SUB-SAHARAN AFRICA CFAR MEETING Durban, South Africa July 17-18, 2016

Center for AIDS Research Sub-Saharan Africa Working Group (CFAR-SSA)
July 17 – 18, 2016, Durban, South Africa
Organized and co-hosted by the Harvard and Providence/Boston CFARs

MEETING REPORT - 2016

Background

To accomplish its mission, the NIH CFAR program promotes establishing collaborative research between CFARs and strengthening capacity for HIV/AIDS research in low and middle-income countries. To that end, the CFAR-SSA Working Group was established in 2011 under the support of the UCSF-GIVI CFAR and transferred to Johns Hopkins CFAR leadership in 2013. The current goals of the CFAR-SSA are to promote collaborative research opportunities among CFARs and their collaborating SSA institutions and capacity build affiliated junior SSA investigators.

To continually support these goals, a third CFAR-SSA meeting was held in Durban July 17-18, 2016 (organized and co-hosted by the Harvard and Providence/Boston CFARs) immediately preceding the International AIDS Conference. Previous meetings were held in Kampala, Uganda in May 2011 (hosted by UCSF) and Cape Town in December 2013 (hosted by JHU).

The intent of this meeting was to directly address NIH priorities to capacity build with SSA collaborators, foster new NIH and CFAR-specific research collaborations and opportunities and address critical research issues on HIV treatment strategies, HIV prevention, and Pediatric/Adolescent HIV.

Meeting Description

Prior to the planning of the 2017 meeting, an electronic survey was sent out to selected representatives from the 19 NIH designated CFARs and members of the established CFAR-SSA listserv to assess the needs of SSA investigators. The results of that assessment identified the following focus areas most important to SSA investigators: HIV Treatment Strategies, HIV Prevention, and Pediatric/Adolescent HIV. Additionally, the targeted SSA investigators selected two workshops they felt would be most helpful to their research careers: Grant Writing Skills and Biostatistical Methods.

Abstracts were solicited from SSA investigators for posters and 43 were accepted for presentation at the meeting. The poster session was available during lunch and an evening networking reception following the first day activities. Travel scholarships were provided to all CFAR nominated poster presenters through funds maintained within the Providence/Boston CFAR.

The meeting began with a keynote presentation from Quarraisha Abdool Karim, the Associate Director of the Center for AIDS Programme of Research in South Africa which was followed by six plenary speakers within the three focus areas. Sessions were moderated by both junior and senior SSA investigators as well as CFAR faculty members working within the SSA international sites (see Appendix I for detailed agenda). Following lunch and the poster session, individual breakout sessions among the participants were held to discuss current research in the targeted focus areas and members discussed the current gaps that need to be addressed. Each of the group leaders provided an update of their discussion to the conference attendees (see Appendix II for detailed reports). The day 1 activities concluded with a networking reception where participants could review posters and share their work with others.

The second day of the meeting consisted of two separate workshops, one on Biostatistical Methods and one on Grant Writing Skills. The Biostatistics workshop was facilitated by Lori Chibnik (Harvard University) and was divided into three separate sessions: missing data, regression (association vs. prediction), and sample size and power. The Grant Writing skills workshop was facilitated by Ingrid Bassett (Harvard University) and Larry Chang (JHU). A specific aims lightning round session for the SSA investigators was facilitated by several CFAR Directors and faculty members and concluded the two day event.

Attendance

121 participants pre-registered and 101 attended the meeting from 17 African countries including Nigeria, Ethiopia, Rwanda, Kenya, Botswana, South Africa, Uganda, Tanzania, Malawi, Swaziland, Zambia, Ghana, DR of the Congo, Mozambique, Zimbabwe, and Cameroon. All of the plenary sessions were delivered by African investigators. Eleven of the nineteen CFARs selected SSA representatives to attend the meeting – Baylor, Case, Duke, Harvard, Hopkins, Providence/Boston, UCSF, UAB, UNC, UW, and DC. In addition to the SSA investigators who had abstracts accepted for the poster session, travel scholarships were provided for the invited presenters and moderators.

Evaluations

At the conclusion of each day of the meeting, an on-line evaluation was sent to all participants for feedback. The survey results of the plenary sessions was enthusiastic with 100% reporting that the overall quality of the program was excellent to very good with 90% of respondents noting that the availability of networking opportunities were in the excellent to very good range.

The survey results of the Grant Writing Skills workshop were also enthusiastic. All respondents noted that they were currently working on or planning to submit a grant application within the next 12 months and planned to use the information from the workshop to develop future grant proposals; all gave high ranks for the workshop meeting their learning objectives and the usefulness of the Specific Aims Lightning Rounds with 100% recommending the workshop to others. Suggestions for improving the session included: secured grant opportunities for early researchers; more practical opportunities for networking including following-up on the impact of CFAR program oriented opportunities; establishing a CFAR-wide mentor-mentee cohort among sub-Saharan African investigators, expand the workshop to 2 days; include a review of an NIH RFA; and secured grant opportunities for early researchers.

The feedback on the Biostatistical Methods workshop was favorable. All respondents stated that the workshop was very helpful, with the majority feeling that the pace was just right (suggestions for improving the session are included in the Appendix). Most respondents felt that the amount of time allocated to the workshop was too little.

In addition to feedback on the presentations and workshops, the evaluations collected demographic information. Of those responding to the evaluation of the plenary sessions on Day 1, 73% had not attended a previous CFAR-SSA meeting, and 40% were women. Of those responding to the evaluation of the workshops on Day 2, 85% had not attended a previous CFAR-SSA workshop and 55% were women.

Future Meetings

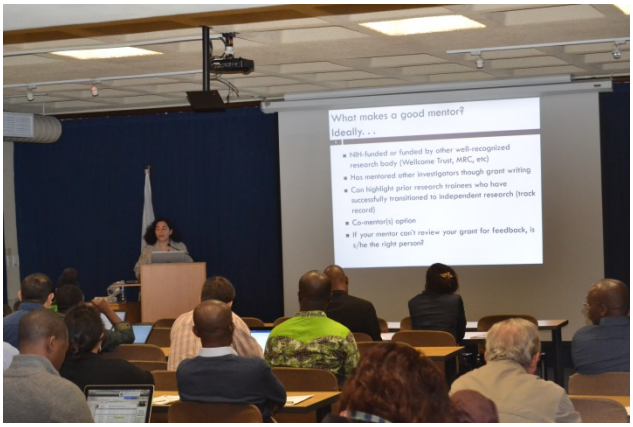
Suggestions for new focus areas and format changes for future meetings included: inclusion of HIV prevention with key populations (particularly on those who use/inject drugs); HIV cure; Nutrition, TB and non-communicable diseases (HTN, DM, epilepsy, asthma); co-morbidities; implementation science research priorities and development; focus on diagnostics of both HIV and co-infections and other related infections; and oral presentations for best abstracts instead of just poster presentations for junior faculty.

Suggestions for future workshops included: manuscript writing; full course on research ethics; ABCs of mentorship; training in practical immunological techniques; and literature review for grant writing.

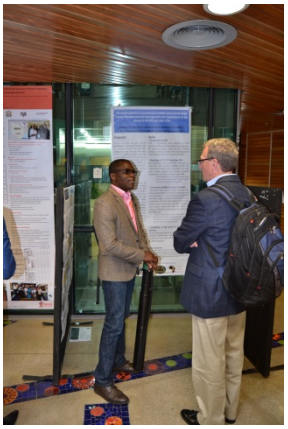
PICTURES

Day 2 facilitators and attendees

Specific Aims Lightning Round Facilitators



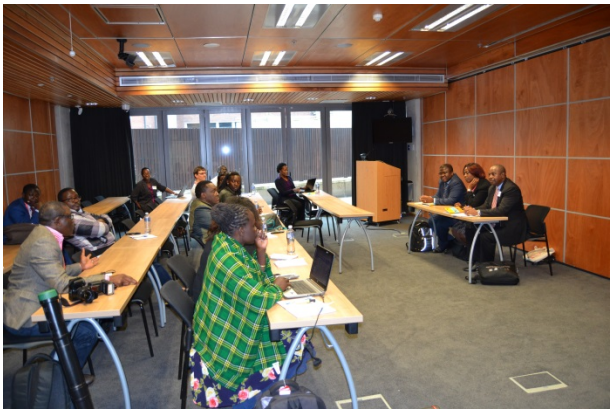
Grant Writing Session – Ingrid Bassett



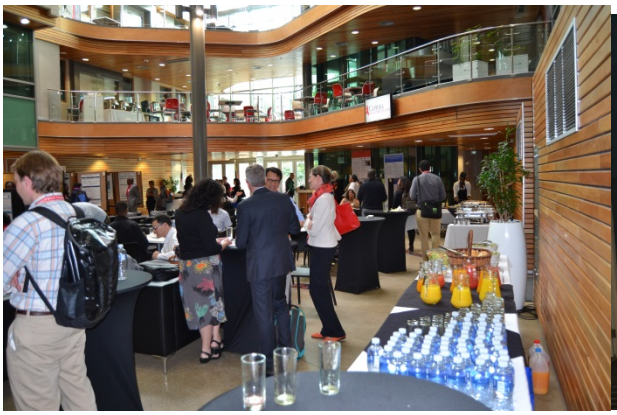
Poster Session

HIV Treatment breakout

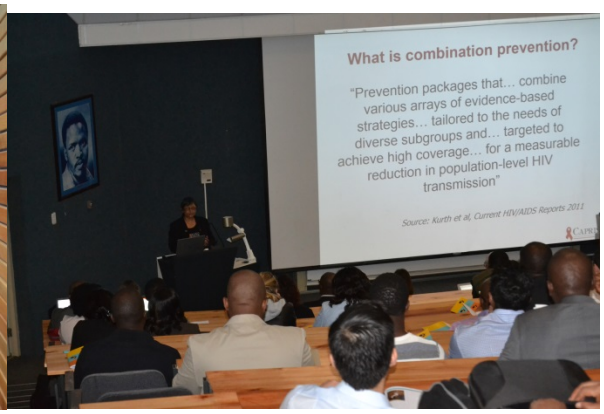
Biostatistics Workshop – Lori Chibnik



Pediatric/Adolescent HIV breakout session



Lunch time poster session – Day 1



Keynote address: Quarraisha Abdool Karim

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APPENDIX I

AGENDA

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AGENDA

DAY 1: **Sunday, July 17, 2016**

7:45 – 8:15 Arrival and registration – *light breakfast available*
Location: K-RITH Tower Building – ATRIUM, 719 Umbilo Road

8:15 – 8:30 Welcome – Susan Cu-Uvin, Brown University
CFAR-SSA Working Group Update – Larry Chang, Johns Hopkins University
Location: Steve Biko Lecture Theatre (Medical School Building)

8:30 – 9:15 **Keynote** – Quarraisha Abdool Karim, Associate Scientific Director, CAPRISA (Center for AIDS Programme of Research in South Africa)
Achieving HIV epidemic control - the importance of HIV prevention in Women

9:15 – 10:20 **Session 1: HIV Treatment Strategies**
Moderators: Awe Kwara, MD, Brown University; Flavia Matovu Kiweewa, MBChB, MSc. Epidemiology, Makerere University-John Hopkins Research Collaboration

9:20 – 9:45 Professor Gary Maartens, University of Cape Town
Next generation ART regimens

9:45 – 10:10 Francis Kiweewa, MBChB, MMED, MPH, Makerere University Walter Reed Project, Uganda Kampala
The African Cohort Study (AFRICOS): Exploring opportunities for collaborative HIV/AIDS research

10:10 – 10:20 Q&A

10:20 – 10:30 BREAK

10:30 – 11:35 **Session 2: HIV Prevention**
Moderator: LaRon E. Nelson, PhD, RN, FNP, University of Rochester

10:35 – 11:00 Thomas Agyarko-Poku, MBBS, MPhil, MSc, PhD, Medical Director, Suntreso Hospital HIV/STI Clinic, Ghana Health Services, Kumasi
The impact of religion, culture, and multiple stigmas on HIV prevention with Men who have Sex with Men in Sub-Saharan Africa

11:00 – 11:25 Rachel Jewkes, MBBS, MSc, MD, Director, Gender and Health Research Unit, South African Medical Research Council

	The impact of gender inequity and Violence on HIV Prevention with Vulnerable Women in Sub-Saharan Africa 11:25 – 11:35 Q&A
11:35 – 12:40	**Session 3: Pediatric/Adolescent HIV** *Moderators: Moorine Sekadde, National Tuberculosis and Leprosy Program (NTLP) Uganda; Betty Nsangi, Reach Out Mbuya Parish HIV/AIDS Initiative* 11:40 – 12:05 Dr Moreen Kamateeka, MBchB, MPH, Makerere University-Johns Hopkins University Research Collaboration/MUJHU CARE LTD *The journey towards making virtual elimination of mother to child HIV transmission (eMTCT) a reality; contribution of clinical research* 12:05 – 12:30 Dr. Angela Mushavi, National PMTCT and Pediatric HIV Care and Treatment Coordinator *Treatment of Pediatric/Adolescent HIV* 12:30 – 12:40 Q&A
12:40 – 1:30	LUNCH & Poster Session Location: K-RITH Tower Building – ATRIUM, 719 Umbilo Road
1:30 – 3:30	Breakout Sessions for each Topic
3:30 - 3:45	BREAK
3:45 – 4:15	Report from HIV Prevention breakout session and discussion
4:15 - 4:45	Report from HIV Treatment breakout session and discussion
4:45 – 5:15	Report from Pediatric/Adolescent breakout session and discussion
5:15 – 6:00	Networking and Poster session

DAY 2: Monday, July 18, 2016 Workshops

8:00 – 8:15	Light Breakfast Location: K-RITH Tower Building – ATRIUM, 719 Umbilo Road
8:15 – 10:15	Grant Writing Workshop
10:15 – 10:30	BREAK
10:30 – 12:30	Biostatistics Workshop

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APPENDIX II

BREAKOUT SESSION REPORTS

Treatment Strategies Moderators: *Awe Kwara, MD, Brown University; Flavia Matovu Kiweewa, MBChB, MSc. Epidemiology, Makerere University-John Hopkins Research Collaboration*

The main agenda for the breakout session was for Sub-Saharan African Investigators to identify HIV treatment strategies and implementation research gaps and to suggest approaches to address the gaps.

The following are the key topics or areas of interest that could improve HIV treatment in Africa.

1. **Novel strategies to improve adherence especially among adolescents in school**
   - Do we need to revise adherence strategies for this age group? Do we have a good measure of adherence? Do we need point of care tests to detect poor adherence? Current approach of measuring adherence is not predictive of resistance. A quarter of non-adherent patients are not resistant yet resistance tests are expensive. Cheaper forms of resistance testing need to be rolled out. Can we afford surrogate markers for resistance testing?
   - Develop and test better biomarkers of poor adherence. For example, Joint Clinical Research Center (JCRC) in Uganda is using salivary samples. This has been successfully used to detect nevirapine levels. Can this be applied to other antiretroviral (ART) drugs?
   - Define underlying factors responsible for poor treatment adherence in key populations including children

2. **Care for transient populations (mobile or migrant populations)**
   - Mobile populations like long distance truck drivers have challenges with ART access, retention in care and adherence as move from one area to another. These patients are not sick. Can meta-clinics along migratory roads or use of biometrics to register patient help link up patients to care? This need to be studied.

3. **Test and treat HIV care model**
   Need for evaluation on how well this can be successfully implemented in SSA. As these are being rolled out these should be studied, as they may need to be modified different regions.

4. **Patients empowerment**
   Patients need to be empowered with personal details. This can be similar to the maternal child health (MCH) booklets. This can be used to improve their care.
   - Can patients be empowered with a documentation or information system that can be used for continuity of care irrespective of where they seek care? e.g. a card or technology that has HIV disease status, and regimen information to be used at any ART site?

5. **Stigma and key populations**
   This can be circumvented by using non-clinic settings for care, testing and initiation of ART, e.g., mobile clinics, home based care.

   Studies to test clinic versus non-clinic settings for providing care to key populations such as MSM or Drug users

6. **System level factors**
   These include policy and implementation gaps. For example, gaps in screening for TB, lack of integration of services say for other conditions like hypertension which are frequent among HIV infected populations.
   - How provider-patient relationship affect care
   - Effect of provider stigma on care
   - What can be done to make care setting more inviting or engaging
   - Test expressed systems of care versus current system for those patients who just need medication refills
   - Develop and test mobile medication refill system
   - Develop systems for baseline screening that identifies those at risk of treatment complications
   - Define optimal numbers and mixed of care providers for optimal care

7. **Gap in evaluation of systems**
   How well services are integrated into HIV care. These include family planning, cervical cancer screening and TB management. The unmet need for family planning is similar to what is documented for the general population that may have no ready access to contraceptive services. Research is needed to assess how well these services are being offered.
   Develop and test a continuous quality improvement evaluation of care systems

8. **Profiling of patients and defining levels of care needed**
   For example, should the aging population who are co-burdened by several other co-morbidities see different clinicians for each problem or HIV care provider can provide integrated care?

9. **Gaps in WHO ART guidelines**
   How can we influence WHO guidelines which have older regimens compared to the high income countries. Need research to fast track adoption of newer and safer regimens in resource-limited settings.
   In addition, WHO uses viral load threshold of less than 1000 copies yet current technology can detect copies as low as below 20 copies/ ml. What type of evidence need to be generated to influence change in these guidelines.

   Develop strategies for implementation of routine viral load and how algorithms of viral load information can be used to improve care.

10. **Regional disparities in care**
    For example, Elimination of mother to child transmission (EMTCT) of HIV, ART initiation differs between East and West Africa

11. **Mental health issues in HIV**
    Define mental health issues in patients with HIV and effect of care cascade

12. **Gaps in funding opportunities to address research questions unique to sub-Saharan Africa**
    NIH funding opportunities are not individually tailored to the needs of communities and regions.

    There should be funding opportunities specifically for implementation science and health systems research

    Could NIH use challenge grants approach for implementation science research as the evidence needed to impact care in Africa is related to implementation issues

Pediatric/Adolescent HIV Moderators: *Moorine Sekadde, National Tuberculosis and Leprosy Program (NTLP) Uganda; Betty Nsangi, Reach Out Mbuya Prish HIV/AIDS Initiative ; Denis Tindyebwa, ANECCA; Angela Mushavi, MOH, Zimbabwe; Apolinairwe Tiam, EGPAF, Lesotho*

Adapted session subtheme: Research is **meaningless** if it is not translated into policy
Policy is **not useful** if it is not backed up by research

Session Objectives: (1) Identify the role of research in guiding the implementation of pediatric/adolescent HIV treatment policies in SSA
(2) Identify Research opportunities in SSA
(3) Identify Funding opportunities in SSA

Objective 1: Role of research in guiding the implementation of pediatric/adolescent HIV treatment policies in SSA

- Evidence based medicine

Challenges

- Lack of involvement of policy makers and implementers in research e.g. proposal development, data collection, analysis, and interpretations. This makes it challenging for the policy makers to implement the findings.
- Lack of resources to support implementation of evidence based policies. E.g. PITC Vs ACT initiative. The latter is more funded than PITC was.
- Feasibility of the implementation e.g. availability of HIV test kits in achieving the first 90 of the UNAIDS **90**/90/90 target.

Recommendations

- Generate research topics related to policy guidelines
- There is need for collaboration between the MoH and researchers. This enhances ownership of the research findings.

Objective 2: Opportunities for research in SSA

Challenges

- Young researchers target "big grants" while ignoring the basic evaluation questions that provide experience in grant applications and research
- Due to NIH related restrictions, there is more quantitative researchers than qualitative researchers
- Certain country institutional research positions are tied to successful individual NIH applications

Recommendations

- Identify simple questions that are guided by the current policy/ guideline challenge. There is a wealth of information in SSA that has not been tapped into.
- Initiate in country collaborations between policy makers and researchers. This will subsequently impact on the implementation of positive research.
- Initiate and strengthen regional inter-country collaborations

Objective 3: Opportunities for funding in SSA

- **In – country opportunities**
  - Global Fund: Evaluation research
  - USG/PEPFAR: Evaluation research
  - DFID
- **NIH**
- **CFAR**

Challenges – NIH specific

- Limited implementation science supported under NIH
- Limited successful grant applications from SSA due to related restrictions

Recommendations – NIH specific

- Introduce a pediatric/adolescent unit in NIH in order to emphasize pediatric/ adolescent specific research. Experience shared from PEPFAR.
- Focus on implementation research in SSA as this is critical in the effective roll out of recommendations amidst limited resources.
- Mentorship grants for young investigators in SSA

Research priorities in SSA

- Who/ where are the HIV infected children?
- Decentralizing pediatric HIV treatment
- Transitioning from pediatric to adolescent care
- Integrating HIV treatment
- Feasibility of 90/90/90 targets
- Role of M health
- Disclosure of HIV status: health care workers
- Behavioral research
- Improving adolescent HIV
- What do adolescents with HIV want as “friendly services”
- Stigma
- Community perspective of perinatally acquired infections with respect to “HIV positive virgins”
- Neuro-cognitive outcomes
- Needs of pregnant adolescents
- Point of care research e.g. diagnostics

HIV Treatment Moderators: *LaRon E. Nelson, University of Rochester and Judith Odhiambo, University of Toronto, Dalla Lana School of Public Health*

Key Populations Expert: Thomas Agyarko-Poku, Kwame Nkrumah University of Science & Technology (Ghana)
Gender, Violence and HIV: Rachel Jewkes, Medical Research Council (South Africa)

Main Research Priorities/Interests

1. Develop and test strategies to decrease gaps in the HIV prevention and care cascade in contexts that are social hostile to key populations.
    a. Focus on MSM
    b. Focus on sex workers
2. More research is needed on multi-level interventions to reduce stigma
    a. societal level
    b. organizational level
    c. patient-provider level
3. Stigma reduction research should include components that support development of psychosocial assets that mitigate effects of stigma on care engagement and retention.
4. More reliable population estimates of MSM needed
5. Current evidence-base on MSM in Sub-Saharan Africa is skewed to young MSM (<25y/o)
    - More research needed to understand HIV prevention and care needs of MSM ages 25 years old and older.
6. Intervention research with adult heterosexual men is needed in to:
    a. Promote equitable masculine gender norms in ways that reduce women's vulnerability for violence and HIV infection
    b. This includes, but is not limited to MSM.
7. Evaluate the implementation of couples-based interventions for leveraging relationship assets to:
    a. Support HIV PrEP use and adherence for:
        - HIV-negative partners in seroconcordant relationship
        - HIV negative partners in serodiscordant relationship
    b. Support HIV care engagement/retention, ART adherence and viral suppression for:
        - HIV positive partner in seroconcordant relationship
        - HIV positive partner in serodiscordant relationship (TasP)
8. Children in schools or residential schools are vulnerable to sexual exploitation
    a. There is evidence from genotyping tracking studies that the rise in HIV infection in adolescent girls is not attributed to sex with same-age peers, but implicates adult men.
    b. Money and other resources can influence youth to succumb to sexual advances of adults and consequently increase their vulnerability to HIV infection.
    c. Intervention research needs to target care providers or adults that have privileged access to children.
    d. Develop and enforce professional ethics, awareness of signs of sexual exploitation, and early identification of adolescent survivors and rapid entry into trauma-informed care.
9. Operations research should be conducted to understand if programs are targeting or yielding the most appropriate men for prevention
    a. Use local epidemiological and program data to customize program targets that in response to changes in micro-epidemics in country.

Main HIV Research Challenges

1. Tools to identify key populations are not yielding participants for research studies
    a. No specific training for providers – interactions can contribute to stigma

    b. Key populations do not self-identify themselves in government facilities – nondisclosure is a protective strategy to employed to avoid stigma and discrimination
2. Implementation of tools and data collection processes are burdensome and felt to be ineffective, especially for MSM
    a. Anticipated stigma can lead to evasion/underreporting of:
        i. same-gender sexual identity
        ii. same-gender sexual desire
        iii. same-gender sexual behavior

Directions

1. Embrace Social Justice efforts as activities that are core to supporting and sustaining gains in HIV prevention and care
    a. Activism and political leadership must be better harnessed to spur governments to support HIV research in their country.
    b. Link science with advocacy to support translate research evidence into prevention practice
    c. Future funding must support research on policy-level interventions and societal level impacts on HIV, including stigma, prevention, clinical and quality of life outcomes.
2. Funding should support integrated research across the HIV care cascade, including prevention, testing, linkage and retention
    a. Research funding that focuses only on one component of the care cascade can contribute to silo in programming and undermine cooperation between programs in country.
    b. The negative impact on program operations acts as feedback loop that negative impacts on research feasibility and acceptability
    c. Systems and implementation research on care coordination service delivery models on prevention and care (engagement, retention, symptom management, viral suppression) outcomes.
        i. Cost effectiveness research that estimate the economic impact of new service models.
    d. Combination research that integrates systems (new service delivery models), social (anti-stigma), behavioral-level (motivation counseling for risk reduction and adherence) and biomedical (HAART and PrEP) interventions.
        i. Target highest risk groups and key populations
3. Modeling studies and simulations studies that can help make the economic and political case to governments to scale up and support implementation study of high-impact interventions such as PrEP and TasP in key populations.

APPENDIX III
PLANNING COMMITTEE MEMBERS

Ingrid Bassett, Harvard University CFAR/Massachusetts General Hospital
Chris Beyrer, John Hopkins Bloomberg School of Public Health
Charles Carpenter, Providence/Boston CFAR, Brown University
Richard Chaisson, John Hopkins University CFAR
Larry Chang, John Hopkins University CFAR
Lori Chibnik, Harvard University CFAR/Harvard T.H. Chan School of Public Health
Susan Cu-Uvin, Providence/Boston CFAR, Brown University
Rhonda DiCesare, Providence/Boston CFAR, Brown University
Vicki Godleski, Providence/Boston CFAR, Brown University
Amanda Gorey, Harvard University CFAR
Joseph Hogan, Providence/Boston CFAR, Brown University
Mark Ingaciola, Harvard University CFAR
Flavia Matovu Kiweewa, John Hopkins University
Awewura Kwara, Providence/Boston CFAR, University of Florida
Tarryn Leslie, University of KwaZulu-Natal
Philippa Musoke, Makerere University
LaRon Nelson, University of Rochester CFAR
Betty Nsangi, Baylor College of Medicine
Moorine Sekadde, Baylor College of Medicine
Paul Volberding, University of California, San Francisco CFAR