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Rapporteur Session
Kaiser Family Foundation
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ALAN WHITESIDE: Welcome to the Rapporteur Session for AIDS 2012. My name is Alan Whiteside. I'm the Chair of this session. I am the Director of the Health Economics and HIV/AIDS Research Division at the University of KwaZulu-Natal in Durban, South Africa. I'm proudly from Southern Africa. Swaziland was my home. [Applause] Thank you, Swazis. South Africa where I now live has a theme, Inspiring New Ways. I think that's what this conference is absolutely about, inspiring new ways.

On the table next to me, we have rapporteurs who've worked incredibly hard to bring you this important session of the conference where they distil everything they've heard into 12 minutes and present it to us. These will be available afterwards. Let us move straight into this session.

I would like to introduce the rapporteur of Track A, Jacques Fellay, an Assistant Professor at the Swiss Federal Institute of Technology and Visiting Physician at the University Hospital in Lausanne, Switzerland. He's the Chairman of the International Consortium for the Genomics of HIV and he co-Chairs the Young and Early-Career Investigators Committee of the Global Vaccine Enterprise. Jacques.

JACQUES FELLAY: Good afternoon, everyone. It is my pleasure to present to you the highlights of the Basic Science Track of this International Conference. To start, I just want to present to you my core Rapporteur Team. Those five persons:

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Jason Brenchley, Galit Alter, Irene Onyango, Morgane Rolland, and Hendrik Streeck who worked all through the week to bring you the summaries. It was really fun and productive—and hopefully, helpful for you all—to work with them. I want to thank you.

The hot topics we identified together with my colleagues are those three: reservoirs and latency, inflammation and fibrosis, and finally, genomics and systems biology. This is subjective arbitrary, so don't feel bad if we don't select you, but those three share something in common. They are new issues. They are novel issues that did not arise by chance, but they are the results of the vision, the dedication of leaders in the field of basic science, and also of very strategic funding decisions that have been made over the past few years. Now, we can see strong science in every single one of those three areas. It shows that the money, the way it is spent, the decision at the fund level have important consequences directly at the level of basic science.

Let's start with reservoirs and latency. You heard the word cure many times at this meeting, and the Cure Agenda was nicely laid out by Javier Martinez-Picado in his plenary on Tuesday, how to go to viral eradication? He made it very clear that we need a combination of many different research areas to achieve a cure. Either a sterilizing cure, getting rid entirely of HIV or a functional cure, meaning we don't need drugs

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anymore. There is still HIV somewhere, but it doesn't bother the patients anymore.

Research is needed in every single one of those areas. That's a point that I want to make very clear here again. We are not there yet. The journey just started towards the cure, but the will is there and the group, the research is there to go in the right direction. Concretely, what we found really exciting during this week were those two presentations. One, on nanoparticle targeting of CD4 T cells, and another one, on preliminary results of allogeneic bone marrow transplantation; but not as in the case of Timothy Brown, the Berlin patient with CCR5 Delta 42 carrying donor but whose donor with normal CCR5 activity.

Here is a little bit of a glimpse into the nanoparticle talk by Jerome Zack. Their club is trying to target lipid nanoparticles like latent cells directly to CD4 T cells to go into the reservoir where it really matters. The goal is to load those nanoparticles with activators of the latent virus and also with anti-HIV drug at the same time in order for the virus to be immediately inactivated at the time it will reemerge from latency. The goal is really to reactivate the latently infected cells where they are and only those, thereby, minimizing bystander activation and rendering the new virus noninfectious.

What is really amazingly beautiful is the nanoparticle they use. Those are called vault and those vault in every

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single of your cells, you have a million of them and nobody knows what they do. If there are cell biologists in the room, don't hesitate to tag along in this new field. Those vaults out there we don't what they do, but they could be the vehicles to really fine tune our approach to reservoirs.

The other example I wanted to talk about is this long-term reduction in the peripheral reservoir, in the blood reservoir that has been observed after stem cell transplantation into individuals now. This was by Timothy Henrich and team. Here is an example. The second patient was pretty much the same picture, where undetectable for a long time before transplant under potent ART.

They received reduced intensity chemotherapy followed by hematopoietic stem cell transplant. What is observed here is that you have in the first few weeks and months after transplant, you have a decrease of detectable cDNA in the peripheral blood cells of the patient until they entirely disappear after 230 days. Then always under treatment, of course, there is absolutely no detectable virus in the blood of those patients.

The CD4 T cells come back to normal after the shot due to the transplant. The message here is not that we have two more Berlin patients. It is that if we do just the transplant without thinking about CCR5 deletion here, we can acutely reduce the reservoir in periphery. What we don't know yet and

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what would be needed here is, of course, sampling of the tissues elsewhere in the body of those patients and what they called analytic treatment direction. You stop treatment and you look how fast the virus will come out. They are not cured. They have replicative competent virus probably at many places in the body, and it will be very interesting if that can be performed.

Second topic I wanted to focus on is inflammation and fibrosis. Inflammation as you heard over the past two, three years now is a critical point in patients that are under successful ART, well-controlled, but still suffer more than non-HIV-infected individuals from consequences of aging or cardiovascular diseases or renal or liver dysfunction.

Steve Deeks gave a very nice overview of everything that can lead to inflammation in HIV patients. How can we measure it? How can we try to stop [inaudible] it? The new thing at this meeting was more on the silent fibrosis which is very mixed with inflammation and that is why I speak about them together.

Timothy Schacker presented this vicious circle of inflammation leading to fibrosis, leading to more inflammation. This seemed to be central pathogenic process for reduction and permanent reduction of CD4 numbers and incomplete reconstruction on successful HAART. You have inflammation. You lose fibro-reticular network in the T-cell zone of the lymph nodes. This leads to a decrease in IL-7 production because this

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network is responsible for IL-7. We know the IL-7 and the CD4 T cells have difficulty surviving. They go into apoptosis. Then you have local inflammation, destruction of cell, collagen deposition. You get a scar inside the lymph node, and this in turn, leads to more inflammation.

The pictures were quite impressive. I don't have the pictures here because that wasn't released, but I have from a paper they just published in PloS Pathogens, the percentage of the T-cell zone of the lymph node that are completely packed with collagen, instead of 10-percent in the normal status, you are up to 30-percent in patients with AIDS. This is almost entirely irreversible if you are at the stage that is too late. That plays an important role.

More than that, they went to Uganda and they analyzed the lymph node biopsies of Ugandan patients with or without HIV. What they found—which is striking—they found that lymph node fibrosis is similar in HIV-negative individuals in Uganda as it is in chronic HIV-positive individuals in the US, which means that we could have here an explanation for lower baseline CD4 T cell count and less immune reconstitution with therapy in patients in African countries where they are subjected to constant aggression by many pathogens.

This may modify the size of the reservoir and may have indication for eradication and cure in the developing world.

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It's not only HIV. It's all the pathogens that have a heavy burden on those lymph nodes.

Finally, two words on genomics and systems biology. We all liked to have Francis Collins from NIH who came to give us a global perspective on genomics and an NIH perspective on it. Then at the end of the same session, we had a clinician researcher, Philip Tarr who gave the clinician's perspective. It was really interesting to see that both of them ended up with the same message. Genomics is already in the clinic for small aspects of. It has enormous potential to develop new areas of research on new ways of thinking about questions and it could bring enormous benefits for clinician and patients.

Here is a fancy example of how to use new technology. Rick Bushman showed how to combine two brand new technologies to get a new insight on HIV transfusion. He combined those two barbaric names. Single molecular microdroplet-based digital PCR technology and high-throughput single molecule real-time sequencing technology, and together was able to pull out all existing transcript from an HIV CD4 culture in vitro.

That's what they observed. It's complicated, but the basic message is that they were able to identify more than a hundred different mRNA forms from HIV in those cells, including several dozens that never were known before and a whole new class of 1000 bases transcript that nobody really knows what

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they do. This is larger scale science that gives new ideas for more detailed research.

Rick Bushman in another session made what he called crowd sourcing discovery. The problem we have in systems biology is not that we cannot do the study; it's that we get too much data. There is no way researchers can make sense out of everything that's come out of the computers and the sequencing machines.

They pushed this website where all of you can access and you can become systems biologists because there are data from genomide studies, from SRNA studies, from pattern mix and it all does that. If you were trying to do only pair-wise comparison between everything that exists now on this website, you have more than 2 trillion possible experiments to be run. Every one of you is welcome to become a systems biologist.

I will just end by saying a big thank you as well to the Track A Committee to Danny Douek and Amalio Talenti who seem here happy to share this Track A Committee for a wonderful Basic Science part of this meeting. I hope that by interacting with the other tracks that we hear about now, we are able to feel the sense of urgency we need to keep to tackle this pandemic, and that we can share a little bit of our enthusiasm for Basic Science and HIV. Thank you very much. [Applause]

ALAN WHITESIDE: Thank you very much, Jacques, for an impressive summary. I'd like to introduce the rapporteur for

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Track B, Dr. Jose Arribas. He's currently the Research Director of HIV and Infectious Diseases at La Paz Hospital and Associate Professor at the Autonoma University School of Medicine in Madrid and a Member of the European AIDS Society Executive Committee.

JOSE ARRIBAS: Good afternoon, everyone. It's really a pleasure to be here to summarize the Track B. On behalf of our wonderful team of rapporteurs including Omar Sued from Argentina, Federico Pulido from Spain, John McKinnon from US, Juergen Rockstroh from Germany, and Sharon Walmsley from Canada. This mixture of electrical plugs gives you an idea of how international our team works and we face the daunting task of having to summarize an enormous amount of data.

When to start antiretroviral therapy? Yesterday, we saw a very important clinical trial, HPTN 052, comparing immediate ART patients who have more than 350 CD4 cells versus delayed ART waiting until the patient went below 250. Here you can see there is a ratio for progression to the primary event.

Take home message, starting about 350 comparing to starting below 250 and here we are talking about a mean CD4 cell count of 229 for a combined endpoint of AIDS and non-AIDS events, there was a trend, but not a statistically significant difference. They focused only on AIDS event. Immediate treatment was better, but that was driven mainly by TB cases.

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The question if starting about 500 is better or worse than waiting until below 350 is still open.

What to start with, is another very important question in these conferences? We saw yesterday and also in the late breaker section a very important clinical trial, Spring-2. Antiretroviral naïve patients were randomized to receive two nucleosides, could be tenofovir FTC or abacavir 3TC at the discretion of the clinician and then the randomization was to receive either dolutegravir, an integrase inhibitor 50 mg q.d. or raltegravir b.i.d. Here you can see excellent success in both arms. The dolutegravir met the non-inferiority criteria without any difference by nucleosides or high viral loads. There were no withdrawals due to renal events and as expected there was a small increase in creatinine due to blockade of creatinine secretion in the dolutegravir arm.

Take home message is that the dolutegravir q.d. is going to be probably a new option for antiretroviral naïve patients and what struck us in the trial is not a single patient in the dolutegravir arm developed integrase or nucleoside resistance. This is unprecedented in the clinical trials of integrase inhibitors.

For children infected with HIV, it's fortunate to know that they can use the dolutegravir too. We show data supporting the use of different doses of the dolutegravir in pediatrics. Actually, the raltegravir data was presented too favoring the use of raltegravir different dosage in kids. We learned that chewing raltegravir gave better exposures actually than just swallowing it.

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In terms of antiretroviral naïve patients, another important trial is this one that tried to answer the question how to better boost atazanavir. In this trial of antiretroviral naïve patients, everybody receives tenofovir FTC and then everybody receives atazanavir, but the comparison was to boost atazanavir with classic low-dose ritonavir or boost atazanavir with a new enhancer called cobicistat.

In the data and the virologic data you can see here that the rates of suppression were very high in both arms with very few patients experiencing virologic non-suppression. There was no development of resistance in either group. Lipids were similar. As suspected, there was a small increase in creatinine in the cobicistat arm, similar rates of discontinuation due to renal adverse events, and similar discontinuation rates due to bilirubin related adverse events. Can you spot the differences? It's very hard. They look very similar.

How to switch in patients who have already achieved suppression? We show for the first time the results of the SPIRIT trial. In this trial, patients who have been suppressed for at least six months received in two nucleosides and a boosted PI were randomized and they've never failed an NRTI-based regimen. They were randomized to continue the two nucleosides and the boosted PI or to switch to a single-tablet regimen of FTC rilpivirine and tenofovir.

You can see here that patients who switched have numerically less episodes of virologic non-suppression. It's 0.9-

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percent for the single-tablet regimen compared to 5-percent for the continuation arm. It's interesting that 17 patients went into the trial with transmitted 103N, primary 103 resistance. All of them, 17 out 17 were suppressed after the switch. The switching produced an improvement in fasting lipids and improvement on 10-year Framingham Risk Score. Take home message, this combination is going to be a strong simple switch option.

Let me remind you that in these three antiretroviral trials, less than 15-percent of the volunteers were females. It is clear that we need to do better to characterize new antiretrovirals in women. [Applause]

With regard to resistance, the theme in the conference in the developing world is that as the coverage with antiretroviral therapy expands, we are seeing more and different type of resistance. In this WHO survey, you can see here as the antiretroviral coverage increases, also increases the prevalence of NNRTI resistance mutations. We should expect that with more coverage and more options, we're going to see more resistance and somewhat more different resistance because they are using new drugs in those countries such as tenofovir, abacavir or boosted PIs.

With regard to TBs-with tuberculosis, two important trials. One is a sub-analysis of the STRIDE clinical trial that look at the optimal timing of antiretroviral therapy in patients with active TB. The question that they wanted to answer is if we have to wait and adjust efavirenz when we are giving rifampin. You can see here what

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happened with efavirenz Cmin in patients taking rifampin when they weighed less or more than 60 kilograms.

You can see that efavirenz levels decrease, but they are still above the therapeutic level. You can see that there is no impact whatsoever in virological efficacy. These patients who weighed more than 60 kilograms that have lower levels of efavirenz, did as well as patients who weighed at least 60 kilograms. Take home message is that, these data do not support weight-adjusted dose of efavirenz during rifampin treatment.

Until now, the best option to treat HIV in patients taking rifampin has been efavirenz, but in this very nice trial presented yesterday and also a late breaker, they compared a new option with efavirenz and that is raltegravir. They compared two doses of raltegravir, raltegravir 400 mg b.i.d. versus raltegravir 800 mg b.i.d. versus efavirenz. You can see here after six months of follow up, the efficacy rates were very similar in the three arms; so supporting the use of raltegravir in patients with active TB receiving rifampin. The dose of raltegravir is still not defined. We have to wait for a 40-week data for PK data, but this really opens the field for using raltegravir as an alternative to efavirenz in patients with active TB.

We haven't seen a lot of new hep-C data, but I thought it was very important for the assistants to know that in patients in this nice study from the VA administration, they compared hep-C mono-infected patients versus co-infected HIV and hep-C co-infected

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patients. The important finding is that it's all very similar to antiretroviral therapy. You can see here that the risk of hepatic compensation is higher in co-infected patients even if they are receiving antiretroviral treatment. We should really take this into consideration when we are following co-infected patients even they are receiving ART.

In terms of aging and co-morbidities, a hot question in HIV therapeutics is if aging is accelerated in HIV-infected patients? There was a very nice study from Amsterdam that looked at the presence of co-morbidities in HIV-positive patients and a very good aspect of this study is that the population of HIV-negative patients was very carefully selected.

They serve many of the risk factors for co-morbidities with HIV-positive patients. You can see that each age strata, there were co-morbidities in the HIV-infected patients than in uninfected patients. Take home message is that co-morbidities are more prevalent on most HIV-positives compared to uninfected controls of similar age.

Following this, we show also DAD presentation comparing the causes of death in two different periods from 1990-2000 to 2009-2011. The take home message again is the difference in mortality and the causes of mortality. There are changes.

Death rates—that's the good news—in people with access to care are decreasing. AIDS is still the leading cause of death as you can see here and non-AIDS cancers are currently the leading non-AIDS cause of death. Adjusting to time has been a challenge, but there are

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some comfort seeing that in the poster area space, some colleagues have trouble adjusting to space. Thank you very much for your attention. [Applause]

ALAN WHITESIDE: Thank you very much indeed, Jose. The track rapporteur for Track C is Audrey Pettifor, an Assistant Professor in the Department of Epidemiology at the University of North Carolina who has worked on determinants of HIV and STI in sub-Saharan Africa.

AUDREY PETTIFOR: Good afternoon. Today, I'm going to present some of the highlights from Track C Epidemiology and Prevention Science. I'd like to thank the fabulous Track C Team who made this possible: Sinead Delany-Moretlwe, Al Liu, Christopher Hurt, Sheri Lippman, and Nora Rosenburg.

A cross-cutting theme of the conference acknowledged the milestones we have achieved where we now have a range of effective tools we can use to prevent new HIV infections. The real question now in an environment of limited resources is how to deliver these interventions, to maximize efficiencies and effectiveness so that we can get to zero new infections. A number of presentations thus focused on the epidemiology of infection-who is most at risk and who should we target?

What interventions should we use in these populations? We don’t yet know how newer interventions will work in different populations, the best combination of interventions, and how we deliver them to achieve maximum coverage and impact. Who to target?

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We're familiar with the distribution of HIV globally. We know that different regions and populations are more severely impacted than others.

The US epidemic was an important focus of the conference given the significance of not having had the meeting here in 20 years. Dr Fauci opened the conference on Monday morning highlighting the severity of the epidemic in Washington DC where prevalence is equal to that seen in many countries in sub-Saharan Africa. Many presentations highlighted the disproportionate burden of infections that young MSM of color face in the US. Of 1.1 million people living with HIV is the US, African-Americans represent half of all infections though they only represent 13% of the population.

Dr. Koblin and Dr. Mayer presented data from HPTN 061, a cohort of Black MSM in six US cities. The study found an overall HIV incidence of 2.8-percent per year, and this increased to 5.9-percent per year among those under 30 years of age. A number of presentations on Tuesday also highlighted that Black MSM in the US are less likely to be on ART or to be virologically suppressed compared to White MSM.

The importance of cities to the epidemic was emphasized in multiple presentations. Dr. Schwartlander highlighted that the majority of people living with HIV by 2030 will be living in urban areas. Supporting this, a synthesis of epidemiologic data from countries in Eastern and Southern Africa showed that 30 cities in the region are host to 30-percent of the HIV epidemic with implications for targeting of programs.

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A number of presentations at the conference highlighted the importance of targeting populations that have often not been the focus of surveillance or programs in generalized epidemic settings. MSM, IDU, sex workers, adolescents, aging populations, transgender persons, and discordant couples were all populations highlighted as being at risk and where we must focus more attention.

In the plenary on Wednesday, Dr. Rao Gupta highlighted the disproportionate burden of HIV among adolescent girls in Sub-Saharan Africa where among 15 to 24-year-olds, approximately two out of every three infections are among young women. Prevention of HIV infection in adolescents remains a key priority globally and gender inequity must be addressed if we are to turn to tide on transmission.

Dr. Beryl and Dr. Kerrigan presented a systematic review of HIV prevalence among female sex workers in low and middle income countries demonstrating that sex workers experience an approximately 14 times higher burden of HIV as compared to other women of reproductive age. The same investigators also highlighted the tremendous burden of infection faced by transgender people. In a global meta-analysis, transgender women were 50 times as likely to have HIV compared to the adult population. This reality is compounded by the disparities in treatment coverage where there are large inequities for socially excluded populations.

Of course, critical to our understanding of the epidemic is being able to measure new infections, to monitor the burden of

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disease, characterize the epidemic, and guide programming and evaluation.

Investigators are working on assays and algorithms for incidence estimation. Dr. Laevendecker and colleagues presented one such multi-assay algorithm which performs—once we know who to target, the question then moves to identifying the right intervention or package of interventions for the target population and determining how to achieve maximal impact. Not too long ago, the range of methods we had in our toolbox was limited to the list you see here on this slide. Evidence was presented that many of our old prevention tools are working when implemented effectively and at scale.

Dr. Bailey and Bertran Auvert from two of the original male circumcision trials, show that male circumcision continues to be a highly effective for heterosexual men. Dr. Bailey demonstrated that the protective effect of MC was sustained at 65-percent more than five years post intervention, and Dr. Auvert showed that HIV prevalence in Orange Farm has continued to decline among men as MC coverage has increased.

PMTCT continues to be a powerful prevention tool. Important advances presented at this conference highlighted the Option B Plus regimen where pregnant women are initiated on treatment irrespective of CD4 count. This regimen simplifies programmatic approaches to PMTCT and facilitates integration of maternal and child health ultimately protecting not just the child, but also the mother and the family.

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In Malawi where Option B Plus is being rolled out, Dr. Schouten presented data showing that HIV-infected mother-infant pairs are still being missed due to not being tested and testing at immunizations visits resulted in finding 37-percent more infected mother-infant pairs.

Importantly, many sessions emphasized the opportunities for integration of services to optimize quality care delivery. Of specific importance integration of sexual and reproductive health and HIV services was emphasized as key to reducing unwanted pregnancies, reducing MTCT, and improving acceptability and uptake of HIV services. The plenary this morning emphasized the need for integration, of TB screening, and treatment into HIV care.

Like PMTCT, harm reduction plays an important role in our prevention strategies. Data from Amsterdam shows that needle exchange is working. Unsafe injections are down and incidence is declining. In Vietnam where it's estimated that IDUs account for 75-percent of all new infections, an RCT was shown to significantly reduce needle sharing. Dr. Marshall in the late breaker today presented results from mathematical modeling of combination prevention for IDUs stressing the importance of harm reduction programs, including high-coverage of sterile syringe distribution.

Now, moving to newer technologies in particular ART as prevention, mathematical models were presented to examine the impact of expanding treatment to other risk populations and subgroups and at different CD4 levels. Models showed that balancing efficacy with cost

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effectiveness meant that often targeting highest risk groups in the US, for example, injection drug users or those with lower CD4 counts, for example, under 500 CD4 was more cost-effective. Overall, context and resources constrained the level at which scale-up of treatment as prevention could be achieved both in the US and in Africa.

Of course, testing is the entry point to ART as prevention and coverage of testing must continue to be a focus. Despite high ART coverage among MSM in the UK, HIV transmission has not decreased substantially in this group. Dr. Brown suggested that the majority of transmission is attributable to undiagnosed men, emphasizing the need to improve testing coverage. To expand testing, we need to explore new delivery modes.

Results of a study using home HIV rapid testing to screen sexual partners and high-risk MSM in New York City found that a high proportion of partners agreed to test and close to 10-percent tested HIV-positive and no unprotected sex was reported after testing. Data from South Africa where a large HIV testing campaign was launched by the government in 2010 found that over 13 million people were tested by June 2011. The result being that HIV-infected people are being found sooner. In Thailand, peer-delivered counseling and testing to IDUs was more acceptable than conventional counseling resulting in higher uptake and acceptance of testing.

Interventions to improve retention in care were also presented. Both domestic and international studies demonstrate that when we invest resources into tracing ART patients who are out of

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care, we can decrease loss to followup and improve retention. Data from Africa also shows that taking delivery of ART out of the clinic and into the community improves retention.

Switching to pre-exposure prophylaxis, we know from trial data that PrEP like ART works when taken. Adherence is critical for the success of all ART-based prevention and is dependent on a realistic perception of HIV risk in those using these interventions. Supportive contexts for adherence behavior are key.

The key question is how PrEP will work in the real world. Given the recent approval of PrEP by the US FDA and new WHO guidelines on PrEP use, there are important questions about who should use Prep and how it should be used and delivered to key populations. Dr Mugo emphasized that for young women in sub-Saharan Africa we might think of PrEP as being used for a season to get them safely through a period of incredibly high risk.

A number of studies were presented on PrEP knowledge, acceptability, and potential for risk compensation. Overall, knowledge of PrEP was fairly low among a range of populations, although acceptability was higher. There were some indications of the potential for risk compensation.

However, until demonstration projects show if this is in fact real, it is hard to know how willingness to use and risk compensation will play out. Critical to the success of these programs will be the role of structural factors or critical enablers not only as they pertain to risk of infection, but also with regard to the

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impact they will have on the uptake and effectiveness of interventions.

Multiple presentations emphasized the importance of social and structural factors such as poverty, stigma and discrimination, gender inequity as key factors that must be addressed in order for our interventions to achieve intended outputs. Dr. Millet presented data showing how structural factors in the US such as poverty and healthcare influence the treatment cascade in Black MSM in the US.

Dr. Cluver demonstrated that adolescents who were from AIDS-affected homes, who had been abused and experienced hunger were significantly more likely to report engaging in transactional sex compared to those without these risk factors. A modeling exercise presented by Dr. Wirtz demonstrated that increasing coverage of comprehensive community-empowerment interventions combined with access to ART could avert up to 40-percent of new infections.

In summary, we now have a full complement of interventions in our toolbox, a huge achievement. We still have a lot to learn about how best to implement some of these newer interventions and how to combine them with our tried and tested interventions. We still need effective interventions that target factors such as discrimination, poverty, gender inequity, and social exclusion. Addressing structural factors is essential to the success of combination prevention efforts and will be necessary to turn the tide on HIV. Thank you. [Applause]

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ALAN WHITESIDE: Thank you very much, Dr. Pettifor. I love the fact the male circumcision slide you used Cox regressions. I assume that was by chance. [Laughter] I'd like to introduce the speaker rapporteur for Track D. You are allowed to laugh by the way. I'd like to introduce the Track D Rapporteur, Bagele Chilisa, who is a Professor and Researcher from the University of Botswana. She's currently the PI for an NIH-funded grant to design and test efficacy of culturally linguistically appropriate interventions to stop the spread of HIV primarily among adolescents.

BAGELE CHILISA: Good afternoon, everybody and a special thank you to the Track D Team. In this presentation, I will highlight some of the themes that were repeated throughout the five days in Track D. Most specifically, I would like to point out that structural drivers of HIV/AIDS, children and adolescents, key populations and the law, and prevention were some of the themes.

Throughout the conference, the roles of structural drivers of HIV were highlighted. These are poverty and food insecurity, gender power dynamics, gender-based violence, alcohol abuse, migration, stigma, discrimination, and social exclusion, and mental health. More research is still needed to identify the role played by structural drivers and possible interventions driving the epidemic. Concern was raised on the lack of research and attention to mental health and HIV/AIDS in this conference.

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Now, I turn to adolescents. All of us, men and women here today regardless of sexual orientation, drug use, and HIV status have been children. Some of us are still raising children while others will raise children in the future. The question throughout this conference was, are we doing enough for children?

As parents, researchers, activists, policymakers, we need to conduct research on children that can inform evidence-driven interventions. There are 3.4 million children worldwide infected with HIV. This figure is likely to be an underestimation in the absence of disclosure by parents, prevailing stigma and discrimination, and differential requirements for age of consent for children testing across countries.

There was further consensus that there is a research gap on children who use drugs even when we know that the majority of drug users are children between the age of 10 and 18. There is also a research gap on children who are sex workers, boys who have sex with boys, street children, refugee children, and children in conflict with the law. Throughout the conference presenters reported that children between the ages of 10 and 18 are often excluded from research. This is often due to issues and challenges related to informed consent and reluctance of governments to address sexual and drug-use behaviors among children and youth.

The situation is not all bleak. PEPFAR introduced its new guidance on programming for orphans and vulnerable children. This is

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good practice and lays the foundation for research, monitoring, and evaluation of programs on children.

The research that we have already shows that AIDS-affected children experience severe risks. In South Africa, a girl who has healthy parents, enough to eat, and is not abused has a 1-percent chance of having transactional sex. If she has an AIDS-ill parent, is hungry and is abused, she has a 57-percent chance of having transactional sex. If we ignore care and support for these children, they will become the next key population for HIV infection.

Now, let's turn to key populations. Throughout the conference, there were life testimonies, voices of sex workers, drug users, men who have sex with men, and transgender populations. They shared stories regarding the violence, stigma, discrimination against this population. Day after day the conference echoed the harmful laws that criminalize HIVs, sex work, drug use and same-sex relationship. Fifty-percent of all countries criminalize sex work and HIV. The end result is that there is limited research and information on HIV prevention, care, and support for these groups.

We need to know more about inherent risks and vulnerabilities of these populations, but research is made difficult by challenges of ethical approval and recruiting research participants from populations that are criminalized and forced to hide their identity. We do not know enough to design evidence-based interventions to turn the tide against HIV/AIDS in these populations. Law and policy have the ability to further marginalize and silence

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key populations. The composite voice and presence of sex workers and drug users is lacking at this conference.

The consensus is that we need enabling legal environments to end AIDS. We need to review laws that criminalize HIV, sex work, sexual orientation, and drug use. [Applause] Criminal justice systems should be guided by science in the response to HIV. There is also need for the review of law enforcement practices. Often carrying a condom is used as proof by police of sex work. As one panelist remarked, we cannot tell sex workers to use condoms to prevent HIV, and on the other hand, arrest them for carrying condoms. [Applause]

We know that policies are designed and enforced by governments. There is a correlation between the level of corruption in a country and its ability to reach target goals for HIV. For instance, the graph above shows that those in countries with high levels of corruption have less access to ARVs. The message is that as we lobby for the eradication of discriminatory laws, we should also lobby for zero tolerance of corruption in all countries. [Applause]

Throughout, the mood of the conference was that we are here to learn from one another and that we need to take to our communities whatever works to stop the tide. There is consensus that the complexity of HIV needs a combination of integrated prevention programs. These include interpersonal communications, short group intervention at facility level, mass media campaigns, community mobilization such as those in Malawi, Rwanda, China to name a few.

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There is some consensus that culture and linguistically appropriate interventions designed with the communities and led by communities are most likely to work. The study by Steffanie Strathdee and colleagues is a good example of combination intervention that work and can be replicated in other countries. The study which was a well-designed randomized controlled trial of Mexican IDU female sex workers shows the efficacy of an intervention that combined behavioral change with structural interventions to increase availability of condoms and sterile syringes.

We have realized that social science, virological science, advocacy and community programming was work together if we are to turn the tide. We have to turn the tide together. Thank you. [Applause]

ALAN WHITESIDE: Thank you very much indeed for rapporteuring on a complex and important issue. Our Track E Rapporteur is François Dabis, a medical doctor, Professor of Epidemiology at the School of Public of the University of Bordeaux in France. Dr. Dabis has worked for 25 years in research on HIV Epidemiology and Global Health in France, West Africa. He's the adviser of the French Agency for Research on HIV and Viral Hepatitis ANRS for Research in Lower Income Countries. Dr. Dabis. [Applause]

FRANÇOIS DABIS: Good afternoon. I'd like to start by thanking the organizers for giving me the opportunity to report on Track E achievements. This would not have been possible

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without the incredible work of the team that accepted to join me and whose names are listed on the slide. Many thanks to the five of them.

The scope of Track is quite large and with seven relevant plenaries, 35 sessions, and many more posters, the theme was undoubtedly important to understand how we are turning the tide together. In proposing a key direction to the end of AIDS, Tony Fauci showed that implementing sound interventions was an essential piece of the puzzle, relying on adequate health systems and appropriate financing mechanisms. In addition, the field of what the science has produced needs often what is called implementation operational research.

My summary will be divided into the two components: first, implementation science and health systems and second, economics. I will start by addressing four of the six basic program activities shaping now the AIDS investment framework, the concept amply presented at this conference and now commonly accepted to guide our thinking and action globally and locally.

First, elimination of mother-to-child transmission—a goal set for 2015. I cannot think of a better example of a change for good than the recent decision of the UN agencies to promote the B Plus Option. Starting to treat all pregnant HIV-positive woman with combination ART will have so important and multiple benefits as highlighted in this business case. It should make a clear difference for achieving two of the three

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objectives of the AIDS Investment Framework, zero new infections, and zero AIDS-related death.

The only outcome indicators reported by Malawi at this conference, the first country to embark in the implementation of the B Plus Option, are quite encouraging with a six-fold increase in the number of pregnant and breastfeeding women starting ART within a year. There is now a clear need in Malawi like elsewhere to conduct implementation research to learn more about the consequences of this new public health approach.

The adequate provision of early infant diagnosis remains clearly one of the bottlenecks of the PMTCT program. In Haiti like in several other countries, information technology is already helpful to make appropriate clinical and therapeutic decisions in due time for children born to HIV-positive mothers. PMTCT services have often been criticized for being too vertical. In the Democratic Republic of the Congo, we learned that decentralization could be a problem rather than an immediate solution and this tend to be important in the scaling up of the B Plus Option.

Voluntary male circumcision is the second prevention intervention I would like to discuss. We have now wide differences in program uptake from less than 1-percent to more than 40-percent in the 15 target countries listed on this slide. Why is this so? In other words, how effective are scaling of programs?

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The Swazi experience is quite encouraging. The reduction in HIV prevalence among those having benefited from the intervention under routine circumstances was very close from what we had learned from carefully randomized trials and the first pilot programs reported in the past two years. However, we should be aware that in many countries these programs are stretching the health workforce quite seriously. Medical doctors cannot be the sole and central piece to deliver all these prevention services. Task shifting and more community involvement are required and will need to be explored.

Let us move now to the leaking cascade that start with HIV diagnosis and goes to long-term followup after ART initiation. We have seen this frequent data several times during this week and it's worrisome that only a fourth of those diagnosed positives start ART when needed. There is, however, good hope. The introduction of new point-of-care technologies, for instance, to measure CD4 cell count and pseudo-viral load seems all ready to make a difference in the first part of the cascade like in Zimbabwe, but technologies yield sometimes unexpected outcomes.

In Tanzania, community health workers were invited to send text messages to provide client-based data on HIV testing. Although the early results were in favor of this technology, they reversed after six months for a mix of technical, logistical, and behavioral issues that need to be explored

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further. Besides technologies, we should never forget the human factor so critical in dealing with life-long diseases and treatment.

In South Africa, a community-based adherence support program use patient advocates somewhat similar to case managers and mostly people living with HIV. They showed excellent result in achieving virological suppression, reduction in mortality, and improvement in retention with many less patients lost to followup. The human factor both on the health system side and at the community level is, at least, as important as technology advances in optimizing the cascade of care and treatment.

We have for the first time at this conference the direct demonstration at population level that life expectancy improves a few years after ART is introduced in the heavily affected community. This again is dramatic—more than eight years and even more for woman than for men. This is excellent news for communities, excellent for those who are involved in the organization of this massive scale-up of health services and for those who have to take the decision to invest in such interventions.

The fourth critical pillar of the AIDS Investment Framework consists in serving vulnerable groups. In Ukraine, the diagnosis was made that there was a demand to organize a provision free of charge of services to injecting drug users and sex workers by pharmacy. Those that are working better with

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already existing civil organization services, but what has been implemented and sometime experimented so far, at least for prevention, are individual interventions.

Time has come to develop and promote truly comprehensive combination HIV prevention programs including the most advanced approaches such as treatment as prevention and PrEP. Although there was no results available at this conference, we learned that, at least, three community-based cluster randomized trials were designed and exploring now this critical question.

Let us now move to economics and see what can be the smart approach in a global context of financial uncertainties and a rapidly evolving economic world. New mechanisms such as conditional and unconditional cash transfers have been recently experimented and had beneficial effects on civil health and education outcomes among orphans and vulnerable children. However, money is not enough in this context to achieve a sustained effect on adolescent risky behaviors.

In Rwanda, a country that was quoted as a success story in many talks at this conference, the uptake of the community-based health insurance scheme on the left and of ART use on the right was strikingly high and parallel. The overlapping of HIV and non-communicable diseases is now well-characterized epidemiologically and is almost universal. Non-communicable diseases can benefit from the experience of HIV/AIDS program.

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Nevertheless, the question of integration and co-funding is not resolved in most countries.

At country level, Brazil showed us how to use the compulsory license mechanism with the dramatic reduction in the unit prices of efavirenz and a rapidly increasing number of patients benefiting from this drug. Economies have designed a proper surveillance system to monitor trends in ARV drug price at international level and can now understand better their determinants. The conclusion is that the generic competition has been a driving force for the decrease in drug price. First-line treatments of the current drug generation are probably now at the lowest possible level, but margin of improvements do exist for second and third line possibly by 50-percent. The fact that many countries are becoming middle-income countries makes the situation more complex now in negotiating prices with the pharmaceutical industry. The risk to universal access compromised there should be closely monitored.

The 2012 Washington DC toolbox of smart investment can be proposed with six pillars.

Country ownership. In the past two years, more resources against HIV/AIDS have come from domestic efforts than from international aid for the first time in history.

Equity. The basic social protection system emerges progressively almost everywhere and helps tremendously those living with HIV. Decision makers and program planners focus

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more now on intervention that have proven efficacy and can be delivered efficiently.

Community have now shared responsibility with the health system.

Strong partnerships take multiple forms.

Finally, new mechanisms of international and domestic financing are progressively put in place and will provide long-term sustainability of programs against HIV/AIDS and other health and poverty problems.

The central financing question raised during this week can be phrased very simply. How do we pay more now to avoid paying forever? My rappoteur team tracked very carefully the official announcements during the conference, and I can say that at the best, USD 200 million extra have been announced this week, a very small amount to fill the gap that is on this slide.

To conclude, Track E conveyed four important take home messages this week. Let me summarize them for you. First, let's continue to invest on implementation research to learn what works and how this can be replicated.

Second, we cannot reach the desired targets without strong health systems that work together with communities. Third, when investing in HIV/AIDS we invest in health systems as a whole. Fourth, as said by the co-Chair of the conference,

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Diane Havlir, last Sunday we must now invest in this epidemic and we will save lives.

In other words, by not filling the 7 billion gap, we kill people and reduce our chances to reach an HIV-free generation. I hope the rapporteur of Track E two years from now will show how efficient we have become, but more importantly how this gap has been filled. I thank you very much for your attention. [Applause]

ALAN WHITESIDE: Thank you, François. Ladies and gentlemen, François made a mistake. Before we came on to the stage, he asked me to be kind to him because today is his birthday. Join me in wishing him a very happy birthday. [Applause] How nice it is to see a Frenchman turn crimson. [Laughter]

Ladies and gentlemen, let me invite the lead rapporteur for the Leadership and Accountability Program. Volderine Hackett is the Head of the Strategic Information and Communication at the Pan Caribbean Partnership Against HIV and AIDS Coordinating Unit of the Caribbean Community Secretariat. Her work in information and communication spans 12 years and she has worked on HIV and AIDS over the past seven. Over to you.

VOLDERINE HACKETT: I wish to remind that the Leadership and Accountability Program Committee envisions a revitalized global, national, organizational, and personal

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commitment and responsibility for ending the HIV and AIDS epidemic. Its mission is to nurture and present the leadership excellence needed to achieve its vision. It's goal is to engage new, nontraditional, and existing leaders for a rapid and measurable progress against HIV and AIDS.

I'm pleased to report that coverage of this program over the past six days has indicated that significant progress has been made in reaching this goal. I pause here to acknowledge and to thank the dedicated team of rapporteurs: Ms. Ogunbanke of Trinidad and Tobago, Dr. Mohamed of Guyana, Dr. Mesquita of Vietnam, and Ms. Nithya Krisham of the United States.

Leadership as defined by its contribution to turning the tide on HIV involves the international interventions, the political will of Governments, the advocacies of practitioners, the tolerance of stakeholders, active involvement of civil society, the driving force of research, provision of adequate funding. [Applause]

What were the messages on leadership and accountability? There were five major ones in our estimation.

1. Leadership comes from all levels.

2. Leadership is a shared responsibility.

3. Leadership is dynamic and innovative.

4. There is no leadership without accountability.

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5. There will be no AIDS-free generation without accountable leadership.

There was general recognition that progress made to date was due in no small measure to political leadership. For example, some presentations reminded of the 2001 resolution by over 100 world leaders at the United Nations Special Session on HIV and AIDS that established the Global Fund. We were reminded of the 2003 vision and commitment of former US President George Bush which led to 8 million people being on treatment and the establishment of PEPFAR, and of the repeal of travel restrictions against persons with AIDS under the administration of President Obama which facilitated the location of this conference. [Applause]

We were reminded also of the many countries, for example, in the Caribbean which despite their small economies have invested their own resources including loans to support the response and to turn the tide of this epidemic. We were reminded of countries like France who are using innovative means of raising funds to turn the tide of the epidemic also.

There is recognition also of the advances in the field of science. The Federal Drug Administration's recent approval of Truvada has inspired hope for an AIDS-free generation, but as demonstrated by this year's Red Ribbon Awards, leadership came from other levels and from other fronts. Over the past five days we've learned how corporate leadership benefited both

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company and community. How health policies and program design continuously evolves to reflect new information, changing trends and feedback on what works and doesn't work. In all of these, we learned that partnerships and shared responsibility have been most effective.

For example, the Global Business Coalition in Health which brings together over 1000 companies contributes to national and community programs across the spectrum of prevention, treatment, and care. Levi's Strauss and Company have partnered with over 30 local non-governmental organizations across the world and have reached retail employees in over 675 stores. We learned that the South African Textile Workers Union provides male circumcision services to workers as well as their neighbors. These are just a few examples of leadership in the sector.

Over the past days we also learned how drug users were the driving force behind initiatives to curb the spread of HIV and hepatitis C, and that harm reduction and other services and programs for people who use drugs were most successful when drug users were incorporated as leaders. Sadly, however, we heard that this leadership potential is often underutilized or goes unrecognized.

We learned of the leadership by the UN family working with countries to advance the human rights of lesbians, gays, bisexuals, and transgender persons and to address gender

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inequities among other social issues. We learned of the work of organizations such as the International Association of Women Judges who work with judges and legal practitioners to ensure that women and men are not disposed of property in Africa.

We were given a chance to learn about the effectiveness of faith-based organizations as partners in the response and even to hear an apology for their role in perpetuating stigma, particularly, at the beginning of the epidemic. [Applause] We learned how in Africa one faith-based organization established a 1500-strong network of religious leaders living with HIV to fight stigma and to turn the tide against the epidemic. We also learned they were willing to take on a more active role in driving the process to an AIDS-free generation.

Several sessions demonstrated how youth are catalysts for positive change and how social media are important tools in HIV research, advocacy, prevention and management, and the creation of partnerships. These sessions also demonstrated that youth leadership is a valuable source of dynamism and innovation, and that youth have the psychological advantage of being born in an era which did not expose them to the early horror of people dying of AIDS. Their enthusiasm, passion, and agitation for inclusion in the decision-making process was evident.

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Jaevion Nelson, a Jamaican youth speaking at the Caribbean Regional Session on Sustainable Development and HIV said young people are more than articulate testifiers.

Our energies must be mobilized to hold our leaders accountable. We heard how in Russia, young people used social media to combat negative framing and to end a situation of pervasive stock-outs of drugs for HIV-positive patients and in Canada, how researchers used social media to take the content to the people.

We heard and we learned that turning the tide of the epidemic was possible by innovative, dynamic and committed leadership which came from many fronts and many levels. Despite these advances, we learned also that racial inequality, disproportionate health status, and restrictive health and immigration policies still support a myriad of health and human rights abuses especially in the minority and migrant populations.

We learned also that in spite of the data and evidence showing high prevalence in incidence of HIV among men who have sex with men and transgender people, their health and HIV and AIDS needs are often ignored in national AIDS responses. We learned also that women made up half of the global HIV epidemic in sub-Saharan Africa and in the Caribbean, with rates as high as 57 and 52-percent respectively.

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We learned also from the skills building workshop on the Inclusion of the Disabled in National Strategic Plans that many countries though they have ratified the UN Convention on the Rights of Persons with Disabilities have not addressed the problems facing this group which accounts for 15-percent of the world's population.

In our coverage, we were reminded that universal access to prevention, treatment, and care, and support services is a prerequisite for an AIDS-free generation, and that accountability through monitoring and evaluation were powerful tools, but we were reminded also in the skills building sessions on leadership and accountability that it should not be taken for granted that accountability is understood by the complex and diverse stakeholders working in the field of AIDS.

We learned that an essential component for success in country ownership is the ability of nations to understand and to use accurate fiscal data and for citizens to be able to monitor spending. There were sessions which surprised us of recourse mechanisms, for example, the Universal Periodic Review offered by the UN which is a protocol to pressure governments in improving health standards and conditions pertaining to HIV and AIDS.

We heard calls for accountability including universal minimum standards of care, transparent systems for tracking both resources and results and the use of evidence-based

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information to address laws, policies and practices that hinder universal access. We heard calls for accountability, not only from governments and non-governmental organizations, but also from the donors and personal accountability.

Where do we go from here? We were told to tell you, change the existing paradigm, and adapt an approach which combines biomedical and behavioral interventions for greater impact; invest more in scientific research; share the responsibility through country ownership and partnership and find innovative mechanisms for the necessary financing to carry the tide to an AIDS-free generation. We were told to tell you to exercise bold and decisive leadership for more effective and meaningful partnerships with youth, persons with HIV and AIDS, the LGBT community, commercial sex workers among others.

We were requested to tell you to recognize that universal access, zero infections, zero AIDS-related deaths, zero discrimination cannot be achieved without including the world's largest minority, the disabled. [Applause] We were mandated to tell you that strong and accountable leadership from all levels and all fronts has become even more critical for an AIDS-free generation. I thank you. [Applause]

ALAN WHITESIDE: Thank you very much, Volderine, for your report and for your hard work. We need to recognize that all these rapporteurs have a very difficult task and they're doing extremely well backed up by teams. I'd like to invite the

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next Rapporteur from the CPC. Garry Brough works as Membership and Involvement Officer for the Terrence Higgins Trust in the UK. He's been living with HIV for 22 years and he said to me, he hopes that the passing of equal marriage rights will mean that he and his American husband can live happily ever after in whichever of their home countries they choose. [Applause]

GARRY BROUGH: Thank you. I wanted to open with a fairy tale reference since this story began as a nightmare 30 years ago. The first wave of the epidemic was amongst gay men here in the USA, a marginalized population that nobody wanted to listen to, but the response to the horror was anger and activism. Something we, as a community, had developed in our fight for the recognition of our human right to love which enabled us to be heard and to eventually have our needs met in a world which didn't really want to hear.

Fast forward 30 years to the day and we seem to have woken up out of the nightmare to a fairly mundane appearance of everyday life with the reality of effective treatment, day-to-day pill taking, and regular checkups to monitor our blood counts, and life lived as normal as any other average Joe. At least, that is how it feels to me as a gay man living in a country where I don't need to fight for my basic human rights, health or social care.

In the mid 90s when I was dying of AIDS and too ill to work, my taxes and my government insured that I was looked

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after and in the nick of time for me, antiretroviral therapy arrived.

It wasn’t easy to take, but it was a damn sight better than the alternative. I recovered, grew strong and went back to work starting the process of paying back the support and the love I've been shown by paying it forward to those that were going through the same difficulties I had faced. Things have even changed to the extent that my American husband lives with me in the UK, recognized legally as my civil partner. We co-own an apartment; two HIV-positive gay men who are able to get a mortgage, buy a home and live openly together. [Applause]

The nightmare is over, right? The reality that I and my peers who have access to medication and the support we need to live well with HIV would have seemed a fairy tale 20 years ago, except that this is not everyone's everyday reality. I'm a member of a key population which sounds very special and important, doesn’t it? Better than risk group, at any rate. What links the worst of us special enough to be a member of a key population? What we have in common in my opinion is our historical marginalization, our disempowerment, our shared struggle against social injustice.

In countries with relatively developed social support and human rights, we are still the other: gays, drug users, trans people, sex workers, immigrants, prisoners, people of color. In those countries where human rights have yet to

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guarantee and equitable healthcare system, education for all and the support that is needed to make life bearable in times of difficulty.

We're all these groups. We were also the general population, the 99-percent disenfranchised by poverty, war, and years of oppression whether by colonial powers, dictatorships or religious regimes. These disenfranchised and marginalized populations, these key populations are still fighting to be freed from the day-to-day nightmare of a life in which they are afforded little dignity or respect.

What is being demonstrated again this week throughout the sessions the community rapporteurs have attended is the fact that we must still fight against social injustice, against laws and judgments that not only prevent us from being who we are, but that discourage or actively prevent us from being able to access the medication and support that we need. HIV seems to shine a light on those areas that we least want to look at, but by necessity must deal with in order to create a just, equal, and healthy society.

Punitive laws and restrictions that prevent people living with HIV from traveling to a number of countries, drug users and sex workers from entering the US, men for expressing their love for another man in Africa or women from playing their full and equal part in civil society have made their presence felt in almost every session that we've attended and

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we will not make the progress needed to turn the tide until we address these issues globally, [applause] but we are seeing successes and we do now know what works.

Treatment has improved to the extent that we can both treat and prevent HIV. Although in this process, we need to be as vigilant as ever that human rights are not trampled upon in the rush to find a public health solution to the epidemic. Thanks to treatment, we're already able to prevent HIV infection in the most vulnerable in this world, the newborn child with ARVs to ensure that none will be born with HIV, but we still need the political will to strengthen health infrastructures to carry this out effectively. We also need to demand from our governments and from drug manufacturers that they ensure that patent laws and restrictive pricing do not inhibit the effective global role out of this life-saving medications. [Applause]

Our medical process with childbirth has ensured that children are born without HIV, but if our schools do not educate these children, they will not have to tools to manage their sexual health when they become adolescents.

We have to make sure that they are taught and supported wherever we can. We now see that we must also consider the older generation and how best to manage the difficulties that old age brings as these difficulties are undoubtedly exaggerated by HIV.

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While global and national responses are essential in terms of law and structural barriers, the need to work and change things at a personal level is just as crucial and this has been the other theme that my team most wanted to highlight. At the grassroots level we, key populations, are an essential component in the solution.

We've spent 30 years fighting to be heard and developing our skills and are now fully qualified to share what we have learned with our peers in the community. Our involvement must not end there, however. The GIPA principle has long promoted the involvement of those of us who have first-hand experience living with this virus within the larger process of change.

Claiming our equality also means claiming our place at the table where the changes that affect us are decided, be they be political or clinical. We, the people with HIV, need to hold not only those in power accountable for the changes that are needed, but to be accountable ourselves and to step up further.

While I've heard most speeches from HIV activists and advocates in places of power and influence this week than at any previous conference, we have yet to count our number amongst the top level politicians and policymakers. The time for talking is over. We need to demonstrate that we are capable of effecting meaningful positive change and be ready to take those positions of power and influence.

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If we are to succeed in this, we need to continue to speak out honestly and loudly as Phil Wilson asked us so eloquently in the opening plenary session challenging as to take responsibility, ownership, and leadership; and as Linda Scruggs and so many of our brothers and sisters have done with such passion throughout the conference.

Communication is key and we are now in an age where the technology to communicate on a global level is more accessible than ever before. Sessions on the power of social media to share strategies, to promote prevention messages and support healthy behaviors and adherence show how these methods are able to reach people on a scale and with an immediacy that was unimaginable until very recently.

We need to master and use these tools effectively if we're to mobilize our community and effect genuine change. Amongst the injustices and inhumanity of a world that is increasingly skewed towards selfishness and getting our own needs met at the expense of our neighbors lies the truth that together we are stronger than our status as marginalized groups would suggest.

That is why we continue to fight because it is a fight we can win. I'm already living a dream, but it is not enough that my needs are met when my brothers and sisters, my comrades around the world still die and suffer in oppression and poverty. [Applause]

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This virus challenges us all to accept and to help and this is what we have spent this week, and for many of us here, most of our working and waking hours trying to do. We try to be of service and to the greater good. I look forward to the day and I intend to live to see it for myself when the dream becomes a reality and we are all able to live happily ever after. Finally, I'd like to thank the amazing team who helped me throughout the conference and then put together this presentation. Thank you, [Applause]

ALAN WHITESIDE: Ladies and gentlemen, we come to the last two rapporteurs who will have six minutes each. That is not a reflection of their importance. We're going to hear from the youth and from The Global Village. I realized how important it is that we hear from young people. When I came in this morning and I came up past the condomized stand that you've all seen there and there was no one there.

The condoms were there, the air wasn’t blowing and they were limp and I thought deflated. [Laughter] I thought that's probably how a lot of people feel about at this point in the conference which is why we need the youth to come up and invigorate us because you have to carry the struggle forward. [Applause]

No pressure, James Gray from the Peer Education Team Leader at ACON, the largest community-based HIV and LGBT Health Organization in Sydney, Australia. I'd like to invite you to

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come up. As it says on his bio, he has worked with UNAIDS in Bangkok. He has been an Australian Youth Ambassador for Development and he's also a volunteer with the HIV Young Leaders Fund. Thank you, James. [Applause]

JAMES GRAY: Good afternoon and a very special welcome to all the young people and youth force participants we have here today. [Applause] In the Australian tradition, I would like to begin by acknowledging the traditional owners of the land upon which we are meeting and I pay my respects to the elders both past and present. [Applause] I would also like to thank the youth rapporteurs: Lorraine Edwards, Kimberley Atkins and Jesse Hagedorn [misspelled?] who have worked tirelessly over the last week to bring us this presentation.

This year, we have a record number of youth delegates with over 2000 in attendance at this conference. This throws into stark relief the diversity of young people affected by HIV; young people as sex workers. They use drugs. They are transgender. They are parents. They are men who have sex with men. They are gay. They are straight, and within these categories there is yet more diversity. However, most of all, young people are resilient. They are not waiting around for others to help them. They are not victims. They are active in their communities and they are taking leadership wherever they can.

Young people have been hit hard by the HIV epidemic making up about 40-percent of new infections and this underlies the importance of considering young people in all interventions and all policy decisions. Throughout this conference, young people living

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with HIV have been very active. The complexities of growing up with HIV and moving from adolescence into adulthood require significant attention as negotiating sexual and romantic relationships is a complex task even without the complication of HIV. There is still significant gaps in service provided and knowledge and competence in responding to the sexual and reproductive health rights needs of young people living with HIV.

More broadly in many countries, legal and rights frameworks remain problematic and impinge on young people's ability to fully engage with services and access treatment. Young men who have sex with men including those who identifies as gay, queer or bisexual or any other identity experience higher rates of HIV than the general population. They face significant barriers to accessing services due to intense stigma and discrimination and sometimes criminalization. Despite the clear evidence-based need for greater investment, services are far too few in number and remain chronically under resourced in most settings.

Young people can also be sex workers. Unfortunately, we really didn’t hear from them this week. Let's not let this lack of access to spaces like this transfer to a lack of visibility or a lack of action in supporting their health and rights. [Applause] If there is one thing that seems to makes people more uncomfortable than talking about young people and sex, it's talking about the barriers that prevent young people who use drugs from accessing harm reduction services. However, as with sex workers, the exclusion of these people

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from this conference has meant that these voices have not been heard as much as they should have.

You may have also seen stickers around the conference asking where are the transgender people and that's a very good question. I attended an excellent satellite on Sunday. I wish you could have all been there. HIV, particularly in young transgender populations, needs far greater attention and we need to empower this communities to respond in the way that they see fit.

Young women and girls are facing disproportionate burden of HIV in many places around the world and this is fundamentally an issue of rights and equality. Many existing youth programs despite the best of intentions often become dominated by young men and this provides a massive barrier to access. We also need to break a certain stereotype about young women that they will only engage in sex due to pressure from men.

Until we address the social, cultural, and political barriers that impede young women from having the right to pursue pleasurable sexual relationships on their own terms, we will not end this epidemic. [Applause] The implementation of comprehensive sex education is another necessity. You must be able and wiling to talk about sex before you can talk with any authority on safe sex and this also involves acknowledging the role of pleasure in sexual decision making. [Applause]

By the time young people can get funding for the projects they wish to implement, assuming they can get it at all, it has

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usually gone through so many layers that there is little left for them to use to implement, let alone consider paying any salaries.

If I can be permitted to plug an organization I'm involved with, Innovative Funding Mechanisms that allow young people to decide what gets funded like the HIV Young Ladies Fund deserve a great deal more consideration and attention than they have received so far. When broader services engage with young people, they need to do so in a language that is accessible.

Most of you would recognize many of the acronyms on this slide. That makes you special. Most people would not make heads or tails of these. Sector jargon is an insidious base that burrows all the way down to implementing organizations and this can really create real barriers to engagement particularly with young people. [Applause] We also must note the potential for innovative uses of technology and in particular social media. This is allowing young people to connect with each other and educate themselves.

Youth leadership can come in a variety of forms. Young people can and do become leaders without the support of the, shall we say, more mature members of our communities. However, for us to reach our potential sooner, the key is mentorship. This is very different to capacity development; at least in as far as capacity development happens in the HIV sector. Mentorship takes time. It takes patience. It takes commitment from both parties, but it is one of the most valuable ways that you can contribute to the future of our response to HIV.

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I have a challenge for every person in this room, whether you're in a small community organization, a large multilateral, whether you're a researcher or a community member, find someone to connect with and commit yourself to spending time with him and I will personally commit to doing this within my community.

At the youth pre-conference attended by over 200 young people, many of which were scholarship holders, three advocacy messages were launched. We want access. We insist on partnership. We demand equality. [Applause]

No one has all the answers. As I look at the quilt to the back of this room, I am reminded of how lucky I am to live in a time of great hope, a time when the idea of an AIDS-free generation is actually within our grasp. We are not there yet, but by giving young people the access they need, by acting in partnership, and by advocating for equality of all, I'm sure we can get there. Thank you. [Applause]

ALAN WHITESIDE: Thank you very much, James. We come to the final rapporteur from the Global Village, an amazing complex and I do hope people found time to visit it and see what people were doing there. Well done everyone who was there. [Applause]

Our final rapporteur is Dimitri Nicholson from Guyana, who has been implementing HIV prevention programs for the past 12 years with youth, indigenous people, and other vulnerable

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populations. Dimitri, the floor is yours for the next six minutes. [Laughter]

DIMITRI NICHOLSON: Thank you very much. Good afternoon, ladies and gentlemen and I see The Global Village has brought itself upstairs. Being the last person to speak, I know lunch has passed so I think everyone might be filled by now. Thank you very much for your attention.

The Global Village has been a true global community with strong continental representation from a variety of people and cultures. In the Global Village, like any community with great diversity, energy, and energy we were committed to ensuring that we can see growth and change for the better.

For better or for worst, we've had our fair share of protests and celebrations. What was most critical to note in the Global Village is that there was a very strong call for the protection of human rights of people especially LGBT and the sex work community. Many of the actors of the Global Village have recognized that a protection of rights will lead to greater change [pause] and respect in our countries so that these vulnerable groups can access healthcare and play a greater role in preventing new HIV infections. I forget to put on the slides. Sorry about that, it happens after lunch. [Laughter]

The challenge of preventing the spread of HIV is a great one and it has revealed to us many on the line attributes of our societies, many of which are reducing the impact of the strides that

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have been made over the years. More and more governments need to take steps to implement programs and policies to protect all the people they serve. Then and only then will we start turning the tide together to end HIV in our communities. [Pause]

In the Global Village, we also saw high levels of participation of people living with disabilities at various events. This was welcomed. It was a pleasure to know that everyone felt comfortable enough to participate in all the activities of the Global Village.

My friends, stigma and discrimination remain a challenge to the community and we have heard from many people at different levels that stigma and discrimination needs to be addressed. They've pointed out that getting to zero requires greater emphasis on the stigma and discrimination still associated with HIV and AIDS and other lifestyles in our communities. People know the facts, but their attitude towards people living with HIV is very slow in changing.

The display of talent at the Global Village was enormous. The Village has demonstrated that more can be done with youth through the creative arts and sports to increase the effectiveness of prevention work and reduce stigma at all levels in our communities. Donor commitment is vital to the work that we do.

Since many of our governments still cannot afford the task of preventing new infections on their own, the benefits gained from PEPFAR though significant could be reversed if support is not

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maintained until we can effectively prevent new HIV infection on our own as countries.

The youth energy and enthusiasm we have seen in the Global Village reaffirms to us that our global partnerships will allow us to turn the tide together and get to zero. Thank you very much. [Applause]

ALAN WHITESIDE: Ladies and gentlemen, and those who are transgendered, we come to the end of the Rapporteur Section of the 19th International AIDS Conference. On behalf of the IAS, I would like to thank you. I would to give special thanks to the rapporteurs and their teams. [Applause]

You worked so hard to prepare these excellent reports. Well done. Thank you also to the production team, the IAS staff again who worked so hard to make this happen. [Applause] Most of all thank you, the delegates, for coming to this and for making this audience alive. The struggle continues, but I believe we are making progress. Thank you very much indeed. [Applause]

[END RECORDING –]

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