TECHNOLOGY/SOCIAL MEDIA

Exploratory (identifying technology most utilized by high risk groups)

Table 1, Question 1: How we best utilize technology to reach high risk populations?

- *Specific aims*: Survey high risk populations to determine most utilized technologies and internet services.
- *Population and sample*: MSM, commercial sex workers, young gay men, Public Health Organizations and other Programs.
- *Methods and design*: Surveys, meta-analyses.
- *Collaborators*: Health service agency, local community court system, homeless shelters, projects who work with sex workers.

T7, **Q2**: Social media and effective use to promote testing and treatment.

- *Specific aims*: How do high risk populations use social media? On-going monitoring of social media trends by location and population and HIV status. What kind of information or sources of information do people access about sexual health, testing, care?
- *Population and sample*: MSM positive, negative; mix of ethnicity/races; mix of ages.
- *Methods and design*: Focus groups; key informant interviews.
- Collaborators: Organizations serving MSM; potentially on-line providers.

T9, **Q3**: How do we best use technology to reach high risk populations?

- Specific aims:
- Population and sample: Identify populations in which new diagnoses are increasing.
- *Methods and design*: Facilitation research: What technologies do they use? What apps are they comfortable with? Would they use these apps or something of similar design to address social issues?
- *Collaborators*: IT experts, application designers.

T11, Q2: Improving ways in which social media can be used to influence MSM.

- *Specific aims*: Identify organizations (NGOs) and assess their use of social media; assess training in social media within; describe how MSM use social media and to what extent and how are they influenced by social media?
- Population and sample: MSM.
- *Methods and design*: Qualitative surveys.
- *Collaborators*: CBOs, experts in social media.

T6, Q2: How do we best use technology to reach high risk populations?

- *Specific aims*: Intervention Development Study.
- *Population and sample*: MSM.
- *Methods and design*: Qualitative (focus groups, in-depth interviews); and Quantitative Methods.

• *Collaborators*: Marketing researchers, IRB/Ethicists, Social Networks (like Grindr, 4Square, BareBack).

Prevention

T2, Q1: How do we utilize social media effectively to promote prevention and get people tested and into treatment as necessary?

- *Specific aims*: To maintain contact and provide HIV prevention information for those testing HIV negative.
- *Population and sample*: MSM, youth, women, transgender (sites with high likelihood for these populations).
- *Methods and design*: Social media monthly; general health message; HIV targeted message. Measures: one year; # retested, behavioral measures, STIs, PrEP use.
- *Collaborators*: Clinics, community organizations.

T5, Q1: Social media/technology: use more effectively.

- *Specific aims*: Increase KAB of HIV, effective prevention; lead to testing sites; can docs online connection impact/improve risk behavior? Create effective interventions.
- *Population and sample*: People on Grinder, for example (Manhunt, Craig's List, Jack'd, Scruff); MSM different ages use different apps, sites; some are more popular geographically too.
- *Methods and design*: Grinder is Grinder, same across region how do we use it to link? Need to be very nimble, as they come and go.
- *Collaborators*: Local ASOs, government alpha, beta test areas; clients (HIPPA, CBRR), someone/people on sites; health message expert; ad design.

T8, **Q3**: How do we utilize social media effectively to promote prevention and get people tested and into treatment as necessary?

- *Specific aims*: Identify marketing campaigns in the New England area and analyze effectiveness; Use social connectivity sites to increase prevention.
- *Population and sample*: MSM.
- *Methods and design*: Social media campaigns; visual marketing and on the sites.
- *Collaborators*: [no response].

T10, Q2: How do we best use technology to reach high risk populations?

- *Specific aims*: How can tailor evidence-based interventions to see if it can apply to specific settings.
- *Population and sample*: Find evidence-based interventions in technology targeting youth young adults that help understand demographics and also help us send interventions messages.
- *Methods and design*: Mixed-methods as methodology.
- Collaborators: Snapchat, Instagram.

T14, Q1: How do we utilize social media effectively to promote prevention and get people tested and into treatment as necessary?

• *Specific aims*: Identify how MSM utilize social media/apps to locate/find sexual partners and the factors that they explore and find important in selecting partners (e.g. Grinder, Manhunt); based on formative

research, develop, implement, and evaluate a social media intervention/app that promotes prevention and testing.

- *Population and sample*: MSM who utilize social media/internet to locate sexual partners (e.g. users of Grinder, Manhunt).
- *Methods and design*: [no response].
- Collaborators: ASOs, CABs, universities, key stakeholders in LGBT communities.

Offline communication strategies

T12, Q1: How do we best use technology to reach high risk populations?

- *Specific aims*: To evaluate communication strategies in communities at high risk = content + medium.
- *Population and sample*: Most at risk populations = homeless at shelters, churches, prisons, soup kitchens.
- *Methods and design*: "Have you seen this message" (from list of 5), "Where" (bus, shelter, etc. let respondent say).
- Collaborators: DOH, CBO's Crossroads Homeless Shelters, inner-city neighborhood groups, ACI

HARD TO REACH/HIGH RISK POPULATIONS

Undiagnosed and out of care

T9, **Q2**: How do we address remediable issues among those who are not diagnosed and out of care?

- *Specific aims*: Remove barriers: identify mechanisms to get people tested and into care. 1) Increase testing 2) Identify people earlier 3) Link to care 4) Identify individual and structural barriers to care/to testing.
- *Population and sample*: 1) Individuals with substance use, mental health, co-morbidity 2) Individuals with issues that take precedence over medical needs 3) Impoverished communities with stigma.
- *Methods and design*: Peer driven intervention (Social Networks). Compare cities that do it and don't do it and compare difference
- Collaborators:

T16, Q2: How do we address remediable issues among those who are not diagnosed and out of care?

- *Specific aims*: Who are the people we don't know?
- *Population and sample:*
- *Methods and design*: respondent driven sampling (RDS) and qualitative, Community Based Participatory Research (CBPR), qualitative interviews with people who test late.
- Collaborators:

T5, Q3: How do we address remediable issues among those who are not diagnosed and out of care?

- *Specific aims*: How do we combine drug, alcohol, and sex risk into single effective intervention for an organization of a certain size.
- *Population and sample*: HIV+; HIV-
- *Methods and design*: Implementation study, following.

• *Collaborators*: Medium sized ASO's, health departments.

T8, **Q1**: What are the most cost-effective methods to reach hard to reach populations?

- *Specific aims*: To compare real-world approaches to reaching populations, community based outreach vs. clinical care.
- *Population and sample*: HIV+ people who are unaware of their status.
- *Methods and design*: Focus on implementation.
- Collaborators:

<u>MSM</u>

T10, Q3: How do we reach hard to reach populations?

- *Specific aims*: Use social networking methods to identify MSM. Develop culturally appropriate methods to get them into care.
- Population and sample: Young MSM.
- Methods and design: Qualitative research with representatives of MSM, organizations.
- Collaborators: CBO, gatekeepers, key informants.

T12, Q2: What are the most cost-effective methods to reach hard to reach populations?

- Specific aims: To increase testing rates among high risk communities, particularly MSM.
- Population and sample: MSM; in communities with the highest density of HIV prevalence.
- *Methods and design*: Analyze testing data from CBO's and DOH. Descriptive and cost effective analyses.
- Collaborators: DOH; CBO's; CFAR; epidemiology/HSPP.

Female prisoners and recently released individuals

T13, Q1: How do we reach hard to reach populations?

- *Specific aims*: What is the most effective way to reduce ETOH use and high risk sexual behavior among female prisoners with a history of ETOH abuse and history of sexual behavior?
- *Population and sample*: Women with history of ETOH and high risk sexual behavior being released from prison.
- *Methods and design*: Randomize women to one of the following groups: 1) Naltrexone +/- motivational intervention 2) PrEP 3) Placebo. Outcome measures: 1) ETOH use, and sex risk behaviors 2) STI's and HIV infections.
- *Collaborators*: Prisons, Parole Boards, Research Treatment Centers, similar projects (Bob Cook in Miami).

MODELING, COST EFFECTIVENESS

Identifying effective interventions

T1, Q2: How do we operationalize evidence-based interventions and cost effective packaging?

- Specific aims: Identify barriers and facilitators in identifying effective interventions.
- *Population and sample*: May depend on the intervention you identify.
- *Methods and design*: Possible surveys, quantitative and qualitative methods
- Collaborators:

T16, Q1: How do we operationalize evidence-based interventions and cost effective packaging?

- *Specific aims*: 1) to conduct system reviews and cost analysis to identify what works and what is affordable. 2) To conduct interviews and focus groups with local informants to prioritize programs.
- *Population and sample:*
- *Methods and design*: Combination of cost effectiveness analysis, meta-analysis and qualitative.
- *Collaborators*: University modelers and systematic reviewers. Planning group to validate and operationalize.

<u>PrEP</u>

T15, Q2: How do we operationalize evidence-based interventions and cost effective packaging?

- Specific aims: To identify the barriers and facilitators to using PrEP (patient/provider perspective).
- *Population and sample*: Patients and providers.
- *Methods and design*: Qualitative.
- *Collaborators*: Community, MD's, PhD's, etc.

MAPPING

PLHIV in small urban areas

T2, Q2: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs?

- *Specific aims*: Develop a method that can be used for cross-site mapping of HIV micro-epidemics in small urban settings.
- Population and sample: Small urban settings in Northeast.
- *Methods and design*: Identify and compile secondary data HIV related variables such as: STI, substance abuse, teen pregnancy, Hepatitis C.
- Collaborators: DOH, Public Health, ID, OB-GYN, Community and Advocacy Groups.

T5, Q2: Place based, mapping

- *Specific aims*: Centers of epidemic, define social networking/sexual networks, what are characteristics to differentiate higher/lower rates; higher/lower med adherence; higher/lower rendition in care, i.e. education, socio economic status, faith.
- *Population and sample*: HIV+ and partners, change agents.
- *Methods and design*: zip code, socioeconomic overlay (google map), key informant interviews, observation, ethnography.
- *Collaborators*: State Health Depts. (epi), built environment research, urban planners, criminal justice, ethnographers.

T7, Q3: Geospatial mapping – real and virtual communities

- *Specific aims*: 1) In small urban areas, where are there greatest concentrations of people living with HIV? 2) What are the demographics of people who live in communities. 3) Within those areas, where do people access services, medical care, engage in high risk behaviors, etc. to inform targeted preventions and interventions (e.g. real vs. virtual networks).
- *Population and sample:*
- *Methods and design*: Epidemiological data qualitative interviews \rightarrow cross border collaborations?
- *Collaborators*: State and city epidemiologists, qualitative researchers, GIS specialists, community providers.

Hard to reach/high risk populations

T3, Q1: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs?

- *Specific aims*: 1) Identify communities of risk (biomarker, social, geographical methodology with a target of recent diagnosis/high virology). 2) Initiate process (based on #1) to spatially target for testing (review of best evidence interventions for testing). 3) Implementation/scalability into larger and/or different settings (density of population, culture, etc.).
- Population and sample:
- *Methods and design*:
- *Collaborators*: Start with CBO's, that are familiar with community, or identify gatekeepers ... such as local community health workers, work with Public Health Depts., experts in social media/institutions in the community (softball teams).

T8, **Q2**: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs?

- *Specific aims*: 1) Create descriptive maps and conduct hotspot cluster analysis using surveillance data with qualitative aspects. 2) Generate areas and communities of highest risk for intervention targeting.
- *Population and sample*: MSM, IDU \rightarrow highest risk populations on the New England census data.
- *Methods and design*: Conduct hotspot analysis (rates/100,000), use clustering, conduct in-depth interviews in "hot spots" (qualitative) to determine descriptive and geo-descriptional maps, focus on service providers in area.
- *Collaborators*: 1) Quantitative: mapping and statistical analysis. 2) Qualitative: ethnographic.

T11, Q3: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs?

- Specific aims: 1) To better reach targeted populations. 2) Develop response with communities.
- *Population and sample:*
- *Methods and design*: Utilize experts to improve methodology across network.
- *Collaborators*: Experts in mapping, geospatial coding, etc.

T12, Q3: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs? ("HIV Hotspots" – H2)

- *Specific aims*: Geospatial mapping of HIV and Syphilis in RI, CT, and MA and overlay HIV-related prevention and treatment funding. Then investigate case rates and testing rates.
- *Population and sample*: Population-level study (Southern New England)
- Methods and design: Census-track-level data from each DOH, geospatial/mapping hotspots analysis

• *Collaborators*: DOH (RI, CT, MA), CIRA and CFAR.

T13, Q1: Accessing hard-to-reach populations with (1) cost effective interventions; (2) technology; (3) social media.

- *Specific aims*: Virtual communities partner with Manhunt to map de-identified data across New England; Identify/describe the top two per state actual communities among MSM re social and sexual networks.
- *Population and sample*: MSM top two cities/towns per state with high prevalence of HIV.
- *Methods and design*: Mapping; qualitative interviews and anonymous online surveys; sex risk; testing HIV status.
- *Collaborators*: Manhunt; health departments; CBOs; academe; GIS/Map.

T13, Q2: How do we better utilize mapping, geospatial coding, psycho-demographics to improve programs?

- *Specific aims*: Describe sexual risk networks in "virtual and actual" communities of MSM to guide development of future interventions. 1) Map de-identified utilization data across users of online hook-up networks (Manhunt, etc.) across New England. 2) Identify "hotspots" of risk based on maps of utilizers. 3) Conduct online anonymous surveys and qualitative interviews to describe sex risk and protective behaviors, social networks, testing and HIV/STD prevalence.
- *Population and sample*: Virtual: users of Manhunt. Actual: men aggregating in "hotspots" across small cities in New England.
- *Methods and design*:
- Collaborators: Manhunt, Health Depts., CBO's, Academic, GIS/mapping experts.