Preparing for PrEP: A Stakeholder's Dialogue

Conference Proceedings

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INTRODUCTION

Pre-Exposure Prophylaxis (PrEP) is an innovative and controversial HIV prevention strategy that involves the daily use of existing antiretroviral medications to protect against potential HIV infection.

There are several reasons to express cautious optimism about the potential of PrEP as antiretrovial agents have begun to play a significant role in the reduction of HIV transmission. Nevirapine is efficacious at reducing the risk of mother-to child transmission, zidovuine is routinely used to protect against occupational exposure, and data from recent studies has demonstrated that intermittent PrEP can provide significant protection to macaque monkeys exposed to simian HIV.

PrEP clinical trials are currently under evaluation in 13 countries across the globe. With more than 20,000 participants enrolled in eight different studies, the trials are seeking to discover if there are differential seropositive conversion rates between experimental and placebo conditions while examining issues related to safety, efficacy thresholds, risk behaviors, drug sharing, and adherence. If proven to be safe and efficacious, antiretroviral-based prevention, coupled with an effective implementation strategy, could provide us with an important expansion to the HIV prevention toolkit.

Ongoing & Planned Advanced Stage PrEP Clinical Trials ■ August 2009				
Study	**Location**	**Population**	**Study drug**	**Expected Completion**
US Extended Safety Trial (CDC 4323)	United States	400 men who have sex with men	Tenofovir	2009
Bangkok Tenofovir Study (CDC 4370)	Thailand	2400 injection drug users	Tenofovir	2010
CAPRISA 004	South Africa	1200 heterosexual women	Tenofovir	2010
iPrEX	Brazil, Ecuador, Peru, South Africa, Thailand, United States	300 men who have sex with men	Truvada	2011
TDF2 (CDC 4940)	Bostwana	1200 heterosexual men and women	Truvada	2010
Partners PrEP	Kenya, Uganda	3900 serodiscordant heterosexual couples	Tenofovir & Truvada	2012
FEM-PrEP	Kenya, Malawi, South Africa, Tanzania, Zambia	3900 heterosexual women	Truvada	2013
Voice (MTN 003)	South Africa, Uganda, Zambia, Zimbabwe	5000 heterosexual women	Tenofovir & Truvada	2013

Conference Goals

The goal of this one-day conference was to examine the challenges and opportunities created by the advent of PrEP and to discuss what the future of HIV prevention could look like with this revolutionary biomedical intervention.

WELCOMING REMARKS

Mary Jane Rotheram-Borus, PhD
Center for HIV Identification, Prevention, and Treatment Services (CHIPTS), UCLA, Los Angeles, CA

This conference brings together the best of policy makers, researchers, community advocates, and practitioners to begin a dialogue about the potential of PrEP as a viable strategy in the fight against the global HIV epidemic. This conference is the third of a five-part series sponsored by UCLA's Center for HIV Identification, Prevention and Treatment Services (CHIPTS) and the National Institute of Mental Health. Though we do not yet have results of the international PrEP trials currently underway, there are many issues that should to be addressed immediately. We come together to discuss issues surrounding costs, acceptance, behavioral dishinibition, dosing, long-term implications, and more. Before PrEP becomes a reality each of these concerns must be attended to. Today we will begin a dialogue around these critical issues in preparation for the global opportunities that will arise once the initial PrEP trials data becomes available.

Andrew D. Forsyth, PhD
National Institute of Mental Health Prevention and Behavioral Research Branch, Bethesda, MD

This is an exciting time. The advent of PrEP is very promising but we need to balance excitement about the potential impact of PrEP with a healthy dose of caution. Over the last few years we have seen a number of very promising biomedical strategies experience setbacks and caution balanced with optimism about this potential tool is warranted. Today we will hear about a number of critical issues that will be the essential components to PrEP implementation strategies should the trials data provides the signal we are looking for. Welcome to a thought provoking and stimulating discussion.

Thomas J. Coates, PhD - Conference Facilitator
CHIPTS and the UCLA Program in Global Health, Los Angeles, CA

Thank you to the conference sponsors: The National Institute of Mental Health and the Ford Foundation. Thank you to our conference collaborators: Global Campaign for Microbicides, Project INFORM, Black AIDS Institute, Forum for Collaborative HIV Research, AIDS Vaccine Advocacy Coalition (AVAC), AIDS Project Los Angeles, Community HIV/AIDS Mobilization Project (CHAMP), and National Alliance of State & Territorial AIDS Directors (NASTAD).

PrEP Overview

Kevin Cranston, MDiv
Massachusetts Department of Public Health Bureau of Infectious Disease, Boston, MA

Dr. Cranston provided an overview of ethical and resource-related considerations concerning the implementation of PrEP. Both excited and scared about the potential of this technology, he spoke to the central role that public health departments will play should data drive us in the direction of implementation.

Like many significant policy decisions, current assessments related to PrEP are based on limited information and being made faster than we would like. Dr. Cranston's remarks were contingent on several assumptions: 1) clinical trials will report reasonable levels of efficacy, uptake, and adherence; 2) federal funding streams (Ryan White and CDC Cooperative Agreement) will continue at reasonable levels of allocation; and 3) there will *not* be a new and dedicated funding stream to support PrEP implementation.

Ethical considerations and resource considerations are inexorably linked, "we can't move forward ethically without sufficient resources…and the resource challenges themselves raise core ethical issues." Should PrEP interventions come to be, one of the first challenges will be the selection of eligible individuals and populations. Many questions should be raised: What will be the level of personal risk that will justify a PrEP intervention? What are the rigors of PrEP and will they be acceptable to individuals, policy makers, and implementing agencies?

A question central to the long term PrEP engagement of at-risk populations was broached: Are there other less invasive, less expensive, less onerous interventions available? Using intravenous drug users as an example, Dr. Cranston reminded the audience of the successes achieved by needle exchange programs and behavioral interventions. Yet, at the same time there are populations for whom our existing prevention interventions have proven unsuccessful. After 25 years of intensive work, there are still unacceptably high levels of HIV transmission in the MSM community and, for certain sub-sets of this population, PrEP may be the best hope at chipping away at HIV incidence.

Another major concern pertained to the readiness of our medical system to implement PrEP. Implementation would require frequent testing; ongoing medical support; management of side effects; comprehensive medical care; integration of medical care with support services; and a life long involvement in an invasive medical intervention. Dr. Cranston was unconvinced that care providers are in any way ready for this amount of work.

Testing and prevention resources are not equitably distributed in the United States. Will PrEP protocols be accessible to, and useable by, a broad range of medical providers? What levels of training will be necessary to enable medical providers to assist those in PrEP interventions? There is well-founded concern that PrEP implementation may reinforce racial, ethnic and geographic disparities in this country.

Resource considerations were then discussed. Noting that there is no consensus in the HIV community about investing in PrEP, Mr. Cranston advocated for separate and discreet PrEP resource allocation. He expressed deep concern about the possibility that the excitement surrounding PrEP may prematurely urge the allocation of resources - redirecting funding from current prevention resources already tapped to the limit.

Federal treatment resources do not currently support PrEP implementation. Ryan White provides treatment for documented HIV+ individuals and CDC prevention resources prohibit expenditure on medications. These restrictions exist for a reason and PrEP, a biomedical intervention intended for HIV uninfected individuals, falls somewhere in the middle. State resources are limited and highly unlikely to be an option for the financing of PrEP.

Dr. Cranston closed by returning to the ultimate challenge of distributive justice. If data show a highly efficacious intervention, how will decisions be made about eligibility? There needs to be a way of ensuring voluntary participation and equitable access for individuals from a broad range of backgrounds, behavioral risk, and stated intent around readiness to utilize PrEP in accordance with expectations.

Connie Celum, MD, MPH
University of Washington Department of Global Health & Medicine and Partners PrEP Trial, Seattle, WA

Can something on the order of a pill a day really be effective in preventing HIV? There is promise but we have to be realistic about the amount of work it would take to make this a reality, explained Dr. Celum. PrEP is not the only way that antiretroviral (ARV) drugs are used in HIV prevention. ARV therapies for infected mothers are successful in preventing transmission to their children while ARV treatments of uninfected, breastfed, infants have been used to successful curb infection from HIV+ mothers. Recent investigations in bio-medical prevention technologies include topical and subcutaneous treatments, pre and post exposure prophylaxis, and intermittent dosing regimens.

Dr. Celum reminded participants that the idea of prophylaxis is not new nor is it limited to HIV. It has a rich, successful history as malaria prevention for travelers, post exposure to tuberculosis, and the prevention of mother to child HIV transmission.

The ideal drug used in a PrEP intervention would be potent, act rapidly, concentrate in the genital tract, be easy to use (no food restrictions or drug interactions), be a different class than ARV treatment drugs, have a high barrier to resistance, and be affordable. Safety is paramount. Although there are no drugs that meet all of these criteria, two drugs are currently used as first generation candidates: Tenofovir (TDF) and Truvada (FTC/TDF).

Dr. Celum provided an overview of the eight current clinical trials examining the efficacy of PrEP across the globe. With more than 20,000 participants in 13 countries, these trials are examining different populations in different geographic locations using systemic or topical treatments. The trials are seeking to discover if there are differential seropositive conversion rates between experimental and placebo conditions, while examining safety, efficacy

thresholds, risk behaviors, drug sharing, and adherence. Some data on the early studies is expected as soon as late 2010.

Dr. Celum's own study, Partners PrEP, is examining a group of 3900 heterosexual sero-discordant couples at nine sites in Kenya and Uganda.

It is important to recognize that these studies are looking at different aspects of PrEP implementation and in the coming years, results will yield a great deal of complementary information. These findings will help to disentangle the relationship between adherence and efficacy; learn about the short-term safety and tolerability of PrEP; provide more understanding about resistance; and learn about the impact of PrEP on behavioral risk behaviors.

What the current trials won't tell us, but what we'll still want to know, are concerns about the safety and efficacy of PrEP for pregnant and breastfeeding women and adolescents; the safety and efficacy of intermittent dosing; the safety and efficacy of other classes of drugs (i.e. CCR5 inhibitors); long-term adherence rates; risk compensation; or ARV resistance.

Despite all of the progress currently being made there is still much to consider and Dr. Culum recognized anxieties in treatment and prevention communities. The issues of targeting, testing, balancing feasibility and cost, population surveillance for resistance, concept preparation, who will pay, how long it will it need to be licensed, and how will it affect other prevention activities still need to be addressed. We walk this road unsure of what the efficacy of this technology will be. Will it fit into combination prevention strategies? We hope.

Craig Washington, MSW
AID Atlanta, Atlanta, GA

As the Prevention Programs Manager at AID Atlanta, Mr. Washington currently manages five prevention programs and his presentation centered on the many questions he, community members, and providers have as we await the data from the first trials. Although PrEP offers the promise of viability Mr. Washington expressed major concerns surrounding the representation of at-risk communities in ongoing trials and the ethical considerations of offering ARVs for prevention when across the globe there are HIV+ people who do not have access to ARVs for treatment purposes.

Mr. Washington advocated for comprehensive education and a commitment to prevention, justice, and safety should clinical trials indicate efficacy. Regardless of what happens with PrEP, there needs to be a focus on building healthier communities and reducing ever-widening disparities. There remains an ongoing need to address structural factors that influence communities at risk (e.g. laws and policies affecting affordable housing, needle exchange, and community prevalence reduction).

While several new biomedical/behavioral combination interventions exist, there is an over reliance on dated and prepackaged interventions. PrEP interventions would be integrated into existing prevention programs and CBOs serving at-risk communities must be involved

in education and training efforts. Comprehensive education for providers at all staff levels would need to be facilitated.

Once the issue of real world PrEP application was raised, Mr. Washington posed several more questions: How will we evaluate service gaps, drug interactions, side effects, and adherence? What is the impact of PrEP on the street market? What are ranges of dosages that may or may not be effective? How do we support and motivate adherence that is affective and realistic? Do we have the capacity to ensure free or low cost testing? How will testing capacities and protocols be expanded to meet the demands? How will PrEP be funded? Are there existing funding structures or do we need to retool for PrEP? What about the additional demands on our healthcare system?

Mr. Washington noted that the cost of PrEP could be a major barrier. In a discussion he had with young Black gay men, Washington found that a monthly cost as low as $25 would eliminate their willingness to participate in PrEP, even if the method was proven to be safe and effective.

PrEP must be used as a supplemental tool rather than a substitute for behavioral methods, (e.g. condom use, limiting partners, sex without intercourse). There are concerns about disinhibition and risk compensation that may accompany the use of an intervention such as PrEP. These concerns should be factored into how we plan interventions and treatment but they should not be a justification to withhold PrEP. Access to condoms does not increase or accelerate the onset of sexual activity and Mr. Washington expressed concern that this type of thinking will be applied to PrEP. He stressed that everyone has the right to viable prevention options that may help them to reduce their risk of HIV infection.

In closing, more information is needed about the strengths and challenges of PrEP and discussion like these will bring about more questions that will demand answers. We need solid arguments based on data, current realities of at-risk communities, and prevention principles to help us determine the path forward.

Kevin Fenton, MD, PhD
Centers for Disease Control and Prevention National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Atlanta, GA

The impact of PrEP will depend not only on the clinical trial results but on the care and deliberation of implementation planning. Dr. Fenton summarized the CDC's engagement in PrEP trials, how the organization is preparing for engagement in PrEP implementation, and their role in collaborative, strategic planning in the US and across the globe.

The new CDC Director, Dr. Thomas Friedan, is particularly passionate about the implementation gap - the time that it takes between trial results and the implementation and scale up of these interventions in communities. Part of his mission is to look critically at the gap to discover ways to improve the facilitation of knowledge into action.

The preliminary results for first PrEP trials will be available this fall but no single trial will provide the information that we need. These results will lead to more questions necessitating an ongoing series of secondary prevention trials.

Despite the absence of clinical trials data, the CDC has begun the process of strategic planning for PrEP with a focus on accelerating activities in four domains:

- Preparation of guidelines for PrEP implementation. Guidelines will be multi-faceted and include populations for whom PrEP will be recommended, initial screening requirements, the management of co-infection, resistance patterns, support services, adherence, monitoring, and possible adverse health outcomes.
- PrEP as a component of effective prevention toolkit. This technology is unlikely to be 100% effective and it will need to be combined with other prevention strategies. We need to find ways to ensure that PrEP is not used as a substitute for other interventions and continue to be diligent in the investigation of other prevention options.
- Cost and cost effectiveness of PrEP. The cost of PrEP would be substantial: estimates of a fully implemented program to reach the most at-risk populations exceed more than 1 billion USD. Thus, PrEP implementation would most likely require new resources, sophisticated analysis of the most cost-effective mix of prevention interventions, targeting strategies, and effective implementation.
- Reaching those at highest risk. Given the costs and complexity, PrEP should only be recommended for those at highest risk of infection. Policy makers and stakeholders will need to hold pragmatic and ethical discussions concerning eligibility criteria. Financial barriers to access will have to be considered as many of those at highest risk may be uninsured and reliant on public assistance.

Dr. Fenton underscored the importance of ethical considerations in the strategic implementation of PrEP. The CDC is currently consulting with national, state, and local partners about the methods, infrastructure and systems needed for publically funded PrEP implementation. Collaborative efforts include assessing the knowledge and acceptability of PrEP among potential users and providers; preparing stakeholders with potential communications and training; economic analysis; implementation needs assessments and differences between potential delivery sites; and demonstration projects that will assist real world feasibility of PrEP implementation.

CDC planning efforts are not limited to the United States. In collaboration with international partners (i.e. WHO, UNAIDS, and PEPFAR), the CDC is supporting planning efforts for PrEP implantation across the globe and preparing for the complex realities that will emerge should the technology prove viable.

Jeffrey Crowley, MPH
Office of National AIDS Policy, Washington, DC

How we talk about PrEP matters. Mr. Crowley spoke about the potential of PrEP in context of a National AIDS Strategy under development in an extremely politicized environment. Concerned about the high risk of demagoguery associated with

misunderstandings about PrEP, Mr. Crowley emphasized the importance of framing this so cannot be viewed as means for "irresponsible homosexuals to have more sex." Without caution in proceedings, the research community could face legislative barriers before we even get started.

Mr. Crowley cautioned that we will be expected to answer questions about what this means for individual behavior. Fortunately, there is a positive story to tell as there are numerous precedents - malaria and the prevention of mother to child transmission serving as two powerful examples.

Efficacy trials are just the beginning. Beyond the science, we have to think about implementing the complexities of PrEP technology in an already complex environment that is our national health system. There is uncertainty about cost, behavior change and resistance and as a community we need to determine if the payoff is worth the risk.

These uncertainties need to be considered in the different realities of the developed and the developing world. Having lived and worked in Africa, Mr. Crowley is cognizant of on the ground realities and stressed that long term cost commitments are necessary for effective implementation. The US has made a mark with PEPFAR. How do we consider PrEP within the context of our international commitments to treatment provision and the development of health care infrastructures?

We are embarking in a national dialogue about a national strategy. It is our responsibility to demonstrate not only scientific efficacy but that we have capacity to do this right. PrEP is now part of a national dialogue, and it is new and exciting, but we must not treat PrEP as the next magic bullet. We must proceed with caution so as to not let our hopes get ahead of the facts.

PANEL NO. 1: PREP CLINICAL TRIAL PARTICIPANTS

The AIDS Research Consortium of Atlanta recently conducted a clinical trial to examine the efficacy, safety, and adherence of PrEP among 400 MSM. The trial involved once a day dosing of Tenofovir (or placebo), comprehensive STI/HIV education, routine HIV testing, and ongoing counseling. Four trial participants took part in a panel discussion to share their experiences and discuss some of the challenges and opportunities associated with trial participation.

Kevin Farrell, LCSW – Panel Moderator
CHIPTS, UCLA, Los Angeles, CA

Lynwood Miller, RN – Panel Moderator
AIDS Research Consortium of Atlanta

Mr. Farrell asked panelists to explain some of their personal motivations for participating in the study. Three of the panelists cited a desire to give back to the community at large. Each had close friend(s) who were recently diagnosed as HIV+ and appreciated an opportunity to give back in some way. One panelist admitted that his reasons were not so altruistic and viewed participation as an opportunity to earn some much needed money. One of the four panelists was in a serodiscordant relationship at the time of the study.

Adherence issues are an integral part of PrEP discussions and panelists were asked to describe the challenges with taking a daily pill and strategies for routinization. Three of the four panelists were already taking daily medications and integrated the pill into their daily routine. One panelist reported that unlike his other medications, the study drug was not on the forefront of his mind, and forgot a dose even when other daily medications were remembered. The panelist who did not take other medications on a daily basis reported difficulty in adherence and used a pill box to serve as a daily reminder. One panelist reported that the presence of an electronic monitoring cap that recorded the number of times a bottle was opened and closed helped, "you couldn't fake it and that made me honest." All of the panelists agreed that the close, personal relationship with the counselor, as well as the knowledge that inconsistent use impacts effectiveness, assisted in adherence.

Dishinibition is a major concern and Mr. Farrell ask the panelists if they felt that access to PrEP would change behavior. Panelists were in agreement that we need to be realistic: people are not going to stop having sex and expecting people to be 100% responsible 100% of the time is idealistic. We can preach condom use and abstinence but the reality is that sometimes people aren't going to use protection. In addition, it's important to remember that even condoms don't always work. PrEP shouldn't be presented as a miracle drug. Rather, it should be seen as extra layer of protection (i.e. condoms or birth control) with information provision being key. One panelist was especially pragmatic. Knowing that he was enrolled in a study, he knew that he was equally likely to be on the placebo and knew that the responsibility for staying healthy was on him, "It is my responsibility to continue living HIV-free."

Mr. Farrell then posed the following, "If it weren't coupled with a trial - and the associated support - would it work?" The panelists were in agreement that outside of a controlled setting there were be a lot of opportunity for misuse. Participants felt that the real strength of the trial came from the education and counseling components. People have to be given

tools - information and support - to make the best decisions regarding healthy sexual behaviors.

The final question centered on communications concerning trial participation. Three of the panelists were very open about their participation and, in general, received positive reactions. The few negative reactions came from people concerned about potential side effects. The fourth participant felt that it was a private matter and did not share his enrollment status with family, friends, or partners.

Comments from the trial's Principle Investigator closed the panel. She cautioned that not all of the trial participants were as articulate, motivated, altruistic, or responsible as the panelists. Many participants were lost because they did not want to take a pill a day, they were afraid, or did not want to take medications associated with HIV. The trial participants were diverse yet many in greatest need of intervention were unwilling to take part. It is critical to remember that in the real world, people don't get the kind of attention they get in a clinical trial, and the counseling and relationships formed were critical to the trial's success.

PrEP Instant Text Voting

Eight questions were posed to attendees at the midpoint of the conference and attendees responded by text message.

Question	Result
PrEP would be a valuable public health strategy in my region	92% agree
Individuals from communities that are most impacted by HIV AIDS are being included in every stage of the PrEP process	68% disagree
The anticipated partial effectiveness of PrEP will be a significant barrier to its acceptance	63% agree
The anticipated stigma of taking PrEP and being perceived as a member of a group at high risk for HIV will be a significant barrier to its acceptance	57% disagree
The anticipated cost of implementing PrEP will be a significant barrier to its acceptance	92% agree
I think that funding for PrEP researched should be increased	83% agree
I intend to use the information gained from this conference to advocate for PrEP research	71% agree
I would like an update on the results of this conference to share with others	98% agree

PANEL NO. 2: SOCIAL AND CULTURAL IMPLICATIONS OF PREP

Social and cultural interventions are given a lot of lip service but oftentimes little investment. This diverse panel's goal was to begin a dialogue about the social and cultural implications of PrEP prior to the release of trial data. Each panelist was given an opportunity to introduce their organization and their interests concerning PrEP implementation. An interactive question and answer session followed.

Kenyon Farrow, MA - Moderator
Queers for Economic Justice , New York, NY

Queers for Economic Justice is a non-profit organization that promotes economic justice in a context of sexual and gender liberation. Mr. Farrow's primary interests surround adult LGBT homelessness and the impact of public assistance and welfare policies on the community.

Dazon Dixon Diallo, MPH - Moderator
Sisterlove, Inc., Atlanta, GA

Sisterlove is a 20 year-old reproductive justice agency focused on sexual and reproductive health for African American women and women of African decent. Ms. Diallo's interests lie in how prevention interventions take the unique geographical, cultural, social, political, economic conditions of the Deep South into account. In regards to PrEP, her focus is on the politics surrounding implementation, the division of resources, and AIDS exceptionalism.

Stephen Simon, JD
LA City AIDS Coordinator's Office, Los Angeles, CA

With a background in law and policy, Mr. Simon's primary concerns surrounding PrEP have to do with health disparities, health justice, and the ongoing fight pertaining to resource division for populations at risk (e.g. MSM vs. women of color). His interests include the debates surrounding funding requirements and risk compensation/behavioral disinhibition. Mr. Simon called for honesty about the fact PrEP will be a factor in decision making and behavior *will* change as a result.

Camille Abrahams, MS
Harm Reduction Coalition African American Capacity Building Initiative, New York, NY

Harm Reduction Coalition is a national organization that works to promote the health and human rights of drug users. Rooted in a standpoint of practical realism, Ms. Abrahams is interested in the preparations of organizations for PrEP integration and how to best assist those organization that cannot (or do not) want to integrate biomedical technologies into their prevention packages.

Linda Villarosa
Author/Journalist/Freelance Writer, Brooklyn, NY

Ms. Villarosa is a health and advocacy journalist who has brought the HIV epidemic to the nation's attention with groundbreaking pieces in Essence magazine and the New York Times. As a journalist her job is to translate ideas discussed in forums like these into information for public consumption. Her interests lie in the ways that PrEP will affect people in their daily lives.

David France
Journalist/Freelance Writer, New York, NY

As a journalist, Mr. France has been covering the AIDS epidemic since the early 1980s. His interest in PrEP stems from a recent realization that HIV incidence was rising in gay communities after decades of decline. Disturbed by the idea that there might be prevention methods that are not reaching their intended targets, Mr. France is intrigued by the promise of PrEP and wants to know more about what this could mean for members of at-risk communities.

Trina Scott
Advocates for Youth Young Women of Color Initiative, Washington, DC

Young Women of Color Initiative is a component of Advocates for Youth, an organization that helps young people make informed and responsible decision about sexual and reproductive health. Ms. Scott called for the inclusion of adolescents in PrEP related dialogue as they have particular issues (e.g. cognitive development, peer pressures, legal, access, sources of care) that necessitate their own discussions.

PANEL NO. 3: NEXT STEPS FOR PREP

The final panel focused on PrEP implementation strategies currently underway or considered essential. Representing organizations involved in research, implementation, and advocacy, each panelist spoke to their organization's priorities and anticipated direction for PrEP programming. An interactive discussion followed.

Judy Auerbach, PhD - Panel Moderator
San Francisco AIDS Foundation, San Francisco, CA

Andrew D. Forsyth, PhD
National Institute of Mental Health Prevention and Behavioral Research Branch, Bethesda, MD

NIMH is interested in the behavioral and social science aspects of PrEP implementation with particular emphasis on the effects that it will have on consumers. NIMH agrees with a number of the modeling studies looking at the potential public health impact and from their organization's perspective, adherence is one of the most important issues.

Highly relevant adherence research has been supported by the NIMH for several years. In addition, the organization has supported equally relevant research concerning decision making in the context of uncertainty. As an organization, they would like their research to inform some of the discussions surrounding implementation.

Why behavior? Dr. Forsyth referred to a survey that looked at attitudes towards PrEP in several hundred gay men. The vast majority of respondents claimed that even if proven to be less than 100% efficacious, PrEP would inform decision making around condom use.

NIMH priorities include finding ways to optimize prevention counseling message (with an emphasis on lasting effects); message framing and how best to communicate with those who would benefit most; comparative effectiveness; and community readiness.

Dawn Smith, MD, MS, MPH
Centers for Disease Control and Prevention Division of HIV/AIDS Prevention - Surveillance and Epidemiology, Atlanta, GA

With an ultimate goal of reducing HIV incidence, Dr. Smith presented the logic model that is guiding CDC processes and strategy.

In the event that trials data indicate efficacy the CDC is preparing to issue interim guidelines. Should these interim guidelines be released they will be followed by a fully developed and comprehensive course of action. In preparation for an interim analysis, working groups have been formed and committees established. Members include academics, health departments and community representatives.

The CDC is fostering several additional working groups, each looking a different piece of the PrEP puzzle. Some are focused on clinical content while others are population specific and deal with issues of messaging, recruitment, and retention. The CDC is actively engaging

technical expertise to guide development, ensure that the right questions are being asked, and the right issues are being addressed.

Dr. Smith reported that the continuation of stakeholder engagement is a priority for the CDC. Research and assessment will continue as well as economic evaluations and the creation of demonstration projects. Proposed and ongoing collaborative efforts include the development of screening tools; knowledge, awareness, and behavior studies; financing workshops; ethics workshops, monitoring and evaluation frameworks; and guidelines for serodiscordant couples wishing to conceive.

Kenneth Mayer, MD
Brown University Department of Medicine and Community Health, Brown University AIDS Program Providence, RI

Dr. Mayer has been intrigued by the use of ARVs as HIV prevention strategies for years and spoke to the issues of PrEP technology as a clinical investigator and as a practicing clinician.

From a research perspective, Dr. Mayer raised the issue of pharmacology options. Ideally, we would like to two different sets of HIV drugs-one for prevention and the other for treatment-and there are several drugs (in addition to Tenofovir and Truvada) that have the potential to be used in biomedical prevention. Although these developments are years away, there are short term considerations for intermittent PrEP that need to be addressed. What types of pharmacology options make the most sense while we wait for efficacy signals from the trials? Adherence and intermittent use mean different things for different populations and, should the trials prove efficacy, how do we extrapolate results from one population to another?

Thought needs to be given to clinical guidelines. Should prescription of PrEP be limited to HIV specialists? Regardless of who prescribes the treatment regimes, there will be a need to train clinicians on monitoring, optimal practice guidelines, cultural competency, and delivery of effective health messaging.

Deirdre Grant
AVAC Global Advocacy for HIV Prevention, New York, NY

AVAC is an international non-profit working to accelerate development and delivery of HIV prevention options. Ms. Grant leads an inter-organization PrEP planning body that aims to increase engagement and build research literacy in impacted communities.

PrEP is relatively new and still lacking the advocacy and education that has been given to other prevention options such as microbicides and vaccines. Recognizing that a large knowledge gap exists, both among providers and community members, Ms. Grant stressed the importance of bringing others along as the dialogue moves forward.

David Burns, M.D., M.P.H.
National Institutes of Health National Institute of Allergy and Infectious Diseases, Division of AIDS, Bethesda, MD

Dr. Burns outlined areas for future research that the NIAID hopes to support. These include bridging studies for adolescent and pregnant and breastfeeding women; the development of Phase 4 trials to examine rates of resistance, risk behaviors and adherence should PrEP is found to be effective; pharmokinetics and pharmodynamics studies to assist in interpreting results of PrEP studies and to inform future designs of intermittent PrEP usage; and supporting the development of pipelines programs informing the development of new and effective (e.g. longer acting, affordable, not currently used in treatment measures, high barrier to resistance) PrEP agents.

CONCLUDING REMARKS

Thomas J. Coates, PhD
CHIPTS and the UCLA Program in Global Health, Los Angeles, CA

We probably should not use the term PrEP anymore. Antiretroviral prevention is perhaps a more apt way to describe what we've come here to discuss. In the battle against HIV there has always been a triple track approach - prevention, treatment, and research - and we have always tried to avoid fighting amongst ourselves. By reframing this technology as antiretroviral prevention we can circumvent a host of issues, avoid dichotomization, and move beyond the internal arguments.

We have entered the phase aptly referred to today as the post-condom conundrum. Drawing on lessons learned in the fight for birth control rights, we can adopt a strategy of normalization. Preventing disease is a normal thing that people do. As human beings were hardwired to do things that are bad for our health - we do things that bring us benefit now in favor of things that may be of benefit to us in the future. How many people in this room are on Lipitor? How many have taken anti-malarial prophylaxis? By normalizing anti-retroviral prevention it becomes an issue of disease prevention.

As with everything in else in the fight against this disease we have tensions. With this technology we are facing the battle of public health vs. morality: the right to viable options to protect one's health vs. how other people think other people should behave. It's not an easy issue to navigate - at the same time we call for acceptance we applaud anti-smoking measures that stigmatize people who choose to smoke cigarettes. We're also facing the issue of social justice (having access to a viable option) vs. financial realities. Resourced nations have financial and moral obligations in our own countries and across the globe. Do we give it to people at home without the disease before we give it to infected people abroad? And finally, there is the dilemma of social justice vs. universal access: should limited supplies be limited to those who need it the most?

In the scale up of testing and the roll out of male circumcision we have learned that there is a pressing need to shorten the implementation gap. As we've learned today, the CDC, health departments, and a host of others are working on the guidelines and practices that need to be defined. While some entities are preparing for post clinical trial research, others are investigating the policy options at our disposal.

There has been a tremendous investment in public dollars for this issue. The financing of eight clinical trials with more than 20,000 participants provides us with a real way to get much needed answers. Government resources have enabled us to talk about this in this type of arena and that is a sign of true progress.

Thank you to everyone who made this a success.