# Rapporteur Session
# Kaiser Family Foundation
# July 23, 2010

[1] The Kaiser Family Foundation makes every effort to ensure the accuracy of written transcripts, but due to the nature of transcribing recorded material and the deadlines involved, they may contain errors or incomplete content. We apologize for any inaccuracies.

[START RECORDING]

**ALAN WHITESIDE:** Good afternoon, ladies and gentlemen. Let us begin the Rapporteur Session. My name is Alan Whiteside. I am the director of the health economics and HIV/AIDS research division at the University of KwaZulu-Natal in South Africa and I am a member of the Governing Council of the International AIDS Society. I am a proud South African, which is relevant because those of you who saw the World Cup know that every game started on time, as will this session. [Applause]

During the conference, teams of Rapporteurs have been scurrying around, collecting information which has been sifted and distilled and will now be presented to the conference by the lead Rapporteurs. Our first Rapporteur from Track A is Dr. Poli. [Applause]

**GUIDO POLI:** Thank you, Mr. Chairman, and I wish to thank the International AIDS Society for the honor to celebrate my 25 years of commitment to HIV/AIDS research by delivering this speech at this very important conference that will be remembered as the CAPRISA AIDS Conference.

I will not discuss microbicides. That will be addressed later in Track C. But, let us remember that about ten years ago we were discussing the results of nanoxine-9 trial. And we were wondering whether there was going to be a future for microbicide research.

So, I will briefly focus on three areas that caught my interest in particular. Let us start with HIV life cycle, which is the roadmap for any anti-HIV drug discovered. We will discuss new findings in the field of LTNP and elite controllers, which are key natural molder for vaccine development.

I will finish the scientific part on the hardest target today for basic scientists as well as for clinical scientists, which is the issue of HIV persistence and how we can take care of getting rid of latent infected cells and reservoir, and will finish with some very brief remarks.

So, let us start with the HIV life cycle. Because every important finding in the HIV field, being basic or clinical, essentially has to deal with all the steps that characterize the virus. And indeed if you go through what have been incredible achievements in these years and decades, now we have a canopy of very potent antiretroviral drugs that target key enzymes in the virus life cycle, but also remember the Copernican Revolution of finding CCR5 and perhaps CXCR4 entry inhibitors that target the host rather than the virus.

So, in this contest, at least two important works need to be mentioned, the new CCR5 antagonist such as TBR-652 have been developed and tested in early trial, and TBR-652 is the feature of having two CCR5 antagonists, that of another chemokine receptor which is CCR2 which is rarely used by the

virus, but it is very effective in driving and recruiting new inflammatory cells that will serve as an amplification circuit for HIV replication.

And then excellent work from Belgium, presented here at the conference, led to the discovery of legends, which are in another class of integrase inhibitors that will work, has the potential to work also on the viruses that already carry resistance mutations to retalgrafin [misspelled?] and integrase mutation.

And the very interesting feature about legends is the fact that they work on a molecule which is called p75 LEDGF but essentially [inaudible] the so called preintegration complex to the host DNA, essentially teaching to the integrase where to cut and paste the proviral DNA.

Let me move to the second topic of my brief talk, which is LTMP and elite controllers, and rewarding what Sarah Rowland-Jones elegantly explained, we saw a relatively rare model, look at the button of the feature; we are talking about 1-percent and in the case of elite controller even less of all infected individuals.

The important thing is that these two phenotypes of natural control of HIV infection, essentially being defined in terms of immunological control, maintenance of CD4 T-cells over the years, all virological control in the case of elite and viral controller, and indeed these two phenotypes overlap but

only in part and if you think about, this already tells you what factors which are controlling virus replication and the CD4 T-cell maintenance are only part of a lapping and probably synergistic.

In a very elegant work, Benjamin Descur [misspelled?] from Paris, France, essentially could demonstrate that indeed a particular subject of activating CD4 T-cells and from memory cell, unlike the other [inaudible] you can see on the left of your screen, and indeed much less infected when compared to LTMP that cannot carry the so called HLAD allele. HLAD allele called at least two protective alleles, B57 and B27, and when one of these is present within the LTMP population, the load of viral DNA in the cell is much less, in fact.

And another study presented by Matthias Littlefield from Boston explored the side of the elite controllers and asked the question why these rare individuals are so capable of maintaining load of viral, and he basically found out that the molecule known as P21 which is inhibitor of a cycline dependent kinase that has already been independently described to contribute to the resistance of hematopoietic stem cells and macrophages to HIV infection is the key factor that maintains elite controller CD4 T-cells very ineffective infected by the virus, and he also characterized the fact that P21 can act at the preintegration level by blocking the reverse transcriptase

step, but also on proviral DNA integrated at the transcriptional level.

Let me move to an area. I will give you just a 30 second introduction to the field of microRNA expression. MicroRNA are short RNA molecules that have been bind to complementary sequences in the three prime untranslated regions of target MRNAs and usually the results of this coupling is gene silencing.

It's calculated that the human genome contained at least 1,000 miRNAs and can target up to 60-percent of the mammalian genes and in already other disease such as cancer, aberrant expression of miRNAs being linked to pattern of disease progression and also exploitation of the therapy is being considered.

In one study by Claudio Cazuly [misspelled?] from Milano, he explored another rare phenotype which is dexycol, multiply exposed but uninfected individuals and compared their pattern of immune expression to that of long term progressor and [inaudible] patients, and the take home message of this provocative and although preliminary study is the fact that there seems to be an opposite pattern of miRNA upregulation in LTMP and [inaudible] versus down regulation of miRNA in multiply exposed but uninfected.

Of course, the study needed to be extended and validated. We need to understand what are the targets of this

miRNA and we need to understand whether these are just markers or can be really determinance of controlling disease progression.

Let me move now to the third and last general topic that I will briefly address to you today, which is the Holy Grail of HIV therapy. Can we achieve a real cure, I mean in a functional or microbiological indication of infectious HIV from the body, and Cheryl Ewing already delivered an elegant speech in the opening lecture illustrating how essentially both activated T-cell but also resting T-cells can be infected.

And therefore strategies need to be diversified in these two categories of important cell compartment, and let us also remember that HIV reservoirs are not restricted to the T-cell but other cells in the body such as macrophages in the tissue, central nervous system [inaudible], dendritic cells and probably other cell types can also contribute to the so called viral reservoir.

So, and again this brings us back to the HIV life cycle, and that we just mentioned a single elegant study by Mosef Emcuron [misspelled?] and his team from Montpellier, France, that essentially went back to the major transcriptional activator that is encoded by the virus which is the protein known as Tat and that has the capacity to rescue, [inaudible] stall LTR promotor by recruiting a number of factors, the most important of which is so called PTFB, which is composed of a

cycline T1 and CDK9 and essentially asks the question what are the complexes that associate together these molecules?

And I will just give you the end of the story but I invite you to re-divert the paper to [inaudible] elegant studies, basically as you can see in these little boxes, he and his team were able to individuate one after the other, all the components that essentially shift a latent inactive complex or transcription to very active elongating PTMB complex that will lead to RNA polymerase II, processive elongation and virus production.

And it is self explanatory the fact that by deciphering this important key control of HIV transcription to lead on the one hand on the design of drugs which can maintain the virus are completely shut off in the body or vice versa, mimicry by pharmacological molecules, not necessarily requiring tat can lead to again the viral reactivation and the desired purging on viral reservoir.

In my concluding remarks and I am very happy to be on time for the happiness of the chairman, I simply want to conclude by thanking the four wonderful young individuals that have helped me in these days, writing a lot of rapports. You can go and access that, that means as read from left to right, Dakafera Monzolusa [misspelled?] from Botswana, Levina Garu [misspelled?] from India, Patricia Montero [misspelled?] from

Canada, and Reid Kenning [misspelled?] from the Netherlands. Thank you very much. [Applause]

**ALAN WHITESIDE:** Thank you very, very much indeed, Guido, and our second Rapporteur for Track B is Andrew Kambugu from Uganda.

**ANDREW KAMBUGU:** Good afternoon to you all and it is a privilege to be able to summarize what we have seen and heard in the Track B of this meeting as a clinician.

Track B was a very active track, as you can see we had over 600 abstracts and I structured my talk to talk about new drugs and new treatment strategies because as you are aware the pendulum has swung in terms of when to begin treatment driven in a large part due to the new drugs that are able to have higher efficacy as well as greater tolerability.

I will also look at the theme that has been highlighted at this meeting concerning when to start antiretroviral therapy. We have had a number of papers addressing this important theme.

I will also talk about coinfections and comorbidities because this has been a key theme of this conference, that even in well controlled populations there are comorbidities that we need to think about, and of course monitoring and pediatrics.

In terms of the pipeline for clinical products that are being tested, I thought I would highlight this paper that showed the newer generation integrase inhibitors showing very

good robustness within 16 weeks for a naïve population. As I said, the pendulum for treatment has swung from early treatment to delayed treatment and is swinging back to earlier treatment and products that have a higher efficacy with less storability are becoming important. And this paper demonstrates hope within the integrase class that there might be products that might enable us to push the treatment earlier.

We have also seen papers around switching and simplification of treatment. In the progress study that was highlighted in this meeting, there was a report as shown on the slide of the non-inferiority of a combination of Lopinavir, Ritonavir, and Raltegravir. I think this study was important because it combined a nuke-sparing approach together with a simplification strategy where two drugs instead of three drugs were used.

And of course, these are tentative findings but they provide hope that perhaps we can simplify the treatment of people who are living with HIV. This field of clinical science is also interesting because initially we had from the SWITCHMRK studies which seemed to suggest that Raltegravir in terms of replacing Pis with Raltegravir was not a good strategy.

And in the SPIRAL study that was reported this week, there was an analysis that seemed to suggest that indeed we could use Raltegravir as a switch strategy, which again opens up the debate around this subject.

The controversy about the use of treatment simplification again within this class of Atazanavir and Raltegravir, this was a study that actually had to be stopped despite showing very early efficacy, as you can see in the circle, again, showing that clinical science is dominated by a pendulum which has got to look at conflicting results that need to be weighed one against the other.

And again, on the subject of when to stop ART, we had data from the Casket Collaboration suggesting that perhaps they might be benefit in starting antiretroviral therapy among patients in the CD4 bracket, 300 to 499. This same analysis seemed to suggest that there was limited benefit among subjects with the higher CD4 count. And this again brings up the debate of when to start antiretroviral therapy.

I think an increasingly recognized dimension concerning when to start is the analysis around cost effectiveness and at this meeting analysis from the SHAR study was presented from a pediatric population suggesting that starting early is the cost effective strategy, as you can see in the circled areas. To note, that most of the costs are actually driven by inpatient costs, one patient initiation is deferred.

So, I think it is going to become increasingly important to look at cost effective analysis when we are talking about when to start treatment. And of course one of the highlights of the when to start treatment debates, which

also creates a good bridge into the discussion on coinfections, was the CAMELIA study that suggested that there is benefit in starting antiretroviral treatment early among patients who have tuberculosis. It was also nice to note in this study that even though there were many immune reconstitution events in the early arm, this does not translate into mortality, which helps clinicians to feel safe.

There was a study that highlighted the need for us to roll out isoniazid prophylaxis among patients with TB and I think one of the take home messages, particularly for clinicians, in resource limited settings, is the immediate initiation of IPT in this very significant population.

In terms of other coinfections, we did see a study that suggested that fracture rates are higher in patients with hepatitis B, as well as an analysis, a retrospective analysis of a cancer registry suggesting that incidents of cancer, even among suppressed patients on treatment, seem to be much higher than the general population, and this highlights the theme of beyond ART that suppressed individuals would need to think about other comorbidities and probably includes screening regimes.

This is another study talking about bone loss, one of the comorbidities that are important. In terms of monitoring, as you know in resource limited settings where viral load monitoring is not recently done, there was an analysis that

showed that there are benefits in terms of remaining on first line, in terms of death and loss to follow-up, and so I think we need to continue putting pressure on the availability of viral load monitoring in resource limited settings.

Not to forget pediatrics, there was a study that suggested that we can use PIs and they compare very well with non-nucleoside best drugs in terms of achieving good biologic suppression. This is important in terms of the relative toxicities of these two classes of drugs.

I cannot finish this track without mentioning the CAPRISA study which was a proof of concept study which I am sure will be highlighted by my colleague in prevention, but provided hope for us in the clinical science section and I think it is important for us to think about the what next after the CAPRISA study, just to highlight that there are a number of studies that are ongoing and that definitely though it was a breakthrough, there are many issues that need to be thought through by doing additional studies.

So, what were the key messages that I saw from this meeting? First of all, we need to continue to provide clinical settings to explore the role of new drugs so that we can contribute to this debate of early versus delayed treatment. We certainly need to start earlier, as was shown in certain populations, certainly patients below 350, certainly in patients with TB, and in children, the cost effective analysis

that I just highlighted. It is less certain in those who are less advanced immunosuppression, but clearly that we need to start treatment earlier.

And, as someone who comes from a resource limited background, that we should initiate antiretroviral therapy at the earliest opportunity. And I would like to acknowledge a team which is a multi continent team that led to the summary of this track. Thank you very much. [Applause]

**ALAN WHITESIDE:** Thank you very much indeed for an excellent presentation and it is my pleasure to invite our third Rapporteur, Anne Buvé, to talk about Track C.

**ANNE BUVÉ:** Good afternoon, ladies and gentlemen. I will present a report on Track C on behalf of this team with people from India, Tanzania, Peru and Australia.

The highlight of this conference was undoubtedly the presentation of the results of the CAPRISA 004 trial. This was a trial of vaginal microbicides that contained an antiretroviral compound Tenofovir. The trial was conducted in South Africa, in HIV negative women, and it was a proof of concept trial double blind and placebo controlled. Insertion of gel, thus coital dependent, that means that women were instructed to insert gel within 12 hours before anticipated intercourse and within 12 hours after intercourse.

This is the first trial of a vaginal microbicide that has shown a statistically significant protective effect against

acquisition of HIV infection. The protective effect was 39-percent, but I wish to point out to you and I don't want to be a spoiled sport that the lower band was 6-percent, the lower band of the 95-percent confidence interval.

Very good news also was that the gel had a protective effect against HSV-2 infection as well, a protective effect of 51-percent. Considering the interaction between HIV and HSV-2, this is also very good news. There were no safety issues and more importantly maybe so far no resistance Tenofovir was detected in women who seroconverted while taking Tenofovir gel.

So, there is a lot of excitement but we are not yet ready to roll out. This is one trial in one population. We need confirmation and in diverse populations, and we need to develop better strategies for adherence to bring that up to a higher level.

More good news came from a study conducted by UNAIDS, that analyzed HIV prevalence data among young people 15 to 24 years in 21 countries with generalized epidemics, and they found that between 2000 and 2008, there was a significant reduction in HIV prevalence in 10 countries. In eight of these 10 countries, the reduction was parallel with a change in sexual behavior towards more safe sex. But, we cannot rest on our laurels and we still need much intervention for young people.

There was a presentation on Sunday about a cash transfer program presented by the World Bank. These type of interventions have advocates but also critics as was highlighted in one of the sessions. Now, what was the intervention? The intervention consisted of transferring cash to households and young girls to keep them in school. After one year, there was a statistically significant difference in HIV and HSV-2 prevalence which was lower in the intervention group. It is uncertain whether this was due to schooling or to higher income.

The situation of intravenous drug users in Eastern Europe, however, remains more grim. A study was done in eight cities in Russia, HIV prevalence among I.D. use ranged from 2.6-percent to 64.3-percent, but in three cities the prevalence was over 50-percent. I.D. use were mostly sexually active in a sizable proportion of them reported non-I.D. use sexual partners which highlights the potential for split in the non-I.D.U. general population.

Then, few data are available from Africa so far on I.D. use but this study from Zanzibar was the first to use respondent driven sampling in Subsahara and Africa and they found an HIV prevalence of 16-percent.

Needle and syringe programs, do we need to say again that they are cost effective? Well, there was again evidence for cost effectiveness, a very nice study from Australia that

demonstrated that in the past 10 years, for every $1 invested in NSPs, there was again in point two days of disability adjusted life, and more than $4 were returned in health care cost savings.

But also from Eastern Europe there is good news. In Estonia, numbers of needles distributed increased dramatically between 2003 and 2009 and HIV incidence among new injectors appears to have decreased between 2005 and 2009. So, there is strong evidence on cost effectiveness of needle and syringe programs in different settings also, including in Iran, but policies and laws block implementation as was highlighted in the session of the Lancet series.

In the opening session, Dr. Yves Souteyrand pointed out that violations of human rights are a barrier to knowing your epidemic, and here is an example from Kampala in Uganda where a study was done employing this honor driven sampling to recruit MSM. Recruitment was hampered twice in the course of the survey, but because of police actions against gay activists, HIV prevalence among these men was 14-percent. Stigma and discrimination also block access to prevention and care services, as was highlighted by studies from South Africa and Senegal.

What is also something we need to pay attention to is that many of these men have female partners and the behaviors of these men also put their female partners at risk, and there

is little awareness among health service providers about the risk behaviors of these men and their partners.

Commercial sex workers, more good news from Avahan, worldwide the largest program targeting commercial sex workers in six states in India. In Karnataka, one of the states, careful evaluation was done of the program and it was found that longer duration of program exposure was associated with increased condom use and alongside with that, there was a significant reduction in HIV prevalence from nearly 20-percent to 16.4-percent.

So, where are we with male circumcision? In 2006, there was a lot of excitement about results of the trials. Now, we need to implement this intervention. In Kenya it was shown that rapid scale-up was feasible and safe and task shifting does not jeopardize the safety of the procedure. But we need also to carefully monitor what is happening in the population when you start rolling out a male circumcision program.

A population based survey was done in Kisumu in Western Kenya and it was found that there had been an increase in prevalence of male circumcision and no evidence yet of sexual risk compensation.

Mother to child transmission, prevention of mother to child transmission is very efficacious but coverage is still

suboptimal, with 58-percent in Eastern and Southern Africa, the region with the highest rates of pediatric HIV infections.

Exposures to ARVs during pregnancy could potentially lead to toxicities in mothers and babies. The antiretroviral pregnancy registry analyzed over 11,000 pregnancies and came to the conclusion that there was no indication of increase in birth defects from babies who were exposed to ARVs during pregnancy. The prevalence of birth effects was 2.7 per hundred live births, which is similar to what you would find in the general population.

Treatment and prevention was hotly debated at this conference, but what do we have in terms of evidence? There is a biological plausibility of course that treatment lowers plasma viral load, hence lowers on what transmission. There is work that has been done with mathematical models and the general feeling is that treatment could lead to a reduction in HIV incidence.

But what do we have in terms of empirical evidence? At individual level we know that there are several studies from discordant couples that have shown that the risk of transmission reduces to very low levels when the HIV infected partner is treated, but the risk is not zero. At a population level, we have heard from ecological studies from British Columbia and now recently also from Denmark that found a

correlation between increase in coverage of HAART and a reduction in new HIV diagnoses.

However, there are some what somebody called inconvenient truths we have to face. What about transmission during acute infection, how much do we know about it? How frequent is it and it is likely to be different in different populations. How can we prevent transmission of resistant strains? And last but not least, for how long can we sustain viral suppression at the population level?

Then lastly, about combination prevention, UNAIDS defines combination prevention and I am going to take some shortcuts, as the simultaneous use of different classes of prevention activities, biomedical, behavioral, structural, to respond to specific needs of particular populations, and to make efficient use of resources.

We have heard examples of combination prevention among the Avahan program in India, but they are very challenging to evaluate. Random matched controlled trials are difficult and may not be well suitable because they are complex interventions and the future is probably for the use of a variety of methods and data sources after having made explicit the pathways towards impact. Thank you for your attention. [Applause]

**ALAN WHITESIDE:** Thank you very much, Anne, and compliments to these remarkable teams of Rapporteurs who are

working and producing these. Our next Rapporteur is Lorraine Sherr, who is going to report on Track D.

**LORRAINE SHERR:** Good afternoon. I am going to talk on Track D, the social science side, where we talk about in the land of Freud what happens to human beings inside their mind when they work as individuals in society?

We know from Track D that there was a 1-percent chance of an oral presentation, a 1-percent of a poster, 42-percent of an actual poster without a discussion, and 55-percent of papers were rejected.

As we have come in every day, we have seen outside the Ubon Mozart and Strauss to greet us, to remind us that we are in Austria, but everybody knows that the real thing about Austria is "The Sound of Music." [Applause] So, we are going to — we are going to use Track D as a bit of a sing along of "The Sound of Music." And I am going to rely on you to help me because I warn you, I cannot sing. So, anyone can help?

[Video played] How do you solve a problem like prevention? Well, okay. We have some serious stuff. [Laughter] [Applause]

This lovely piece from Track D showed that combination prevention which my colleague has just gone into could potentially have quite a dramatic effect in terms of rollout. This is a nice study by Fischer who reminded us that we are not just focused on drug use, but also there is pregnant strike

users, and although there is a change over time of women who are, IDUs coming and being found to be positive during pregnancy or prior to pregnancy, please look at this slide which shows that many of them are actually picked up around delivery which is very late, and that is increasing over time, not decreasing.

Anyone here, climb every mountain. Oh I love you! [Laughter] For me, the mountain was mental health. There was a session entirely devoted to mental health, which looked at depression, food insecurity among men who have sex with men, intervention, resilience, and OBC. A systematic review showed suicide is still on the agenda and there is a cross cutting issue, this was a slide by Weisner who looked at deportation, but what is the mental health associated with being deported? How do you feel? What is the stress? And are we picking this up?

This was a lovely study by Lucy Cloover [misspelled?] who followed just under 1,000 children over four years and she uniquely looked at AIDS orphaned, other orphaned, very often by very violent means, a lot of murder in the sample, road traffic accident, etc, and non-orphan, and looked at depression, post-traumatic stress, anxiety, peer problems, and all of them higher in the AIDS orphaned.

In the follow-up data, you see that the AIDS orphans are, all the mental health gets worse over time, but look at

the rate and the rate goes very much higher for the AIDS orphaned, so we are not doing anything, we are sitting and watching the mental health decline.

And this is an interesting study by Gordon Mellons [misspelled?] who looked at a group on missing a little bit, this is the group of long term, early infected adolescents who are now surviving into adolescence, they were infected during pregnancy and now these are their issues. But interesting is the positive and the negative. These are the exposed children who are born to positive mothers. Look, they have similar levels of problem.

Family based approach, now this was a very important theme that came right through the conference, treating the child and the family, and Abram showed reaching out to other adults, Teresa Vesencort [misspelled?] showed the complexity of providing work with families, and these were a few of my favorite things.

Mortals preach integration, social science must be integrated, and in fact this feedback entrenches separation. We found it really difficult to keep to Track D when we see social science creeping in anywhere and we would like a balance. Any of us?

The Bill's are alive with the sound of music, well, we all saw Bill Gates and Bill Clinton [laughter] [applause] and guess I am going to talk about finance, no I am not. I am

going to talk about aging under that one. We all get older, do we not? And this is a lovely study by Lisa Power who really looked at the figures here on many main concerns of older people, and loneliness, self care, depression, we need to keep track and an eye on lonely.

High on the hill, high on the hill, we thought it was drug use, okay, what do we do about drug use? Well, we know and one of the take home messages was 67-percent of HIV cases but only 25-percent of those on treatment, a real problem, and here another study by Strafte [misspelled?], really looking at the inadequate ARB provision and sexual transmission can really pay a very key role in some IDU related epidemics.

I bring you this picture, which I stole from a lovely presentation by Fischer, and this is the original paper that showed of the method and works. It was done in 1965; Barack Obama was born on the 4th of August in 1961. He was four by the time this came out. I am sure he was really exaggerated in his ability to read. So, he had his entire life time to read this paper.

Here we go, so we are pleased, and I am thrilled to tell you that there are 12,000 heads signed by yesterday, by today the number is up to 13,000. Please sign the Vienna Declaration. [Applause] That is a real proud achievement.

Where is my singer? Help. I am, thank you, youth and children, I'll do this one quite quickly. Children, especially

from very vulnerable groups shouldn't have mainly sex with men, children of drug users, children of sex workers, where are they? Who's working with them?

There was a lot on HIV positive children, but generally, they are being left behind in treatment. We hear about access for all, but what if you're small? Melasin's [misspelled?] study of adolescents showed no disclosure to children, and 33-percent actually knowing about the HIV and it did increase as they got older, as they were given prophylaxis or ART.

And in this conference, there really wasn't a focus on the uninfected, but the affected children. A lovely study by Priscilla Akwara which actually won the prize yesterday, which was really an evidence based idea of how orphans are picked up in studies across 59 countries. Orphans are not significantly worse off than orphans in all three outcomes of child well-being and actually they looked at the predictors that they would be able to use in projects to pick up and maybe it will help us with destigmatization of orphans.

And this is a sad one, so long, farewell, auf wiedersehen, goodbye. Please, please remember that continual, increased survival has been welcomed, but even with universal ART, we cannot prevent death. All the issues, the ultimately underserved people are the people who are dying. We have very few presentations on them and we only have four on pediatrics.

Doe a deer, a female deer, the feminization of the epidemic, we want elimination of vertical transmission. We see that 45-percent of pregnant women are getting treated, but that's only of those being tested. You know about lies, damn lies and statistics, well, if you only two-percent of voluntary testing and counseling available, you won't know everyone in the country. So that 45 is a very inflated figure. And women are not fully included in the clinical trials.

A lovely study by Ashley Pertz [misspelled?] and sero difference does the Swiss statement inform women and actually it didn't on things like desire, intimacy, and relationships do.

Ray, a drop of golden sun, as you said, what is cutting edge to us? Well, the first one is needle exchange and use for IV filter through to PEPFAR, it only took 28 years, but we are pleased. And of course, the microbicide results, all the Koreans and the wonderful team.

But there were social science implications and I want to highlight those. There were three. One was how important adherence was, and although it provided a 39-percent protection in the sub-group who had over 80-percent adherence, that went up to 54. So psychology and social science goes in there.

Motiviation, they use some great motivational intervening techniques, theory driven, and decision making. How do you know to arouse in advance if you are going to have

sex? Well, I don't know. So, hold on what's the time now? [Laughter]

Me, a name, I call myself, what else is positive perspective, right here, right now, we would really enjoying seeing the presence of participation, voice, and visibilit of people with HIV. And so therefore, it's not been seen before, planning the conference content, presenting evidence, chairing sessions, and actually leading from the front. And that remind us to what Meena said, no top down, bottom up. Well, you know what I mean.

Far, a long, long way to run. Well, wherever you've got to go for the MDG goals, where will we be by 2015? And of course that will bring us back to doe.

The Robin Hood Tax for financial transfer, we know that this clever idea of every time money is transferred you add a little percentage on. It's been launched in Spain, the Spanish won Wimbledon, they won the World Cup, but they do [inaudible] it's coming to America, apparently after Thanksgiving. Philippe Douste-Blazy from UNAID, who gave a lovely discussion on that, but not only do we have innovated financing, we also have innovative spending.

AIDS World Rights, how to get wise about AIDS? Well, I've listed things that we put aside to make the methodological debates, we've got lots of good methodologies. We need evidence based policy, it's a complex understanding here. We

can build on it, the structural approach, the family based approach. These are the key new words of a new way for us.

We need integrated models and of course, stigma. We see that there's stigma and stigma creates risks. Lovely studies, this is one by Kurtz that shows that if you have stigma, risk goes hand in hand.

And look at the coronary of that, this is a really lovely study by Gregson [misspelled?], which showed that if you have commitment and if you are connected to your society, you reduce vulnerability, so not only a stigma bed, but non-stigma and community connectiveness is really good for you.

Criminalization, what we've spoken a lot about the law that's being used as a spear, but what about the law that could be used as a shield for us? So we should be taking criminalization and hopefully, we should have the law on our side protecting the rights, not the opposite.

So that leads me to say thank you to all the people who gave us some nice images, always, can put your phone down please? I'd like to acknowledge the Von Trapp Family rapporteurs who were just wonderful. [Applause]

I'm not finished yet. I've got 89 seconds on this clock. So as we say goodbye to Vienna and we eat our lovely sucker torte, are sweet dreams made of this or we can look at the data instead? Thank you. [Applause]

**MALE SPEAKER:** Innovative, thoughtful, fun, and for the other speakers, we'll keep applause, laughter, and singing as we treated injuries as we see in the world and you will be allowed extra time for singing, laughter, and applause, but otherwise we stick to the time.

Thank you very, very much Lorraine. [Applause] And our next rappporteur is Pierre Barker reporting on Track E.

**PIERRE BARKER:** Thank you, that's very tough to follow that, but I'll give it a go. Okay, so Track E, we'll talk about the role of health systems providing quality care to all who need it. How we finance the health systems that provide that care, and talk a little bit about the operations research that will study the coverage and the financing.

I'm pleased to say that Track E is a new track. We're very excited about it, we got over 1,000 abstracts accepted, as we already have a fan club and I'm very grateful to those of you who came to the oral sessions and submitted their reports.

Thanks also to the IAS for forming this track and to what will follow outside of group who led us. I really hope that this will grow and I hope to dissuade you briefly that this is a very, very, important topic as we try to face the future.

So the current state as we were told is that we're not doing very well, we're under 50-percent performance in low- and middle-income countries for both HAART and antiretroviral

amongst others. Which leaves us of a gap of people who are dying, they're not getting treatment, and a gap of infants who are getting infected unnecessarily. This problem is all over the world. It's not just low- and middle-income countries, although the worst performing countries are in Eastern Europe and North Africa, Middle East.

You can see every single one of these countries has a significant gap in the terms of coverage. More importantly, there is no one single health systems response to this problem. Every one of these countries has a different type of epidemic. There are low burden countries and high-burden countries and high-prevalence countries, low-prevalence countries, and you have mixtures, each one of them will need a separate response.

It's not just numbers, it's the quality of care that we have to be particularly concerned about. There were a number of sessions, really good sessions looking at strategies to try to keep people in care who have been started on treatment. This is not easy. At speaker after speaker, showed us very small successes in getting people back into care and the obvious conclusion from these sessions is we have to design systems that prevent people from falling off care rather than to spend tremendous amount of effort chasing around after them after they've fallen out of care.

And then there's finance. There was a lot of concern expressed about the potential for levels of funding flattening

off and it's a reality. Both commitments and disbursements have flattened and there's no predictability, no prediction of where that's going to go. Are finance levels going to be sustained if they can't level acceleration, are they going to flatten or are they going to decrease?

Meanwhile, we've got a problem, we've got an epidemic on our hands and we still want to maintain this trajectory. What we do know is that the assumptions that we have relied on for this rapid increase in the number of people who are accessing HAART do not apply anymore and it forces us to think of different ways of looking at the health systems and support ARV programs.

We've heard impassioned pleas, which we all support to lobby, to replenish global funds, but will make our case much easier if we can make the case for cost effectiveness and return on an investment and that study that we have to do and some of the really exciting work that has been done and was presented at this conference addresses that issue.

We were told about innovate and the last speaker referred to these tasks, systems of neighboring, additional external funding, but we should not rely on it. There were also some really interesting comments that were made about the responsibilities of the countries where these epidemics are happening, to really face up to the obligations, particularly those under the DARHAR Declaration where local health systems

should be putting out at least 15-percent of the GPD into their health systems. This is not happening and this is certainly one way in which funds need to be accessed.

So, on the other side, can we do things better with less? And we do need operational research on costing on methodologies. I'll tell you about a couple of interesting cost-benefit analyses. We've got to continue fight to reduce costs of drugs and I'll show you examples of that.

Cost benefits of the new WHO guidelines is clear that the WHO guidelines are going to bring benefits and most importantly, there is much that we can do to become more efficient. And to ensure that we can in fact, continue to scale-up antiretroviral therapy globally. This report from Lori Bollinger showed the effect of the financial implications of the 2009 WHO recommendations, and the depressing part of it obviously is that there will be a tripling of costs between now and 2010 and 2015, just to maintain coverage or to increase coverage.

The cost per person is $800 per year, but she contrasted that with the cost of death which is about $10,000. There is a gap here and one of the speakers referred to the gap between the time that it takes to get your return on investment. We do have to make a strong case that there is a very strong return on investment, even though it may be delayed a decade or so.

There was a very interesting study on potential cost savings from implementing different types of recommendations particularly for pediatrics. WHO recommendations for A or B, first of all, the calculation in 15 of these PEPFAR countries that would triple the number of infections that would be averted. There was also an interesting observation that option A is a lot cheaper than option B for those countries that are considering option B.

I think also the new recommendations are highly cost-effective. Every single one of the examples that I looked at, the ICER cost benefit ratio was last on the GDP per person, which means by definition that they are all very cost-effective. And in fact, you can see in some of these countries in green here, South Africa, Kenya, and Botswana, etcetera, there were actual cost savings apart from just simple cost effectiveness.

The problem is that the opportunities are limited in terms of health system efficiencies for saving money. If you look here, the primary cost coming down the pipe, if we again,I implement these new guidelines is going to be drugs and labs. So leaving us not much opportunity here for service delivery and for testing improvements.

But there is encouragement from the Brazil experiments, who showed not only as we know, massive decreases in the cost of drugs due to negotiations, but an additional 74-percent here

of savings was gathered due to mandatory license, local production, and also collaboration of Russia and Thailand over licensing.

So, the cost-effectiveness of interventions should also be taken into account. Here's an example of the incremental cost effectiveness for facility based versus an outreach campaign for testing. They went around to different clinics and sending teams around versus campaigns. In Uganda and it showed, in fact, that there was a significant advantage to the outreach campaigns over both campaigns, and waiting for people to come and test at your facility.

In Rwanda, there was a comparison of community based health insurance performance versus performance based financing which has gotten a lot of attention and in fact, it was shown that there was a very significant improvement in HIV delivery with the community based health insurance. But this was not shown for performance based financing. So I think there's a lot to be learned and there are a lot of assumptions about the way that health systems are configured that need to be challenged by these kinds of studies.

Here's another very interesting approach to HIV counseling and testing. This was a campaign that was combined with malaria and diarrhea, protection campaign in Kenya, they got to 51,000 people over seven days reaching 80-percent of the targeted population and again, showed a cost-effectiveness in

terms of the averted costs and were able to target two other very important diseases showing an integrated approach I think we could learn a lot from.

So there's another big problem that we're tacking in our track which is really how do we get from what we're really good which, which is developing really great ideas and developing them on basic science, taking them to proof of concept, and developing randomized controlled trials, which we get published rather easily, and then we hit the block, which is really how do we get these very important evidence based interventions into the real world, into resource constraint settings, into a real life environment where we really don't have study coordinators running around and you don't have the ability to keep a close track as you do in your trials.

And certainly one thing we really do badly is scale-ups. So how do we design an intervention that starts with scale-up in mind? And I think that we've seen a lot of excitement at this conference about the effectiveness of existing drugs and particularly new drugs coming on stream.

We've also seen a lot of models about prevention and for treatment, but I would argue that all of these assumptions, all of these models, all of these evidence-based treatments are held hostage to the effectiveness of the systems in which they are implemented. And if we are unable to implement these or

improve these health systems, we will not deliver these drugs. [Applause]

I heard some rather sobering views from an analysis of a real life scenario. PEPFAR supported programs and some of these are fairly well-resourced programs in PEPFAR supported countries, if we look at the levels of testing and counseling from 2008, 2009, and levels of antiretroviral prophylaxis you will see a big range from those performing very well, South Arica, Botswana, Zambia, etcetera, down to those to which are performing very poorly.

I'd also draw your attention to the two lines on this graph. These represent PEPFAR targets which are both set at about 80-percent. So, 80-percent performance which is where PEPFAR is wanting these programs to go to. And there was a very important presentation by Caroline Ryan, which asks the question just really are we setting the right performance goals for these programs?

And they did some modeling and they suggest that if PEPFAR did meet its goals, which is 80-percent performance of the system, the mother to child infection rate would in fact be 15-percent, not 2-percent which is what the drug delivery system is designed to produce. That if they improve that 85-percent coverage, the rate would only drop to 10-percent and in order to get down below 5-percent, which is the so-called

virtual elimination of mother to child transmission, you would need a 96-percent coverage goal.

The biggest problem is attritions, the paper that was quoted often from Jeff Stringer which shows how hard it is to run a health system that has sequential drop off of patients, even when you think you're doing really well with a 90-percent performance, you can end up with only 50-percent of the mothers getting the drugs.

So, the good news is quality improvement is gaining strength as a methodology for improving health systems with a number of abstracts and organizations who are contributing. I want to give you just one example of a really low-tech solution which I think holds the key to how we can get locally driven, locally inspired ideas to solve local problems.

This is a set of clinics in Swaziland where they had a problem of CD4 counts and a long turnaround time, some enterprising clinic managers decided to start using public transport to carry the samples to the lab and to get the results back. The results were very, very good, he got from a baseline of 22 samples per cite to 293, all in a matter of six weeks and the turnaround time dropped from six weeks to two weeks to five days. [Applause]

Another and just in terms of utilizing the resources we have, we have a lot of NGOs in these countries. And we have a lot of knowledge and resources, but it's very uncoordinated.

This is a great example presented by a colleague of mine Kedar Mate who, we were asked by the national government of South Africa to help coordinate NGOs working in districts whose NGOs were really working in these districts.

They all worked off a similar quality improvement design, assisting district offices to assist their clinics The leverage of this kind of approach is tremendous. You can get to hundreds of clinics using this as long as you can coordinate everybody to work off a workable strategy. The results were dramatic, you can see the performance here is over 95-percent for just about all of the cascade of PMTCP, this is 151 clinics in nine districts over a period of nine months.

Even our holy grail, which is getting mothers who are on antiretrovirals on to HAART was achieved from increasing from a start rate of 22-percent to up to 55-percent over a nine month period. And this 151 clinics, all able to achieve this mean improvement through application of a coordination assistance from a a number of NGOs.

One of the other ways of closing these gaps is using some modern technology and a particular point of care technology is very promising, as a way to close these gaps. HIV testing, CD4 count, viral load, and TB all showed promise and what you could do, you could take all of these steps and you could collapse them into one [inaudible], start treatment immediately and you immediately lose all that drop off.

Finally, we had a very inspiring talk from Elaine Abrams, who spoke about integrated care. It's the obvious way we have to go. All the maternal and child HIV services need to fall under the MCH umbrella and deliver care. If you cannot get mothers to antenatal care, the statistic is 55-percent of mothers only will attend four times antenatal care and half of mothers deliver at home, you will not deliver PMTCP. So if you don't solve that problem, you will not solve PMTCP.

MSF has been at the frontier of showing us how to integrate care into general services and to TB services. And in summary, these I think were my take homes from the conference. We need to use existing knowledge and new knowledge to close the remaining gaps for prevention and care. We need to modify our health system's response in view of the global financial changes. Pay closer attention to cost effectiveness and a return on investment to make the argument to the funders, and to show us the way we need to design prevention and treatment strategies for real life health systems, not just our clinical trials. And we need to learn how to scale them up and how to publish this.

There needs to be better NGO to NGO and funder to funder collaboration to capacitate national health systems to the lowest sustainable cost effective, high quality HIV care than can be rapidly scaled. Thank you. [Applause]

**MALE SPEAKER:** Thank you very much indeed. How encouraging to see local solutions and how nice to see Swaziland up there. [Speaking in a foreign language] Thank you from Swaziland. Our next presenter for Track F is Damon Barrett. Thank you Damon.

**DAMON BARRETT:** Thank you. Okay, I'd like to start this time by thanking my team. In particular, Rebecca Schliefer from Human Rights Watch who's helped me when I first was asked to do this and panicked. I am going to start with this last one, but I'm going to skip over it. I'm just going to say that we didn't get to everything as usual, rapporteurs's proviso, and I would like to congratulate IAS for the incorporation of human rights into many tracks as I think we saw in B and C.

So, Susan Timberlake's mantra for the week sums up my talk. We can't continue to talk about human rights abuses and stigma and discrimination, without in the next breath saying what to do about it and demanding that funding goes to community based rights solutions.

So, we heard a lot about the problems we faced this week and I will repeat them, but we also heard about people dealing with it and I think that's really important and I'm going to try and bring those solutions in.

It's a really difficult track, so I've used this basic circles of influence diagram. Both are a reminder of the

complexity of the epidemic and the laws and policies that surround it but to also locate the many concrete actions people are taking. We have two international legal systems that have a massive impact in access to medicines and neither of them works. TRIPS, the international Drug control system, they're both complex, they're both moving targets, and they're revolving. The threats are revolving. Both have international, national, and community dimensions.

India's patent act showed a national legislation within international flexibilities can have impact either continent, in this case, Africa. But then in Africa, national laws are damaging that progress. This week, we heard from those engaged in national lobbying, national law reform campaigning and training of patent officers, a multipronged strategy which is responding to these challenges. Others remain remains, anticounterfeiting laws in free trade agreements pose further barriers.

Similarly, we heard from those working on access to opiates for pain relief and drug dependence treatment. Flexibilities within the drug treaties are being exploited, model other national laws are being drafted and doctors are being trained in opiate prescription, but the stigma surrounding these medicines is significant and must be addressed too.

If human rights entwined in national law, they must be translated into national law and policy and they must be realized on the street. Criminalization blocks all of this. This is why legal aid, legal empowerment and legal literacy for criminalized groups is so important. This includes the use of affidavits to transform that which may be seen as here say into something admissible in court.

In the UK, with African Migrants, in Botswana to challenge sodomy laws, and in Bolivia to challenge sterilization of women living with HIV, the strategy is being utilized. Legal aid programs for drug users in the Ukraine and Indonesia, and for sex workers in Cambodia show that legal aid is not just about provision of a service, but about community empowerment. It's also about law reform from the grassroots.

A human rights and sexual rights framework, not criminalization is the answer. We heard from Portugal about its successes in decriminalizing drug use and possession and New Zealand's decriminalization of sex workers. However, laws can be drafted and policies perfected, but this is not enough. Social attitudes must also change.

A fascinating study on construction workers in China showed that this can happen. It takes dialogue and it takes information. I should make clear by the way that administrative measures can be as bad or even worse. Drug user

registry in Eastern Europe and drug detention centers in East Asia are both ostensibly administrative sanctions.

Something that was not as much of a focus in the official program was the broader human rights picture, the day to day lives of people living with, and affected by HIV. public hearings for over 100 children affected by AIDS in India show that their main problem was not the virus, it was lack of food. I raise this to tell you that the hearings themselves resulted in action being taken to address food security for those children and other issues.

Another study presented here showed that education has positive impact on reducing HIV transmission, both among girls and boys. The impact of education and income data is a query in the CAPRESA trial as we just heard. I must confess that the quote on this slide doesn't come from the conference, it was e-mailed to me by a friend before I came here.

He was talking about drug users dying of exposure in Afghanistan before getting anywhere harm reduction service. I talked a little bit about empowerment, but let me reiterate that accountability and empowerment are connected. We all know this. The importance of the greater, meaningful involvement of people living with HIV and the need for investment in this is clear. I don't need to tell you that.

But what I'd like to ask is how do we involve criminalized groups? How do we involve youth? What mechanisms

can we put in place to facilitate mothers living with HIV to fight for their own rights? This was somewhat of a gap in the official program. Anya Sarang started the week with a literary them and then I add my own, although it's from a comic book, who watches the watchmen?

This week, we heard a lot about donor accountability. UNICEF's funding of what only can be described as a center of child abuse in Cambodia, unity sees complicity and executions for drug offenses. And we heard that human rights advocacy works, one of those Cambodian centers is now closed because of human rights watches actions. [Applause]

Corruption on ARV procurement is being fought with advocates in the Ukraine forcing the government investigation. These are important things. The collusion of healthcare staff and human rights abuses from blackmail to denial of care for certain groups needs even great focus, again, the importance of legal empowerment cannot be understated, but perhaps by Washington, we will hear the conviction of such abuse.

This is the sharp end of accountability. Human rights enforcement. I'd also like to see more discussion of business and human rights. Know your epidemic, apply a rights based approach, that's our mantra, but what we've heard this week is that knowing the epidemic which is not just biological and character requires a rights based analysis.

Human rights is sometimes seen as a barrier to public health goals, but now the predictions of human rights advocates are coming to pass. Provider initiated testing and counseling services as an example. Women in South Africa have reported denial of immunization for their children because they refused testing. Women in Serbia who are pregnant feel enormous pressure to be tested and are vilified if they don't want it, they might have very good reasons for that.

A model for treatment as prevention is impressive and it's not my area, it's the first time I've seen it, but my first thought is that human rights kind of leaning guy was: how can we do that without getting draconian. It's about billions tested and millions in treatment. Public health must itself be humanized compliant, it's not enough on its own and it won't work otherwise.

Informed consent is not just a nice sounding principle, it's about treatment literacy and effective programming and we learned that this week. But make no mistake, human rights abuse, even if the effective towards a public health goal is not acceptable. [Applause]

On this, I'd just like to return to criminalization again. And this I'd like to return to criminalization very briefly. As long as we criminalize certain group and push them from services, which can act as excellent data collection mechanisms, we'll never get a proper picture of the epidemic.

And I'd like to reiterate what's said before, please do read The Lancet Special Edition for this conference, it's a great example of the nexus between science and human rights.

So the slide already showed you. AIDS is not in recession, this was a banner I believe understand in the global village. We have to remember that the progressive realization of human rights requires the maximum extent of available resources and that itself is a legal obligation.

This includes times of austerity, it includes developing countries, and it includes international cooperation too. Any better financing mechanisms such as the Robin Hood Tax may themselves be engines for the progressive realization of rights. But all the while, let's remember that funding must be delivered in a non-discriminatory way.

This week we were asked what it would cost to address HIV among women and we don't know. We learned about the complexities of disability and AIDS, women who used drugs, women who are sex workers, women who are migrants, women who are all free. Nondiscrimination includes finding ways to assist those in need of special attention and to ensure their rights are guaranteed.

But where will we get the money? To begin with, let's at least redirect funding from failed policies. That's pretty simple. Anyone who is in the drug policies now, I'm sure you saw the amazing ticker counting up the dollars spent on the

global war on drugs during the conference. That too was our AIDS money being used to fund policies that fuel the epidemic. [Applause]

Microbicides might not seem like a human rights track issue, but everybody has the right to benefit from scientific progress and its applications. This came to our mind during the microbidcide session and I raise it here because the same threats we experienced with generic ARVs, we must now expect and start to address if people are to benefit from such discoveries.

Harm reduction works to reduce the spread of HIV and we know this for a long time. Bill Clinton knows this and he said it in his speech. Barack Obama knows this and PEPFAR guidelines now recognize this. But harm reduction must benefit young people and women too. Here I'd like to recognize the work of Youth Rise, the international of network of people who use drugs, and the Eurasian Harm Reduction Network, because solutions are hard to find, but they will not come from government, they will come from groups like these. [Applause]

Of course, I'm going to raise this, the scientists are increasingly coming to human rights conclusions based on their research and that's what the Vienna Declaration is all about.

We know from decades of evidence that unless we address our international and national drug laws and policies, we are never, ever, going to beat this epidemic. Please if you have

not done so, read the declaration. If you agree with it, sign it, pass it on, and I'm assured by the organizers that this process will continue after this conference.

So what do we want to see in two years? You have your own ideas and I'll miss people's priorities, but here are some of my ideas, we should be seeing more funding for rights based programming because it is required by international law and becase it works, it's all that will work. Hopefully Austria will have drawn inspiration from the conference and begun to contribute to the global fund. [Applause]

I've already touched on my next two points, I won't reiterate, but I understand there were some problems in getting people to this conference and I hope that we can start planning now to predict barriers to attendance and deal with them in advance. [Applause]

And of course, by Washington, Maxim Popov in Uzbekistan the [inaudible] in Iran should be enjoying their freedom and earlier Ilia Padolian [misspelled?] should have been exonerated in the Ukraine. [Applause]

I wonder though, will we see a lifting of Russia's ban on OST. I doubt it and I wonder will we see a reduction in deaths from TB, I hope so. So during the conference to remind us what went on while we're in the cocoon, $2 billion was spent on the war in drug, 3,000 people in the region that is the focus of this conference, Eastern Europe and Central Asia

contracted HIV, and meanwhile, Russia reasserted its plans to do absolutely nothing about that, while preparations were being made for Russian Government official to take the lead reigns on this issue at the UN.

But, Libya reduced announced removal of travel restrictions and Argentina legalized same sex marriage. [Applause] I have five seconds and I'm going to say this. Right here right now has been the theme of the conference but to use a rather obscure musical reference, this is not here, this not now, the fight is at the international/national community levels where you all work, so from the Track F team, safe travels and good luck. [Applause]

**MALE SPEAKER:** Thank you very much. Track F was innovative and its introduction and its report showed us how very important it is. It's with great pleasure that I introduce the rapporteur on our leadership and accountability program, Nathan Ford.

**NATHAN FORD:** Thank you very much and you will be delighted to know that due to the cross cutting nature of this conference, many of my slides have already been covered by others, so I'll be able to go a little quicker than I thought.

Now, leadership and accountability, it's the first time that this conference has included accountability in the leadership track and I think the conference has generally done a very good job of providing platforms not only for leaders to

get up and make statements, but also for them to be accountable by mixing political leaders with civil society groups, by mixing people marginalized groups with the policy makers that make the marginalize. And when you do that, it creates an opportunity for leaders to apologize, to make commitments, and hopefully to say things to which as they move forward, will be held to account.

Now, one good example of that comes from Arch Bishop Emeritus B. Nzimbi from Kenya, who after meeting here in the conference earlier this week said we want to apologize for not doing what we should have don and for doing what we should not have done. And in other parts of the conference, religious leaders have made it clear that HIV is a virus and not a moral issue and when morality gets in the way of policy, the results, two of them are morbidity and mortality and I think that's an echo across many of the human rights issues that have already been summarized for ideas and many other groups.

Now, people living with HIV/AIDS, the activists have certainly continued to demand better leadership and accountability. There has been some criticism about the demonstrations, but it's something that absolutely needs to continue having a place at these conferences. And there has been a sense of a renewed activism, particularly around human rights and issues to access to medicines at this very difficult time where the amount of funding for HIV is slowly drying up.

But it is important to note some other presentations that were made at this conference showing that civil society and activist groups are not just about making noises and demanding that other people are held accountable, but working very, very hard to develop accountability mechanisms that work.

Here's one example from Belarus, the implementation of the stigma index and also holding themselves to better account, this was an example of an accountability framework for those civil society representatives of international forum like the global fund, developing a framework so they may be better accountable to their own communities in those platforms and not just representing their own ideas.

We've heard a lot about the Vienna Declaration and I just wanted to applaud the IAS for showing very, very strong leadership on this issue, but it has also been pointed out that while some 12,000 plus signatures have been gathered during this conference, there are 19,000 of us here. And so some 7,000 delegates have not signed up yet.

And it's not just about participants at this conference either. The Vienna Declaration is very much a living document. And we want as many signatures as we can moving through to the 2012 conference which will take place at one of the major centers of the War on Drugs.

Now, the point has already been made that improving the situation is not so much one of evidence anymore because for

many of the greatest improvements we could make the evidence is now in. The Lancet series has demonstrated elegantly a number of policies that work. It's a matter of showing the political will. And so for leadership and accountability to kick in and address those countries, those programs, those policies that fail to take account of the latest evidence.

Now right here right now; it's just been covered by the previous participant that this was the slogan of the conference. We have seen so shocking examples of continuing abuses of human rights that were presented at the conference in Namibia and other parts of Southern Africa. The forcible and coercive sterilization continues at some public hospitals often as a condition of delivery or abortion services.

But we have also seen some positive examples from leaders around the world whereby through embracing human rights positive frameworks, they have managed to have a substantial impact on the HIV epidemic. In the example from New Zealand where police were previously targeting sex workers using condoms as evident – possessive of condoms as evidence of being a sex worker and arresting them has recently changed. And through a human rights based framework, legislation was passed to decriminalize sex work. And it removed a significant barrier to HIV prevention not just among sex workers but within the general population.

So a lot of talk at this conference particularly in the leadership and accountability track about the future of universal access. As we know, universal access was a target for this year. We're not going to make it. There have been some calls for a new target to be set of 15 by 15 taking into recognition the fact that the millennium development goals ought to have been met by 2015. And we will fail completely to address many of the important, if not all of the important millennium development goals unless we continue to scale up efforts in the fight against HIV/AIDS.

However, it is important to note when we talk about targets that we need meaningful targets. And this presentation shows very nicely the disparity between general universal access targets for which over 83 countries — just look at where the mouse is — had implemented those at a national level and targets specifically for high risk groups and marginalized groups. So only 13 countries had established national level targets for MSM and only 15 countries had established national level targets for IDU.

So as we recognize that targets are important, the 15 by 15 has to be much more nuance than a simple global target because you can certainly reach universal access targets without doing anything for those most at risk.

And here's an example of why it's important to address targets in a more meaningful way because we know very, very

well that where we do have data, we see the striking disparity between the HIV prevalence in the general population and those among high risk groups. However, the vast majority of countries do not report that data. And some hundred or so countries have absolutely no data available whatsoever to report on HIV prevalence among MSM.

Now the UNAIDS and the WHO, I believe, should be strongly applauded for showing their leadership in embracing the latest science to inform their guidelines for antiretroviral therapy in resource limited settings. Peter Magenne [misspelled?] from Uganda made the very important point that this is science that is not just for the developed world and there is another science for the developing world. But as the evidence comes through for earlier initiation for more effectiveness and better tolerability of newer drugs that those tools, every effort is made to make those tools available to everyone who needs them.

The problem, of course, is that we're being told at this conference that we're running out of money in the response to HIV. And donors, most of the major donors, have been here making a very, very strong statement that we need to find much, much greater efficiencies in the AIDS response.

Now some examples of efficiencies have been given by some of the other rapporteurs. I just want to dwell on one very important one in which civil society groups have been

holding the donors up to account. And that's the perpetuation of the international intellectual property laws that restrict access to affordable medicines. And it's quite a powerful statement that was made in one of the sessions here that is very, very rich for major donors to go around telling the developing world to find greater efficiencies when those very same governments are perpetuating policies that drive up the price of drugs to an unaffordable level. [Applause]

And there are policies as well as stopping the perpetuation of the ever increasing monopolization of medicines through pushing for tighter patent protection. They have also very clearly policies that exist right now that could be implemented to overcome barriers to intellectual property where they exist. And it's also beheld on the countries most effective to follow the lead of those countries like Thailand and Brazil in making a maximum effort to use those safeguards and contribute. [Applause]

And as previous rapporteurs have made the point, I'm sorry there's a misquote here. It's not just about antiretroviral drugs either. As one person said in this conference HIV positive people are now surviving with an incurable disease but dying from a curable disease in the case of Hepatitis C because the price of treatment is in access of some $20,000.

Now finally onto the issue of funding, it's been a theme pretty much every day at this conference and many large and smaller sessions. But even with efficiencies, the point has been made that we, frankly, just need more money. The evidence is clear. It was shown by previous rapporteurs that we are in a situation of flat lining. And despite the rhetoric of some of the funders here this week at the conference, it's very, very clear that we're going into a scenario where the amount of money is decreasing as the epidemic continues to increase.

This has already been covered. We have a number of mechanisms that show efficiency that can be improved in their efficiency both in the disbursement of money. We have examples of where we can be more efficient in implementation, in the technical assistance provided by the multilateral institutes and we have some innovative finance mechanisms that really need to be embraced to ensure that more money flows through the pipeline.

And I want to stop here by making the point that has been made by very many people in this conference including some of the major donors, including the Global Fund, that the issue of lack of money is not one of pure lack of money per say but a lack of political choice in where to spend it. Thank you very much. [Applause]

**ALAN WHITESIDE:** Nathan, thank you very much indeed. And one of my take home messages from this conference is that it's not that AIDS is overfunded. It's that public health is underfunded. Our next speaker is reporting from the Community Program. Dr. Nycal Anthony, over to you.

**NYCAL ANTHONY-TOWNSEND:** Good afternoon. Over the past week, I had the distinct privilege of working with an exceptional team of professionals from the field where we collected and reported valuable information for people providing community level services across the world. It was a wonderful experience being a frontline provider and having access to the type of information and results that the field has brought.

The Community Program vision was that AIDS 2010 would create the space for community empowerment and engagement and would be an opportunity for people living with HIV and effected communities to reclaim ownership of the HIV/AIDS agenda at all levels. The inclusion of positive health, dignity and HIV prevention is critical to increasing effectiveness and sustaining national strategies and local programs. I can attest that this space was indeed created over this past week.

So how did we get that? How did that happen? The Community Program's approach was to link communities with evidence based science, providing communities with skills, building development workshops and the ABCC directory,

accessing the top scientists, building networks with leading experts and connecting capacity of collective learning into action.

In working with community based organizations for the past 20 years, when trying to be of assistance, the response or the request is to give us information that we can use. And so as my colleagues here today have said, we would like to put into action what we've learned here. As such, I'll be presenting some crosscutting key findings gleaned from the numerous abstract driven sessions, workshops and poster presentations.

Since we understand that research informs, here's what we've learned. In living with HIV in that area that we suggest collaborative multi-agency work is needed. We need to link people living with HIV and aging networks with comprehensive and appropriate medical, social and psychological care. Peer driven support and education is considered essential as we need to make people aware of self-management strategies that can mitigate some of the harms caused by both aging and HIV.

Over the next few years, it is anticipated that people living with HIV and AIDS will be over 50. Actually in the U.S. as I understand it, a large percentage will be living over 50.

Under human rights what we can do. We can create a framework advancing the integration of human rights protections into the global AIDS response. It should be a unifying call to

action for the global community. A legislative policy and practice agenda should be developed eliminating inhumane conditions and must protect the rights of all people. My colleagues before have given you lots of ways to make that happen.

Networking. This whole conference has been an opportunity to network. But we're suggesting that at the community level, we need to network more effectively to create effective treatment care and prevention which will require the collaboration between all stakeholders. And it also enables the leveraging of resources, information and advocacy. We've learned from our funders that they're even interested in funding community strengthening. We also suggest that we consider building community coalitions.

From a funding perspective, civil society organizations should see themselves as partners with governments who are mutually accountable to a transparent system. We talk about accountability here but we, as community level organizations, are also accountable. We can become involved through citizen report cards and social auditing.

Organizations must also engage with a range of people from key government agencies. Data rules in this world. And we understand we need to look at budget, do budget analysis; research offices, treasuries, donors; analyze reports on policies, performance, budget expenditures; conduct multiple

assessments and participate in the budgeting process. We have to be at the table to make a difference.

From an advocacy standpoint, there are key elements to all successful activism. And they've been effective here this week. But we need to make sure it includes factual information, a clear message, a targeted audience and expected outcomes.

For people living with HIV over the age of 50 being represented — a sizable part of the community within the next few years, we should also plan for an agenda of improving the support and visibility of older adults with HIV. Many of our slides don't show that aging population.

For advocacy, there's some agenda that we pulled from our team from advocacy standpoint. We've realized through the research or lack of research that there's an increased need for options and access to new interventions and models for care for women. Various structural factors such as gender and equalities, economic security and public policy continue to negatively impact women centered prevention efforts.

We also learned that homosexual behavior and individual homosexual orientation and identity are being legally criminalized and marginalized by cultural customs in countries around the world exacerbating the social marginalization and stigma associated with HIV prevention targeted to MSMs and

transgenders. Advocacy to eliminate these practices must be a call to action for all nations.

Now to move on to collaborating with our governments. They're not just our funders. They're our partners. Communities can provide evidence to policy makers at the highest levels through formal and informal communication that punitive legislation is counterproductive to their goals of creating healthy societies. We have immediate access to that information and even if needed, sound bites that can come to your front door and learn what the impact is.

Community strengthening. Outreach to our faith leaders should occur earlier than later. So we're suggesting that they reach out to them in seminaries, in schools, where they can be taught about HIV and AIDS about they are released into the world to make a difference. The message that we're hoping to put is love, respect and compassion in response to HIV. And from a community leadership standpoint, we should be developing leadership skills and tools to influence research, engage with policy development and interact successfully with the media and key decision makers.

We've learned a lot from the research community. And I'd like to have some real life or share some real life lessons from the field that will benefit our community based organizations. In rural Malawi, tax shifting in resource limited setting has improved access to HIV in care and testing.

Task shifting, which we thought was really interesting, is actually looking at the entire daily routine that it takes to perform clinical work and shifting the heavy clinical work and the clinic counseling and clerical work to different bodies so that it increases the access to care.

In Mozambican, self management and the development of expert patients to deliver ARVs to local self-formed groups improves retention and adherence and separate medical care in HIV prevention. Within each of the local groups of six stable patients, one person travels to pick up the medication each month and is trained to go to work with the group on adherence issues and reporting of ill health which would then result in a clinical visit. There are currently 291 groups with 1,384 members who share money and resources to send the group representative. Not only did the imitative work and massively reduce the workload of healthcare providers but patients also reported decreased stigma due to having a built-in support group and not having to disclosure their status by default when traveling to a clinic on a regular basis.

In Western Kenya, low risk express care demonstrated no opportunistic infections or history of adherence problems from switching patients who were stable on ARV with CD4 counts below 200 from doctor to nurse led care in two out of every three visits.

So our team came up with a few thoughts of what we could do from a community standpoint and what we'd like to offer to this community. Before I go to our list, there's something that's come across from our panel here today that we need to move from bench to bedside or from papers to people. And the community based organizations are a great place to do that. These communities can also be afforded an opportunity to continue this dialogue that we've had here over the week through social networks to maintain a link. We can facilitate the application of evidence based models. We can use list servs, Webinars, Skype. I'm still learning about some of those.

Valuable lessons can also be learned from the creation of global community connections and peer mentoring for professional development. I think community based organizations should consider some linkage with academic institutions be them local or abroad to help create an environment of connection. Universal advocacy on human rights issues must target marginalized communities so the voice of world's humanity is linked together.

We've had so many distressing stories about migrants, sex workers, ex-offenders and IDUs that we have to band our voices together as a community and make it a global community to make a difference. People living with HIV must also have meaningful involvement with all the areas of the process

throughout the entire life of the policy advocacy or project implementation. Their participation makes a significant difference. And we look forward to being your partners as you move from your research to the field. Thank you. [Applause]

**ALAN WHITESIDE:** Thank you very, very much indeed. And now we turn to our rapporteur from the Global Village, Dr. Kleinmoedig. Thank you and the panel is yours.

**MARIO KLEINMOEDIG:** Thank you very much. To start with bon tardi. I would like to thank my most professional team, Kate Hawkins and Dudley Fernandez. This is the first time that there is actually a rapporteur team of the activities of the Global Village to actually stress the linkage between what happens in the Global Village and the whole of this conference.

Arriving at the Global Village on the first day, we felt like Dorothy after finally having reached Oz, a wonderful, magically world of inspiration and activism. Only Dorothy had a whole series of books and movies to tell a story. We, now, have only seven minutes and good shoes. So here it goes. [Laughter]

Global Village, that vibrating, multi-everything explosion of community activism and bodies of knowledge are just bodies. [Laughter] The opening was hosted by the ravishing Lakshmi [misspelled?] the Asia Pacific Network of Sex Workers bad girl Ambassador. Now if there is anything [Applause] Yes, applause is well deserved. If there is

anything the organizers could have done to enhance the visibility of the [inaudible] the world trans community, it was staging Lakshmi as mistress of ceremonies.

But then there are many more communities striving for attention and visible in the main and side alleys of this village. Some more, some less successful.

Another fabulous idea was to dedicate a day and lots of events to our disabled brothers and sisters, the visually impaired and deaf people. Sitting down at a zone, we heard a South African brother, for instance, explain how they had to invent new signs for among the STDs. And how in Africa, myths play a huge role in the universe of the deaf. Decodifying those myths become a huge endeavor which community activists all over the continent are tackling. [Applause]

And then in the middle of this exotic mix of noises of course the complaints; too noisy, too hot, too cold, the catering not catering to the globality of our village. And then of course maybe too many tourists and travelers; the need for much more activists but it's also a beautiful place.

Almost in the center of global village, there is a wish tree. A project of the AIDS Federation is to as passers by put up their wishes for an answer to the growing epidemic of Eastern Europe and Central Asia, wishes for today. In the long-term, there are also wishes for things to be accomplished before the next IAC in Washington, D.C. in 2012. The bulk of

the wishes will be handed – 6,000 by now – to the UNAIDS Secretary General. Wishes can be read, of course, online. And please feel invited to do so.

And then a giant iceman, a humanlike statue carved from ice, brought to the center performance area. A group of representatives from Eastern Europe and Central Asia explained that as much as the already melting iceman stands as a metaphor for their lives that are melting away fast in the epidemic. There is the anticipation of a future statue which won't melt to be erected at the next IAC when hopefully the fast spread of the epidemic in their eastern lands will be halted.

And people find synergies between communities. Like in the women's leadership sessions, people were talking sex workers rights. And the harm reduction advocates learning from the models and strategies of the gay rights advocates. LGBDI participants learning about each other and transgender activists finding themselves at a converging point of many, actually all of the communities.

The networking zone hosted many sessions that were not on the official conference agenda but which were hugely valuable. It's heartening to see how the harm reduction approach and its language have now become mainstream not only among policy makers but also among activists. But there is still a long way to go.

And then there was the [inaudible] but exciting songs of demonstration and percussions of the disenchanted but rightfully so. From financial mismanagement in Tanzania to housing rights to treatment access and decriminalization of homosexuality in the Caribbean and Africa among others and of course, the big human rights march which made our presence clear not only to Vienna, not only to Austria but to the world. And then — [Applause]

The need for access for all, the need for scientists to engage with communities and the importance of communication for accountability and of course, the separation; not only the virtual separation but even the geographical separation is almost about the ying and the yang of disability. Plenary, Global Village at the other side.

We were blessed to have some high profile visitors like Princess Mette-Marit of Norway in the youth pavilion. And the same youth pavilion we learned about how local celebrities in countries by acting as role models actively engaged youth and inspired them to participate in peer to peer education activities. The Global Village [Applause] is absolutely the most glamorous part of the conference and certainly also the most sexy actually shown by these Brazilian sex workers' fashion show. But we worry that it is still too separate from the rest of activities both in content as in actual location. And we hope that in Washington, D.C. two years from now, steps

will be taken to bring the two more together. So among the free hugs [Applause] and the free kisses more communion. Thank you very much. [Applause]

**ALAN WHITESIDE:** Thank you very much indeed for that report from the Global Village. Emily Carson is going to report from the Youth Program. Emily, you need to understand that your being at the end of the program is not an indication of the importance because youth are so important. It's [Applause] But we look to the Captain Myer curve and decided you were most likely to still be alive at this point. [Laughter]

**EMILY CARSON:** Fantastic. Thank you very much for staying around and first and foremost, I'd like to take this opportunity to thank the International AIDS Conference for including a youth voice in this forum. This is my second international AIDS conference. And if in 2008 you told me I'd be standing here right now, I would have laughed in your face.

I honestly never thought I would be reporting on the situation regarding youth. But today I represent my peers, those who are fortunate enough to be able to attend this conference and those who weren't. There are 1,500 youth in attendance at this conference. We are here and young people need to get their voices meaningfully included especially those from key affected populations. I think this conference has been a really big step in that direction.

We talk a lot about the power of the youth voice. I wish you all could have experienced the raw power of the pre-conference last week. The electricity and collaboration of the youth pre-conference was intense. Three hundred young people from all around the world were led by the amazing Vienna Youth Force Team to engage in three days of networking, skill sharing and co-education. Youth participated in this conference represented more than 95 countries and represented a vast mired of different organizations and brought many different perspectives and specializations to the delegates.

We've made tremendous. And from the data that was released last week, we know that HIV prevalence in trends in 16 countries have shown a decline among young people 15 to 24 years old. Young people's involvement in leadership was key in making this a reality. This is a fantastic feat and there are no — but we are nowhere near halting the transmission in youth. We must work harder and push more forcefully until we reach the goal of no new infections. We can do this. We can make this happen in our lifetime.

We have many amazing partners that have come up and given commitment to youth. The Global Fund and UNAIDS have both invested to involving more youth and more young people in substantial and concrete ways and not just mere tokenism. We have developed strong allies. And Michel Kazatchkine, the Executive Director of UNAIDS and her Royal Highness, the Crown

Princess of Norway, both of you spent many days this past week engaging with young people in meetings and events. And we urge them to please continue to make it happen. [Laughter] I'm happy to see that established leaders have stepped up and taken notice of the power behind the youth voice.

We're willing to invest our time, our skills and our loyalty if you're willing to support us logistically, intellectually and monetarily. We have made this clear through the astounding amounts of applications to the e-course and grants from both of the organizations I work for along with the amount of applications that came in for the participation in the youth pre-conference and the main conference.

For the first time, we're focusing on subjects like harm reduction, injected drug use and sex work. I believe by opening these conversations we drove the conference to a more political and direct action oriented environment. Youth were at the forefront of these movements and highly visible during the protest that happened during this past week.

We called for transparency and accountability in funding for AIDS. We protested against international governments much like my own of Canada when they continually refuse to meet the constituents' needs in regards to the full spectrum of harm reduction. [Applause]

We also have advocated for the integration of sex workers into the consciousness of this conference as a whole.

I still don't think we've touched even the surface of these conversations. Article No. 34 of the United Nations Declaration of the Rights of the Child says state parties undertakes to protect the child in all forms of sexual exploitation and sexual abuse. This restricted the conversational to only include sex workers over the age of majority but what about the complexities of the situation for young sex workers? The criminalization of sex work only further stigmatize and endanger sex workers and young sex workers and heightens the risk of the entire community. [Applause]

In addition, the criminalization of drug use and possess and the reluctance to incorporate harm reduction measures like needle exchange and syringe exchange, safe injection in inhalation sites, education about drugs and only further drives the HIV pandemic in all communities. Punitive laws need to be repealed and replaced. There needs to be [Applause] [Laughter] There needs to be effective measures to reach out, eradicate and provide health and safety within the IDU and sex work communities.

Lastly, we cannot lose sight of the fact that the pandemic is still prominent in the LGBT community. And further work to decriminalize same sex relationships, reduce homophobia stigma and discrimination is crucial in continuing to make progress in response of HIV. [Applause] We also need to fight

complacency within the young LGBT community in regards to HIV and AIDS.

Another main issue throughout the conference was surrounding funding. The economic turbulence has driven up the government deficits in too many countries. And they've responded by reducing their investments in global health. Youth initiatives need to be funded so we can go out and do what we're good at. We need to advocate and educate our own communities.

The international community as a whole needs to fund the unfundable projects and subject matters. They need to redirect funding to core areas and capacity building so we can continue to have sustainable youth organizations so we can train to support the next generation of youth leaders. We need to work within our communities to understand their needs and to apply lessons learned to advocate for better, effective, evidence based policies and programs and to ensure our change in the world in the response to HIV and AIDS.

These ideas also need to drive from the community of young people living with HIV and young key populations. We also need to strive and encourage strong, positive youth to come out and come forward to help us refocus the target of our activism.

I'd like to thank all the members of the Vienna Youth Force and the efforts to bring the youth voice, experience and

expertise to the forefront of AIDS 2010. As well as my colleagues and mentors at the Relief Coalition on HIV and AIDS and the HIV Young Leaders Fund, the entire youth force would like to thank the leaders of this conference that took up the complex and controversial issues surrounding HIV and AIDS. And I would like to invite you all to read the entire youth teams' summaries of the AIDS 2010 conference on the Web site. Thank you. [Applause]

**ALAN WHITESIDE:** Well ladies and gentlemen, that concludes the Rapporteur Session. I want to do one thing that I never got to do in South Africa which is look on the screen and wave at myself. [Laughter] But I also want to thank you on behalf of the IAS, on behalf of the conference organizers, a wonderful panel they've had up here. It's been a real pleasure to chair it. And most of all, to thank you the participants.

Let's break before the closing ceremony. And let's give ourselves all a big hand. Thank you. [Applause]

[END RECORDING]