# XVII International AIDS Conference
# Plenary: Panel Discussion on the State of the Epidemic
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**MALE SPEAKER:** I am the Minister of Health and Consumer Affairs of Spain and I will have the honor and the pleasure of giving the opening remark of such a marvelous Congress.

Authorities, ladies and gentlemen, good morning. It is a pleasure and an honor to be here today with all of you at the 17th International Congress on AIDS, which is being held in Latin America for the very first time, opening this first plenary session to discuss the state of the epidemic.

I will need to comment some figures to display the globalist scenario of this epidemic. Sixty five million people have been identified with a virus since 1981, and 25 million have died of AIDS related diseases; 33 million people currently live with HIV, and over half of them are women. In 2007, an estimated total of 2.5 million people were infected with the virus, and 2.1 million died as a consequence of the disease.

By regions, the figures for [inaudible] in Africa are [inaudible]. Seventy eight percent of all adults are infected, and 90-percent of them are children. AIDS is the cause of 76-percent of all this. In Eastern Europe and central Asia, the number of people infected has increased by over 150-percent. In less than 50 years, ladies and gentlemen, AIDS has become the first globalized health problem that affects every country in the world. Never before in the history of mankind has an epidemic mobilized society. The governments are local,

national, and international organizations to such an extent. Therefore, there has been enormous and fruitful.

But according to the data presented at the United Nations at the special high level session on AIDS last June, the epidemic is spreading at a faster rate than the provision of services. There have been an increasing number of people receiving antiretroviral treatment throughout the world, but the new infections grow at a faster rate. We are facing the health problem that is complex to deal with and, as such, it requires for both nationwide and global strategies and commitments, focused on respecting human rights during the battle.

For years, AIDS was the leading cause of death in Spain among the 25 to 44 year old population, and it was devastating among injected drug consumers. Fortunately, we have managed to turn the epidemic around since the mid 90's. In 11 years, the number of cases of AIDS in Spain has fallen by 78-percent, and this has been achieved thanks to antiretroviral treatment, which has universal coverage in Spain, but also because damage reduction is at the core of our AIDS infection prevention strategy. The general [inaudible] injection material distribution programs and the use of opiate substitutes [inaudible] was a great step taken by the Spanish government. We tried to reduce people's high risk practices, and offer realistic solutions that can be accepted by the most vulnerable

groups without changing their habits or their sexual orientation.

It is a must to place human rights at the very core of prevention and treatment strategies. In 2001, we undertook the work of Nigol's [misspelled?] of fighting the stigma, eradicating discrimination, and protecting human rights. This requires that the initial destructor of inequalities have to be addressed in equalities with men and women, women's right to make freely taken decisions about their equality promoted, and last but not least, to give homosexuals equal rights.

In this task, [inaudible] and especially people with HIV have shown their commitment to these things in several lines of factions. We will always be grateful to them, but I will also like to highlight the role of civil society as the war for equal rights, and those have helped taken important steps forward in this field. Control of the epidemic obviously requires a continuing and coordinated response with political help and social measures, taken that with multisectoral plan against HIV/AIDS infection that has recently been approved by all sectors involved with it. This plan in Spain has for us has pragmatic and flexible framework, avoiding unnecessary dichotomies, and recognizing prevention as the [inaudible] in our response to the epidemic.

In the international arena, Spain has made a significant financial effort and international cooperation. The development of a committee has recently recognized them in

2007 that Spain was the donor that had increased its aid by the most, reaching seventh place in the rankings in absolute terms and in proportion to the gross domestic product. The official development of aid exists in Spain, €5.5 billion in July 2008, [inaudible], our commitment to reaching 0.7 of gross domestic income and keep us on this track to reach our target by 2011. A decision, you know, has been taken to increase to more than €10 million in contribution to UN AIDS, in addition to our contribution of 600 million US dollars to the Global Fund. Despite the present economic situation all over the world, we will continue to work and to invest in cooperation until we meet the commitments that we have made.

But this epidemic has also highlighted the deficits in the public health system in many countries. That is why one of the fundamental focuses of the Spanish cooperation policy is to reinforce the national health system. We consider this essential increase, access to treatment, and to obtain the objectives established by the recognition of commitment adopted by the generosity of the United Nations in 2001, and renew it in 2006 by the Universal Access Initiative.

I would like to close by recognizing that we have made an unprecedented effort, but we must not be content with us, we must continue to move forward because there remains a lot to be done. Muchos gracias thank you. Thank you.

**ANA MARIA SALAZAR**: Thank you, Minister. Welcome, welcome to you all. I am Ana Maria Salazar, and we are going

to initiate this morning's work with a panel talking about the status of the disease.

I want to tell you a little bit about myself so you understand why I am just so honored and delighted and just fascinated to have the opportunity to be here. I have had the opportunity to work in the US government for many years, and the Pentagon and the White House and the State Department from different perspectives, mainly security, national security issues.

But that is not the reason why I am here. One of the reasons why I wanted to be here is that when I was a young college student in Berkley in the early 90's, we were in Berkley in the area of San Francisco, we were probably at the university, one of the first groups of people who were starting to get this notice or information of this very strange disease that we were seeing among our colleagues and friends and other students.

So I lived through that process of being very extremely scared, not knowing what was going on, reading the information in the newspaper, getting even more scared at each moment trying to understand what was happening to our friends, what was happening to people, our neighbors, and when I look at what we lived at that moment, I am talking about '81, '82, '83, I do not think any of us who lived through that initial process could have imagined what was going to happen in the next 20 years. Sometimes there have been extraordinary advances,

sometimes I look back and say sometimes there has not, but I think what is extraordinary, that I do not think anyone would have fathomed at the time, is the ability for all of us to be able to organize around this theme, around this disease, bring us together, people from all different backgrounds. Someone was describing the extremely powerful and the most unprotected, united in one place. So for this reason, especially after the presentation you all saw last night, the celebration we all had last night, I do want to tell you, welcome to Mexico.

Now, to initiate this session, as you can see from your agenda, we have a variety of views that you are going to be seeing this morning from the scientific perspective, from the public policy perspective, NGO perspective, and, of course, the human perspective, the people's perspective.

And to participate and to be my partner in this panel, I have a fabulous, wonderful human being, Thembi Ngubane, who she is a young, South African who is living with AIDS. Since she was 19 she has been recording her life, and I am sure many of you have head her. She has been recording her life on a radio diary, which can, in fact, listen to at www.aidsdiary,org, and she is going to be our co-chair helping us guide through the different questions and topics and issues that we are going to be talking about this morning at this panel.

Before I invite Thembi to come and join me here on the podium, I would like to remind you there is going to be a

question and answer session, and there is going to be volunteers that are going to be walking here through the hall with pieces of paper so you can write down your questions, and they will be able to address as many questions as possible.

So, once again, welcome to Mexico, welcome to this discussion this morning, and I would like to ask the fabulous Thembi Ngubane to come and join me here at the podium. Thembi?

**THEMBI NGUBANE:** Good morning, ladies and gentlemen, and welcome to Mexico. I am very honored to be here and also very honored to be part of this panel.

My name is Thembi Ngubane and I am 23 and I am from South Africa. I was diagnosed with HIV when I was 16, and it has been a really tough time of my life because of the stigma of this condition that goes on in South Africa. At the age of 19, I kept a diary and recorded my life for a year and a half just to get people to know what it is like to walk in my shoes, what it is like to be in South Africa and be HIV positive.

I am very happy to be here and ever since I was diagnosed, my life has changed for the better. It helped me really very much to keep that diary because ever since I started to keep it, I felt more comfortable and I felt more confident to disclose to other people, and I felt it was my responsibility to make other people aware of this disease, especially young people. And now my story is an inspiration to other young people out there who are living with HIV and other

people that are HIV negative, to inspire them and to guide them on what HIV is.

And now I am going to introduce some speakers and Ana Maria is going to help us with that. Thank you very much.

**ANA MARIA SALAZAR**: Now I am briefly going to present who are the speakers on this panel and you will see that it is a panel full of experience, different experience. They represent different voices, and I am sure that each one of them are going to provide us a broad overview in talking about where we are right now and where this is going. Hopefully this panel will become at least the basis of numerous discussions, and numerous debates that should be taking place in the next couple of days.

Joining us is Geoff Garnett, he is a Profession of Microparasite Epidemiology at Imperial College, London, where he is theme leader for Public and International Health and Director of a master course in epidemiology. His main area of research is epidemiology and control of sexually transmitted infections, the development and analysis of mathematical models of the transmission dynamics of STI's, provides a framework to analyze surveillance and survey data and observation cohort studies.

Also joining us is Jaime Sepulveda; he is the Director of Integrated Health Solution Development in the Global Health Program at Bill and Melinda Gates Foundation. At the Gates Foundation he manages grants that develop new tools and

strategies for maternal, newborn child, and reproductive health, vaccine preventable diseases, and nutrition. Dr. Sepulveda served for more than 20 years in a variety of senior health posts in the Mexican government.

So we have now, as you can see, one of our panelists, Geoff, is going to be talking more of the scientific perspective; Jaime from the NGO perspective.

Alex Coutinho is a graduate from Makerere Medical School as a doctor in 1983 and worked with the first cases of AIDS in Nsambya Hospital in 1983 to 1985. From 1986 to 1989, Dr. Coutinho lectured at Makerere Medical School; he then worked in Swaziland in 1989 where he started one of the First Care programs for people living with HIV in Swaziland. He also established the first Occupational Health program for people living with HIV in the private sector in Swaziland; he completed an MPH from the University of Witwatersrand in 2001, and returned to Rwanda that same year.

Also joining us is the fabulous, wonderful Elisabet Fadul. She is a youth activist and Project Manager for youth issues in the Dominican Republic. She currently studies international relations at Universidad Catolica Santo Domingo, and has worked for more than four years advocating for improved social development among her peers, particularly in the area of sexual and reproductive health in HIV/AIDS.

We are going to start with our colleague Geoff Garnett. Please give him a big round of applause.

**GEOFFREY GARNETT, PH.D.:** Thank you. So thank you everybody for giving me the opportunity to give this presentation, and what I want to try and do is describe some of the analyses that we can do to understand the current spread of HIV. I want to try and explore some of the plastic lines [misspelled?] and prevalence that we have seen and try to argue that we need to do a detailed analysis to understand whether there has been changes in risk. Then I want to talk a little bit about models and how they tell us about the potential success of combining interventions versus using interventions on their own. And then I am going to argue for using statistical epidemiological analyses to actually try and understand the relationship between the drivers of the HIV epidemic, and the patterns of risk that we see within populations.

But, first, the big picture. This is from the recent UN AIDS report on the state of the epidemic, and you can see we have still a growing trend in HIV prevalence; although it has flattened off a great deal. But masked within these trends are great deals of heterogeneity. We have in some places really worrying epidemics among men who have sex with men, among ethnic minorities, and in some large countries we have trends going up still, in others we have trends and prevalence going down. So these headline figures do not really give us a good sense of what is happening in the epidemic in particular locations. So we need to look at more local data.

What do we actually expect an HIV epidemic to look like? Well, this graph looks at, over time, the prevalence and incidence of HIV infection, HIV incidence, and AIDS deaths. And we have this parameter, the basic reproductive number of the infection, which is the number of infections caused by one infection entering an entirely separate population, and it comes from ecology, and it is basically a measure of the potential for spread of HIV.

But first, if we get an epidemic, that has to be overrun, but over time, prevalence saturates in those with the highest patterns of contact within the population, and we start to see incidence declining. It takes a long time for prevalence to follow that incidence decline because we have a long period between HIV infection and death. But, over time, we actually expect prevalence to go up, peak, and then start to come down. And unfortunately, we can get to a situation of an endemic prevalence where the infection has a reproductive number of one, in each new case of infection is causing one more new case of infection.

Ideally we would want to know about the incidence of infections in the population to understand whether our interventions are working here and now. But, unfortunately, we just haven't got the tools to measure that at the moment. Even if we had a validated HIV test for recent infections, which I do not think we have for the bulk of the world, then if you look at the difference between prevalence and incidence, what

we need to understand is that we would have to have sample sizes in order of magnitude at least bigger is we were going to be able to measure trends and incidences within a population. So we have to rely on these patterns of prevalence that we see all the time, which is unfortunate because it means we are looking back to events happening a few years ago.

As I said, HIV spreads from those with high numbers of contacts to those with low numbers of contacts as the epidemic progresses and saturates within the population, where the incidence declines, and then as mortality increases, we expect prevalence to decline. And so it would seem to find prevalence in populations, we need to ask ourselves a critical question. Is that decline the natural course of the epidemic or is it something bigger? Is it something that is being caused by populations changing their risk behavior over time? And we can look for the scale of that decline and prevalence, or the pattern of that decline and prevalence to try and help us understand whether we are seeing declines due to successive interventions at the national level.

Another important question relates to this is are those who are newly sexually active or newly injecting drug use, do they have a lower pattern of risk and a lower pattern of exposure than their predecessors when the epidemic first started spreading in the population? And those are difficult questions to answer without case control studies, but we can use mathematical models to simulate the expected course of the

epidemic, and then compare what we observe in terms of trends in HIV prevalence with the patterns that we get with and without changes in behavior.

And this shows you an example of that using NATO clinic data from urban Zimbabwe, and there is a talk on this later this afternoon, where we have got to take into account that we have consistently sampled the antenatal clinics and then we can simulate multiple times the cause of the epidemic with and without changes in behavior and using some basic statistics, we can actually work out what gives us the best fix in terms of reduction in terms of risk patterns within the population. And in this analysis done by Tim Hullet [misspelled?], what he found was the best fix to the HIV epidemic in urban Zimbabwe was that there had been a 50-percent reduction in partner acquisition, or a similar change due to condom use in that the urban population is in Zimbabwe.

So in some places we are finding prevalence that are not caused by changes in behavior. Here we have a decline in prevalence, and we are seeing a lot of examples of this now across the world where we do think there have been significant reductions in risk and we need to try and understand why those changes have occurred.

Then just a brief note on combining interventions. This is a schematic graph of what we expect the relationship to be between the endemic prevalence of HIV and this basic reproductive number. And we have a tipping point where the

reproductive number passes through one and that allows the spread of HIV. And then as the reproductive number increases, prevalence increases; if we have a lot of variation in risk within the population we can reduce prevalence, and what we are trying to do with our behavioral interventions is reduce that basic reproductive number and move it to the left in this curve.

And what you can see is if we reduce transmission through circumcision by 30-percent or the other numbers by 50-percent, we go some way to reducing prevalence, but not far enough if we start off with a well entrenched epidemic. But by combining reductions in partner numbers with reductions in transmission probability through circumcision, we can actually move further over to the left and really get the HIV epidemic under control.

So what we have here with this epidemic situation is a natural synergy between our different interventions. And rather than arguing for a single magic bullet, we really need to be trying to focus everything that we can that works on the epidemic to realize these natural synergies.

I just want to briefly talk about theoretical framework for understanding the spread of HIV. I believe that we have not done enough yet to understand the relationship between social, economic, structural variables, the biological behavioral variables that influence HIV, and the incidence of HIV. And we have got a lot of data that we can actually use to

explore this if we use a theoretical framework. Once such framework comes from demography, which is approximately termed in its framework where we have the biology co-risk of HIV and exposure to infection influenced by approximate risk factors related to numbers of sexual partners. For example, condom use, and that is influenced by social and demographic variables, such as education.

That gives us one framework, and it is limited, but it is possible to look at, in fairly limited data sets. Another richer framework would be a social epidemiological framework where we can look at how structures influence social patterns, how they influence individual behavior, how they then influence the contact, the transmission problem, and the duration of infection that influences the spread of HIV.

And in a statistical analysis for individual acquisition, we can see whether this framework applies because we can expect the approximate determinants to be significant risk factors for HIV. We expect the underlying determinants to similarly be significant risk factors for HIV; and we expect the two to be related to each other. And in a statistical analysis, if we do control for one with the other, we expect the effects of one of them to disappear if we have properly identified the pathways through which the underlying determinants ask.

And we try to do this with our studies in rural Zimbabwe, and these are just some examples of the approximate

and underlying determinants. So, for example, we found that beer drinking was a determinant, but then that disappeared when we control for multiple partners. Something like being a skilled laborer did not disappear. So the reason I think we should be doing more of this is to actually get a better understanding of the drivers so that we can work at how best to intervene them.

There is a problem of measuring those approximate determinants well versus whether we understood them or not, but I think we need to be doing more effort to try and understand that theoretical framework.

So I have run out of time, but my conclusions are that when we have got declines in prevalence, we really need to analyze it to understand whether there have been changes in behavior or not. When we use interventions, we should be combining them to create synergies, and I think we should be doing more to try and statistically understand the relationships between the things that we are concerned about socially within populations and the risk behaviors within populations. Thank you.

**JAIME SEPULVEDA, M.D., M.P.H.:** Good morning, everyone. Thank you very much for continuing to be here. The topic for me today is about the organized social response to the AIDS epidemic.

I am very pleased that this vitally important AIDS conference has come for the first time from Latin America, and as a Mexican, proud that we are able to host it here.

Mexico, as you know, shares its borders with the U.S., Central America, and the Caribbean. It has one of the lowest HIV prevalence rates in the hemisphere. Why is this so? The answer lies in having adopting early and aggressively, in the epidemic in the 1980's, with the prevention tools available at the time.

Look at responses are a fundamental or of a global architecture. We need to understand local successes and failures in order to aggregate and share global knowledge. The global architecture in its most general sense includes everything from the United Nations organization down to the smallest community based organization that is responding to this epidemic.

I am sure we will be hearing at this conference about experiences from many countries. My intention here is to focus more on the global response at the super national level, and organize my comments around three main questions. One, what has the global architecture addressed and accomplished effectively? Two, what has been insufficiently addressed by the global architecture today? And, three, what reforms in the global architecture might strengthen its ability to address the next 25 years of this epidemic?

There are many accomplishments to tell. When historians look back on how the world responded to AIDS, they will describe an unprecedented global mobilization in response to a health problem. The creation of an independent U.N. program addressing a single disease, UN AIDS; the creation of a new global funding mechanism, the Global Fund; the creation of the largest bilateral health program in history, PEPFAR; massive investment, public and private, in the development of new technologies, especially drugs, to combat HIV; and perhaps most unprecedented, the birth of global alliances of people living with the disease, dedicated to mobilizing a global response, such as GNP positive and ICW.

This extraordinary mobilization of resource and efforts has borne fruit. Virtually every country in the world has a national AIDS program. Educational systems throughout the world have modified their curricula to include education on AIDS. Epidemiologic efforts, while far from perfect, track the progress of HIV better than for any other disease. A massive global effort to provide sophisticated antiretroviral therapy to people in developing countries, something that had been dismissed for years as hopelessly unrealistic, has already initiated more than 3 million people on therapy.

And yet, we would not be here today asking for a further redoubling of global efforts if we could have readied this small victory. We continue to add 2.7 million people a year to the pool of 33 million people with HIV, and the only

reason that the global total is not larger still is that over 2 million people a year are still dying for lack of access to treatment.

When and how would we know that we have turned the corner? If we continue as we are today with 1 million people newly initiating treatment, and 2.7 million new infections per year, then for every five people who become infected, three will die without ever accessing treatment. I would suggest to you that one way of knowing that we have turned the corner is to look for the day when more people are started on therapy than are newly infected with HIV.

Of course, there are two ways to achieve such a goal. Increase the number of people starting therapy, and decrease the number of people becoming infected. And we must do both. But take out on how far away we are on this goal, a doubling of the number of people starting therapy would not be enough, nor would halving at the rate of new infections. Changes at the margins are not enough. Massive change is required if we are to reach this turning point within the next few years.

What are the obstacles to such change that we are failing to address? At the 2006 Toronto conference, Melinda Gates spoke about the enormous social obstacle to tackling HIV AIDS posed by stigma. Today, I focus on three deficits in the global architecture that had honored my efforts to prevent new infections.

First, if we research deficit, existing research mechanisms are well adapting for the development of new biomedical technologies, curative and preventative, and those should be continued and scaled, focusing on the development of the vaccine and microbicides. Existing mechanisms, however, are not adequate for development of new behavioral interventions for harnessing the power of marketing that the private sector exploits so well. For learning how to do effective social mobilization, or to change in legal structure first.

Second, an evaluation deficit. We have collectively given insufficient attention to understanding which prevention and treatment strategies work best, under which circumstances, and for which populations. The world has a pretty good idea on how much money has been spend on AIDS over the past 20 years, and a pretty good idea of the number of people who had previously, and who are currently, receiving treatment. However, I have never seen any accurate estimate of the number of HIV infections that have been prevented globally by prevention programs.

If we knew how much HIV prevention we were actually achieving with our prevention efforts, we surely would come to two conclusions. First, each HIV infection prevented is costing far more than it should. Why? Because our programs are choosing an efficient mixes of interventions, targeting

them at the wrong populations, and managing their implementation poorly.

We must also compare the relative efficiency of global funding mechanisms. Under what circumstances is it more efficient to channel funds through the Global Fund, through the World Bank, or through bilateral mechanisms?

Second, we are not investing enough in prevention. Even our current inefficient global prevention efforts more than pay for themselves in future averted costs of treatment. Investing in prevention is not only cost effective, but is actually cost saving.

The final deficit is a delivery deficit. To turn the corner of the epidemic, we need to make better use of the full range of prevention options that are already available to us. We need greater technical and financial support for the delivery of combination prevention. It includes safe male circumcision and other prevention programs that have been shown to work such as integrating HIV with family planning, to reduce unintended pregnancies among HIV positive women. It means a scaling up combination prevention alongside combination therapy.

So what reforms would be decidable in the near future? First, we need to radically ramp up our prevention efforts by increasing funding for research, evaluation, and combination prevention and scale. I was very pleased to read that the U.S. Congress has significantly increased its already generous

contribution to Global AIDS efforts through the reorganization of PEPFAR. It is time for all the wealthy nations in Europe, Asia, and the Middle East, to match this effort and to help redress the prevention deficit.

Second, we need to implement reforms among institutions that currently provide the bulk of international, financial, and clinical support for HIV research and programs, enhancing synergy, reducing duplication, and increasing efficiency. We see more knowledge and services out of available funding. The timing is perfect. The Global Fund, the World Bank, UN AIDS, and PEPFAR have all recently undergone, or will soon undergo, leadership change. Almost 12 years ago, the creation of UN AIDS started the important process of harmonizing the UN response. But now there are other, larger players in the field, and it is time that they started to play as a team, to move us more rapidly towards our common goal, a goal that I would summarize as more and better prevention. We have accomplished a lot in a short period of time, but to paraphrase Mahatma Gandhi, it is the difference between what we are doing and where we are capable of doing that will eventually conquer AIDS.

In closing, I would like to recognize the contributions of my colleagues, [inaudible], to these papers, and I would like to dedicate this talk to the memory of Jonathan Mann, a dear friend and classmate, and one of the most effective and

charismatic leaders in Global Health. Thank you for inviting me, it has been a pleasure to join you this morning.

**ALEX COUTINHO, M.D., M.P.H.:** Good morning, colleagues. I am going to be talking about the state of the epidemic and the response, and as you can see my tag line is Promises, Progress, and Problems.

But let us pause and remind ourselves what this is about. This is an HIV positive grandmother and grandchild in Tanzania, worried about her own status, how to cope with her daughter, who is HIV positive, and not even sure if her grandchild is positive or negative.

And this is a remote and beautiful part of Papua New Guinea in the southern highlands, difficult to reach, but HIV has gotten there, and the adult HIV prevalence in this part of the world is over 1-percent. And this is a picture that we see increasingly, grandparents caring for orphans and vulnerable children. This picture is changing, and there are a few headlines that I want to share with you.

One million more individuals who are now on treatment at the end of 2007, most of them in Africa, and at least, 3 by 5 was achieved; three years late, but it was achieved. Significantly more mothers and children are now receiving services to prevent transmission to their children and to provide pediatric care. HIV testing and counseling services have been increased substantially through diverse approaches.

And male circumcision has been demonstrated as an important addition to our combination of proven prevention approaches.

But there are challenges, too, and most of us will recognize that few countries will achieve universal access by 2010. And most people living with HIV still remain unaware of their HIV status, despite often visiting health facilities. And as has been repeated, new HIV infections significantly outpace the numbers of those started on treatment by a ratio of 5:2. And 69-percent of people who need treatment are not getting it, and often not even getting any special care package that would keep them alive until they could start treatment. And sadly, of those who start treatment, one in three are not in care two years later due to early deaths, loss to follow up, and drug adherence challenges.

And there are lots of actions that are required, which I will summarize first as leadership, leadership, and more leadership. Countries that have passionate and sustained leadership are achieving results in both treatment and prevention, and Tanzania, Rwanda, Cambodia, and Mexico come to mind as examples. We have heard the term combination prevention over and over again, and far more investment needs to be put into combination prevention. We have heard a lot about health systems, but we need inclusive health systems that will reach into rural areas, as well as how to reach sites. And, in particular, to fully embrace HIV positive people as equal players and key catalysts for change. And we need

programs that reach out, too, and support marginalized and at-risk communities, MSN, injecting drug users, sex workers, prisoners, migrant workers, and increasingly, the elderly.

So let us look at a few graphs, and it is clear that if you look at Africa and look at [inaudible], in the year 2003, Africa deserved its description as a dark continent. But as we move to 2007, the lighter areas that show that treatment coverage is approaching 50-percent, and exceeding it, is very welcome news for many individuals in that continent. And this has been replicated in all the other places in the world. And if you focus down on a country like Ethiopia, one can see that access to treatment has spread out throughout most of the densely populated country with at least 260 treatment sites available to provide antiretroviral therapy.

And there are many parts of the rapid scale of treatment in Africa. By the 30th of June in 2006, 2-percent of ART beneficiaries in Malawi were healthcare workers, and their combined work time of more than 1,000 staff days per week was equivalent to the human resources required to provide ART at the national level to over 50,000 ART beneficiaries, key evidence that HIV programming is strengthening health systems.

In Uganda, ART and cotrimethazole [misspelled?], not only achieved a 95-percent reduction in mortality in HIV positive participants, but reduced the mortality of children who are unaffected by 81-percent, and reduced often good by 93-percent. HIV and TB have shown a lot of gains, and 700,000

people with TB received an HIV test representing a 30-fold increase from the year 2002. However, approximately 50-percent of people with active TB are HIV positive, so unfortunately because only 12-percent of total TB cases were tested, 2,200,000 TB HIV coinfections were missed, and this is not acceptable.

In HIV counseling and testing, a median of about 10-percent of men and women had ever received an HIV test. And, again, a very low median of 20-percent of people living with HIV knew their HIV status. And yet, if you focus on the white and red parts of the pie chart, it is clear that by doing early, routine counseling and testing, you can detect individuals whose CD4 counts are above 200, and this study in Uganda showed that this percentage increased from 35-percent to 55-percent, and allows much earlier intervention and far better outcomes.

And these are examples of testing and unique methods of testing. This is an example of home based testing in rural Uganda, where testing is being rolled out on a door to door basis, and in one of the districts in Uganda, reached over 400,000 people.

What about women and children? Clearly there has been massive scale up and more women than men are started on treatment. However, only 12-percent of pregnant, HIV-positive women were assessed for their own treatment need. The good news is that 33-percent of pregnant, HIV-positive women

received preventative mother child services, up from 10-percent in 2004, and the numbers of children on treatment have risen from 75,000 two years ago to almost 200,000 in 2007. And this graph clearly shows the upward drudgery of PMTCT services from 10-percent to 33-percent, and this in turn shows a remarkable scale up of pediatric antiretroviral treatment in the last two years.

If we look at services for orphans and vulnerable children, I make two statements that are obvious, that even the best OVC program cannot replace parents, and the best way to support children is to keep parents alive and healthy. And what is often not articulated is hat treatment scale up is estimated to have prevented over 2 million orphans. And community responses have been key to a lot of these programs. The world disaster report of 2008 from The Red Cross points out that communities that have wisdom and resilience have offered so much in partnership with governments. I have examples of some of these community-based programs. This is from Papua, New Guinea; a feeling to stop the violence against women, because violence is one of the key drivers of the epidemic in that country. And this graph shows the scale up of clinical services for sex workers under the Avahan, India AIDS initiative. And I believe there will be a satellite giving more details of how this has been achieved through community engagement.

This is a picture of an HIV-positive support group in Zanzibar that has done a lot to fight stigma and discrimination in the communities in this part of the world. And this is a picture of the Tasso [misspelled?] community ART program. The lady in the red top on the extreme left is a beneficiary of this program, and by keeping her alive, we have been able to keep all of those children that you see receiving care from their mother and their guardian.

So, let me end by going through a few things that we should not accept. We should not accept that less than 10-percent of individuals at high risk for HIV, like sex workers, IDU, MSM, and prisoners in developing countries are receiving appropriate prevention intervention. We should not accept that PMCTC, a proven effective preventative technology, is not the highest of global and national priorities to reduce HIV transmission to children to below 2-percent. We should not accept that proven methods of HIV prevention, like male circumcision, are yet to be deployed in most countries that need them, including those where the research was carried out. We should not accept that we cannot provide HIV testing routinely to all who need it. We should not accept that HIV is still being transmitted through unsafe blood and unsafe injections, and that only 35-percent of health facilities have post exposure prophylaxis measures in place. We should not accept that health workers are often not seeking HIV testing

and not accessing treatment and care in time to protect their own health so that they can protect others.

I leave you with two parting quotes: A quote from Albert Einstein; imagination is more important than knowledge. We have a lot of knowledge, but going forward, to achieve universal access, we will need lots of imagination and innovation. And the second is that reach for the moon, and even if you miss, you will be among the stars. Well, the rocket has taken off; we are reaching for the moon; and if we have universal action now, we will definitely be among the stars. Thank you very much, and I wish you acknowledge a lot of people for this talk.

**ANA MARIA SALAZAR**: I just want to remind you that after Elisabet Fadul from the world food program from Dominican Republic, we are going to start our questions and answer session. So, there is volunteers walking around with pieces of paper so that you can write down your questions. Please provide to them the questions as soon as possible so we will be able to include more questions and discussions. Elisabeth.

**ELISABET FADUL**: Good morning. It is indeed an honor to be here at the first AIDS conference held in Latin America.

Today young people have been branded as a vulnerable and priority group in the response to HIV and AIDS. Youth activism around the world has dynamized and evolved from simply peer educators to seize decision-making spaces and have our voices heard at international and national levels. And I am

truly humbled to be here today before some of the greatest youth activists around the world.

So, what does HIV look like today? It looks increasingly young, significantly female, and unjustly marginalized. With 40-percent of all known infections of HIV among young people between the ages of 15 to 24, the trends of the pandemic clearly reveal the limitations in our involvement and the acknowledgement of our rights and realities in the international and national responses. We are still below half of the 2001 global goal set that our garment is [misspelled?] committed to uphold set for us to access adequate information on HIV and AIDS. The available approaches to prevention, treatment, support, and care for us are just not enough. So, what are you going to do? It is the objective of my presentation here today to present to you eight months for the implementation of an urgent response to HIV and AIDS among young people. Number one, effective in-country reactions and policies are critical. It is still to rare to find international dialogues turn into in-country successes. The application of commitments towards solutions is too shortly accounted for and are difficult to find adapted and achieved in the local country level. In other words, rhetoric usually stays in rhetoric. How can we translate this into real policy impact and behavior change? Number one, we must break the cycle of no accountability and mass non-focalized spending. Therefore, it is a call to donors and to us to hold our

governments more accountable for plans to address the realities of young people. Number two, investment in our capacity building, implementing Ufadel [misspelled?] partnerships is essential, for it is through these processes that we construct empowerment with behavior change and become social actors with skills and capacities to bring about constructive solutions to our own realities.

Must number two: Evidence-based sexual health education, interventions, and information are fundamental. At age 18 we are considered apt by governments for being sent to battle to protect our country, but when it comes to protecting ourselves the funding and support for a right to access evidence based and comprehensive services that also promote condom use and contraceptives as a mean of safe sex is often denies, especially to those most at risk. This constitutes a violation of our human rights. For those of you— [Applause]. For those of you who currently hold the property rights to the funding support and political power over the international AIDS response, please note the following: Our knowledge of HIV remains inadequate, and yet we are drowning in evidence which is not applied, driven by theological and moral beliefs over fact-based, accurate information. [Applause] Thank you.

Many countries have a policy or national HIV and AIDS strategy in place to promote sexual health education, but are they effective and based on evidence or theological beliefs? Are they tailored to our needs and diversity and offered in a

manner that motivates us to reduce our risk of infection? Did we participate in the construction of this curricula? The main obstacles behind the implementation of real sex education are mainly based on the fact that openly addressing our sexuality, safe sex, sexual orientation, and sexual diversity, the realities that we face are often regarded as controversial, non-addressable, hot topics. But they are realities and the gaps in the current responses. It should not be our destiny to live our sexuality behind and iron curtain of myth and stigma. Instead it is crucial for you to recognize a right to access evidence-based comprehensive and accurate information tailored to our diversity. For accurate knowledge provides us the tools we need to make educated decisions about our lives.

As I am on the subject, I would like to congratulate the garments of Latin America and the Caribbean, the health and education ministers, for stepping into a groundbreaking political declaration to provide evidence-based sexual health education. Please, please do not let evidence-based education become the latest it phrase of political rhetoric. [Applause] We expect to be at the table with you as equal partners when the evidence-based curricula is being designed, and we must demand this right.

Number three: It is pivotal for prevention interventions to focus on young people living with HIV and AIDS. A topic largely unaddressed, a population rarely unaccountable for, except for treatment and care, directing

prevention efforts, and addressing the sexual reproductive health needs of young people living with HIV/AIDS is a major gap in the response.

Number four: It is vital to meaningfully involve us. People talk a lot about your participation, but do you do it? The limitations to involving young people in reducing the pandemic of HIV/AIDS in comparison to the many programs that supposedly do clearly demonstrate that addressing youth has not necessarily meant involving you in decision making, policy making, and program development. Statistics only say so much, but it is from our experience that plans should be drafted. They cannot be successful if they do not involve young people, that work for and with young people.

Number five: Totalization [misspelled?] of programs and participation of young people in context of risk in decision-making programs are of essence. It is amazing how little the most directly impacted and affected are involved into the industry-wide response, how as in many of the big decisions of the world, the big few make the decisions to be suffered by the small many, making it a hard-lived reality that approaches and programs often used fail to reach those that could benefit most. This becomes more than relevant when we consider that young people are over-represented among the world's poor and marginalized populations. Those who are in the productive years, you are succumb to marginalization, exclusion, and criminalization, and are just too often overlooked, as

apparently their needs are too conflictive to be worth addressing.

Now is the time for urgent action and involvement of young sex workers, young people who have sex with men, lesbians, transgenders, bisexuals, injected drug users, those living on the streets, the disabled, and the imprisoned. In addition and especially, it is vital for young people living with HIV to have greater access to decision-making processes in order to improve the relevance, acceptability, and effectiveness of service, testing, care, and support programs. At nearly three decades of responding to HIV and AIDS, it is time for those at greatest risk to be let take a stand and drive the national and international response; for it is truly behind their ranks where we will finally achieve the goal that has given conception to the many conferences, meetings, and political declarations from around the world. We must meaningfully involve those who front the ugliest and truest realities in the face of AIDS.

Number six: The provision of supportive harm reduction programs is urgent. Programs must be based on realities and recognize the specific needs and rights of young injected drug users as a primary health and program concern.

Number seven: We must celebrate the diversity of young people in tailored programs and policies.

Number eight: Completing the cycle of response. We must begin by tackling the economic and social determinants of

HIV and AIDS and adopt a holistic approach, that in responding to these focuses on prevention, treatment, and care. I would like to highlight two determinants: Number one is poverty. Investing in young people helps break the cycle of poverty. The major challenge of HIV and AIDS in the pandemic has been reducing the burden of disease and death amongst young people. This statement becomes more transcendental by the fact that we make up about half of the worlds unemployed. Furthermore, we have been classified as a window of opportunity for surging an economic growth among developing countries. Yet, as youth, we are unfavorably impacted by education, unemployment, lack of training and skills, and other social factors that greatly reduce our health and quality of life.

Number two: Social support and discrimination. HIV and AIDS is also spread by the discriminatory actions of societies and government and constitute key barriers to obtaining support and services for young people. The protection of human rights and our own demand of the recognition [misspelled?] are vital to reduce transmission. Efforts to invest and leadership to reduce poverty provide greater social support, guarantee equal access to education, and follow through on commitments to reduce discrimination based on race, ethnicity, sexual orientation, and gender are essential.

Finally, I would like to end with a call to action to all of you, be it donors, governments, my peers, private sector, media, religious leaders, medical professionals, or

society in general, for leadership at all levels is imperative: Do not forget us when you get back home. Take into account our realities in your work summed up into four key messages identified by the Mexico youth force with young people from all over the world writes, we have the right to comprehensive, evidence-based, accurate information and services to protect our sexual health. Respect for our realities, our experiences, and our contributions. Responsibility. Together we must create and environment where we have power over the decisions that affect our lies. Recourses. We need training, mentorship, funding, and opportunities. The global response but stop focusing on merely putting out fires across the world and adopt a sustained short, medium, and long-term agenda of response that begins by addressing the social and economic determinants of HIV and mainstreaming youth rights into poverty reduction, employment, and education policies. It is the quest and desire for a better future that as young person [misspelled?] drives us to avidly work for the compromise, which I hope you will all take on, which is that future generations of young people do not stand before you in upcoming years, as I am, and say that I am 23 years old and have seen, heard, and lived the effects of HIV in my community for as long as I can remember. Thank you.

**ANA MARIA SALAZAR**: We are going to initiate our questions/answers/comments section. As you can see, we are getting a lot of questions, so we are going to try to go

through them as soon as possible, as much as we can. I would like to initiate this session with one question for both Thembi and Elizabet Fadul, and it has to do with media and new media. One of the other reasons I am here is that I have a daily radio show in Mexico. I have a TV show. I write columns. I work with my media. I do media work right now, and I have to believe that the fact that we have more than 3,000 of my colleagues here reporting on this event is somehow going to have some impact in the way public policy is made in countries like Mexico and around the world, but there is different ways of reaching out, and Thembi, with your daily, with your diary that has been posted on internet— and I know you have other activities— and Elisabet, you, in trying to reach out to young people, I mean, let us talk a little bit about new media and whether— I mean, in trying to balance out new media and its effectiveness in countries where there is technology and thinking of other ways that there is going to be to have outreach to other people.

**ELISABET FADUL**: I do not know. Thembi, would you like to answer that question?

**THEMBI NGUBANE**: Thank you very much. With the diary, it had a really good impact on people because everyone had access to radio, and especially it was broadcast in community radios, so everyone could listen to their radios in their communities, and they could also log on to the website and listen to the story. And it really had a good impact on me

myself because I felt very empowered for the story to be broadcast on radio because not everyone has a TV and not everyone has access to the internet.

**ANA MARIA SALAZAR**: I do not know, Elisabet, in terms of outreach to young people, how much are you using the new media?

**ELISABET FADUL:** I am sorry, could you repeat? I could not listen very well.

**ANA MARIA SALAZAR**: For those of us who are up here, it is a little difficult to listen, so you may want to put— In terms of new media— blogs, internet, media that is specifically focused for young people— how much of it are you using? What are the new trends?

**ELISABET FADUL**: Well, of the new trends, the internet is very vital, basically because as young people we use it to get a lot of information, be it for school, be it for entertainment, and when we use the internet or blogs or communications for development and education and combine it also with a bit of entertainment, we actually are constructing capacity building through the internet and technologies, and also we are empowering ourself through that medium, so definitely the technology and internet is very vital and the new trends would be to use all those available techniques we have, and instruments, and really adapt them to education and empowerment and advocacy on HIV and AIDS.

**ANA MARIA SALAZAR**: We have a couple various questions for Dr. Garnett. Demographically, Africa is the most infected and the largest, and the exposure to the virus is the greatest. How can one talk about prevalence and incidence globally related to Africa?

**GEOFFREY GARNETT, PH.D.:** So, I am not sure I actually understand the question. Clearly, the prevalence and incidence has been much higher across the whole, the general population of Africa, particularly in Southern and Eastern Africa, but in terms of the methods we use to look at the data, they can be similar. Obviously we need to look at more targeted marginalized populations outside Africa, compared to women in uncinated [misspelled?] clinics and general populations in the demographic and health surveys inside Africa. And I think that is one of the problems we have in understanding the epidemic is that we really do need to look at the different countries and not assume that they are all the same, but the methods, the statistical methods, are the same.

**ANA MARIA SALAZAR**: This is a question for anyone on the panel who wishes to answer this: Can the panel comment on the possible role of treatment as a prevention strategy to overcome the deficits mentioned to reduce the incidence of new infections? I do not know who would like to answer it. Dr. Garnett.

**GEOFFREY GARNETT, PH.D.:** Okay, so in terms of treatment, it is clear that by reducing viral loads you have in

impact on transmission probabilities, and it is also clear that in rolling out treatment you are identifying those who are HIV infected and hopefully you can change risk behavior. So, treatment has a key role to play in HIV prevention. The actual use of the antiretrovirals to prevent transmission is not going to succeed though unless we have many more people knowing their HIV status, and also we put people on treatments much earlier than is clinically warranted because most of the transmission occurs well before individuals actually require treatment.

**ANA MARIA SALAZAR**: Alex, you want to add to that?

**ALEX COUTINHO, M.D., M.P.H.:** If I could add, good treatment programs do not just hand out pills. They also provide education, and they include HIV-positive people as partners in prevention. We call that positive prevention. And if you evaluate good treatment programs, you find that the behavior of HIV-positive people in terms of risk behaviors is markedly reduced. So, it is not just a biological phenomenon. It is also a behavioral phenomenon. And as doctors and other treatment providers, we need to focus that it is not just about handing out pills. It is about a comprehensive approach to a treatment program that includes HIV-positive people as partners. [Applause]

**ANA MARIA SALAZAR**: Jaime, would you like to add to that?

**THEMBI NGUBANE:** And also I would like to add on that, and I think that testing earlier is not important. Testing now

may actually lower the acute status of fewer infected other people and also because the risk of getting more infected, and also by knowing earlier connected [misspelled?] access to treatment. So, I think it is very important to stay on your status so that you can get access anytime you need treatment.

**ANA MARIA SALAZAR**: Jaime.

**JAIME SEPULVEDA, M.D., M.P.H.:** Hi. I completely agreed with my colleagues. Treatment is an essential part of prevention, but we cannot treat. We are way out of the epidemic. We need to have a combination prevention much as we need to have combination therapy.

**ANA MARIA SALAZAR**: This is another question for all of you on the panel: What is your opinion on scaling up sexual partners' reduction as the key effort area in combination with prevention programs? I do not know who would like to answer that.

**GEOFFREY GARNETT, PH.D.:** Maybe I can have a first step. So, my understanding is, of the question, is whether— [audio gap] as opposed to a very important part of HIV prevention interventions. And I think a lot of the successes we have seen certainly in— so sorry— in Africa have been around whole societies realizing that multiple partnerships was a problem and reducing those multiple partnerships. But at the same time, condoms do prevent HIV, and widely used, especially if there were few [misspelled?] sex between partnerships can have a big role to play. And so, I think we are making a

mistake if we try to identify the one magic bullet, the one key in prevention. We need to be identifying multiple preventions to control the epidemic. But it is clear that multiple and concurrent partnerships play a very, very important role.

**ANA MARIA SALAZAR**: This is a specific question for Dr. Alex Coutinho. How much empirical evidence is there that male circumcision has been proven effective? Number of studies? Countries? Sample size?

**ALEX COUTINHO, M.D., M.P.H.:** Well, classically there are three studies that have proven this in a research environment. Obviously what we are lacking yet are community-based studies to see what happens when you scale up this intervention because it is a fairly complicated area. I believe a number of these studies are now in progress, but those results are not yet out to see what happens when you do massive circumcision to scaling communities. The country to watch is Rwanda, which is rolling out a community-based, massive scale up of male circumcision.

**ANA MARIA SALAZAR**: This is a question for Dr. Sepulveda. How is it possible that Mexico is one of the countries where there is least HIV in the region? When you look at the general numbers, Mexico has the second place in Latin America. I guess it has to do with an issue of numbers.

**JAIME SEPULVEDA, M.D., M.P.H.:** Yes, it has to do with the absolute versus relative numbers. So, relative to the size of the country, a country with a population of 110 million

people, the absolute numbers of HIV/AIDS cases are relatively small compared to other countries, and as I said, the three borders we share with Central America, the Caribbean, and the U.S., have prevalence rates that are higher.

**ANA MARIA SALAZAR**: This is a question for either Geoff, Jaime, or Alex: Which parts, countries in the world are still disconnected from the global strategies against HIV/AIDS, and why? Which of the countries where there is literally no programs, that the focus of world needs to be on?

**GEOFFREY GARNETT, PH.D.:** I think there are countries where which the leadership has not been adequate and where we are not getting that success we need with HIV prevention interventions, but I do not think we can identify particular countries that are not engaged in HIV prevention and treatment globally, and I think there are some countries with politics that make working in them difficult, and maybe Alex knows better than I do.

**ALEX COUTINHO, M.D., M.P.H.:** I think the global response has reached every single country, but there are major caps within countries. There are countries, including my own, where services for prisoners are almost nonexistent, where if you spend a long time in prison you are more likely to die of HIV than you are to die of any other cause. And definitely when you come to marginalized communities, men who have sex with men, injecting drug users, migrant communities, we have not even talked about conflict settings because conflict

settings are right for the spread of the HIV virus. So, I would say every country has some form of programs. I would also say that maybe of 50-percent of countries do not have the right mixture of approaches to contain the epidemic.

**ANA MARIA SALAZAR**: This is a question for all of you on the panel: Could the panel comment on some countries in the west refusing treatment to persons living with HIV/AIDS and even deporting them to countries where access is nonexistent or may have difficulties in finding the support? I know there has been a lot of talk about the role of migrants and how people being deported. I do not know who of you would like to address that issue.

**ALEX COUTINHO, M.D., M.P.H.:** I often get enquiries from countries in Europe and the U.K. in particular to find out if they deported someone, whether they would get access to treatment in Uganda. My standard answer is that the numbers that we have for treatment in Uganda are so few to treat all the Ugandans who need treatment, that it would be very helpful if you allowed people to stay in Europe and U.K. And access their treatment there and contribute to global scale up. [Applause]

**ANA MARIA SALAZAR:** This is a question for Geoff. How does mobility of people, migrants, and similar [misspelled?] businessmen, refugees affect your epidemiological model? Should we look at a global model?

**GEOFFREY GARNETT, PH.D.:** Okay, so, one of the slides I showed you showed that skilled workers in rural Zimbabwe had a higher risk than others and that I could not explain that through their actual own sexual behavior, and it is probable that these skilled workers are moving in Zimbabwe either to the mines in South Africa or and there is a lot of circular migration in Zimbabwe. So, movement is really important for two reasons. One, it introduces the virus into new communities, and that is probably a historical fact that is not particularly important. What is more important is that movement creates the environments in which people have higher risk behaviors and can try and cope with being away from home. And so, it is a structural factor that influences risk. So, I think in terms of our models and understanding of HIV movement and the migration, the circumstances people live in are really important. Whether we need a global model to look at that, I doubt, because we can understand it with easier, smaller scale models. But there is no doubt that movement is important.

**ANA MARIA SALAZAR**: Very interesting question. What strategy can we put in place to address this issue that health workers are not facing their status or not getting enough testing, when most of them are encouraging other people to be tested. I mean, how do we explain this phenomenon to what strategies should we be implementing?

**ALEX COUTINHO, M.D., M.P.H.:** Difficult questoin. No straightforward answer. However, I do not think we are talking

to health workers enough, A, for them to understand they are often at higher risk; they are a higher risk group, and B, to understand what kind of services they would want, whether there would be services within their own health setting or they want a private, anonymous health service that would maintain the unanimity [misspelled?]. I think the starting point is to talk to heath workers and put in place services that will respond to their needs.

**ANA MARIA SALAZAR**: This could be a question— well, it is for all of you, but Thembi and Elisabet, maybe you might be interested in answering: How can we create a prevention social movement when we have no Nobel prize [misspelled?] for prevention science and the media has no victims to interview or to photograph?

**THEMBI NGUBANE:** Well, I think that we can do that by people, actually by people coming out, people by coming out and talking about this, people by stopping hiding this, people by breaking the silent, and I think we can accomplish it actually because if everyone is comfortable talking about HIV and everyone is interested in the topic instead of hiding it, I think we can find ways to actually work together, and yes.

**ELISABET FADUL**: Well, I think in terms of creating a prevention social movement, it is key that persons that are more marginalized come to the front of the response and direct that social movement. I think it is imperative that prevention for people living with HIV/AIDS also be a main focus on that.

**ANA MARIA SALAZAR**: This is a question for the panel. Human recourses and health infrastructural improvements are catalysts to universal action; where do they fall on the priority list?

**ALEX COUTINHO, M.D., M.P.H.**: Very high, but we need to have a common understanding of what a health system is and what the infrastructure needs are. I said that HIV-positive people are part of the health system, and yet, in many countries they are excluded from the health system. So, we need a redefinition of what a health system is. I think global architecture, global funding, is recognizing this, and I think, moving forward, we are going to see more of the funding coming to HIV being used in part to strengthen the health system and infrastructure.

**ANA MARIA SALAZAR:** Dr. Sepulveda?

**JAIME SEPULVEDA, M.D., M.P.H.**: I would add to what Alex just said so brightly, the financing of HIV prevention and treatment programs can serve as vehicle to strengthen health service locally. These huge amount of recourses that finally are being delivered for HIV can serve as a force for health system reform within countries.

**ANA MARIA SALAZAR:** This is a question, once again, for you, Dr. Sepulveda. Why are none of you— I guess it would be for all of you— why are none of you talking about the failure of not investing in the universities in countries who are being

affected, mostly affected by this disease? High-quality research locally is crucial for local, effective prevention.

**JAIME SEPULVEDA, M.D., M.P.H.:** Let me give this a try. Yes, I am absolutely convinced that we need both global and local research. I think there are advantages of using biological research in a global scale, but I think there are also very many lessons to be learned from research being done locally on behavioral research, behavioral prevention research, as well as in some structural prevention research.

**ALEX COUTINHO, M.D., M.P.H.:** Main reasons not highlighted is that the talk was ten minutes, and you cannot highlight everything. However, on an earlier talk I gave that looked at research in developing countries, it was also sad to note that less than 20-percent of the research findings locally had been translated into policy and practice. So, it is not just about doing more research. It is also about translating that research into policy and practice.

**GEOFFREY GARNETT, PH.D.:** I think this is a really important question in terms of developing local capacity for doing research. The trouble is it is not easy and we cannot play at building capacity. We have to do it seriously, creating the critical mass and the environment for academics from developing countries, who can be very brilliant, but if they have not got the right environment where they can concentrate on their research, they are not going to be able to achieve their potential. So, I think it is a very important

thing that we need to be investing in, but it is not something we can play at. It is something that needs serious consideration and investment.

**ANA MARIA SALAZAR**: This is a fascinating question. Elizabet and Thembi, and I am sure all of you may have some comment on this: From a communications perspective, are advertisements with AIDS awareness messages that are branded by the government? How effective are they in reaching out to youth in general? That branded communications done by governments.

**THEMBI NGUBANE**: Well, from my point of view, most of the messages that has been sent out there, especially in my country, they do not make sense, so a lot of real stars [misspelled?] are really confused, and yes, yes, really confused because most of the messages really do not make sense at all.

**ELISABET FADUL:** Well, I think the statistics show it, basically if we have not reached the global goal for adequate information, the information campaigns are not working, mainly because they are not tailored to our diversity. They do not speak to us. They are not friendly. And they do not also focus on our different cultures, our different sexual diversity or different sexual orientation, our different gender, and that is pretty basic for these campaigns to have success.

[Applause]

**ALEX COUTINHO, M.D., M.P.H.:** I have three children, aged 19, 21, and 22, and the main advert they want to see is how can I have sex, have fun, and stay safe? And government adverts do not normally talk about that. [Applause]

**THEMBI NGUBANE**: And also I find that most of the messages that has been sent are mostly sent to teenagers that are HIV negative, and not much has been said about people that are, like teenagers, that are HIV positive. And also, I find most of the messages really offending.

**ANA MARIA SALAZAR:** I believe, unfortunately, this is going to be our last question. This is for Dr. Garnett. Why was therapy not in your models and what effect might it have?

**GEOFFREY GARNETT, PH.D.:** Okay, that is an important question, and the real reason was time. In terms of therapy, as we get an increase in the number of people going on to treatment, they will survive longer and we will get an increase in prevalence that is counteracting the declines in prevalence due to prevention. So, we do, in our models, need to include that in the future. However, it is only in the last couple of years that we have seen the scale up of antiretroviral treatments to a large level, and it is only now that we will start to see people surviving for longer. So, my models to date have included it, but it has not been an important part of the models, but in the future it will be a very important part. So, we will need good strategic intervention information on

what the coverage and success of treatments is if we are going to be able to monitor the epidemic in the future.

**ANA MARIA SALAZAR:** Unfortunately we ran out of time. Once again I would like to give a big round of applause to Geoff Garnett, Jaime Sepulveda, Alex Coutinho, Elizabet Fadul, and my co-chair Thembi Ngubane. Thank you so much. [Applause]

[END RECORDING]