CHAMP Strategy Lab
July 15, 2009
Call Notes

HIV Screening, Targeted Testing, and the Challenge of Expanding Testing in Distinct Communities

A. Cornelius Baker, National Black Gay Men's Advocacy Coalition (NBGMAC); and, AED Center on AIDS & Community Health

These remarks provide a broad overview of some of the issues our communities are confronted with as our communities engage testing and in a more proactive way.

Slide 2. HIV Prevention Strategies
HIV Prevention Strategies include a multitude or variety of different interventions. HIV testing and counseling is one but is not the sole one. This is an important point because over the last few years, we have been focused on HIV testing. The goal has been both to identify positives (1) to get them into care and (2) with the expectation that knowledge of serostatus often alone will result in decreased transmission in HIV. This approach is valuable to individual health and prevention in the community.

But we need a great variety of interventions to be effective.

Slide 3. Integrating HIV Testing into Routine Medical Care
Since September 2006 (when the CDC published revised recommendation for HIV testing for Adults, Adolescents and pregnant women) much discussion has been about how to get people tested in routine medical care, "opt in" versus "opt out ", what is routine care, and what is universal care. The 2006 recommendations are especially important for pregnant women. Important to recognize that a large segment of the populations most effected by HIV are not in regular or routine care.

Must look at a variety of settings – given the context of the absence of universal health care for all people. Emergency rooms, community health centers, outreach street setting as well as routine settings. The issues here include coverage and access to qualified physicians in communities (examples: deep rural south or mountain/western areas) that folks will have access too. In the absence of that, we need testing in a variety of settings.

Slide 4. National HIV Testing Day

Our dialogue and controversies over HIV testing are not new in our communities.

In the beginning of the epidemic there was a unified view of what voluntary HIV testing should look like: it should be voluntary and people could make a legitimate choice not to be tested. From 1981-early 1990s there were no effective treatments

available. Prevention was key in form of universal precautions, condom use and use of clean syringes.

In 1995 NAPWA evaluated HIV testing and the role we thought it played in responding to the epidemic. Most staff in NAPWA were positive and understood the role of testing for wellbeing; NAPWA promoted the National HIV Testing Day. Many people were not embracing of the concept; this was the pre-ART era. National HIV Testing Day has played an important role in de-stigmatizing HIV testing, and it is the norm.

The question now is "how do we achieve universal testing in our country?"

This talk from this point forward focuses mostly on the experiences and lives of Black gay men.

Slide 5. Comparative AIDS Prevalence, Major Cities
When we think about the different approaches, we must recognize that all populations, geographies, and cities are not equal. There is divergent burden of HIV epidemic in distinct communities and, therefore, approaches may need to be different. The challenge is how to have policies that relate to distinct needs without stigmatizing those environments, but also recognizing the reality that they may need stronger or different measures than places with low prevalence.

Slide 6. New HIV Infections among MSM by Race, 2006
When we look at the experience of the HIV epidemic on gay men overall, the plurality of cases is still among white gay men at 46% with black gay men representing 35% of the total epidemic. On the population-level basis (and extrapolating rates back to overall population, Black gay men are disproportionately impacted in the context of the gay epidemic if we assume their proportion in the gay population is the same as the overall population).

When we look at younger ages (13-29 years old), black gay youth are quickly becoming a majority of all HIV infections among gay men. The prevalence of HIV in white gay men is decreasing and the rate among Latino gay men is increasing slightly (these rates are in terms of diagnosed HIV infection).

Slide 7. Undiagnosed HIV Infection
The rate of undiagnosed HIV infection among blacks in 2006 was 9 times that of Whites.

Slide 8. HIV Prevalence and Young Black MSM

There is a wide divergence of HIV prevalence among gay men between younger and progressively older age groups. When we look at black gay men we see a high prevalence in all age groups with 15% prevalence in younger age group. By the time folks reach age 32 it is estimated at 46%.

Slide 9. HIV Prevalence and Proportion with Undiagnosed HIV Infection in MSM in 5 cities – NHBS, 2004-2005

Note the figures in yellow (on slide). Overall HIV prevalence is estimated at 25%; undiagnosed HIV infections are 48%. Younger gay men have much higher undiagnosed infections than older gay men.

The prevalence of Black gay men is 46%, but the undiagnosed HIV infections are 67%. When we think about that in comparison to the white gay male population, undiagnosed rate of 18%, what are the elements that create this disparity? Is it access to health care, availability of testing, cost of testing or other issues that might be in play? We need to look at these questions to reach a consensus on HIV testing policy.

Slide 10. Unrecognized HIV infection and Young MSM
In unrecognized infection there is no difference by race in delayed HIV testing or perceived risk for being HIV positive or unprotected anal intercourse.
Slide 11. HIV/STD Coinfection
For Black gay men, we have to look at related sexual health issues. HIV positive Black gay men are more likely than their white counterparts to be coinfected with gonorrhea, syphilis or other STIs. The burden of disease for gonorrhea in particular is much greater for Black gay men.

Slide 12. A Police Cocktail for Fighting HIV
Fauci's three-pronged approach to curbing HIV/AIDS looks at potential for PrEP, universal voluntary testing/immediate antiretroviral therapy ("test and treat" approach) and cure/functional cure research.

I would include in the cure research the development of an HIV vaccine.

Slide 13. Washington D.C.: Increased HIV Testing Has Led to Diagnoses Earlier in the Course of Disease
In the increased testing campaign first initiated by Dr Marsha Martin and continuing today under Shannon Hader, we see an overall increase in the number of those diagnosed early. Programs are being developed to create a sense of civic responsibility to get tested, in jail and medical setting screenings, in emergency rooms and public health clinics; the result is people getting tested earlier and, we hope, improving their health.

Slide 14. Voluntary "Test and Treat" Concept
Since 1995, there have been concerns about testing – and concerns are expressed in recent dialogue about encouraging testing and connecting positives to treatment. The major concern is protection of individual rights and how we define universal and voluntary testing. On the reverse side, we need to think about minority populations, or people that have a different cultural perspective on health care

seeking behavior. How do we create a sense of expectation in the quality of their health care, so that when they are getting their screening tests, there is an expectation that HIV will be one of the core areas that a physician is thinking about, because of the high burden of disease in their population.

Slide 15. Feasibility of Multi-Component HIV Intervention for Black MSM
This is the first large-scale study looking at HIV prevention intervention for black gay men. The study utilizes (1) social and sexual networks to encourage HIV/STI testing and (2) peer health navigators to guide Black gay men through appropriate health care systems. Over time, the study looks at whether HIV and STI prevalence decreases. The first study will be a feasibility study in a small set of locations. If proven to be successful, a large-scale study will be launched. This is an important opportunity to look at how we create population and culture specific interventions.

The Policy Component
We know that there is a high burden of disease in Black gay men and that they form ¼ of the US HIV epidemic. We know that overall HIV testing rates and patterns between Black gay men and white gay men are not that different, yet there continues to be a higher level of undiagnosed levels of HIV among Black gay men.

Greg Millet (CDC) has proposed is that annual screening is not sufficient. Perhaps we need to look at 2 or 3 times a year as a policy recommendation. The challenge is how do we form the policy and promote it. How do we make sure there are systems and payment structures that can accomplish it, have marketing and get people to accept it as a policy? And how do we do this without stigmatizing communities to such an extent that they refuse testing? At this point, we should be focusing on what will protect the individual. We should focus on policy development that might be appear to be stigmatizing -- because in the long-term, these policies will be far more beneficial for both the individual and the community. Therefore, we should change our policy discussion so that we move in that direction.

Discussion

Question: Dr Fauci's Post article was notable for its complete lack of attention to behavioral modification and the risks of development of multi-drug resistant strains if our main approach to prevention is widespread treatment. Are you suggesting that these are correct attitudes or do you feel that behavioral modification and traditional prevention are still needed?

I think that behavioral modifications will be needed but I'm not sure overall what we will be able to achieve in behavioral modifications alone. We need to look at a number of interventions together. Examples: structural interventions such as mandating seatbelt use or you get a fine, it changes behavior. We know that there are some structural interventions, like increasing price of cigarettes that can lower smoking rates a little; but, smoking rates have been stable for over a decade. When we think about sexual behavior, where we know even less in terms of what type of

behavior modifications that we are going to be able to do to impact the HIV epidemic in the long term, we are going to have too look at how we can integrate behavior and biomedical interventions together. An HIV vaccine would be best. We are not there; so what interim measures could we use – like the use of PrEP and ARV treatment. What level of structural intervention can we make that would impact sexual behavior?

Jeanne Bergman: How can we as activists and providers meet need to communities that have high rates of HIV and are untested – and, at the same time not profile or stigmatize those statistically more at risk because of their membership in certain populations…and, also, not impose expensive testing policies on the entire population (13-64 years old – with streamlining or elimination of informed consent process to accomplish that)? There are political and economic interests attempt to achieve this. Cornelius works to accomplish testing in a community with very high rates of HIV infection; yet, the political context in which this issue is fought is not addressing communities at risk; it has a very separate agenda.

> Cornelius: The policy to test everyone annually or once per lifetime is good for establishing acceptance of testing, but it might not be effective in certain high-risk communities. One probably needs both approaches: Generalized HIV testing policy and also specific guidelines for distinct populations. How do you do that without creating marginalization or stigmatization? Social justice issues come into play with trying not to stigmatize that group. For instance, legalization of gay marriage is in play in New York State. To the extent that state policies affirm the rights and dignity of individuals, it is easier for public health to establish policies to promote public health without reinforcing policies that stigmatize populations. How do we have social justice policy that supports public health? How does public health better utilize social justice policies to affirm its core principles of serving public health and enhancing the lives of every individual?

Q: Why not tie testing to number of partners and not to the calendar? For instance, get a test after every eight partners.

> A: Might be appropriate for come populations. But for Black gay men we see the paradox: they do not do more drugs than white gay men – and, in fact, they use less of certain less drugs associated with high-risk sexual behavior (like crystal meth) and have fewer sex partners. Basing test frequency on the number of partners rather than a sense of basic healthiness could further drive black gay men into a perception of well being that is not true. The issue is that the viral load in the community of black gay men is much higher – so even with fewer sexual partners, the likelihood of infection is greater.

Naina Khanna, Positive Women's Network: How can we effectively expand testing without placing the onus of prevention solely on the partner who knows

their status? This is particularly relevant in the context of the upsurge of criminalization of transmission cases, even where transmission has not occurred.

> **Cornelius**: I won't address the criminalization issue now.
>
> I think that there are two approaches that we need to take. Particularly for women, HIV testing should be a standard of care and that the offering of it should be reflected in every medical chart. We see that when people are offered a test they rarely decline. What we hear from many women when they test positive is that they are surprised, because they assumed their doctors had been testing for anything they are at risk for. We need to look at standardization within medical care. The second part is to increase the awareness, for women in particular, for what a standard exam should be (not only a pap smear and mammogram but also that you had an HIV test).

Test-and-Treat: Beginning the Dialogue

The Principles of Test and Treat (TNT)

Theresa Gable, Scientist, Family Health International (FHI) HIV Prevention Trials Network (HPTN)

This idea comes from a mathematical model published in Lancet. This talk summarizes the general concepts in that paper.

Slide 2. What is Test and Treat (TNT)?
TNT involves the combined use of HIV testing and of antiretroviral therapy (ART) as a prevention strategy.

Primary TNT Assumptions
TNT hypothesis rests on two critical assumptions. First, everyone in the community living with HIV is identified via testing (likely via universal testing). The second assumption is that positive people on ART with suppressed viral load will be less likely to transmit HIV to others. These two assumptions must be met for TNT to be successful.

Slide 3. Test and Treat Conceptual Framework

Left side (of slide): testing aspect. As more people know their status they can adopt safer behaviors and this applies to HIV positive and negative people

Right side: treatment aspect. Once people start ART they will maintain viral suppression

Both parts will decrease transmission either through behavioral change or through the concept that if you have undetectable viral loads your ability to transmit is lessened – and both parts together would greatly lessen transmission.

Slide 4. Primary TNT Assumptions
There are two critical assumptions that must be met in order for TNT to work.

- Everyone with HIV in the community is identified by testing through universal testing
- HIV positive individuals on ART with a suppressed viral load will be less likely to transmit HIV to others

Slide 5. Before TNT
Picture of community. In this scheme an individual can be in one of two places: inside the circle or outside the circle. All the dots on the slide represent a person.

Dots outside of circle represent people in community who do not know their HIV status. Dots inside the circle signify everyone knowing their status.

- The aqua dots are people who are HIV negative and they are inside and outside the circle.
- Pink dots are people who are HIV positive and have a detectable viral load.
- Pink dots in the circle are people that know their status but for some reasons are not on treatment, maybe they don't qualify for ART or for some reason have chosen not to go on ART or have lack access to treatment.
- Blue dots are only within the circle; they know their status, are on ART treatment and have an undetectable viral load.

Slide 6. During TNT

During the TNT intervention in general terms:

- Aim to get all in the community tested and counseled
    - So that everyone knows their status and has the opportunity to change their risk behavior
- Aim to initiate ART and achieve viral suppression

Slide 7. During TNT

After TNT has been initiated the significant difference is that the circle has expanded to include everyone. Also the percentage of people with undetectable viral load has increased in terms of the number of infections. There are still some people with detectable viral load because you will never be able to achieve the theoretical end of having everyone being undetectable. Regardless, this is a significant difference from the "before" picture

Slide 8. Issues to Consider

- People with suppressed plasma viral load may still be contagious. This is an issue that is being hotly debated and studied within the scientific community.
    - One of the issues is that plasma viral load is not directly correlated with genital viral loads (in vaginal secretions or semen).
    - There are other transient changes that can happen in viral load based in comorbidities or "blips in viral load"
- It is hard to stay adherent and maintain a suppressed viral load. Thinking of this as a long-term strategy makes us think about that component.
- There is a threshold at which the epidemic will slow down or even stop, even if some people are still infectious.

Slide 9. TNT Components

All these must be present:

- Increase HIV Testing – include entire community
- Increase Linkage-to-Care so that people don't get tested and lost
- Treat HIV+ with ART
- Increase adherence to ART and maintain viral suppression

- Promote prevention for positives

Slide 10. What is Special about TNT
- It works at both the individual and community level
- It involves many aspects of HIV prevention and treatment

Clarifying Questions

Bob Wood: Testing is not going to find everybody because most testing is antibody testing and we need to consider if we want to employ PCR nucleic acid testing to find people in the window who maybe particularly infectious (perhaps the Wohl model in North Carolina). In Seattle we found 13% in MSM through nucleic acid testing on top of antibody testing. Those people might generate more

Theresa: I would agree with that statement and the concept of TNT testing does not exclude that of searching for acute infections.

Toni: Can we explain the difference between the TNT and START study. The START study looks at which point ART should or should not be started by comparing different levels of CD4 count.

Theresa: I'm not well acquainted with the START study but from my understanding TNT is more comprehensive in that it focuses on both testing aspect and treatment. In theory with TNT everyone would be treated according to the mathematical model in Granich's paper that may not be feasible in practice but that is the mathematical model. I'm assuming START doesn't allow just anyone to go on ART

Response: START study is conduct by the INSIGHT Network and is asking the question for the individual when do we begin therapy. This study does not directly answer the question of when to begin therapy, but links HIV positive people to care and treatment according to guidelines.

A. Toni Young, Executive Director, Community Education Group, Washington, DC

I'm one of the few community people that are a big supporter of TNT.

Testing based on number of partners: When you live in a jurisdiction, such as DC, that has a density of epidemic that by some estimations is 3% in published data but could be as high as 7.5%, depending on the testing in certain populations. It is not a matter of how many partners you've had as where is HIV in that community. TNT gives us opportunity to crack that 25% threshold of those individuals that are undiagnosed and figure out new methods for HIV testing.

In DC HIV testing has been very successful in medical settings, but we need new methods to get people who may not come into testing in traditional settings. How do

we expand and increase the number of partners and the availability of testing throughout the community?

Also about showing the difference between individual level intervention and community level intervention and finally being able to merge the two together.

DC and the Bronx are the two places that this project will get started.

I think that there will need to be a rigorous evaluation process, because we are looking at individuals we had not been able to access before. TNT gives us the opportunity to design new strategies to reach many different communities.

It will expand HIV testing and give us new and innovative models to link individuals to care. We need to find ways to link the programs and communities that test well or access community well with others that link individuals to care and treatment.

TNT will also increase number of individuals that will be screened for STIs. It will give us the opportunity to disperse information on other health issues and health disparities. It is just a really good thing because we will indentify people who are HIV positive that were unaware of their status.

In places such as DC where we think we have an epidemic of 3%, but we just ramped up our venue based testing in the last three years. In a part of the community (like the area east of the river in DC that is historically under tested), if you are able to increase testing there in a systematic way, we believe that there will be higher incidence over time (perhaps as high as 10%), because we haven't been able to diffuse testing into the community. TNT would give us a resource to access this community and for it to bridge to care and ART for individuals that are recently diagnosed. This would be done within current guidelines, but more intensively. Perhaps these models could be used throughout the US.

It is important to have a conversation about it as it happens and clarify the distinctions between what TNT is and isn't.

Discussion

Israel Nieves: One of the challenges you will have with this is the title of your project. There are multiple components (see slide 9 from Theresa's presentation) that are included in the program but missing from the title of the project. I think what is missing is screening for other co morbidities and the discussion of engagement in care. There is discussion of adhering to care but not about engaging clients in long term care.

Theresa: The name does focus on just two of the points, while there are many to the program. If you go back to the assumptions, the whole program won't work unless

you maintain increased testing and treatment. The model in the Greenwich paper does not include any comorbidity testing. We are working to develop a protocol including many things. While we don't directly include additional STD screening that certainly could be included.

Toni: In DC, considering Hepatitis A, B and C rates, we are trying to figure out ways to access people for testing and treatment in a similar way to the TNT program.

Israel: In promoting prevention for positives, HIV+ persons disclose status and engage in sex with other HIV+ individuals. But this does not eliminate the possibility of transmission of other STDs.

Q: What is the impact of testing on health care cost and what should communities do to get commitment from drug manufactures to provide funding for prevention programs?

Toni: A method, like Test and Treat or what Cornelius spoke of, is what we are going to have to do and where we are. It my not be just HIV service providers that need to provide testing or where/how we do testing. We are going to have to bring in new partners. HIV may not be people's primary health issue, so we are going to have to make some choices. Some of this is going to be about AIDS exceptionalism. Do we move HIV to broader health care issues or do we ask other health care issues to come into HIV? If I look at health disparities across DC, HIV is very important and is the number one health priority of our mayor, but we have high rates of renal disease, diabetes, heart disease and so on. Can I have HIV testing and care and treatment be a part of that portfolio to better serve the individual, or do I look at it from an HIV perspective or overall health care perspective?

The second part of you question, DC is a unique position at this point, given the high exposure of the high rates of HIV and testing programs – so every pharmaceutical company is in DC trying to figure out what strategy to use locally. They now understand that they have to be an active part of prevention even though they make their money on the treatment.

Theresa: It is my understanding that in DC and NY there is underutilization. If suddenly people start getting linked more effectively to care, therefore, those people seeking care will not swamp the systems that are in place.

Julie: In a trial setting resources become available and there is a clarity of focus and drive that raises the quality of service beyond that has been seen before or after in the community. I have concerns in two directions for test and treat. What if we validate a model that requires attentiveness to referrals to care or other enhancements that aren't available when it is generalized to a non-trial setting. Or what if that isn't attended to and it could be that TNT would work in the context of attentiveness to cultural barriers and dealing with service provision issues. And not

taken care of and thus the modeling is invalidated due to lack of quality in the service structure.

Theresa: Those points are well taken and in our research we are trying to figure out ways handle this. We don't want to create a system, even though we are doing the on the community level and are trying to do it on top of what already exists. We don't want to do a substitution, so that some services could be taken away and then not returned after the study was done, or do things that we can do to learn with structural issues that are surrounding the environment that the services are provided.

Toni: I think that this is a model that is an opportunity for those of us in HIV service provision community to look at our model at how we've done things. Are we doing things because they are effective or because that's simply how it has always been done? It creates an opportunity for us as well

Walt Senterfitt: I have a problem with how we are going to describe the model. It mostly involves things that we already know how to do but isn't being done. There is a different stream of thought from Theresa than Toni: people trying to narrow things down in a protocol sense versus people who are trying to use this as an opportunity on the ground to come up with something. The more comprehensive a model is to meet the needs of real communities, the more difficult it will be to tease out scientifically the contribution of different elements of that for purposes of generalization or distinguish which parts are essential. I perceive the description and characterization of the model is going to be a key conceptual, operational and later generalization issue in this.

The second conflict I hear in the speakers is that we might add testing for comorbidity, but that is not a part of the original model. Or will we include it? Also Toni says we will follow existing protocol for treatment but the presenter said treat everyone no matter what his or her CD4 count is. That is a substantial change from current standard of care (although there are people advocating for that separately).

Theresa: The model in the paper for Granich is "treat everyone." But as you stated, that is fraught with issues, because we don't have any scientific evidence that starting at high CD4 is good for an individual, let alone as a good prevention strategy for a community.

The other issue is access; we would need to have a different take on providing ART if we provide to everyone that is positive. We don't need to have 100% suppression for the idea to work. Our concept or protocol is only one of potentially many that will be developed. We will probably use standard of care so that we can interface as seamlessly as possible with systems already in place. We have some elements that we are going to measure more carefully to see what is making the biggest contribution, but we are trying to look at the overall effectiveness of the whole package.

HIV Transmission among Main Male Partners

Patrick Sullivan, DVM, PhD, Associate Professor, Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA

We look at the issue of transmission from main partners in the US MSM epidemic. Two projects in Rwanda and Zambia had done analysis in the capitals of those countries and suggested that somewhere between 65% and 95% of transmissions arose from cohabiting partners. This was a finding that was important to understanding the African epidemic, but it is not a shocking finding. We found a study from the Netherlands published in the early 2000s that looked at small cohort of MSM. Found that in the second half of the 90's about two-thirds of transmissions had arisen from main sex partners.

Simplistic modeling approach: if you want to understand how many transmissions occur in the group, you need to multiply the number of men in the group *times* the number of sex acts in a period of time *times* the proportion of those that are unprotected by condoms *times* how common HIV is in their sex partners *times* the per-act risk of HIV transmission.

This equation brings up concerns. We might feel like the prevalence of HIV in sex partners is going to be really different if the index man feels his partner is positive, it is very likely that he is positive. If the index man believes that partner to be negative, there is a lower chance that he is positive than when the index thinks he is positive. Risks are also different depending on the act (receptive anal intercourse, insertive, oral sex, etc.).

An important part of this hypothesis is between main and casual partners.

18 different combinations of main and casual partner, perceived partner status and sex act. We had to find a way to estimate in a hypothetical group of men, how many times in a year would a man have sex with a main sex partner who he believed to be negative where he had receptive anal intercourse or where it was insertive and so on. In order to calculate estimates, we used the CDC national HIV surveillance data in 5 cities and that was for issues about partner types, number, perceived HIV status, and type of sex acts. The second data source was the vaccine preparedness study, which provided the number of sex acts per year for men who had casual or main partners. NHBS provided data on the prevalence of HIV in the sex partners and the how often that status was unrecognized of our hypothetical cohort.

Conclusions: 68% of transmissions in the hypothetical cohort arose from a main partner but only 32% arose from a casual partner. Things that drove this were men have more sex with their main partners than casual partners, men are more likely to

report having receptive anal sex with main partners, and are more likely to report having anal sex with no condom with their main partner than their casual partners. Those three things increase risk of transmission from main partners.

People with whom one feels having a more significant relationship are probably more likely to be more intimate; hence more anal intercourse and less condom use than with casual partners.

When we stratified this by age 18-24 year olds 79% were estimated to be from main partner. For 25-29 year olds 84% were from main partners. Decreases in over 40 years age group - only 40% of transmission were from main sex partners.

We estimated that 69% of transmission from receptive anal intercourse, which is what expected to account for the largest portion. 28% from insertive anal sex and the remainder a small percentage from oral sex.

Most transmissions from main partners were from those believed to be HIV negative. Transmissions from casual partners came from unknown status partners. There are issues of awareness of serostatus, either being unknown or undisclosed.

Half the paper is devoted to sensitivity analysis, where we poked holes in our own approach to see if some of our assumptions were flawed how that would impact the results. In every case the portion of transmission from main partners was over 50%. Half the discussion is devoted to the limitations of this kind of study, which are considerable. In particular, the data set we used for this analysis did not include information on the duration of the relationship, which is a critical factor in this.

Q&A

Q: Are people surprised or unsurprised by the findings?

Walt: Not surprised. Simon Rosser did an interview study of people who were positive in Minnesota 12 or 13 years ago asking who they believed they were infected by and 60% said their primary partner. How much do you think it was distorted by lack of information on the differential perception of what constitutes a primary partner (e.g., length of relationship). In some forms of research certain populations think a long-term relationship is two weeks or more. One thing that impressed me was the number of infections found in the modeling was pretty close to what was found in previous research. One concern I had was using the VPS information because the data is so old

Patrick: This is a critical point for a couple reasons. In terms of age, the way this question was asked a main partner is someone you feel committed to above all others. Younger men happen to be from a different cohort grew up in a different time. We need to look at if they were more likely to report multiple main partners in a year. It is possible younger men have a lower threshold early in their sexual and

romantic carriers about who is a main partner. My 16-year-old nephew is making plans with his girlfriend for the rest of their lives. Despite the homophobia in our country, younger men are able to have that experience of being overwhelmed in that relationship and to identify a life partner in a way that men of 40+ generation were unable to do. There are issues with the cohort, age and definition of main partnerships. We need to look at the frequency with which young men report multiple main partners in a year compared to older men.

Re: frequency of testing of MSM: if you are in a long term relationship of 10 or 15 years, if you believe your partner to be negative, you are likely to be correct given that both of you have probably been tested multiple times. A 6-month relationship does not offer the same number of testing opportunities. All of these things are potential problems, and I don't know how to quantify how big an effect it has on the data.

You mentioned that we reported 2.2% annual incidence rate based on the model. Ron Stall published a meta analysis earlier this year, that reported incidence studies of MSM and reported 2-2.5%. Your third point about VPS, this is a limitation of the data. We did a couple things to address this. There were two cities that didn't overlap with the NHBS cities. We did a stratified analysis on race and recombined that which didn't change the results. We did one of the sensitivity analyses that were restricted to the two common cities, and the result didn't change either. We looked at different data for the number of different sex acts from the General Social Survey and Sex in America survey. The results were fairly consistent. The frequency of sex with main partners from Sex in America survey was almost identical between the limited number of gay men they had in that study and the heterosexual respondents, about 80 acts per year with the main partner. The number of acts in male-male couples are about the same in male-female couples. When we used the data from Sex in America Survey we came up with 66% and when we used general social survey data we came up with 62%

Israel Nieves: How do we create effective prevention message with this information so that it isn't a judgment statement or saying don't trust your partner - but stresses the importance of frequency of testing, honesty about relationship outside of main relationship and disclosure of status?

A: Jim Curran and I had a lot of discussion about exactly this issue. We didn't want it to exacerbate the stereotype of gay men being unfaithful but to use it as a productive prevention tool. What we do in our two projects in Africa is that we engage couples in counseling around HIV testing so that they can make a plan together based on those results. A piece of this is recognizing that male partnerships are in every way equivalent to other partnerships in the country. Hopefully that will bring rights in some states and responsibilities among partners. We are starting to look at whether we can take a program that is shown to reduce HIV incidence within partnerships by 50% in Africa and adapt it for use in the US. A key element is to take the point you made that you can't trust your partner and change that to say your

relationship is at the same standing as other relationships in other configurations in other parts of the world and say that we are going engage you as a couple and respect your relationship and provide you with the resource to manage the presence of HIV in your relationship. So it is important to look at both personal and couple interventions and respect MSM partnerships.