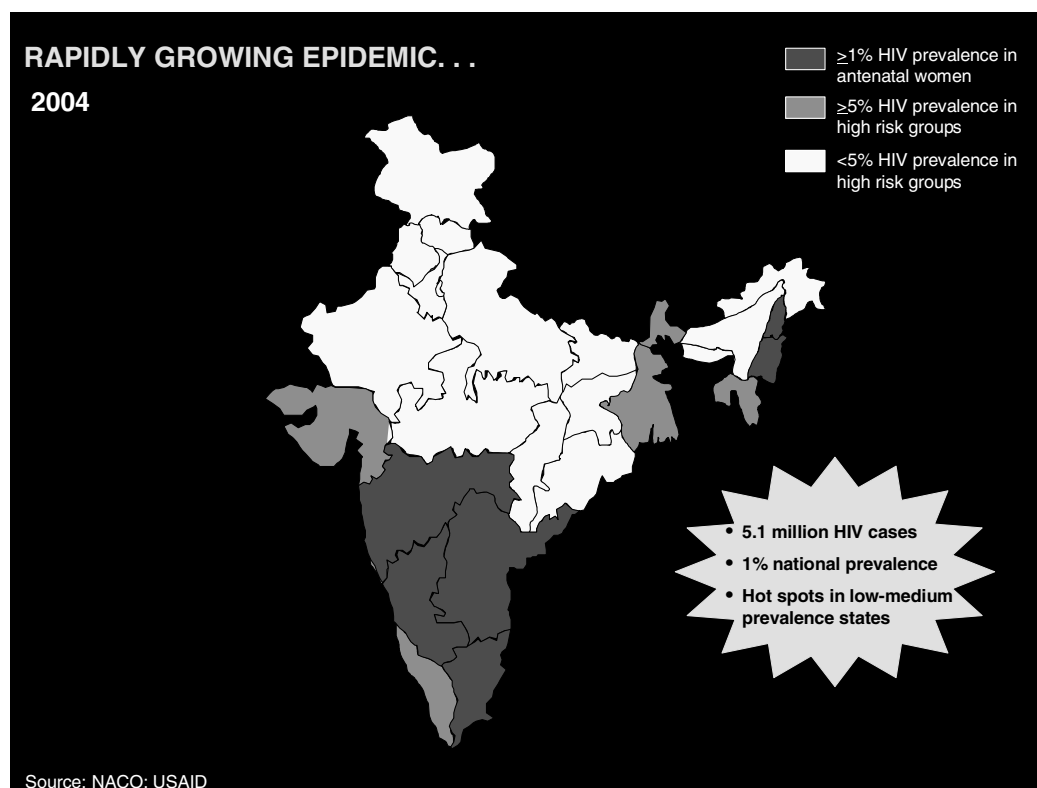
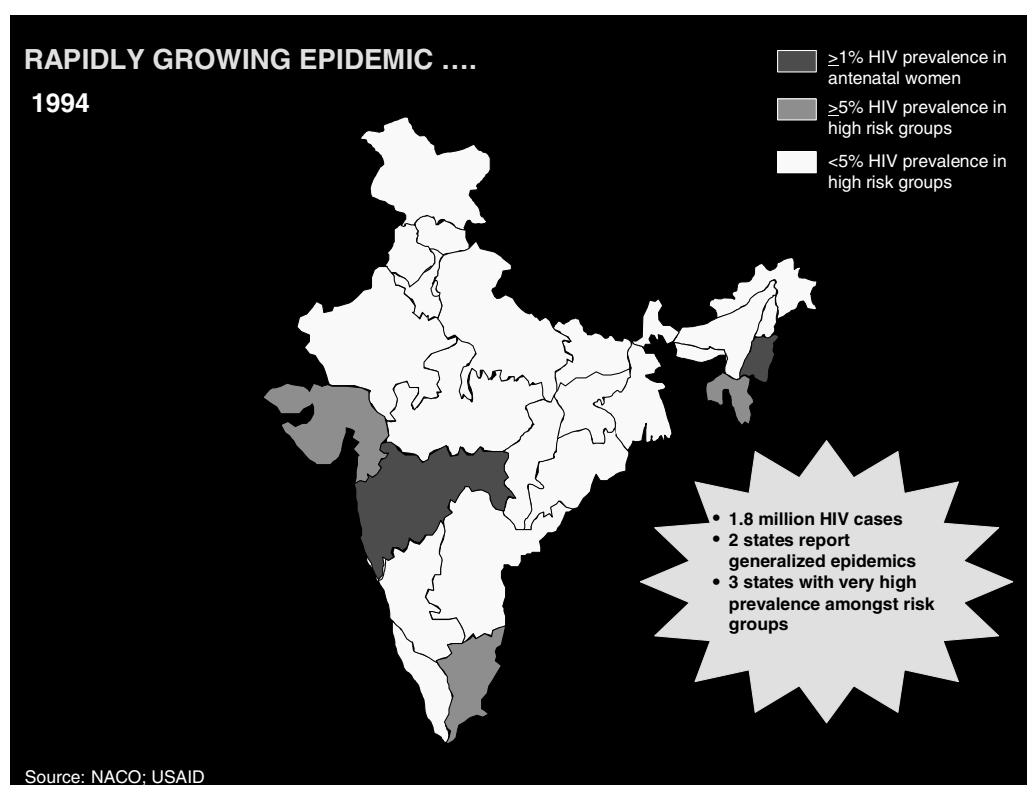
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Executive Summary

The Center for Strategic and International Studies (CSIS) hosted a conference on September 9, 2004, entitled *Strategy for the Second Wave: Learning from India's Experience with HIV/AIDS*. Its principal purpose was to analyze the lessons learned so far from India's fight against the HIV/AIDS pandemic and start thinking about how that experience can help the United States and the international community develop an effective strategy toward other second-wave countries. Participants included political figures and representatives from the health care industry in India and representatives of international and nongovernment organizations (NGOs) that have been active in the fight against HIV/AIDS, including the Bill and Melinda Gates Foundation, as well as other U.S.-based experts.

India has entered a critical period in its fight against the HIV/AIDS pandemic. In June 2004, India's National AIDS Control Organization (NACO) announced its estimate that India had 5.1 million people infected with HIV as of the end of 2003, up from 4.58 million a year earlier. This represents a 10.3 percent increase in estimated infections (a welcome drop in the rate at which infection is spreading from the 13.3 percent increase a year earlier). India is home to the second-largest number of HIV-infected people in the world, and some would argue that it actually has the largest population of infected people. The HIV/AIDS epidemic has moved into the general population in several parts of the country.

The four panels of speakers at the conference dealt with prevention, antiretroviral treatment (ARV), research, and the strategic challenge. Panelists as well as the individual speakers all emphasized that an effective response to the epidemic must be massive and comprehensive. Essential ingredients include (1) widespread behavior change, (2) massive resource mobilization, and (3) a focused drive by both government and private actors to provide prevention and treatment services. This is a tall order. India's leaders, like those in other "second-wave" countries, face the tremendous challenge of doing all these things at a time when the HIV/AIDS problem has not yet become a clear crisis in their societies. To avert a catastrophe, in other words, they need to act before the force of the catastrophe makes its presence felt in their politics, society, and government.

Chart 1. Spread of the HIV/AIDS Pandemic in India, 1994–2004

Panel I

India's HIV/AIDS program from the start has emphasized prevention. The first panel presented three different approaches to prevention that have been prominent in India. The Bill and Melinda Gates Foundation's Avahan program, described by its director, Ashok Alexander, has devoted most of its resources to focused interventions in the six states with high HIV prevalence as well as along national highways. It aims to reduce HIV transmission among high-risk groups, especially sex workers, their clients, and injecting drug users (IDUs), and to slow the spread of the epidemic into the general population. These interventions are supplemented by advocacy, public education, and capacity-building. A number of NGOs and the Indian government have instituted similar intervention programs; one example was described by Dr. P. Krishnamurthy, of APAC (AIDS Prevention and Control). Both speakers stressed the importance of tracking the epidemic at the local level in order to understand both the diverse cultural and economic environments in which the epidemic is taking place and the complex geography of its spread. Dr. Krishnamurthy also pointed out that APAC's behavioral surveys had shown considerable success in the program's efforts to increase condom use by truckers and discourage casual sex.

Tata Steel, with one of the most active workplace programs in the Indian business community, combines awareness, condom distribution, counseling, treatment, and informal company support for community activities. Bharat Wakhlu, in describing the program, argued that the business community has personal and organizational skills as well as local influence that can reinforce government and private efforts in the areas where businesses are located.

Dr. Philip Nieburg of CSIS described some of the factors that eventually led to a sharp increase in testing in Botswana after the country shifted from "voluntary counseling and testing" to "recommended and routine" testing. He argued that this is a tool that will probably need to be introduced in a number of places. Dr. Michael Merson, commenting on the presentation, argued that India was not ready for routine testing. Rather, routine testing needed to be preceded and accompanied by a massive effort to reduce stigma, and it should be "road tested" with pilot projects before being introduced on a large scale.

Panel II

The second panel dealt with antiretroviral treatment, which India has introduced into its government HIV/AIDS program in the past six months. Reflecting on that effort, Dr. S. Rajasekharan, deputy superintendent of the Government Hospital for Thoracic Medicine in Chennai, noted that the number of HIV-positive patients visiting the hospital was increasing dramatically. The number of patients receiving ARV treatment was just under 400. Many patients are coming forward in spite of long commutes, and collaboration with NGOs is helping the program to reach those in need. The program insists that all patients receiving ARVs have a support system in place that can ensure their consistent compliance with the requirements for taking these medications. Thus far, patients had responded to the medication

better than expected, in terms of both toxicity and reliability in taking each dose. The hospital, like the others in the program, had devoted a great effort to capacity-building, which would have to continue for a long time. ARV medications are also bound to create a major and growing new expense for the hospital's program.

Several speakers were concerned that ARV therapy would also lead to less effort on prevention. Helene Gayle of the Bill and Melinda Gates Foundation saw the availability of ARV treatment as an opportunity to increase testing dramatically. She also argued that prevention efforts needed to be aimed at the HIV-positive population as well.

Panel III

The panel on research made a strong plea for integrating biomedical research with the needs of practitioners and communities, and for bringing social science and biomedical research together. Dr. Robert Bollinger of Johns Hopkins underscored the importance of asking research questions that are relevant to the community and of evaluating the proposed means of delivering new scientific discoveries. The behavioral aspect of biomedical research is especially important in current efforts to develop a vaccine and microbicides. Dr. Geeta Rao Gupta of the International Center for Research on Women argued that social science research provides the essential tools for understanding the sociological underpinnings of the epidemic, including such critical factors as the power of gender roles in influencing the and its spread, the role of economic vulnerability in fueling it, and the role of violence in preventing access to or use of voluntary counseling and testing. She concluded with a plea that the Indian government make better use of the Indian Council of Social nature of the epidemic Science Research (ICSSR) and that it encourage research partnerships between biomedical and social science institutions.

Panel IV

The final panel tried to construct a bridge from India's experience to a strategy toward second-wave countries. Bates Gill of CSIS compared and contrasted India's experience with China's. Both are enormous countries with an epidemic that needs to be stopped before it reaches crisis proportions. China's epidemic is predominantly rural, and the role of intravenous drugs and tainted blood transfusions figures more prominently in transmission of HIV there than in India. India possesses the opportunities and challenges that a democracy presents, while China's authoritarian environment presents its unique set of pros and cons. The biggest contrast is the absence of NGOs in China. As a result, thinking about how to stem the epidemic centers strongly on the government.

The other speakers, Dr. Subhas Salunke, director of General Health Services⁷, Maharashtra; Dr. Kathleen Cravero, deputy executive director of UNAIDS; and Mr. William Brencick, of the U.S. Department of State, focused more specifically on lessons from India. Their presentations wove together a number of points that speakers throughout the day had highlighted:

- *Stigma and discrimination as drivers of the epidemic.* Virtually all speakers emphasized this, and most also stressed the need to understand and begin changing the special vulnerabilities of women. India's epidemic is becoming increasingly "feminized," yet women face a host of special difficulties in both prevention and access to care and treatment. India's complicated social norms and conservative attitude toward sex make stigma harder to address. Pallav Das's film *The Unseen*, about street children in New Delhi, brought this point home with special force.
- *The importance of capacity-building,* so national and state medical establishments can deal with this multifaceted epidemic more effectively.
- *The need for integration of the various "stovepiped" health programs.* The most important examples were maternal and child health and tuberculosis, both of which are intimately related to the HIV epidemic. Integration is one of the goals of the Indian government's National AIDS Control Organization.
- *The inadequacy of current surveillance systems.* The natural way to administer a large program in a federal country is to devolve authority and administration from the central government to the states. But operating at the state level does not give a sufficiently fine-grained picture of the epidemic to those trying to fight back. Dr. Salunke and Ashok Alexander illustrated this problem with maps showing districts in which the epidemic was racing ahead of the surrounding areas. In Dr. Salunke's case, the focus was on the parts of low-prevalence states where conditions are ripe for a breakout. Both argued for a significant increase in surveillance capability geared toward identifying these hot spots.
- *Costs.* Several speakers presented estimates of the cost of an adequate AIDS program; Dr. Cravero, for example, said the cost for all of Asia would reach \$5.1 billion per year by 2007, or \$2 per capita. Dr. Gayle argued that none of the late second-wave countries currently devotes sufficient resources to HIV/AIDS. On the other hand, recent international studies calculated that the resources needed ten years from now could be cut in half by a strong prevention effort now. The introduction of ARV treatment will become a major cost factor when the "rollout" is concluded and larger numbers of patients begin to be absorbed.
- *Indian resources.* An impressive number of speakers, including, most tellingly, one of the two Indian parliamentarians to address the group, commented that the 0.9 percent of its GDP India spends on public health is woefully inadequate. Estimated expenditure on AIDS programs is \$0.11 per capita; adding the Gates Foundation's grant brings that figure to \$0.19. By way of contrast, the comparable figure in Thailand is \$0.55, and in Uganda \$1.81. The speakers, especially those from India, argued passionately for an increase in the resources India brings to the table.
- *International resources.* At the same time, there were strong arguments for increasing the international resources supporting the Indian program. Those closest to the program are keenly aware that, despite the perception in the public media, there is an under-resourced program, and that India's effort to

get international support is handicapped by donors' fear that a mega-country like India will take up all the available aid resources. They also acknowledged the need to have better plans in place for spending additional resources, to persuade the Indian government not to constrain its expenditures on internationally funded HIV/AIDS programs through budget caps, and to persuade foreign donors to meet India's most important priorities. Mr. Brencick noted that U.S. contributions to India's HIV/AIDS program were larger than to some of the "focus countries" under the President's Emergency Program for AIDS Relief (PEPFAR). However, even the largest of the PEPFAR countries is a small fraction of India's size.

One additional theme running through the day's discussions was political will. Participants agreed that political awareness and will were sharply up compared to the earlier days of the epidemic, but that HIV/AIDS had not yet become a driving national priority. The two Indian parliamentarians who spoke at the conference, Rajiv Shukla and Rajesh Pilot, both affirmed their government's commitment to fighting HIV/AIDS, but Mr. Pilot acknowledged that pushing this commitment through India's democratic political process was taking time. This assessment became especially apparent in his rather cautious view of the prospects for passing legislation banning discrimination against HIV-infected people. One participant in the conference identified the "political will gap" as the difficulty of translating commitment into action.

The U.S. government has substantially increased its funding to global HIV/AIDS in the last four years. In developing a "second-wave" strategy, it will need to reflect on the themes that ran through this conference. But it will also need to deal with some other factors that are peculiar to the three biggest countries in the "second-wave" category—India, China, and Russia. These include their size; their profile in the world, which makes them particularly resistant to letting outsiders set their priorities; and their widely divergent political systems, which interact with their large size to make national programs difficult to carry out. The biggest challenge, however, is the one the policy community started with: developing a shared sense of urgency about preventing a catastrophe before that catastrophe arrives—and hence before we feel the galvanizing influence of death on a large scale.

Acknowledgments

The CSIS Task Force on HIV/AIDS and its work on India would not have been possible without the hard work and dedicated support of a number of people. The Bill and Melinda Gates Foundation has provided generous financial support and irreplaceable intellectual leadership to the fight against AIDS. Helene Gayle and Lisa Carty have been critical colleagues in shaping and carrying out this conference, and Ashok Alexander's leadership in the Gates Foundation's Avahan project has been an example to all of us. Merck and Company also provided generous support for the conference, as well as the insights and understanding of Samir Khalil, Linda Distlerath, and Nigel Thompson, extending well beyond the pharmaceutical field. The Centers for Disease Control and Prevention (CDC) and the U.S. Agency for International Development (USAID), and their respective representatives in New Delhi, Dora Warren and Walter North, devoted time and effort to making our efforts successful and integrating our work with their own pathbreaking programs on fighting AIDS in India.

The Asia Society, cosponsor of this conference, has brought its broad expertise on Asia to bear on our work and, more generally, on the effort to contain the AIDS pandemic. We are grateful to Dr. Vishakha Desai for joining us and for putting India's challenging situation into a broader context.

The team that traveled to India in January 2004 on the CSIS Task Force's study mission has remained a lively, knowledgeable, and creative source of ideas. Almost all of its members have actively participated in the conference; every one has left an intellectual imprint on its results.

Finally, the conference would not have been possible without the hard work of the HIV/AIDS team at CSIS. Stephen Morrison has directed the Task Force with skill and energy. Celeste Wallander and Bates Gill have extended its reach to Russia and China respectively. Those who made the conference happen "where the rubber meets the road" have earned our special thanks: Pramit Mitra, Jessica Krueger, Constance Harrell, Navin Vij, and Shahryar Hussain.

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Director, CSIS South Asia Program



John Hamre, CSIS President and CEO



Ashok Alexander, Gates Foundation



Vishakha N. Desai, President of
the Asia Society



Bharat Wakhlu, Tata Group



Priya Bery, Global Business Coalition
to Fight AIDS



P. Krishnamurthy, Director of AIDS
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Sachin Pilot, Member of Parliament,
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S. Rajashekar, GHTM Hospital,
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Michael Merson, Yale University



Robert Bollinger, Johns Hopkins University



Pallav Das, Director, *The Unseen*



Helene Gayle, Gates Foundation



Geeta Rao Gupta, International Center for Research on Women (ICRW)



Phillip Nieburg, CSIS Task Force on HIV/AIDS



Stephen Morrison, Director, CSIS Task Force on HIV/AIDS



(L-R) Bates Gill, CSIS Freeman Chair in China Studies; Kathleen Cravero, UNAIDS; Teresita Schaffer, CSIS South Asia Program; William Brencick, Department of State; Subhas Salunke, Director, Maharashtra General Health Services

OPENING SESSION

India and the HIV/AIDS Pandemic

Introduction

John Hamre

John Hamre, president and CEO of the Center for Strategic and International Studies, opened the conference, saying that HIV/AIDS poses an immediate danger to what Martin Luther King Jr. termed the “seamless fabric of mutuality,” which is now commonly referred to as globalization. HIV/AIDS is not merely a public health crisis; it also has profound security implications with vital political and economic dimensions. In Africa, for instance, HIV/AIDS has created a generation of orphans, which in turn has given rise to countless child soldiers and mercenaries. The conference, he added, is not expected to come up with a solution to the problem, but to prompt us to ask, “What can I do now to deal with this crisis?” Dr. Hamre concluded by welcoming Vishakha N. Desai, president of the Asia Society, and thanked her institution for being a partner with CSIS on the conference. He thanked the Bill and Melinda Gates Foundation for supporting the CSIS Task Force on HIV/AIDS.

Welcome Addresses

J. Stephen Morrison and Teresita Schaffer

J. Stephen Morrison, director of the CSIS Task Force on HIV/AIDS and the CSIS Africa Program, welcomed the delegates and briefly outlined the work of the overall CSIS project. The India component is part of a larger effort to investigate the pandemic in second-wave countries, which CSIS has defined to include India, Russia, China, Nigeria, and Ethiopia. Chaired by Senators Bill Frist (R-Tenn.) and Russ Feingold (D-Wisc.), the Task Force comprises 35 experts from different fields who come together twice a year to review the work of the project and who also participate in missions to the target countries.

The purpose of the project, Dr. Morrison explained, is to track the rapidly changing dimensions of the disease in the target countries and produce policy

recommendations for the United States Congress and the executive branch for dealing with this pandemic globally. As part of its ongoing work, the CSIS Task Force will organize a conference to include all second-wave countries in June 2005. The objective of the conference will be to tie together all the work of the Task Force and to help the next administration in the White House with policy suggestions to prepare a strategy for dealing with the HIV/AIDS crisis in megacountries like India and China.

Teresita Schaffer, director of the CSIS South Asia Program, outlined the work of the CSIS HIV/AIDS Task Force on India. The target audience of the effort is primarily policymakers in Washington, D.C., and the goal of the project is to help them better understand the magnitude and dimensions of the pandemic in India. As part of that work, the Task Force undertook a high-level mission to India in January 2004 and published a report based on the findings from that trip. Ambassador Schaffer thanked the members of the delegation, including those present in the audience, and the staff of CSIS who work on the Task Force project. She also thanked the Bill and Melinda Gates Foundation for funding the project, and Merck and Company for their support of a dinner on September 8, 2004, for the conference participants. Ambassador Schaffer concluded by introducing Vishakha N. Desai, president of the Asia Society, and invited her to give the opening remarks.

Opening Remarks

Vishakha N. Desai

Vishakha N. Desai, president of the Asia Society, began her remarks by providing the overall picture of the HIV/AIDS pandemic in Asia. Dr. Desai stressed the impact of HIV/AIDS on women and girls, who are often coerced into early marriage and suffer from unequal access to education and health care, particularly reproductive health care. To have a comprehensive discussion of AIDS in Asia, it is imperative to discuss the stigma and discrimination experienced by women and girls in the context of the underlying poverty, gender discrimination, and violence that make them most vulnerable to infection.

According to the 2004 report of the Joint United Nations Program on HIV/AIDS (UNAIDS), 4.8 million people became newly infected with HIV last year, bringing the total number of people living with HIV to nearly 40 million people. The majority of people living with HIV—nearly two-thirds of the overall number—are in sub-Saharan Africa, despite the fact that the region has just over 10 percent of the world's population. Dr. Desai said that even though the numbers are staggering, they do not capture the full impact of the disease.

Although some comparisons can be made between the AIDS epidemics in Africa and Asia, there are many differences. First, Asia has not seen prevalence levels anywhere close to those in Africa. The highest prevalence rates are close to 4 percent, whereas in Africa there are countries and communities with 30 percent to 40 percent prevalence. Second, unlike Africa, where most believe HIV spread

rapidly through heterosexual transmission, HIV's spread in Asia has happened most quickly, and penetrated most deeply, in concentrated populations indulging in "high-risk" behavior. This includes intravenous drug use, which is fueling the epidemic through much of Southeast Asia. Sharing infected needles causes one in three new infections in Asia, for instance.

Another major difference is the sexual behavior of men and women on the two continents. In high-prevalence areas in Africa, both men and women have concurrent sexual partners, meaning more than one partner in one year. In Asia, most women are still in very traditional, conservative roles; they marry young and tend not to have multiple partners. It is the husbands who have sex outside of marriage and are the ones who bring the disease home. This is a cultural difference—one that epidemiologists are working hard to understand and incorporate into HIV/AIDS programs. Understanding these differences is critical to mounting an effective response to the HIV/AIDS pandemic.

Unfortunately, most prevention programs in Asia have shied away from issues relating to drug use, sex tourism, and homosexual behavior, Dr. Desai said. Condom promotion and needle exchange programs were initially given low priority, despite the overwhelming evidence that these targeted interventions can have a great impact in stemming the spread of the disease. Dr. Desai added that although the HIV virus is threatening to break out into an all-out epidemic, there is hope because political leadership is on the rise, including in India and China. Recent legislation in China that bans HIV-related discrimination and trade in human blood is a step forward.

The low economic and social status of women in South Asia makes them particularly vulnerable to AIDS. Dr. Desai said that India has been witness to the creation of a new social class of women lower than any previously existing in the country. It is made up of HIV positive women. The majority of these women get infected through their husbands. Frequently, a woman learns of her status only when she becomes pregnant. Often her in-laws blame her for bringing the disease into the house. These women are shunned by their own families and are left to fend for themselves, with no or few skills and with very little training. Many are forced on the streets and get into prostitution.

Children are also particularly vulnerable. According to a recent Human Rights Watch report, many of the millions of Indians living with HIV/AIDS are children. These children are discriminated against in education and health services, denied care by orphanages, and pushed onto the streets and into the worst forms of child labor. Gender discrimination, such as denying them access to schooling, makes girls more vulnerable to HIV transmission and makes it more difficult for them to get care. Many children, especially the most vulnerable, as well as the professionals who care for them, are not getting the information they need to protect them and to combat discrimination.

Policymakers must launch major education drives for women and girls, and ensure that they have broad access to quality and comprehensive education. This, Dr. Desai argued, is crucial to addressing the stigma and discrimination associated with this disease. Beyond formal education, lawmakers must reach out to the millions of children in India who are not yet in school— either because they are

on the streets or at work—and try to get them into nonformal schools. These are the children most vulnerable to infection and now least likely to get the lifesaving information they need. Dr. Desai also called on people in the arts community in India as well as the country's strong research, scientific, social science, and policy communities to strategize and work together to ensure a comprehensive response to the HIV/AIDS crisis.

Fighting AIDS in a Democracy

Rajiv Shukla and Sachin Pilot

Both **Rajiv Shukla, member of Rajya Sabha (Upper House of Parliament), Congress Party, and Sachin Pilot, member of Lok Sabha (Lower House of Parliament), Congress Party**, stressed the ruling Congress Party's commitment to fighting the HIV/AIDS epidemic. Mr. Shukla began by stating that the Indian government takes the HIV/AIDS crisis very seriously. He outlined the various steps taken by the Indian health ministry, but said more needs to be done. He pointed out that as truckers are a major source for the spread of the virus, Indian villages are now vulnerable to the AIDS epidemic. He added that condom use is an important part of fighting the disease, but India's conservative attitude toward sex prevents many from purchasing them. Mr. Shukla also underscored the need to increase cooperation between the U.S. and Indian governments and give a bigger role to the NGOs in the fight against the HIV/AIDS pandemic.

Mr. Pilot echoed Mr. Shukla's remarks about the threat that the HIV virus poses to India's society. He stressed that one of India's biggest challenges is its growing population. With over a billion people to provide for, the demands on the country's scarce resources are immense. This in turn puts enormous pressure on India's health infrastructure. He said India clearly needed to devote more resources to fighting AIDS, but stressed that the money would be wasted without improvements in health care delivery. Mr. Pilot also stressed the need to improve data collection to get an accurate picture of the spread of the HIV/AIDS pandemic in India.

Mr. Pilot supported legislation banning discrimination against HIV-positive people. He was not optimistic that it would pass quickly, however, given the difficult atmosphere in parliament and the fact that many politicians were still diffident about talking publicly about HIV/AIDS.

P A N E L I

Approaches to Prevention

Panel Moderator:

Priya Bery

Director of Policy and Research, Global Business Coalition on HIV/AIDS

Panelists:

Ashok Alexander

Executive Director, India AIDS Initiative, Bill and Melinda Gates Foundation, India

P. Krishnamurthy

Director, AIDS Prevention and Control, Chennai, India

Bharat Wakhlu

Director, The Tata Group

Phillip Nieburg

Consultant, CSIS Task Force on HIV/AIDS

Priya Bery, director of policy and research at the Global Business Coalition on HIV/AIDS, pointed out reasons for both optimism and pessimism regarding the fight against AIDS in India. The country already has the second-largest population of HIV-infected people after South Africa, and is catching up fast. Some experts even believe that the official estimate of 5.1 million people infected with HIV may be low and that India may have the world's largest population of HIV-infected people. But there are opportunities to stem the tide. Prevention programs targeted properly and interwoven with treatment and care initiatives can make a huge difference.

The Global Business Coalition on HIV/AIDS is working with over 165 multinational companies to engage them to fight the HIV/AIDS pandemic globally. It helps its members develop corporate action plans on HIV/AIDS. In India, the response from the corporate sector and foreign companies has been slow. The coalition is working with the Confederation of Indian Industries (CII) to engage private-sector companies in India. Companies such as Tata Steel, Daimler Chrysler, Merck, and Booz Allen have joined with the coalition to fight the pandemic. The challenge for India is to harness its immense pool of technical expertise and human resources, both in the medical profession and otherwise, and bring it to bear on the HIV/AIDS crisis.

Ashok Alexander, executive director of the **Bill and Melinda Gates Foundation's Avahan project in India**, recalled that the word "avahan" in Sanskrit means a "call to action." The HIV/AIDS pandemic in India is complex and requires immense resources, but Mr. Alexander said that there is a window of opportunity of a few years in which an aggressive campaign can be mounted successfully to combat the epidemic.

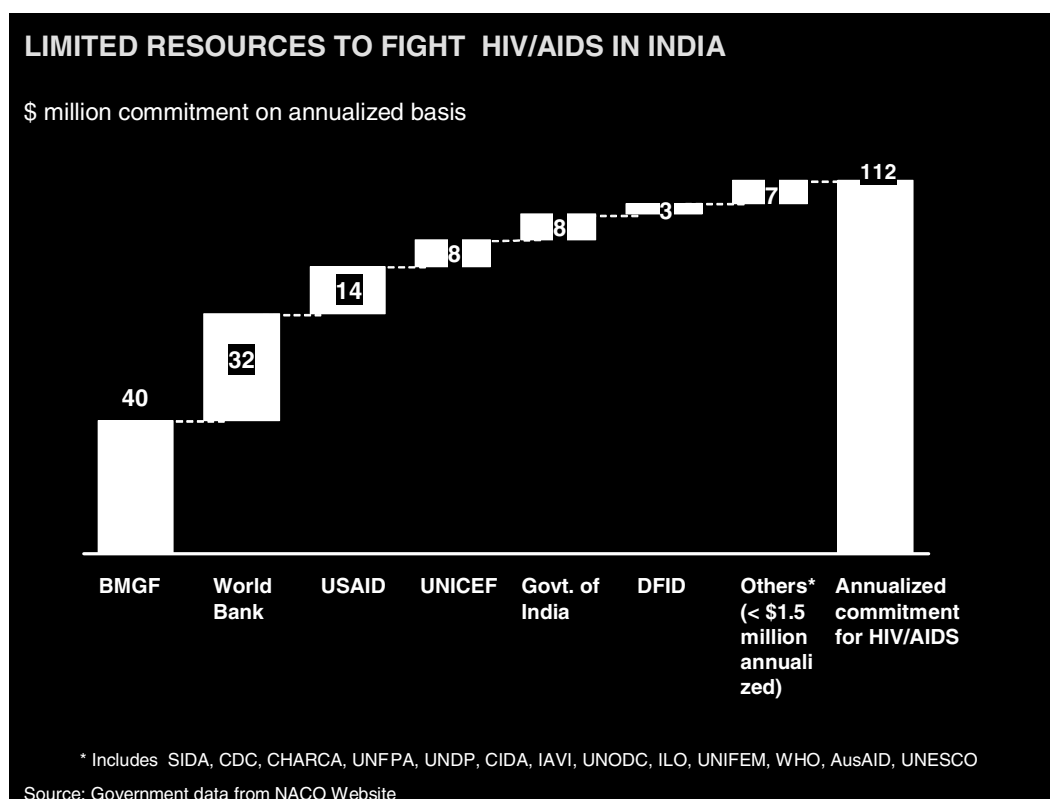
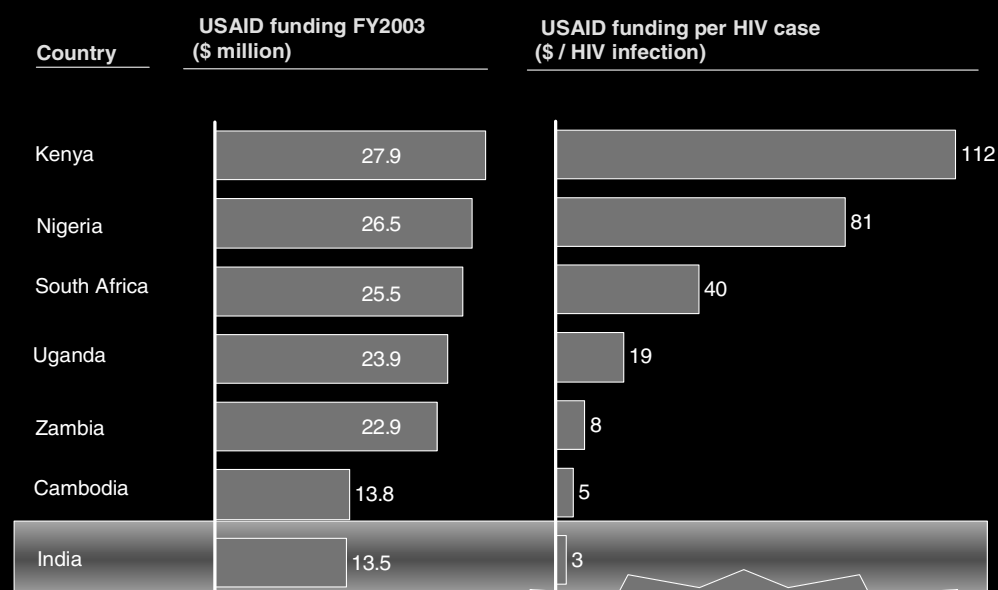
The HIV/AIDS epidemic in India is not a single outbreak, but a multiplicity of epidemics, which are local in nature, each with its unique challenges and solutions. The risk groups are small, dispersed, and mobile, and stigma and discrimination are rampant and deep-rooted. Like China, where the HIV/AIDS epidemic may infect 10 to 20 million people by 2010, India also is looking at a gargantuan problem within five to six years unless it takes decisive action now. With India's population of 1 billion, even a small shift in the prevalence rate can result in tremendous numbers. Six states have been identified as having high prevalence of HIV infections, but even the low-risk states have pockets of high incidences of sexually transmitted diseases, which makes them vulnerable to an all-out breakout of HIV/AIDS.

India's immense size, high levels of illiteracy and low status of women make fighting the epidemic particularly daunting. On top of that, each state, and within that each district, has unique characteristics, which means that each prevention program has to be tailor-made to address the needs of that region. There are immense variations in language, food habits, and lifestyles within states. For instance, in Karnataka, one of the six high-prevalence states, the resource-poor northern region is prone to drought and far less prosperous than the southern districts, home to Bangalore, where India's information technology boom began. The epidemic is most acute in a handful of districts in the north, where the sex trade is linked with the presence of traditional "devadasis" (*servants of god*, Indian girls sold into slavery as children), some of whom then move northward into neighboring Maharashtra in search of work.

Turning next to the Avahan initiative, Mr. Alexander explained that the Gates Foundation has committed \$200 million over five years to the project. It is being developed and implemented in partnership with the NGO community, the central and state governments, and the private sector. Broadly, Avahan supports activities in the following five areas:

- *prevention among high-risk groups*—interventions in the six states with high HIV prevalence and along national highways to reduce HIV transmission among high-risk groups (especially sex workers, their clients, and injecting drug users) to slow the spread of the epidemic into the general population;
- *communications*—communications capacity building and mass media efforts to promote behavior change among high-risk groups;
- *advocacy*—efforts aimed at galvanizing the leadership in India around HIV/AIDS to create a supportive environment for HIV prevention and care efforts, with a special emphasis on reducing stigma and discrimination;
- *capacity building*—efforts aimed at increasing the capacity of Avahan grantees and other organizations to execute Avahan's strategies, with specific emphasis

Chart 2. Funding to Fight HIV/AIDS in India

**OVERALL AIDS FUNDING IN INDIA IS EXTREMELY LOW (2/2)**

Source: USAID budget FY2003, avert.org; * Includes the CDC and the NIH budget apportioned for India

on management of sexually transmitted infections (STIs) and structural interventions achieved through community mobilization; and

- *monitoring and evaluation*—program monitoring, surveillance, and long-term evaluation to determine the impact of Avahan's efforts on the HIV/AIDS epidemic in India.

Avahan aims to accomplish its task by collaborating with companies and organizations with proven track records and appropriate scale. For instance, Indian Oil, one of India's biggest energy companies, has been tapped to allow promotional and intervention programs at approximately 4,000 truck stops and highway outlets run by the company. Similarly, the Gates Foundation is working with the Transport Corporation of India to spread HIV/AIDS awareness among the company's long-distance truckers. The project uses existing infrastructure and experienced NGOs to provide targeted programs in the high-risk states. This is akin to standard business practices where the market is segmented and solutions are tailored to meet specific demands, he said.

Mr. Alexander concluded his remarks by calling on the Indian government to boost its public health spending, and on international organizations to increase their support to India. At present, India spends roughly \$0.11 cents on AIDS, compared to \$1.81 by Uganda and \$0.55 cents by Thailand. The international community also needs to do more in India and increase its support to fighting the HIV/AIDS pandemic. In addition, India's media and its intellectual community need to get more involved if the spread of this disease is to be halted.

P. Krishnamurthy, director of AIDS Prevention and Control (APAC), shared successful experiences from his position as director of a major NGO in Tamil Nadu, India, in combating the HIV/AIDS pandemic. The first case of HIV/AIDS was diagnosed in Tamil Nadu in 1986, and the state has one of the highest HIV-prevalence rates in the country. Tamil Nadu is also one of the most prosperous of all Indian states with one of the best health indicators. Literacy rates in Tamil Nadu among women are among the highest in the country.

Dr. Krishnamurthy's organization, AIDS Prevention and Control (APAC), works through a tripartite agreement between the U.S. Agency for International Development (USAID), the Indian government, and an international NGO, Voluntary Health Services (VHS). The partnership was established in 1995 with initial seed money of \$10 million from USAID. The second phase, which began in 2002, has been expanded to include work in neighboring Pondicherry state and expanded care and treatment programs. USAID has extended its support in this phase to \$15.5 million. The two main goals of APAC, Dr. Krishnamurthy explained, are (1) to reduce the sexual transmission of HIV/AIDS in Tamil Nadu and Pondicherry and (2) to facilitate care and support for people living with HIV/AIDS. He added that various program evaluations have shown that the APAC project is a successful model worth replicating in other Indian states.

The work of APAC has been mainly concentrated in urban areas where the high-risk population is located. In the first phase, APAC provided funding to NGOs for increasing awareness of HIV/AIDS. This was then supplemented with

money for devising targeted intervention programs among high-risk groups such as sex workers and truckers. These programs include behavior change, public information programs, condom marketing, treatment for sexually transmitted infections, and research and advocacy work. Care and treatment programs include home-based care projects and voluntary testing and counseling.

Dr. Krishnamurthy mentioned that the work of APAC has been evaluated annually over the past nine years through behavior surveillance surveys (BSSs). The sample size and methodology used to assess the impact of the project are regarded by independent sources as quite good. These evaluations have shown that although awareness has increased significantly among high-risk groups, misconceptions regarding the transmission of the disease persist and are a major problem. Another significant finding by the project is that commercial sex workers now insist on condom use by their clients, but not when it comes to their live-in partners (husbands or boyfriends).

The evaluations of the APAC project have also indicated that fewer truckers are having sex with multiple partners, and condom use has grown: 83 percent of truckers surveyed in 2003 used condoms, compared to 44 percent in 1996. Sex with non-regular partners among truckers surveyed has shown a decline too: 26.1 percent in 2003, compared to 48 percent in 1996. In addition, truckers now regularly seek treatment and counseling for STIs. Promotion of condoms has gained ground, but so far the private sector has not played a major part in the effort. This needs to be encouraged, Dr. Krishnamurthy said.

Dr. Krishnamurthy cited some indications that the HIV/AIDS pandemic is stabilizing in Tamil Nadu. A survey of 290,000 pregnant women between July 2003 and June 2004 found that prevalence in this group had fallen from over 1 percent to 0.55 percent. Behavioral changes that will slow the growth of the disease further are also taking place.

Dr. Krishnamurthy concluded by outlining some of the lessons and challenges facing his organization. One key lesson from Tamil Nadu's experience is that working with NGOs is a dynamic process and can yield very effective results. Collaboration with government agencies and the private sector is important too. Because private-sector health care is an important part of India's health industry, private practitioners must be brought into any program to fight the pandemic. Future challenges include sustaining existing behavior change programs, overcoming stigma and discrimination among health care providers, developing fruitful partnerships with government agencies, maintaining regular supply of ARV drugs, and integrating existing HIV/AIDS programs with the rest of the health care industry.

Bharat Wakhlu, director of the Tata Group, spoke on the workplace intervention programs undertaken by Tata Steel and the role private companies can play in combating the HIV/AIDS pandemic. Mr. Wakhlu began by challenging the misconception that private-sector companies, like Tata Steel, are too profit-oriented to be of any use in solving a public health crisis like the HIV/AIDS pandemic. A large company can bring a number of resources to the table in the fight against

AIDS and other public health issues, he said. For example, a company like Tata Steel exerts a lot of influence both in the state where it is based and also in the capital because of the taxes that it pays and the employment it generates. It has hospitals and other medical facilities, through which it can extend the reach of government and NGO programs. It has employees whom it can make available to work in the community and mobilize people. It has organizational and managerial talent.

Mr. Wakhlu explained that Tata Steel, which employs over 40,000 people, has taken an active interest in promoting HIV/AIDS at its factories in Jamshedpur. It has enlisted the support of local politicians and religious leaders to prevent any misunderstanding and other issues. The main activities of Tata Steel in HIV/AIDS prevention can be broken down into four broad categories:

- *Awareness and prevention activities:* Distribution of handbills, posters, and information booklets for employees and their family members, informational materials for local cable television channels, and other teaching materials regarding HIV/AIDS and sexually transmitted diseases.
- *Curative and rehabilitative activities:* Counseling for HIV-positive people and their family members.
- *Condom distribution and informational programs for truckers,* who pass through Tata Steel's facilities in Jamshedpur.
- *Volunteer activities by Tata Steel employees:* Both managers and factory workers participate in weekend awareness programs among the company's employees and in surrounding neighborhoods.

Tata Steel's intervention program with truckers is significant because the company employs a large network of trucks to carry its products and raw materials throughout India. On any given day, anywhere between 600 and 1,000 truckers and their helpers stop at Jamshedpur to load and drop off goods. The targeted intervention program, which includes informational programs and condom vending machines, can therefore reach a large number of people at a single point. In addition, Tata Steel is also treating HIV/AIDS patients in hospitals run by the company and conducting HIV tests for employees and outsiders. Blood banks operated by these hospitals, Mr. Wakhlu said, routinely test for HIV infection.

Mr. Wakhlu concluded by saying that Tata Steel's program has raised the awareness of the HIV/AIDS pandemic and can be replicated elsewhere. Because India's government spending on public health is very low, companies like Tata can have a big impact by introducing such programs at their workplaces. A company faces many challenges, mainly due to local politics, which create obstacles in forming effective partnerships between that company and NGOs, the local community and others. But these obstacles can be overcome since awareness about AIDS is on the rise among Indian lawmakers.

Phillip Nieburg, consultant to the CSIS Task Force on HIV/AIDS, spoke on evolving models of HIV routine testing and counseling. He defined routine testing as a procedure in which a health care worker actively offers HIV testing as a

routine aspect of contact with a patient but where the patient retains the ability to refuse (opt out of) testing. Dr. Nieburg also mentioned that the emphasis these days is on “testing and counseling,” rather than the other way around, indicating that there is less emphasis on pre-test counseling.

There are five broad approaches to testing:

- *Voluntary counseling and testing (VCT)*: Patient initiated.
- *Diagnostic testing*: When people show symptoms of disease. Example: Patients with tuberculosis should be treated for HIV as a component for TB care.
- *Routine testing*: Health care worker offers testing to a patient.
- *Mandatory testing*: Examples include those for blood products or for military personnel.
- *Testing as part of epidemiologic surveys or surveillance*: Such testing may sometimes be done on subjects with all personal identifiers removed.

Testing is an important issue mainly because of low awareness levels among HIV/AIDS patients. In many places, fewer than 10 percent of infected people are even aware that they carry the HIV infection. Stigma prevents people from coming forward for testing and treatment. Even when antiretroviral drugs are available, for instance in Botswana, testing rates have been far lower than anticipated. All these factors, Dr. Nieburg said, have put emphasis on the issue of testing. The World Health Organization has emphasized offering HIV testing and counseling as a standard practice wherever they are likely to enhance the health and well-being of the individual.

Studies show that more widespread testing has helped reduce risky behavior among both HIV-infected and non-infected people. Uninfected people who earlier thought there was no benefit in getting tested have been shown to reduce their risk behavior once tested. Testing also opens the door to ARV and other treatment options. In addition, it also helps HIV-infected people to deal with family issues and future options.

Dr. Nieburg also used the example of Botswana to highlight some strengths and weaknesses of routine testing. Botswana is one of the few countries with a high HIV-prevalence rate where testing has become routine. (Approximately 38 percent of the population is infected with HIV.) Initial attempts to introduce testing through a program of voluntary counseling and testing, or VCT, met with a low uptake. From January 2004, however, the government has made a strenuous effort to increase “routine” testing. Under strong political leadership from President Festus Mogae, who got himself tested publicly, the number of people coming forward for testing and the number of testing centers have increased.

Dr. Nieburg pointed out that although the results from Botswana have been positive, it will be difficult for other countries to emulate the success without strong political leadership from the very top. In India, the number of people volunteering for testing so far has been low. Awareness among lawmakers has increased, but is still relatively low compared to what is required. Capacity problems, stigma against HIV-infected people, and the limited number of testing centers have contributed to the disappointing numbers. The low rates of HIV

testing, Dr. Nieburg warned, could become an obstacle for Indian health authorities as India expands its ARV program.

Discussion

- **Has the Gates Foundation conducted any studies on the mobility of the sex workers? How can the foundation's Avahan project ensure that sex workers are not discriminated against?**

No study has been conducted in India that follows the mobility of sex workers. But the Gates Foundation is in the process of initiating such a study that will shed more light on the issue and help us to target our interventions more effectively. Discrimination is a major issue. The Avahan project works with the "madams" who employ sex workers, the local politicians, and the police to ensure there is no misunderstanding among the various stakeholders.

- **Experience from other parts of the world has shown that once the HIV/AIDS pandemic stabilizes, people let down their guard and this prompts HIV infection rates to grow rapidly. What is Tamil Nadu doing to ensure that doesn't happen in that state?**

There is no question of letting down our guard. In fact, Tamil Nadu needs to act more vigorously to ensure that the downward trend of HIV infection continues. Our next challenge will be to integrate HIV/AIDS programs into the general health care system. For instance, we need to integrate HIV/AIDS programs with TB work. The Indian government also needs to look at Botswana's experience with routine testing and see what India can learn from that and how it can be introduced in India. But India should also be careful about introducing routine testing too hastily, as each country is different, and Botswana's experience can provide important clues but not a ready-made model for others. From what we have seen, Botswana has been successful because the stigma attached to the disease has come down and there is strong political leadership. This is lacking in India. Also, as you ask people to come forward for testing, there have to be adequate provisions for ARV treatment.

P A N E L I I

The Impact of ARV Treatment: Transforming the Health System

Panel Moderator:

J. Stephen Morrison

Director, CSIS Africa Program and CSIS Task Force on HIV/AIDS

Panelists:

S. Rajashekar

Deputy Superintendent of the Government Hospital of Thoracic Medicine (GHTM or Tambaram Hospital), Chennai, India

Helene Gayle

Director of the HIV, TB, and Reproductive Health Program, Bill and Melinda Gates Foundation

J. Stephen Morrison, director of the CSIS Africa Program, moderated the second panel on *The Impact of ARV Treatment: Transforming the Health System*. Dr. Morrison asked the panelists to reflect on the recent rollout of the Indian government's new program to provide free antiretroviral therapy and the experiences and challenges for both public and private health care providers. Dr. Morrison also asked the panelists to offer their insights and advice on the future of antiretroviral therapy (ART) and on the provision of prevention in the context of the Indian care program.

S. Rajashekar, deputy superintendent of the Government Hospital of Thoracic Medicine (GHTM or Tambaram Hospital) in Chennai, provided details, based on his hospital's experience, about the introduction of the Indian government's initiative to provide free antiretroviral therapy to people infected with the HIV virus in the worst-affected states. Dr. Rajashekar was able to offer participants a unique perspective as he had helped establish GHTM as a major provider of tuberculosis care. GHTM is now a key distribution point for the rollout of the ART program. In his presentation, Dr. Rajashekar used the example of his hospital to illustrate the successes and challenges the ART program faces.

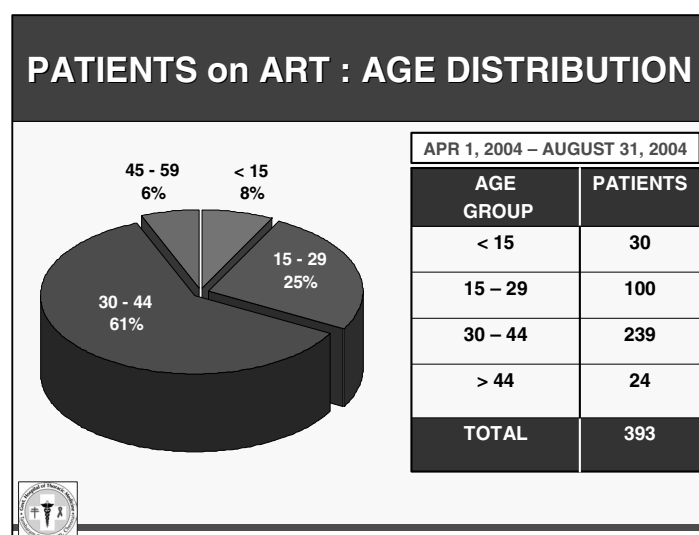
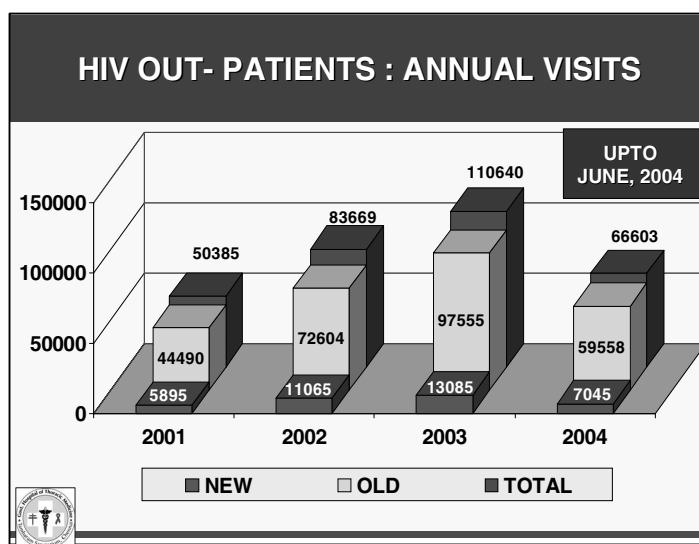
Last April, the Indian government began providing antiretroviral drugs directly to HIV-positive parents, children, and patients in government hospitals in the six most-affected states. The Global Fund to Fight AIDS, Tuberculosis, and Malaria contributed \$165 million to the program. India's plan distributes several fixed-dose combinations (FDCs) of ARV drugs that have been approved for use by the World Health Organization (WHO), including several made by Indian pharmaceutical companies. In implementing the project, the National AIDS Control Organization has collaborated with the WHO, the Positive Network (an organization of HIV-positive people), the U.S. Centers for Disease Control and Prevention, and several NGOs.

Since January 2004, NACO has prepared for the rollout by creating guidelines for eligibility and logistics, determining drug procurement procedures, and selecting training and treatment centers. So far, the program has established four training centers in Tamil Nadu, Maharashtra, and Manipur. The drugs are provided through eight treatment centers in the worst-affected states and Delhi. Tambaram Hospital was selected as one of the centers as it has treated HIV patients since 1993 and has worked closely with the CDC on HIV/AIDS control. More than 110,000 HIV outpatients visited the center in 2003.

An HIV screening program was introduced in March 2004 to test patients' eligibility for treatment, and the treatment itself was launched in April 2004. Since then, Tambaram Hospital has screened 1034 patients. Of these, 505 cases were found eligible based on medical tests and capacity for follow-up and drug adherence, 430 were registered, and 393 are currently being treated. The patients receiving treatment are on one of three three-in-one fixed dose combinations approved by the World Health Organization and made by Indian generic pharmaceutical companies. As ARV drugs interact negatively with tuberculosis medication, treatment of HIV-infected tuberculosis patients has been deferred. Dr. Rajashekar stressed the importance of finding new types of treatment because many HIV patients in India suffer from tuberculosis. In addition, a number of patients react poorly to nevirapine, one of the three drugs in the FDCs, and the program is still struggling to determine the best response to this situation.

Dr. Rajashekar provided some initial data from his hospital: Of the 393 patients being treated, 61 percent are between 30 and 49 years of age, while 33 percent are under 30. Although the patients represent a broad spectrum of occupations, housewives account for 28 percent. The vast majority of patients are married; only 30 are unmarried adults and 30 are children. All patients participate in a network of support and counseling through the hospital's own Guardian Support care, or through Positive Networks or other NGOs in which whole families may participate. Participation in support programs is crucial to successful treatment and drug adherence. Only 16 patients have missed doses, and only 5 of them on a regular basis. The five patients who missed their doses had to travel long distances to reach the hospital, and Dr. Rajashekar stressed the challenge of treating those in remote areas as the program expands slowly, while simultaneously combating problems of stigma and lack of infrastructure.

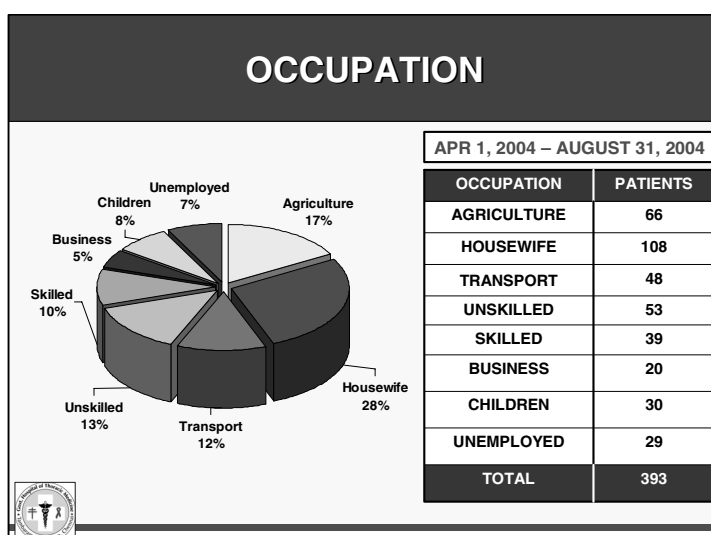
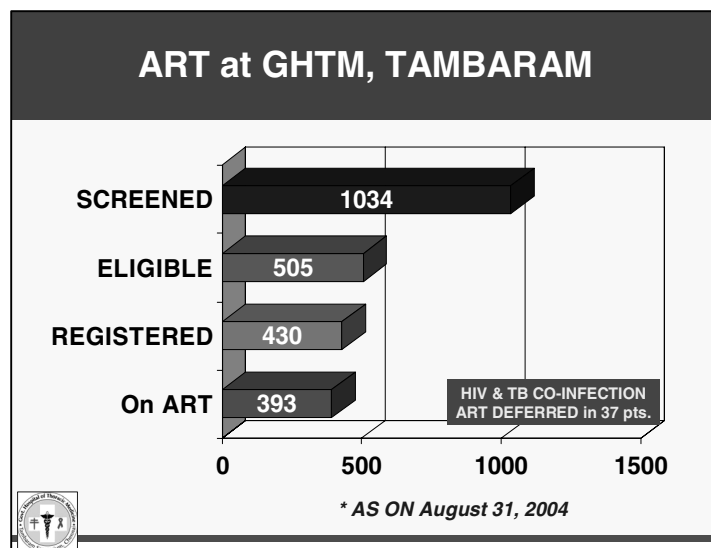
Gender remains an important factor in access to treatment. Male patients compose 53 percent of patients, while women account for 46 percent, but Dr.

Chart 3. ARV Therapy at Tambaram Hospital, Chennai, various indicators*(continued on next page)*

Rajashekaran noted that male dominance was more noticeable at other treatment centers. Indeed, for any kind of treatment in public health institutions in India, men make up two-thirds of the patients. Tambaram Hospital treats 88 positive men whose wives are not infected, but only 37 positive women whose husbands are negative. For 79 couples who are both positive, only one of the pair is receiving treatment, while 24 positive couples are receiving simultaneous treatment.

Dr. Rajashekaran stressed that monitoring is essential to effective continuation of treatment and to ensure adherence and determine cases of toxicity. The clinic tracks clinical signs and symptoms, weight gain, laboratory tests such as Hb (hemoglobin) percent and CD4 (T4) count, and hepatic and renal functions. Of the 393 patients, 10 patients demonstrated toxicity to treatment. In six of these cases, the clinic withdrew treatment, and in three the clinic switched drugs, and

Chart 3, continued



one case resulted in death. At Tambaram Hospital, 17 patients have died since beginning treatment. These were primarily cases in which the patient's CD4 count at the start of treatment was already below 50, indicating severe HIV infection, or pediatric cases. Children are particularly vulnerable to opportunistic infections, and treating children remains difficult because the drugs are unavailable in pediatric dosages.

Dr. Rajashekar concluded that the program has been successful in beginning treatment for a growing number of patients, and the drug side effects have been largely manageable. Many patients are coming forward in spite of long commutes, and collaboration with NGOs is helping the program reach those in need. The gradual rollout has enabled the hospital to identify and confront most challenges, Dr. Rajashekar said. Lastly, the ART program has created new op-

opportunities for the preventative care that is crucial to a long-term and effective fight against the HIV/AIDS epidemic, and Dr. Rajashekaran said he is confident of the continued success of the program.

Helene Gayle, director of the HIV, TB and Reproductive Health Program at the Bill and Melinda Gates Foundation, provided insight on the importance of prevention and ideas for prevention strategies in the context of care. After 20 years of public health service at the Centers for Disease Control and Prevention, Dr. Gayle is not only an expert on HIV/AIDS but also an important active leader in the global effort to fight the pandemic. She plays a key role in setting the intellectual agenda and works to mobilize institutions through not only the Gates Foundation but also leadership roles in the Global Fund Board and Global AIDS Society.

Dr. Gayle's presentation drew on her background as part of the Global HIV Prevention Working Group. The group, convened by the Gates Foundation and the Kaiser Family Foundation and consisting of more than 40 leading public health experts, doctors, researchers, and people living with HIV/AIDS, advises policymakers, program managers, and donors on critical issues in the global fight against the epidemic. In June 2004, the group published the report *HIV Prevention in the Era of Expanded Treatment Access*, advocating a comprehensive prevention and care response to the epidemic.

Referring to the report, Dr. Gayle said that a comprehensive prevention and care approach to the HIV/AIDS epidemic could avert 29 million of the 45 million new cases of infection projected to occur by 2010. Prevention could also prevent the disease from becoming a widespread epidemic in second-wave countries such as China, Russia, and India. No country, unfortunately, now has an adequate preventative response. Fewer than one in five people at high risk of infection have access to proven prevention interventions. Only 5 percent of pregnant women have access to HIV testing and technologies to prevent mother-to-child transmission.

Dr. Gayle then identified the numerous ways to integrate HIV prevention in the health care system and stressed the added opportunities that come with increased access to ART. When other countries have begun ART programs, more people have come for HIV testing when the news about availability of ART spreads. The possibilities for prevention go beyond the potential for reduced infectivity that may correspond to ART. Increased testing and the availability of treatment may help reduce stigma against the disease, which in turn can help bring millions into the health care system. STD treatment clinics, family planning and reproductive health centers, TB treatment centers, and substance abuse facilities are just a few of the places where preventative HIV intervention programs should be implemented to reach these people. As India expands its ART program, health care workers should take advantage of this chance to integrate prevention strategies into the ART delivery sites, treatment education initiatives, and treatment adherence and counseling programs.

Dr. Gayle stressed that although ART does bring opportunities for prevention, expanded access to care can pose difficult challenges as well. The health care

system may become increasingly overburdened, and risk behavior may rise as the ART program expands. Dr. Gayle offered data showing that the United Kingdom has experienced a twofold increase in HIV diagnoses since the introduction of ART, and the United States has seen a 10 percent increase in diagnoses. She warned of the example of Kenya, where risky behavior such as unprotected intercourse spiked after announcements and news releases touting ART as a “cure” for HIV/AIDS.

Dr. Gayle also noted the tendency to think of HIV prevention as a strategy focusing on the role of people who are not yet infected with HIV. With the expansion of ART, health care workers must be careful to adapt prevention strategies to both HIV-negative and HIV-positive people. To reach the growing numbers of people within the health care system, educating HIV-positive people about their role and opportunity to slow the spread of the disease is vital.

Summarizing the recommendations of her group's report, Dr. Gayle emphasized India's opportunity to expand prevention as the ART program grows. She offered hope for the future by showing the example of Brazil, where HIV/AIDS infection rates have fallen dramatically due in large part to the simultaneous expansion of ART and voluntary counseling and testing programs. To work toward a similar goal, India should focus on integrating prevention into health care settings such as STD and reproductive care clinics. Health care providers and policymakers should concentrate on expanding access to testing, as existing testing capacities may become strained. India should work to fight stigma and involve HIV-positive people while continuing education for HIV-negative people. Health care workers must adapt messages and education to reflect accurately the complexities of the current situation. Last, in order to understand the impact of treatment on future efforts to prevent and treat HIV, India should carefully monitor existing programs and work to fully fund a comprehensive response instead of pitting treatment against prevention. The international community must join India in this effort, especially in light of the \$20 billion that is projected to be the cost of reversing the epidemic by 2007.

Discussion:

- **What are the economics of ART? Is the cost of ART still three times higher than the average income of HIV patients in India?**

The cost of treatment has fallen dramatically since the introduction of generics into the world market thanks to Cipla and other Indian pharmaceuticals, but the economics of treatment remains a tricky issue. The drugs provided as part of the government's free ART program would cost a private consumer \$25 to \$30 per month, although the best versions of these drugs could cost over \$100 per month. The government's current supply comes from the WHO, and neither Dr. Rajashekar nor Dr. Gayle was able to specify the cost to the Indian government under this agreement.

■ **What explains the male-female disparity in access to treatment and what are some of the effective strategies for overcoming such obstacles?**

The problem of male dominance in health care stretches beyond access to ART into India's health system in general. Excluding pregnancy-related care, men compose two thirds of patients in the public health system. Tambaram Hospital has had some success in addressing this problem, however, by cooperating with women's NGOs that counsel and encourage women to present themselves for testing and screening. By utilizing NGOs that focus on women's needs, the clinic has been able to screen and treat relatively more women than most other hospitals. To address issues of cost and travel, an obstacle that may be even more difficult for women, the Indian government is attempting to at least partially reimburse the travel cost for patients who seek TB or HIV testing or screening. Expanding the reach of counseling into rural areas may be another way to address similar obstacles and empower women to access health care.

Lunch Session

Screening of The Unseen

Documentary produced by Pallav Das, about street children at the New Delhi railway station and the NGOs that work with them.

Pallav Das explained that *The Unseen* was commissioned by UNICEF and UNAIDS and filmed in 2000. His goal was to present a human face to policymakers and lawmakers who are grappling with the HIV/AIDS pandemic. The film examines street children in New Delhi and how they perceive the threat of AIDS. It also looks at the larger problems of sexual abuse, drug abuse, and poverty and how they further complicate the fight against the HIV epidemic in India. The children tell the story in their own words. Mr. Das thanked the organizations who had worked with him in making the documentary.

PANEL III

Integrating Research and Getting It beyond the Laboratory

Panel Moderator:

Michael Merson

Dean, School of Public Health, Yale University Medical School

Panelists:

Robert Bollinger

Professor of Infectious Diseases and International Health, Johns Hopkins School of Medicine

Geeta Rao Gupta

President, International Center for Research on Women (ICRW)

Michael Merson, dean, School of Public Health, Yale University Medical School, moderated the third panel, *Integrating Research and Getting It beyond the Laboratory*.

Reflecting on his experience in India, Dr. Merson noted that there was hardly any awareness of AIDS in the country a decade back, and that it was heartening to see increased awareness among the population, the civil society, and lawmakers. When NACO was set up 14 years ago, few policymakers in India believed that HIV/AIDS would become an issue that they would have to worry about. As in the United States, where response to the pandemic in the 1980s was slow, India also did not immediately recognize the immensity of the problem. There are, however, some reasons to be optimistic about the future. The rollout of ARV treatment and the Gates Foundation's Avahan project are very positive developments, Dr. Merson noted. He also urged the U.S. government to engage with the second-wave countries to combat the AIDS pandemic immediately before the crisis gets out of hand.

Dr. Merson noted that there is a great deal of pressure to do something about AIDS in India at present, and experience has shown that the right research is indispensable for successfully combating AIDS. There is a need to integrate programs and research in India in order to get a clearer understanding of the problem and how to tackle it. For instance, it is often believed that in Asia the HIV virus remains within a triad—the sex worker, the client, and his partner. Initial data

from the ARV program in India, on the other hand, suggests that there are a number of women who are HIV-positive while their husbands are negative. This, Dr. Merson said, suggests that the transmission dynamics of the virus are much more complicated and there is more casual sex among married women than previously estimated. This would suggest that there is a real danger of AIDS breaking out into a full-blown epidemic in India. Transmission dynamics, stigma, and migration factors are very important to understand, and research can give us that understanding. Therefore research should be considered a part of programming, not separate from programming.

It is also crucial that research into AIDS in India include both biomedical and social science research. Dr. Merson felt that while India has a strong tradition in biomedical research, it is not as strong in the social science and behavioral research arena. He hoped that there would be much more integration between the biomedical and social sciences research in order to combat AIDS more effectively. Dr. Merson concluded by introducing the two speakers on the panel.

Robert Bollinger, professor, Infectious Diseases and International Health at the Johns Hopkins School of Medicine, spoke on the importance of biomedical research in combating AIDS. Dr. Bollinger started by stressing the importance of making sure that the research agenda is well understood by the local community in the early stages. Researchers need to work with the local community, and good research needs to address questions that are relevant and important to the community. To illustrate his point, Dr. Bollinger recalled a study at the National AIDS Research Institute (NARI) in Pune in 1992 to develop a database of HIV transmission and risk factors. Within a few months, the *Times of India* newspaper ran a story on the project with the headline, "Forcible Blood Letting Decried." This attitude arose out of ignorance regarding the research and led to several problems during the course of the particular project. The Indian researchers were afraid to talk to the press about the project; and their research findings, which showed high rates of HIV infection at that point, were decried as an assault on India's conservative society. Dr. Bollinger felt that had the researchers and the community worked more closely with each other, such misunderstandings could have been avoided.

One of the challenges of initiating biomedical research is asking the relevant questions. These questions should be relevant to the community being addressed and not just to the agency that is sponsoring the project or the university carrying out the work. This is not an easy task. To illustrate this, Dr. Bollinger broke down research into two categories: developmental research and operational research. While developmental and operational research overlap in some ways, they are quite distinct from each other in terms of the kinds of collaborations that are necessary.

Developmental research attempts to answer important new scientific questions. For instance, universities such as Johns Hopkins could collaborate with medical institutions in India, like NARI, to carry out a research study to assess whether a new drug that has never been tested before is effective and safe. This is a very heavily regulated process requiring extensive laboratory and clinical facilities. The

challenge is to ensure that the purpose of the study is understood at an early stage by the community where clinical trials are being carried out.

Operational research, which is sometimes referred to as program evaluation, looks at how one can take the results from such developmental studies to the community most effectively and efficiently. How do you distribute a newly tested drug on a large scale within a community, for instance? What are the barriers in that process? How do you scale up a small STD intervention program that has shown promising results? These are the kind of questions that operational research attempts to answer. There are, however, some similarities with developmental research: One needs access to some laboratory facilities and data management software. For these kinds of research, however, NGOs typically partner with policymakers and government agencies, rather than two very technically oriented organizations partnering with one another.

Dr. Bollinger noted that while operational research techniques have improved, communication between NGOs, social workers, and researchers remains a problem. This collaboration is essential because without it, both parties fail in their objectives. Prickly relations between NGOs and researchers hamper the effectiveness of the program and a successful collaboration between the two should be encouraged.

Dr. Bollinger noted that India is steadily moving toward a stage where a longer-term approach to research is possible. From his own experience, Dr. Bollinger stated that Indian researchers who Johns Hopkins had collaborated with in the past are not as receptive to international collaboration now. That, according to Dr. Bollinger, is a sign of success, as it shows that John Hopkins has successfully transferred the necessary skills and knowledge to the Indians. He also mentioned that this longer-term approach of technology transfer has been smoother in India than in many other countries because of the high level of education and scientific expertise of Indians.

Nonetheless, Dr. Bollinger felt that more has to be done to develop research skills in India. The country has catching up to do in terms of public health research, data management, biostatistics, and the like. For instance, despite being very good in statistical theory, India has very few programs for training researchers in clinical trials. The improvement has to come from India itself, he felt. There need to be incentives for Indians to study programs such as public health. In particular, jobs must be available for Indians who graduate from these programs.

Geeta Rao Gupta, president of the International Center for Research on Women (ICRW), made the case for a greater investment in social science research in India to improve the effectiveness of HIV/AIDS policies and programs. In the world of research on HIV/AIDS a clear hierarchy exists in terms of how different types of research are valued. Invariably, biomedical research gets top billing, and for good reason because it often results in concrete outcomes, such as a new medical intervention or technology or insight, with clear parameters of its effectiveness and use. Epidemiological research comes in a close second because it provides the numbers and the underlying relationships among the numbers. This is critical information when one is trying to decide on resource allocation.

Typically, social science research is viewed as being of the least value, particularly descriptive social science research, which is often considered a waste of resources. Dr. Gupta said that qualitative evidence is often not even thought of as research evidence, and it is disparaged as “anecdotal evidence.” But Dr. Gupta argued that when social science research uses a combination of qualitative and quantitative methods, especially in the right order, it can be very effective. On the other hand, she pointed out, social science research can also be a waste of time and money if the wrong question is asked.

Dr. Gupta used the example of the prevention of mother-to-child infection (PMTCT) intervention program to argue her case. Initial biomedical research on PMTCT programs had shown that this intervention was one low-cost way to stem the tide of the epidemic, at least on one front. There was immediate political pressure to make the intervention available for all. The world responded by making the intervention available in several countries at prenatal clinic sites. But social research studies later showed the other side of the story: Women were hesitant to be tested when they were pregnant, a time when they are most vulnerable. They feared that if they were found to be positive, their men would blame them for being the first to bring the infection home. Women also found it stigmatizing to walk out of maternal health clinics carrying their babies in one arm and cans of breast milk supplements in the other, for all to see, like a visible sign on their person that they were infected. Men, it turned out, were resentful of such prevention services because they were offered in sites that are primarily used by women—prenatal clinics—which made the men feel uncomfortable.

Dr. Gupta then turned her attention to the different types of social science research and their value to the HIV/AIDS epidemic. *Operations research* depends on social science methods and is the key to determining exactly how to design a service so that it best meets the needs of those served. It allows policymakers to tweak different components of programs and compare them to controls where those components have not been modified to see if the change makes a difference. It also allows them to improve the effectiveness of service delivery. *Intervention research* includes formative research to determine the nature of the problem that one is trying to fix and the type of intervention that will best fix it, followed by an evaluation of that intervention to ensure that it addresses the problem that it was to fix.

Last, there is *descriptive social science research*. This type of research is often considered at the bottom of the totem pole of types of research. But Dr. Gupta argued that some of the greatest insights in the HIV/AIDS field have come from social science descriptive research. Examples include understanding the power of gender roles and norms in influencing the nature of the epidemic and its spread; the role of economic vulnerability in fueling the epidemic; the role of violence in preventing access to or use of voluntary counseling and testing or PMTCT services; the structure and determinants of stigma and the most effective ways to reduce it; insights into power dynamics underlying homosexual and heterosexual interactions; insights into the lives and contexts within which injecting drug users, or IDUs, live; and the hidden private lives of sex workers—their relationships with their husbands, long-term partners, and children.

Dr. Gupta pointed out that India has tremendous social science skills but the best of those skills are not being applied to responding the AIDS epidemic. Indians take pride in their biomedical research capacities, but hardly talk of their strengths in social science research. For instance, the Indian Council for Medical Research (ICMR.), under whose auspices most AIDS research currently takes place, is quite well known, but very few in India and outside have heard of Indian Council of Social Science Research (ICSSR). The problem is that HIV/AIDS is not high on the list of priorities of those organizations that excel in the social sciences. The cause, Dr. Gupta explained, is a lack of prioritizing of government funding for this kind of research, and a lack of leadership in the ICSSR-funded institutions that have these kinds of skills, such as the Institute for Social and Economic Studies in Bangalore or the Delhi School of Economics, to take up HIV/AIDS as a research issue.

Dr. Gupta ended her remarks by making four recommendations:

- She urged the Indian Minister of Science and Technology to prioritize social science research and make concrete efforts to raise the profile of ICSSR in HIV/AIDS research in India.
- She argued that the Indian government should fund research partnerships between social scientists and biomedical experts, instead of trying to teach biomedical experts how to be social scientists—which is what is currently happening.
- She recommended the creation of competitive research programs targeted to Indian universities, with a requirement that state AIDS societies partner with them so that the research questions are determined by the state AIDS societies and the research serves to help improve government programs.
- She urged all foreign donors who are interested in containing the epidemic in India to fund and give equal value to social science research.

Discussion

- **First, sex outside of marriage is an issue not only for men, but for women too for a variety of reasons. And, secondly, there is a perception among social scientists in India that HIV is not that big a problem.**

Dr. Merson noted that the stigma attached to AIDS is an issue not only in India but also in the United States. This was especially true in the initial stages of the disease in the 1980s. There was a stigma against not only the people affiliated with the disease, but also the investigators involved in the fight against the disease. Dr. Gupta added that maybe one of the ways to overcome the bias against HIV/AIDS in the social sciences is to provide more money for such projects. The problem is that there is not enough money going into social science research at present. Dr. Bollinger said that monetary issues aside, cultural issues also play an important role in this issue. He noted that many AIDS researchers in India have faced difficulties in getting their daughters married because of what they do. In many cases,

AIDS researchers face opposition even from their own families for the kind of work they do. As a result, many good researchers are afraid to enter the field. The good news, however, is that these negative perceptions are beginning to change.

- **Two of the subjects of biomedical research are microbicides and an AIDS vaccine. Where is the research effort on the two? What kind of social science counterpart is needed, assuming that these efforts are eventually successful, to make them into workable tools in the campaign against AIDS?**

Dr. Bollinger noted that all the research done at Johns Hopkins has a behavioral and a social component to it. An effective biomedical research has to be strongly integrated with social science research to be effective. For instance, all microbicide trials, ARV trials, intervention programs, and laboratory studies have a behavioral and a social science agenda attached to them. Biomedical researchers from India who have come to Johns Hopkins for training have all been exposed to some social science research. This is to make sure that they listen to social scientists and integrate their input in their work when they return to India. In India, there is often a sharp separation between biomedical and social science researchers in terms of the support they get or even how their offices are organized. Dr. Gupta agreed, adding that this divide is detrimental to good research. A representative of the International AIDS Vaccine Initiative added that the organization has encountered difficulties in recruiting people for their phase III trials in India, which need to be conducted mainly among commercial sex workers and drug users. In India, people expect to be reimbursed for participating in such trials and that has raised some ethical issues for the organization, which it is trying to work out.

- **Comment from Ashok Alexander of the Gates Foundation: Apart from differences between biomedical and social science researchers, there also seems to be a “disconnect” between researchers of all kinds and program managers on the ground. Managers often have the experience but cannot ask the relevant question in some kind of basic conceptual framework, while researchers have the knowledge but are too theoretical and out of touch with the field. How do you solve this problem?**

Dr. Bollinger said that it is often difficult for NGOs and researchers to talk to each other. Sometimes there is distrust between the two camps. Dialogue and linkages can demonstrate the value of integrating research and programs in specific ways, and later partnerships can be built. One way to address the issue is to demonstrate the value of research with programs in some very specific ways. That can be a building block for a partnership. Dr. Gupta added that partnerships work better when both parties benefit. An articulation of the perceptions by both sides, a memorandum of understanding, and a strong donor who emphasizes partnership are beneficial. Dr. Merson added that this is an issue faced by universities in the United States too. He noted that the National Institutes of Health (NIH) has spent a lot of money to address the issue. Scientists have to understand that research is not just about publishing data. There has to be community involvement too. The results of any project have to benefit the community.

- **Comment from a representative of the U.S. Department of Health and Human Services (HHS):** In response to the shortage of training opportunities in India, there is an Indian Ministry of Health initiative to develop schools of public health. The Indian health secretary, Mr. Prasada Rao, approached the HHS in late 2003 for support for this effort. The president and CEO of the Association of Schools of Public Health visited New Delhi, and high-level discussions and symposiums are scheduled between India and the United States in the coming weeks.

Dr. Merson observed that the initial Indian plan in this initiative suggests an emphasis on laboratory science, epidemiology, and biostatistics. It will be a challenge to get a strong social and behavioral component into the curriculum. In the United States as well, the importance of the social sciences in research is a relatively new phenomenon, and hopefully the U.S. experience will be helpful to India. Dr. Bollinger welcomed the initiative and added that merely creating these schools will not be enough. There has to be enough demand for employment for graduates of these schools in order to succeed. He noted that many Indians graduating with masters in public health (MPH) degrees at Johns Hopkins cannot return to India because there are not enough employment opportunities for them at home.

PANEL IV

Toward a Second-Wave Strategy

Panel Moderator:

Teresita Schaffer

Director, CSIS South Asia Program

Panelists:

Subhas Salunke

Director, General Health Services, Maharashtra, India

Bates Gill

CSIS Freeman Chair in China Studies

Kathleen Cravero

Deputy Executive Director, UNAIDS

William Brencick

Director of Diplomatic Liaison, Office of the Global Coordinator for HIV/AIDS, U.S. Department of State

Ambassador Teresita Schaffer, director of the CSIS South Asia program, opened the final panel, *Toward a Second-Wave Strategy*, by saying that the goal of this session was to focus on the future of the pandemic and to distill some lessons from India's experience that will be helpful to policymakers in Washington D.C. as they devise strategies for policy toward India and other second-wave countries.

Ambassador Schaffer outlined some of the differences between the first-wave countries hardest hit by the HIV/AIDS pandemic and the second-wave countries. The second-wave group contains two megacountries, India and China. India, for instance, has 10 states with populations of more than 50 million; each of them would be a large country were it an independent state.

The second-wave countries are much more diverse than first-wave nations. Some of them have their own internal resources to bring to bear on the pandemic. India has substantial health care capacity, despite its low public health budget. Second-wave countries pose a unique challenge with their diverse political systems. While India is a democracy with its unique problems, China is an autocratic system with little room for lively debates, and Russia has elements of both. Most second-wave countries have several epidemic patterns, distinct from one another

both socially and geographically. For example, in India the HIV/AIDS epidemic is concentrated in some of the most prosperous and highly urbanized states, while in China it is mostly found in remote, poor provinces of the country. This makes it impossible to speak of a single strategy for the second-wave countries. Ambassador Schaffer concluded by introducing the members of the panel.

Subhas Salunke, director of General Health Services, Maharashtra, India, began by commenting that different countries, so far, have failed to learn from each other's experiences when it comes to the HIV/AIDS pandemic. Indian policymakers failed to take note of the devastation of the pandemic in Africa and believed that such a scenario would not occur in India. Even within India, state lawmakers have continued to argue that the pandemic would not spread to their states because of socioeconomic differences with the high-prevalence states. One of the concerns is that the number of reported cases is much less than the prevalence estimates derived from sentinel surveillance sites where testing is carried out anonymously. This indicates a big gap in data gathering. The other area of concern is hot spots, or areas with high incidences of sexually transmitted diseases, in low-prevalence states. If not contained, these areas of low prevalence and high vulnerability could spread the HIV virus rapidly.

Dr. Salunke stated that five risk factors are driving India's HIV/AIDS pandemic at present:

- commercial sex work and casual sex with non-regular sex partners;
- high prevalence of STD cases in some states;
- high social stigma attached to topics related to sex and sexuality;
- migration of male populations, both from rural to urban areas and interstate migration; and
- low levels of literacy, gender disparities, and other human development indices.

The first phase of India's response to the HIV/AIDS pandemic, from 1992 to 1999, focused mainly on prevention programs. The highlight of this period included setting up the sentinel surveillance system for data gathering, increasing awareness through mass media, and increasing safety of blood products. Phase I showed inadequate capacity at the state level, low community involvement, and a lack of attention to high-risk groups. Care and support systems were almost nonexistent. Based on the experience of the Phase I work, the second stage of India's response (1999–2004) laid strong emphasis on the following:

- increasing political advocacy;
- giving more authority to state AIDS organizations;
- focus on vulnerable groups;
- mass awareness programs to change behavior; and
- NGO and community participation.

Dr. Salunke explained that one of the main challenges is to gather more information about the hot spots in the low-prevalence states, as there is a false percep-

tion among policymakers that these states will not be as badly affected as the six high-prevalence states. This has given rise to complacency, which can prove disastrous. Low-prevalence states account for a staggering 735 million in population, compared to 291 million in the six high-risk states. In addition, increasing awareness among health care professionals about the HIV/AIDS crisis and removing the stigma and misinformation attached to the disease within the health care community is another daunting task.

Focusing on future activities, Dr. Salunke said the Indian government has accepted the ART program as an important project and is fully committed to it. India's success in combating the disease depends on how successfully it can integrate prevention with care and treatment programs. He concluded by saying that there is a ray of hope that India will be able to stem the tide of the disease because prevalence rates, even in the worst-hit areas, have not shot up as many experts had feared. But Indian policymakers cannot afford to let down their guard and they should devise programs that are flexible and tailored to the specific needs of the local community.

Bates Gill, the CSIS Freeman Chair in China Studies, outlined the two CSIS delegation visits to China in January 2003 and April 2004. There was a marked increase in awareness of the importance of HIV among Chinese lawmakers and policymakers between these two visits, Dr. Bates said. Beijing also focused more on the crisis following the SARS epidemic of 2003. According to Chinese statistics, 93 to 94 percent of the people suspected of carrying the HIV virus are not aware of their medical condition. Most of them reside in rural, remote, resource-poor, and marginalized areas.

There are differences with other second-wave countries. Unlike in India, HIV/AIDS in China is not an urban problem. That raises unique care and treatment challenges. The main drivers for the spread of the virus are intravenous drug users, poor farmers, illicit blood plasma donors and to some extent, commercial sex workers. Also, unlike other affected countries, in China ethnic populations, who make up only 7 percent of the country's total population, are disproportionately affected by the HIV/AIDS pandemic.

Dr. Gill explained that the response to the HIV/AIDS pandemic in China has been mainly run out of the Ministry of Health. Chinese leaders have been reluctant to take a more holistic approach in dealing with the epidemic. He advocated setting up an Office of HIV/AIDS Coordinator in the office of the prime minister to give this issue greater visibility. Greater coherence between policymakers in Beijing and those in the parts of the periphery where the virus has established itself also should be a top priority. Prevention programs need to be scaled up. Dr. Gill pointed out that treatment and care will have to be delivered at a local level, taking into account the rudimentary resources. This means that close monitoring by experts in the majority of the cases will not be possible. This, in turn, can lead to HIV drug-resistance issues, which have already begun to crop up.

The other major difference between China and India is the utter absence of nongovernmental organizations in China and the inability of Chinese civil society to operate in any effective way. Dr. Gill argued that civil society organizations and

NGOs will not be able to operate at the national level in China in the current political system. The absence of any private-sector initiative in dealing with the pandemic in China is also disheartening. So far, there is little interest within Chinese companies in mobilizing their resources to combat the HIV/AIDS crisis. These factors, in addition to broad political considerations, such as Taiwan, human rights, and abortion, limit the kind of engagement the U.S. government can have with China on the HIV/AIDS issue. Dr. Gill argued that it is up to the U.S. private sector, which includes private companies, think tanks, foundations, universities, to take the lead in taking a leadership position within the U.S. response in dealing with the pandemic in China.

Kathleen Cravero, deputy executive director of UNAIDS, began by describing the unique structure of the Joint United Nations Program on HIV/AIDS and giving a broad overview of the status of the pandemic in Asia. There are over 7.5 million infections in Asia, and half a million deaths occur each year due to HIV/AIDS. That puts Asia in the eye of a gathering storm. Because of the immense populations of some of the hard-hit countries, like India and China, Dr. Cravero explained, even a small shift in prevalence rate could result in staggering numbers of infected people. There is hope that a full-blown epidemic like the one in parts of Africa can be avoided in Asian countries, but the window of opportunity is small.

The economic cost of a full-blown epidemic in Asia would be immense. The Asian Development Bank estimated that in 2001 alone, economic losses due to HIV/AIDS in Asia were about \$7 billion. According to ADB projections, that figure could rise to \$17 billion by 2010 if present trends continue. The bottom-line message is that we act now or pay later, Dr. Cravero said. Mobilizing adequate resources to meet the demands of the pandemic remains a challenge. In 2003, an estimated \$1.5 billion was required for basic care and prevention in Asia, but only \$200 million were spent. By 2007, that figure is expected to rise to \$5.1 billion, or \$2 per capita. Public spending in Asia has not kept pace with the spread of the epidemic. Governments must increase their public health spending to meet the challenge.

But there are reasons for optimism. Programs that are under way right now have important lessons for policymakers. Comprehensive prevention programs work, but need to be expanded. Harm reduction programs have shown results, which is important because in many parts of Asia HIV infections are spread by injecting drug users. Voluntary testing and counseling and mother-to-child transmission programs have also shown promising results. These programs need to be fine-tuned to make a bigger impact. On a regional level, awareness of the pandemic is on the rise. Member states of ASEAN (Association of Southeast Asian Nations), for instance, have put HIV/AIDS on their agenda. The Asia Pacific Economic Cooperation organization (APEC) is being urged to do the same.

Political awareness in India has steadily increased in recent years. Vibrant partnerships between NGOs are making a dent. The bad news is that these positive developments are not expanding fast enough to keep pace with the spread of the disease. Referring to the ARV treatment program under way, Dr. Cravero said that the Indian government's commitment to treatment is a welcome develop-

ment—Indian lawmakers and policymakers cannot afford to be complacent, however; they must scale-up their programs and be flexible in their approach. Sonia Gandhi's address at the July 2004 Bangkok conference was a very positive development and sets a good precedent. This was the first time a major Asian leader had spoken publicly at an international forum on the need for governments to do more to fight the pandemic.

Dr. Cravero advocated a decentralized approach for India. Building state-level capacity and addressing pockets of high prevalence in low-prevalence states should be a high priority. To address the risk factors that can push the epidemic forward in today's low-prevalence states should be a high priority for the Indian health ministry. This would involve scaling up data collection and monitoring and evaluation operations. Dr. Cravero also urged Indian policymakers to make sure that while treatment programs are scaled up, they are linked with prevention. Although there is little evidence at present to establish a link between treatment and prevention programs, this synergy has paid high dividends in Brazil. India could be another example. India also can show foresight in developing programs taking into account the special needs and status of women and girls. Without that, Dr. Cravero pointed out, the programs will not reach their full potential.

Although much progress has been made, the global community, especially the United States, will have to take a greater lead in leadership roles in combating the spread of the disease worldwide. One way to do that is to promote leadership through diplomacy. This can be done by highlighting and awarding Asian leaders and institutions that put HIV/AIDS high on their agendas. U.S. ambassadors, for instance, can play a key role in supporting Asian leaders, especially in national settings, who speak publicly on this issue. The United States can also share expertise and help Asian countries build capacities. Dr. Cravero pointed to the UNAIDS initiative, Asia Pacific Leadership Forum, to achieve this goal.

William Brencick, director of Diplomatic Liaison, Office of the Global Coordinator for HIV/AIDS, U.S. Department of State, began by outlining the problems common to second-wave countries. These include lack of health infrastructure capacity, gender inequality, significant migration and mobility of worker populations, deeply imbedded stigma and discrimination, and an uneven mobilization of political will.

Mr. Brencick then gave an overview of President Bush's Emergency Plan for AIDS Relief, commonly known as PEPFAR, which operates bilaterally in more than 100 countries, including 15 focus countries. The plan emphasizes an integrated strategy of prevention, treatment, and care in all the countries, including India. The United States is spending more than \$2 billion this year on HIV/AIDS research, prevention, and care programs, including a pledge of \$547 million to the Global Fund—a partnership between governments, civil society, the private sector, and affected communities to provide resources for affected countries—for the 2004 fiscal year. India has received a \$100 million grant from the Global Fund for prevention, treatment, voluntary testing, and counseling.

Outside the focus countries, India is the largest bilateral program supported by the United States. The U.S. government committed \$36 million in the 2004

fiscal year to fight HIV/AIDS in India. This includes \$5 million for CDC, \$15.5 million for USAID, and \$15.5 million for NIH-supported research projects. Mr. Brencick pointed out that this is more than the amount committed to 7 of the 15 focus countries. The effort includes cooperation among different U.S. agencies operating in the country. Strong ties between military establishments of both countries have also provided opportunities for the United States to engage with India and to share expertise to fight the disease. The military health community in India can play a key leadership role in this process, Mr. Brencick said.

Mr. Brencick next focused his remarks on India's strengths and weaknesses in combating the HIV/AIDS epidemic. India possesses material and human resources that most focus countries under PEPFAR lack, including a sizable population of health professionals and established health care networks. India has a fast-growing economy, a highly educated middle class, and a vibrant civil society. India's pharmaceutical industry is a unique strength. Mr. Brencick also reiterated the point made by several other speakers that public health spending needs to be boosted immediately in order to prevent the disease from becoming a full-blown epidemic. At present, India spends less than 1 percent of its GDP on health.

And although political awareness has increased, strong leadership from the top is required to help fight the pandemic. Bold leadership is one of the most effective weapons against fighting stigma, discrimination, and misinformation. This has been seen in Uganda, Thailand, and Brazil. In these countries, leadership at the national and state levels sent a strong message against stigma and discrimination.

Mr. Brencick said that although Indian health officials have shown keenness in dealing with HIV/AIDS, NGOs remain weary over bureaucratic hurdles and the political lethargy that afflicts the issue.

Discussion:

- **Is anybody thinking about mobilizing public figures such as Bollywood stars and sports personalities to engage on the HIV/AIDS issue in India?**

The Indian government is trying to rope in film personalities for spots on Indian television. The Gere Foundation is also working to mobilize public support in India by soliciting the support of popular cricketers, such as Rahul Dravid, and popular actors and actresses.

- **How accurate are the projections for India's HIV/AIDS prevalence, as there are criticisms about the survey that collects the data for estimating these numbers?**

Ambassador Schaffer responded by saying that absolute numbers are an important issue, but what is more important is understanding the patterns of the disease. The need for better data came up in all the panels of the conference. Dr. Salunke added that the Indian government is well aware of the deficiencies of the sentinel survey through which HIV/AIDS data are collected, but right now in the absence of a more practical method, this is the best that can be done. But even the limited data have provided important trends that are very useful. He pointed out that the survey has more than 350 sites, which is still very low but is a marked

improvement on the initial assessments. He concluded by saying that the most effective way to gather data on the pandemic would be to establish sites at the district level and that the survey is up for expansion next year.

■ **What is the role of the legal profession in combating the HIV/AIDS pandemic in India?**

Dr. Salunke agreed that lawyers have an important role to play in India, and an association of lawyers called the Lawyers Collective has already taken a leadership position on the issue. He said the Indian government has welcomed their activities; in fact, senior government officials have been nominated to the advisory board of the association, and hopefully their draft legislation on HIV/AIDS will be soon taken up by the parliament for consideration. Dr. Salunke concluded by saying that India's challenge is to treat HIV/AIDS as a holistic problem comprising economic and development challenges, rather than as a mere medical crisis. Dr. Cravero added that judges and lawyers have an important role in the fight against stigma and discrimination, especially issues related to women and girls in countries like India. This is a subject that has not received much attention, but it is a critical part of the fight against HIV/AIDS.

About the Authors

Teresita Schaffer is the director of the South Asia Program at the Center for Strategic and International Studies. She came to CSIS in August 1998 after a 30-year career in the U.S. Foreign Service. She devoted most of her career to South Asia, on which she was one of the State Department's principal experts, and to international economic issues. From 1989 to 1992, she served as deputy assistant secretary of state for South Asia, at that time the senior South Asia position in the department. She served as the U.S. ambassador to Sri Lanka from 1992 to 1995, and as director of the Foreign Service Institute from 1995 to 1997. Her earlier posts as a Foreign Service Officer included Tel Aviv, Islamabad, New Delhi, and Dhaka, as well as a tour as director of the Office of International Trade in the State Department. She spent a year as a consultant on business issues relating to South Asia after retiring from the Foreign Service and has taught courses at Georgetown University and American University.

Pramit Mitra is the research associate in the South Asia program at CSIS. Before coming to CSIS, he worked at the *Far Eastern Economic Review*, where he wrote extensively on political and economic affairs of South Asia, including the AIDS pandemic in India. Before that he worked at *The Times of India* newspaper in New Delhi for two years. He holds a master's degree in public policy and a certificate in emerging markets studies from the Johns Hopkins School of Advanced International Studies (SAIS) and received a B.A. in journalism from the University of Delhi.