

# **Category A: Routine and Expanded Testing**

## ABSTRACT 1

## In a High HIV Prevalence Area, Are African-American and Hispanic Patients Aware of Who Should be Tested for HIV in the Routine Opt-Out HIV Testing Era

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**OBJECTIVE:** To better understand the ongoing low HIV testing prevalence in community health centers implementing routine opt-out HIV screening, the objective of this study was to determine if African-American and Hispanic patients are aware of the CDC recommendations for routine HIV testing of all persons ages 13–64. The findings of this study will guide the development of HIV testing campaigns to improve HIV testing in these clinical settings.

**METHODS:** In a community health center serving predominantly African-American patients and a community health center serving predominantly Hispanic patients, a survey was given to patients in health center waiting rooms. The survey presented seven categories of people that should be HIV tested based on CDC recommendations: men who have sex with men, people who use intravenous drugs, people who have sex for money/drugs, people who have more than one sex partner, pregnant women, healthy teenagers, and healthy adults. Survey participants were asked which of these people should be HIV tested.

**RESULTS:** One-hundred seventy-six African-American and fifty-five Hispanic patients participated. The percentages of African-Americans versus Hispanics believing people should be HIV tested were: men who have sex with men (96% vs. 76%), people who use intravenous drugs (95% vs. 76%), people who have sex for money/drugs (95% vs. 86%), people who have more than one sex partner (94% vs. 64%), pregnant women (79% vs. 67%), healthy teenagers (74% vs. 40%), and healthy adults (73%

vs. 46%). For all categories of people except pregnant women, African-Americans were significantly more likely than Hispanics to know that they should be HIV tested ( $p < 0.01$ ).

**CONCLUSIONS:** Knowledge of the recommendation for routine HIV testing for all persons ages 13–64 — including healthy teenagers and adults — could be improved among African-Americans and Hispanics. Our study found that African-Americans had more accurate knowledge than Hispanics. Knowledge deficits could be one reason why many patients continue to opt-out of HIV testing even when it is offered routinely in health care settings. Other research has shown that self-perceived risk is lower than actual risk. Health center campaigns focused on disseminating knowledge about HIV risk and promoting CDC HIV testing recommendations may improve HIV testing rates.

## ABSTRACT 2

## Chief Complaints of Newly Diagnosed HIV Patients versus Negative Controls in Two Urban Emergency Departments Conducting Routine Opt-Out HIV Screening

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**OBJECTIVE:** In 2008 and 2009, two emergency departments (ED) in a publically funded hospital system in a high HIV prevalence area began routine opt-out HIV testing. The objective of this study was to compare the chief complaints of patients whose HIV test was positive to the chief complaints of patients whose HIV test was negative on routine screening to determine if persons who tested positive presented with distinctive chief complaints.

**METHODS:** A case-control study was performed to examine the ED chief complaints reported by patients tested for HIV in a routine, opt-out HIV testing program. Cases were patients whose HIV test in that visit was positive and without a known previous HIV diagnosis (new

positive), and controls were patients (matched on gender, age, race, in a 1:1 ratio) whose HIV test in that ED visit was negative. Free text chief complaints were abstracted from the electronic medical record, and categorized into clinical categories. The relative frequencies of the complaints were calculated and ranked.

**RESULTS:** Between August 2008 and August 2010, there were 342 patients identified to be newly HIV positive by routine HIV screening in the EDs, among 72,922 tested. Among the persons with newly diagnosed HIV infection, the top five chief complaints were: body pain (8%), fever/chills/night sweats (5%), shortness of breath/respiratory problems (5%), vomiting/nausea (4%), and drowsiness/weakness/fatigue (4%). Among the control patients with negative HIV test results, the top five chief complaints were: abdominal pain (14%), chest pain (10%), injury/trauma (6%), kidney/urinary problems (6%), and shortness of breath/respiratory problems (6%).

**CONCLUSIONS:** In a routine opt-out HIV screening program in a high HIV prevalence area, it appears that there are no predominant chief complaints among those with unrecognized HIV infection compared to patients who test HIV negative. Among the newly diagnosed, even the complaint of fever — which may suggest an infectious etiology — was reported only 5% of the time. Given the low frequencies of even the top five chief complaints and the broad diversity of chief complaints of persons who tested HIV positive, our findings suggest that chief complaints in the ED should not be used to guide HIV testing strategies. Routine opt-out HIV testing as recommended by the CDC should continue to be supported.

### ABSTRACT 3

## Rates of Hepatitis C Virus Testing Among US Veterans in Department of Veterans Affairs Care, 2011

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**OBJECTIVE:** In August 2012, the Centers for Disease and Prevention (CDC) augmented its recommendations

for hepatitis C virus (HCV) testing. Specifically, it recommended “one-time testing without prior ascertainment of HCV risk for persons born during 1945–1965, a population with a disproportionately high prevalence of HCV infection and related disease.” Historically, the policy for HCV testing in the Department of Veterans Affairs was based on assessing for exposure risk consistent with previous CDC recommendations. We sought to assess the extent to which veterans in recent Department of Veterans Affairs (VA) care — particularly those veterans born during 1945–1965 — have been tested for HCV.

**METHODS:** We used the VA’s Corporate Data Warehouse (CDW) to identify the birth dates, sex, race/ethnicity and VA laboratory tests of all veterans who had at least one VA outpatient visit in 2011. For HCV testing we accepted HCV antibody (including RIBA), viral load and genotype tests as evidence of testing for HCV. We calculated rates of testing for HCV overall, by birth cohort, by sex and by race/ethnicity.

**RESULTS:** Overall among 5,415,084 veterans with a VA outpatient visit in 2011, 54.9% had a VA test for HCV infection. Stratified by birth cohort, the rate was 41.4% for those born before 1945, 65.1% for those born during 1945–1965 and 60.1% for those born after 1965. HCV testing rates were higher in females (59.0%) than males (54.6%). Among those with race/ethnicity identified, rates were as follows: Hispanics 69.6%, Blacks 67.0%, Asians 63.5%, American Indian/Alaskan Natives 63.0%, Hawaiian/Pacific Islanders 57.1% and Whites 53.6%.

**CONCLUSIONS:** Among veterans in recent VA care, rates of VA HCV testing are higher among those born during 1945–1965 than among other birth cohorts. Of note, these results are limited to VA laboratory tests so the rates may be underestimated since some veterans may have been tested at non-VA facilities. Additional work is underway to measure testing rates by geographic location in order to identify variation and to target veteran and VA provider education to increase birth cohort testing rates. Substantial numbers of veterans still require testing to meet the CDC’s recommendation of one-time HCV testing for everyone in this birth cohort.

## ABSTRACT 4

## Performance Characteristics of ADVIA Centaur HIV Ag/Ab Combo (CHIV) Assay for the Simultaneous Detection of HIV p24 Antigen and Antibodies to HIV-1 (groups M and O) and HIV-2 in Human Serum or Plasma

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**OBJECTIVE:** The automated ADVIA Centaur HIV Ag/Ab Combo (CHIV) assay\* is designed to simultaneously detect both antibody to human immunodeficiency virus (HIV) and HIV p24 antigen on the ADVIA Centaur systems. This study evaluated the sensitivity and specificity of the ADVIA Centaur CHIV assay.

**METHODS:** The diagnostic sensitivity of the CHIV assay was evaluated with 728 HIV-positive samples and specificity was determined by testing 9191 unique random donor samples. The results were reported in Index values as reactive (Index = 1.0) or nonreactive (Index < 1.0). A total of 326 samples from 35 disease groups of potential cross-reactants were tested on the CHIV assay. Forty-eight HIV-infected viral lysate (antigen) isotypes that included isotypes A, B, C, D, F, G, O, AE, and AG were tested on CHIV for reactivity. Forty-five commercially available HIV seroconversion panels were tested. HIV-1 p24 Antigen (1st International Reference Reagent) was used to evaluate analytical sensitivity to the p24 antigen. Precision was evaluated in a study involving 20 days, two runs per day.

**RESULTS:** All the positive samples showed reactivity by the CHIV assay, resulting in 100% (728/728) sensitivity. Specificity determined by testing 9191 unique random donor samples was 99.82% (9174 / 9191). Testing of the potentially cross-reactive samples (n=326) on the CHIV assay yielded no reactive samples. All HIV-infected viral lysates (n=48), including isotypes A, B, C, D, F, G, O, AE, and AG, as well as HIV-2 strain NHIZ, tested reactive on the CHIV assay. The seroconversion sensitivity of the CHIV assay on all 45 panels tested was equivalent to that of

the reference methods as per vendor certificate of analysis. The observed mean analytical sensitivity of HIV-1 p24 antigen across three lots on the ADVIA Centaur system was 1.17 IU/mL. The CHIV assay had a within-run CV of <10% and a total CV of <12% over the assay range.

**CONCLUSIONS:** The results of this study show that the ADVIA Centaur HIV Ag/Ab Combo (CHIV) assay is a reliable and accurate, fully automated qualitative method to simultaneously detect the presence of both HIV p24 antigen and HIV antibodies in human serum or plasma.\*Not available for sale in the U.S. This assay is CE marked. ADVIA Centaur HIV Ag/Ab Combo assay is developed, manufactured, and sold by Siemens Healthcare Diagnostics Inc. for Ortho-Clinical Diagnostics Inc.

## ABSTRACT 5

## Barriers and Facilitators to HIV and Hepatitis C Testing Among Active Intravenous Drug Users

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**OBJECTIVE:** Non-sterile injection practices and unprotected sexual contact place injection drug users (IDUs) at high risk of contracting and transmitting HIV and Hepatitis C (HCV). Despite this, screening rates remain low. We explored perceived barriers and facilitators to HIV and HCV testing among IDUs utilizing a community-based needle exchange program.

**METHODS:** We conducted a cross-sectional, brief interview of 553 active IDUs in multiple urban settings in Southern Wisconsin who presented for free needle exchange services. Questions were developed based on the health belief model. Interviewers recorded verbatim oral responses on a standardized spreadsheet. Each participant received \$10 for compensation. Two investigators used inductive thematic analysis to code the qualitative responses line-by-line, and determined main themes by consensus. Coders achieved 81% agreement.

**RESULTS:** Participants were 69% male, 83% white, and had a median age of 28 (Interquartile range 23–36). Heroin was the most commonly injected drug (85%), and 68% injected drugs at least daily. IDUs reported the following barriers to HIV testing: lack of transportation, fear of a positive test, and time limitations. Comparatively, barriers to HCV testing included access to transportation, time limitations, cost of the test or lack of health insurance. Many reported that stigma associated with a positive HIV test was a significant barrier to HIV testing. Knowledge regarding testing appeared to be more of a barrier to HCV than HIV testing. The most frequent facilitators to either HIV or HCV testing included access to free testing at a supportive setting such as a community-based organization, convenient locale (including mobile testing), linkage with the needle exchange program, and general health concerns. Barriers and facilitators identified during thematic analysis were sub-categorized within five domains of a proposed conceptual model describing HIV/HCV screening behavior: (1) attitude toward testing, (2) access to a testing site, (3) IDU-provider communication regarding testing, (4) test performance, and (5) timely provision of results.

**CONCLUSIONS:** Our study offers an analysis of why active IDUs do not participate in HIV and HCV screening, and a model for future research. Most barriers to screening were related to limited access and resources such as locale, transportation, and time constraints. Stigma and fear associated with a positive test were also significant barriers to testing for HIV. Many IDUs reported concern about their overall health. This knowledge gap may be addressed through tailored education focused on their health benefits from HIV and HCV screening.

## ABSTRACT 6

### Low Rates of Screening for HIV and Hepatitis C among Injection Drug Users Not Engaged in Primary Care: A Community-Based Survey

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**OBJECTIVE:** The CDC has recommended expanded testing for HIV and hepatitis C (HCV) in health care settings to reduce the number of undiagnosed cases in the US. Injection drug users (IDUs) are at high risk for HIV/HCV, but often have poor access to health care and, therefore, may fail to receive appropriate screening. We investigated the use of community-based HIV/HCV screening among IDUs utilizing a needle exchange program.

**METHODS:** Lifepoint Needle Exchange is a statewide program offering free syringe exchange and HIV/HCV prevention services to IDUs in 11 cities across Wisconsin. Clients who inject drugs are encouraged to undergo HIV and HCV screening at least every six months and tests are provided free-of-charge upon request. We invited Lifepoint clients to complete an anonymous, 88-question, computerized survey that assessed frequency of HIV/HCV testing, injection-related risk behaviors, and access to medical care. Multiple logistic regression was used to identify factors associated with receiving recommended semiannual screening for HIV and HCV.

**RESULTS:** The survey was completed by 553 IDUs, of whom 69% were male, 83% white, 11% black and 6% Hispanic. The median age was 28. The percentage of respondents reporting they were tested for HIV in the past six and twelve months was 61.1% and 76.9%, respectively, with a somewhat smaller percentage reporting an HCV test during those intervals (55% and 69%). Of those tested for HIV during the past 6 months, 21.5% received their test at the needle exchange site, 31.7% from a primary care

provider, 8% in a correctional facility, and 38% at some other location. Respondents were more likely to report being tested for HIV in the past 6 months if they were under 30 (odds ratio (OR) 1.6, 95% confidence interval (CI) 1.2–2.3), had health insurance (OR 1.5, 95% CI 1.1–2.2), and had a primary care provider (OR 1.8, 95% CI 1.2–2.5). Adjusting for age and insurance status, IDUs who reported attending a primary care visit in the past 6 months had over four-fold increased odds of receiving an HIV test (adjusted OR 4.4, 95% CI 2.1–9.3). Parallel analyses demonstrated a similar association between primary care visits and HCV testing.

**CONCLUSIONS:** Despite the availability of free testing for HIV and HCV at a highly-utilized, community-based needle exchange program, a minority of IDUs receive recommended screening through this venue. Access to primary health care is a strong predictor of receiving screening for HIV and HCV.

#### ABSTRACT 7

### HIV Testing Practices Differ Among Black Primary Care Physicians in the US According to Physician Characteristics and Patient Demographics

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**OBJECTIVE:** The CDC recommends routine HIV testing in all healthcare settings, but this approach has not been widely incorporated in primary care settings, partially due to inconsistent physician adoption of the recommendation. The Black community bears a disproportionate burden of HIV and Black patients may preferentially seek treatment from Black physicians, but because only about 3% of physicians in the US are Black, each patient-physician interaction is an important opportunity to discuss HIV

testing. This study evaluated the HIV testing practices, perceptions, and attitudes of Black physicians who see Black patients in the US.

**METHODS:** A physician survey was administered at the 2010 National Medical Association Convention, by email, and via online panels. Eligibility criteria: Black race; primary care specialty; practicing at least 1 year; practice comprised of at least 60% adults and 20% Black patients.

**RESULTS:** Results are physician-reported estimates. 502 physicians responded: 47% male; 73% >40 years old; 28% with a high proportion Black patients (>75%); 27% with a high proportion low-SES (>45% 'poor') patients. Specialties: Internal/General Medicine (37%); Obstetrics/Gynecology (26%); Family Practice (25%); Emergency/Urgent Care (13%). Demographics of patient base: 56% Black; 33% men; 31% low-SES; 24% on Medicaid. Physicians generally over-estimated local HIV prevalence rates (13%–14%), yet only 34% of patients were tested for HIV in the past year; 67% of those tested did so due to physician recommendation. "More-routine" testers were more likely to be <40 years old, female, and OB/GYNs, and had more low-SES, Black, and Medicaid patients. Differences by geography of practice had minimal impact on testing rates. Physicians primarily recommended HIV testing to at-risk patients who were: involved with multiple sex partners (89% of physicians); injecting drug users (85%); sexually assaulted (83%); suspected of prostitution (77%); homosexual (77%); previously incarcerated (70%). These all ranked above routine testing (55%). Top barriers to testing were: patient may perceive recommendation as accusatory/judgmental; patient would not want to be identified as HIV-positive; competing priorities of physician; insufficient physician time with patient; patient may get offended due to HIV stigma.

**CONCLUSIONS:** Physician recommendation is a key driver of HIV testing among Black physicians in the US. However, multiple barriers exist that prevent routine testing and it is concerning that reported HIV testing rates was only 34%, which indicates that this is an area of focus for future targeted testing initiatives. Training and adoption of policies around CDC guidelines may encourage routinized HIV testing practices, improve linkage to care, and reduce HIV racial disparities.

## ABSTRACT 8

## Feasibility and Acceptability of Hepatitis C Virus Counseling and Rapid Testing in a Criminal Justice Setting

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**OBJECTIVE:** The primary objective of this research is to assess the feasibility and acceptability of rapid hepatitis C virus (HCV) testing among correctional populations through a pilot study of rapid HCV testing among 250 short-term inmates of the Rhode Island Department of Corrections (RIDOC).

**METHODS:** We created a brief (<10 minute) pretest counseling informational video on HCV. This video provides a general overview of HCV and modes of transmission; the importance of getting tested for HCV/ who should be tested for HCV; an explanation of the rapid HCV test; an explanation of the meaning of reactive and non-reactive rapid HCV test results; an explanation of confirmatory testing procedures for persons with a reactive rapid HCV test; and a brief overview of HCV care and treatment. HCV-negative, short-term inmates at the Rhode Island Department of Corrections (N=250) are recruited to participate in this pilot study. Participants complete an interviewer-administered baseline assessment regarding risk behaviors and HCV knowledge, view the video, and complete an OraQuick rapid HCV test. While the rapid HCV test is being processed, participants complete a second assessment to assess post-video HCV knowledge and opinions about the video. Participants with a non-reactive rapid test result receive standardized counseling. Those with a reactive rapid test result have a blood specimen obtained and a HCV viral load PCR test conducted for confirmation. Those with a positive HCV viral load result are counseled and referred for an HCV

assessment in the community after release. Community and Department of Corrections medical records of study participants identified as having chronic active hepatitis C are reviewed to collect relevant data on viral hepatitis medical appointments, testing, and treatment. Additional data relevant to a cost analysis of rapid HCV testing within correctional facilities will also be collected.

**RESULTS:** To date, 41 participants have been enrolled and completed rapid HCV testing; 3 participants had reactive rapid HCV tests, confirmed with positive HCV viral load results. These participants were referred to community-based HCV assessment appointments. Overall feedback on the video has been positive, and preliminary data suggest short-term efficacy in enhancing viral hepatitis knowledge.

**CONCLUSIONS:** The creation of a brief video providing information on HCV and rapid testing may help facilitate HCV testing within correctional facilities. Findings from this pilot study will inform the design of larger research trials and the implementation of HCV testing efforts in criminal justice settings.

## ABSTRACT 9

## Syringe Access and Clinic Based Routinized Outreach, Testing, and Linkage to Care

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**OBJECTIVE:** Describe Prevention Point Philadelphia 's(PPP)innovative approach to its current HIV testing program, to increase the number of newly identified and linked to care HIV and Hepatitis C positive Injection Drug Users by routinizing testing within PPP's Syringe Exchange Program (SEP) and Street-side Health Project (SHP) sites, utilizing 'social networking' outreach methods.

**METHODS:** PPP will routinize testing within its SEP at the point of registration at all mobile sites and during in-building syringe distribution days (Mondays and Saturdays). PPP will further innovate its testing program by beginning routinized testing within PPP's Street-side

Health Project (SHP) medical clinics, which conducted 1,121 screenings last year with 724 individuals. By specifically routinizing outreach, testing, and linkage to care within the SHP clinics, PPP will be able to target high risk participants who will have a sustained interaction with PPP staff but who have avoided testing through the current counseling and testing program. By redirecting testing staff to the SEP sites with the largest number of new SEP registrations and routinizing the testing offer as opposed to simply informing all new registrants of the opportunity for an HIV test or making testing available for those who ask, PPP will be able to target high risk participants who have not previously accessed sterile syringe access and prevention services.

**RESULTS:** PPP is proposing to conduct 1,000 HIV tests during 2012, to identify 22 newly identified as well previously identified but naive to or lost to care HIV positive individuals, to link at least 18 of those individuals to at least one HIV primary care appointment, to link 14 of those individuals to at least two HIV primary care appointments, and to link 12 of those individuals to all three HIV primary care appointments. PPP additionally proposes to offer a rapid HCV test in conjunction with the HIV test to all individuals receiving an HIV test, and further proposes to successfully provide a rapid HCV screening to over 50% of individuals receiving an HIV test.

**CONCLUSIONS:** By offering routine HIV, HCV testing opportunities at Philadelphia's Syringe Exchange Program, PPP will reach more high risk individuals and present them with an opportunity for linkage to coordinated care for HIV, HCV. The further expansion of testing services through out the free medical clinics will increase the opportunities for testing.

## ABSTRACT 10

### Internal Evaluation of the Bio-Rad Geenius™ HIV 1/2 Supplemental Assay

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**OBJECTIVE:** The objective of this internal study was to compare the sensitivity and specificity of this new assay with HIV reference assays (Bio-Rad HIV-1 Western Blot and Bio-Rad Multispot HIV-1/HIV-2 Rapid Test) on blood bank samples, hospitalized patient samples, HIV known positive samples, and seroconversion panels. The Bio-Rad Geenius™ HIV 1/2 Supplemental Assay is a rapid test for the confirmation and differentiation of HIV-1 and HIV-2 antibodies. The Geenius™ HIV 1/2 Supplemental Assay is simple and easy to use. This immunochromatographic test utilizes HIV-1 and HIV-2 antigens on the membrane solid phase and protein A which is conjugated to colloidal gold dye particles.

**METHODS:** In this validation of the Geenius™ system (test device, reader & software), the specificity was evaluated on negative blood bank samples (n=350, serum and whole blood samples) and on samples from hospitalized patients (n=100). The sensitivity was tested on HIV-1 known positive samples (n=135), HIV-2 known positive samples (n=232), 32 commercial seroconversion panels (n=154 samples) and 4 samples from well-documented HIV co-infected patients.

**RESULTS:** The specificity in this study was 100% (450/450, 95% CI 99.2–100%). No false positive results were found in the testing of blood bank samples and samples from hospitalized patients. Of the 135 known HIV-1 positive samples, 100% (135/135, 95% CI 97.2–100%) were positive. Of the 232 known HIV-2 samples, 100% (232/232, 95% CI 98.4–100%) were positive. The performance of the Geenius™ HIV 1/2 Supplemental Assay with seroconversion panel's demonstrated greater sensitivity than the GS HIV-1 Western Blot on 13/32 (41%) of the panels tested. The use of the automatic interpretation feature in the Geenius™ reader and software allowed differentiation of 100% of the known HIV-1 samples and



90% of the known HIV-2 samples tested. The remaining 10% of the known HIV-2 samples demonstrated cross-reactivity with HIV-1 antigens and were considered HIV positive untypable (HIV-1 and HIV-2 positive). The 4 samples from HIV co-infected patients were correctly identified as HIV-1 and HIV-2 positive.

**CONCLUSIONS:** The performance of the Geenius™ HIV 1/2 Supplemental Assay during internal evaluations demonstrated excellent specificity and sensitivity and allowed differentiation of 100% of HIV-1 samples and 90% of HIV-2 samples (including identification of 4 co-infected samples). The Geenius™ HIV 1/2 Supplemental assay is the first unitary assay allowing HIV-1 and HIV-2 confirmation and differentiation with automated reading and interpretation in less than 30 minutes. Bar-coding of samples and assay devices assures traceability of patient samples and results.

## ABSTRACT 11

### Barriers and Facilitators to Universal HIV Screening Among Internal Medicine Residents

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**OBJECTIVE:** Adoption of universal HIV screening by primary care physicians has been suboptimal, despite CDC and ACP recommendations. Medical residents represent the next wave of practicing clinicians. In 2010, our internal medicine residency included HIV screening to an annual self-audit focused on meeting preventive health guidelines. After its addition, resident screening rates increased from 18 to 44%. This improvement prompted us to design a qualitative study examining barriers to, and facilitators of, increased HIV screening by residents.

**METHODS:** Fifteen internal medicine residents, representing 20% of the training program, volunteered to participate in one of three focus groups exploring barriers and facilitators to routine out-patient HIV screening. A

trained facilitator led the groups using a standardized interview guide. Questions were formulated based on 1) a knowledge-attitude-behavior framework for physician non-adherence to guidelines, 2) existing reports of barriers, and 3) informal discussions with residents and recent graduates regarding their experiences. Focus groups were audio recorded, transcribed, and de-identified. Two investigators used a hybrid thematic analysis of 1) deductive codes from the original knowledge-attitude-behavior framework and 2) inductive, HIV-specific, codes derived from the focus groups themselves to code the transcripts line-by-line. Inter-rater reliability was 95%. Discrepancies and main themes were discussed until consensus was reached.

**RESULTS:** Residents were uniformly knowledgeable and displayed positive attitudes towards the 2006 CDC guidelines. However, they described three potential barriers to routine screening: 1) some patients were reluctant to accept screening because of perceived low risk and stigma, 2) HIV screening often became a low priority in time-limited encounters, and 3) approaches to screening were not standardized. Residents also described three prominent facilitators to promote screening: 1) they normalized the topic and drew analogies to other chronic disease screening, 2) they referenced expert authorities, such as the CDC, and 3) residents developed modifications to their electronic health record templates as a cue to address the topic.

**CONCLUSIONS:** Internal medicine residents displayed knowledge and positive attitudes toward universal HIV screening. Most barriers were behavioral and some involved a subset of patients who indicated reluctance to undergo testing. Physicians wishing to promote HIV screening in primary care should consider utilizing three facilitators in their routine: 1) normalizing the topic, 2) referring to an expert authority, and 3) employing an electronic health record reminder.

## ABSTRACT 12

## Hepatitis Education and Testing in Rural Missouri

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**OBJECTIVE:** The outreach programs provided by MoHepC Alliance, which brings outreach services directly to the at-risk populations, will produce a much high rate of HCV virus identification then would normally occur through regular acute care testing procedures

**METHODS:** This effective outreach model brings the education directly to the individuals in the at-risk populations providing education on risk factors, prevention and treatment. We reach out to substance abuse treatment centers and rural health departments to provide onsite services. The program methodology is as follows: patient attend free education programs; takes hepatitis C testing; meets with medical professional in facility offering testing and is given results and offered a confirmation test, the viral load test at reduced rates or free, to confirm if the patient has active disease or if they have cleared the virus on their own. All who test positive are referred to physicians in their area; Patients are also offered counseling on treatment options including help in accessing reduced cost drug, testing and medical treatment programs, and life style adjustments.

**RESULTS:** This program produces an overall infected rate of 20% ,while the national rate is estimated at 2% of the general population. Between 2007 and 2011 MoHepC Alliance tested 3017 drug users for hepatitis C, 1,003, or 33% of which were identified as infected. This represent 47% of the total population tested during that time however the infected population of drug users represented 80.1% of the total positives identified. There were 3,384 people tested who were not identified as substance abusers and 247, or 7% were found to be positive. We tested a total of 6,401 people in Rural Missouri and found a total of 1,251 or 20%.

**CONCLUSIONS:** MoHepC Alliance's outreach programs targeting at-risk populations have a very successful

outcome for individuals with Hepatitis C. By reaching out and going to the substance abuse treatment centers we were able to find a much higher rate of infection with HCV. When we worked with the Rural Health Departments and screened people without the risk factor of IV or Drug use, the rate, 7%, was still above the CDC's published rate of infection. This program is an example of how a the time and effort of a small organization directed efficiently can resulting in higher than previously reported infection rates then through general screening methods used.

## ABSTRACT 13

## Routine HIV Testing: The Teen Health Clinics' Experience

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**OBJECTIVE:** The objective of the study was to describe the profile of young males who tested positive for HIV through routine HIV testing at the Baylor College of Medicine Teen Health Clinic, a system of seven clinics that provide family planning services to male and female adolescents.

**METHODS:** Since the implementation of routine HIV testing in 2008, HIV testing has increased 320%, while the numbers of new HIV cases have increased 300%. A total of 46 males tested positive for HIV during this period. A retrospective chart review was conducted in order to identify risk behaviors that can place these individuals at risk for HIV as compared to males who did not have an HIV diagnosis. Risk behaviors included condom use, type of sex, partner history, number of lifetime and recent sexual partners, drug use, history of incarceration, exchanging sex for money, past sexual assault and HIV testing history. Demographic information (ethnicity, age) of the males was also abstracted from their charts. The study was approved by the affiliated IRB.

**RESULTS:** The study included 92 males ages 18 to 23 (Mean=20.59). Of these, 70 (76%) were Black, 18 (20%) were Hispanic and 4 (4%) were White. A total of 46 were

HIV-Positive and 46 were HIV-Negative. Of the HIV positive males, a total of 28 (60.8%) have been tested previously for HIV. Males who had engaged in anal sex, had given or received sex for drugs or money, or were sexually assaulted were significantly more likely to test positive for HIV. Testing HIV positive was also significantly associated with the number of lifetime and past 12 months sexual partners and partners' number of lifetime sexual partners. There were no condom use differences between the groups.

**CONCLUSIONS:** The testing rates following the implementation of routine HIV testing have increased within some of the most vulnerable populations; young men who have sex with men (MSMs). The stigma of HIV and societal homophobia have a negative impact on the mental health of young MSMs. Studies found a correlation between internalized homophobia and overall poor sexual health. Family planning clinics are accessible and more likely to be utilized by groups where HIV risk and prevalence is high and who find these clinics accessible and safe.

#### ABSTRACT 14

### **Synergizing HIV Testing and Viral Hepatitis B Screenings Amongst Hard to Reach Asian & Pacific Islander Populations through Non-Traditional Approaches**

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**OBJECTIVE:** Despite having similar routes of transmission, Hepatitis B enjoys relatively little stigma among hard-to-reach Asian & Pacific Islander (A&PI) communities, while HIV is highly stigmatized. In the San Francisco Bay Area, 1 in 10 A&PIs are carriers of Viral Hepatitis B. Successful community level awareness campaigns such as the San Francisco Hep B Free campaign has been effective in mobilizing A&PIs to screen, access treatment, and talk about Hepatitis B. Unfortunately, HIV testing rates among A&PIs in San Francisco are extremely

low, as they are the least likely community to test when compared to all other racial and ethnic groups.

**METHODS:** In a strategic attempt to increase testing and reduce stigma for HIV among hard-to-reach A&PIs in San Francisco, Asian & Pacific Islander Wellness Center (A&PIWC) developed a model using Hepatitis B as a gateway to educate A&PIs about HIV and its common risk factors. A&PIWC implemented an integrated Hepatitis B and HIV education, screening & testing, and linkage to care program through a "mobile clinic" approach — co-locating the described services in house as well as at various A&PI targeted community cultural festivals/street fairs, and A&PI community cultural centers. Community members accessing screening services for Hepatitis B complete a pre and post HIV/Hep B knowledge assessment and education session. After, they are then asked if they would like to be tested for HIV. A rapid HIV testing algorithm is then completed.

**RESULTS:** Through our approach from June 2007 to June 2012, a total of 1210 community members were screened for Hepatitis B. Almost 90% of those screened has never been tested for HIV. Of those screened for Hepatitis, 13% were tested for HIV at the same time as their Hepatitis screening, while 88% accepted a referral to an HIV testing clinic. We observed an 8% HIV positivity rate among those screened for HIV. A 16% Hepatitis B positivity rate was observed among those who screened for Hepatitis. Results of the post screening knowledge questionnaire indicate that 80% of respondents were not aware of the risks of HIV. 75% did not know how HIV is transmitted. 75% stated interest in being tested for HIV in the future. 60% stated they would be comfortable discussing HIV with their families moving forward.

**CONCLUSIONS:** This integrated approach suggests that leading prevention efforts with a less stigmatized health issue can assist in addressing barriers of discussing health issues that comprise higher cultural stigma.

## ABSTRACT 15

## Making HIV Testing a Routine Component of Gynecologic Care for All Women

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**OBJECTIVE:** This program's objectives are to expand HIV testing of non-pregnant women by making it a routine component of gynecologic care and educate providers about appropriate gyn care for HIV-infected patients.

**METHODS:** Most ob-gyns test all pregnant patients for HIV during each pregnancy. Anecdotal information suggests that most are not testing all non-pregnant patients. The American College of Ob-Gyns (the College) has recommended routine HIV screening for women ages 19–64 and targeted screening for women with risk factors outside that age range since 2008. In early 2009, the College broadly distributed routine HIV screening guidelines to all members in active practice to increase HIV testing of non-pregnant women. The College also broadly distributed educational materials for providers and patients to heighten awareness of the importance of routine HIV testing. In late 2009, the College surveyed members to assess HIV testing practices and to determine what factors influence ob-gyns to follow recommended HIV testing guidelines. To help further expand testing of non-pregnant women and educate providers about appropriate gyn care for HIV-infected women, the College launched [www.womenandhiv.org](http://www.womenandhiv.org), a website designed to provide ob-gyns, other women's health care providers, and consumers with a central, trusted source of up-to-date information about HIV infection in women and its impact on their reproductive health. The College also developed an interactive, web-based tutorial for providers. Gynecologic Care for Women With Human Immunodeficiency Virus is a ground-breaking companion piece to the Practice Bulletin of the same name. Free CME credits are available to anyone successfully completing this tutorial.

**RESULTS:** Study results published July 2012 (*J Womens Health (Larchmt)* 2012;21:762-8) indicate that approximately 1 in 5 ob-gyns are routinely testing their

non-pregnant patients for HIV infection. The provider's perception about the patient's risk for acquiring HIV is the number one reason for not testing non-pregnant patients. Practice type and location appear to have some influence on ob-gyn HIV testing practice, as does physician race.

**CONCLUSIONS:** It's likely that adequate time had not elapsed for ob-gyns to have adopted the 2008 guidelines into practice by late 2009; most changes in medical practice often take 2–5 years to become established. More studies are needed to assess ob-gyns' current HIV testing practices with non-pregnant women and identify testing barriers. The Women and HIV website and interactive tutorial are pieces of an overall strategy to fully engage ob-gyns regarding HIV infection and non-pregnant women and incorporate HIV testing as a component of routine gynecologic care for all women.

## ABSTRACT 16

## Structural Modifications Allowing for Efficient Implementation of Routine Opt-Out Testing in Community Health Settings

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**OBJECTIVE:** The CBC Initiative HIV primary program was created in 1999 in response to the severe lack of HIV primary care services on Chicago's west side. The program is collocated within the Austin Health Center. Austin Health Center is part of the Cook County Health and Hospital System (CCHHS). In 2011, CBC Initiative implemented a new HIV testing program to routinely test Austin Clinic patients. This included offering all eligible patients HIV testing in accordance with CDC's 2006 recommendation. In June, the CCHHS added an EMR pop-up to prompt lab technicians to offer HIV testing to clients receiving laboratory services. The program has resulted in substantial increase in HIV testing and a routine practice is cost effective and can be easily replicated.

**METHODS:** To implement the County’s new opt out testing policy, CBC Austin staff met with key stakeholders to obtain buy in including administrative and medical leadership. To increase awareness of the HIV testing services and walk-in clients, we also provided HIV testing at the local Department of Human Services and utilized HIV positive peers to recruit community residents as walk-in HIV testing clients. Walk in clients received rapid HIV test from CBC staff and register clinic patients received HIV tests as part of laboratory services

**RESULTS:** After a 3 month assessment and training period, HIV testing increased from 7% to over 30% of all Austin Health Center clients in year 1. Created Routine Testing Videos for Providers and Patients Successfully established a regular presence at the DHS site Achieved 100% Linkage to Care Rate

**CONCLUSIONS:** Making structural changes to support implementation of opt-out testing in community health centers, is a cost effective method that rapidly identifies previously undiagnosed HIV positive individuals.

**ABSTRACT 17**

**Engaging Stakeholders in the Development of a Comprehensive Manual for Hepatitis C Counseling and Testing**

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**OBJECTIVE:** Hepatitis-C virus (HCV) infection is the most common blood-borne infection in the United States. About 18,000 individuals per year acquire new HCV infections and the current prevalence may be up to 4 million. Because of the high disease burden, low rate of testing, and high proportion of people who become ill without obvious signs, HCV infection has been described as a “silent epidemic.” The CDC has recently updated the national recommendations for the prevention and control of HCV infection. The new guidelines call for one-time testing for all people born from 1945–1965, the group at highest

risk of chronic infection. To anticipate the expansion of hepatitis C testing, the CDC is developing a comprehensive manual to provide guidance for HCV counseling and testing. With the release of the new recommendations and the introduction of the rapid antibody test, hepatitis C testing may become more widespread, thus increasing the need for information and resources.

**METHODS:** To determine the manual’s usefulness, a field assessment is being conducted among two distinct stakeholder groups: Group 1) counselors in public health venues likely to reach adults at risk for hepatitis C; and Group 2) clinicians in primary care settings that reach patients born from 1945–1965. As part of the field assessment, stakeholders from both groups are being asked to review the manual, use it with patients, and provide feedback on its applicability, functionality, and recommendations for improving it. A mix of organizations, including mobile HCV testing units and clinic-based testing sites are participating.

**RESULTS:** Data are currently being collected at sites in a number of cities including Seattle, Los Angeles, and New York City. Preliminary results show that the manual may be applicable under a variety of situations including traditional and rapid HCV testing. CDC will use the information from the assessment to refine the manual. The field assessment will result in a comprehensive manual that consists of four modules: 1) an introduction to HCV counseling and testing; 2) pre-test counseling; 3) post-test negative counseling; and 4) post-test positive counseling.

**CONCLUSIONS:** Since there are no standardized protocols for conducting HCV counseling and testing, the CDC manual will provide a useful tool to address the call for routine and expanded HCV testing. Stakeholder engagement in the field assessment is crucial to ensure that the manual reflects the priorities and needs of end-users and results in a tool that supports the expansion of HCV screening.

## ABSTRACT 18

## Routine HIV Testing in Emergency Departments: Capturing Missed Opportunities in Texas

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**OBJECTIVE:** The number of persons living with HIV (PLWH) in the US will continue to rise until the number of undiagnosed and untreated cases of HIV is substantially reduced. Many undiagnosed PLWH seek healthcare but are not tested for HIV. This represents missed opportunities to identify PLWH unaware of their infections and increase the number of PLWH with suppressed virus. The purpose of the Texas Department of State Health Services' (DSHS) Routine HIV Testing Project is to address missed opportunities and ultimately drive down the number of new infections.

**METHODS:** Emergency departments are key settings to implement routine HIV testing, being the safety net for the underserved/uninsured, and account for approximately 28% of annual acute care visits and increased healthcare costs. One of the DSHS HIV prevention strategies is to support routine testing in areas/settings with the highest prevalence of HIV. In 2011, Dallas County ranked first in Texas with a case rate of 561.8 and has the highest percentage of uninsured Texans. The Parkland Health & Hospital system in Dallas provides nearly 50% of the unfunded care in the county — there are over 2.4M residents in the Parkland service area.

**RESULTS:** Since 2009, DSHS has funded routine HIV testing in the Parkland emergency care system. Parkland has identified almost 1,100 HIV positive cases with a 2.3 positivity rate (23 times higher than the CDC standard of 0.1%). Prior to testing positive, 332 of the HIV positive patients had previously sought emergency services at Parkland, totaling 1,303 previous visits. The number of previous visits by individuals ranged from 1 visit to over 20. These patients represent the missed opportunities to test and identify patients earlier in the disease process.

But it also represents the high cost burden of treating persons who should have a medical home. It is estimated that over 83% of patients have been linked to HIV-related medical care in Dallas County, contributing to improved health outcomes, and decreased healthcare costs in the community.

**CONCLUSIONS:** It is estimated that 20% of HIV positive persons are unaware of their infection, contributing to 54% or more of new sexually transmitted infections. The identification of PLWH in emergency departments in facilities similar to Parkland has the potential to capture missed opportunities, increase the number of PLWH that know their status, drive down the number of new transmissions, and save healthcare dollars to better serve the community.

## ABSTRACT 19

## Performance Characterization of the Second Generation COBAS® AmpliPrep/COBAS® TaqMan® HCV, v2.0 Quantitative Test Incorporating a Novel Dual-Probe Assay Design

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**OBJECTIVE:** In this study, we evaluated the performance characteristics of a second generation real-time PCR assay, the COBAS® AmpliPrep/COBAS® TaqMan® HCV Quantitative Test, version 2.0 (COBAS® HCV v2 test), designed with a novel dual-probe approach.

**METHODS:** HCV RNA viral load (VL) monitoring has been well established as a diagnostic tool for management of chronic hepatitis C patients. HCV RNA VL results are used to guide treatment decisions with the goal of antiviral therapy to achieve undetectable VL results. Therefore, a sensitive assay with high specificity in detecting and accurately quantifying HCV RNA across genotypes is critical.

**RESULTS:** The new assay demonstrated a limit of detection and lower limit of quantification of 15 IU/mL across all HCV genotypes; and was linear from 15 to 100,000,000 IU/mL with high accuracy ( $<0.2 \log_{10}$  difference) and precision (S.D.=0.04–0.22  $\log_{10}$ ). Correlation to the COBAS® AmpliPrep/COBAS® TaqMan® HCV Test (version 1) was good among the clinical samples explored (n=412 genotype 1–6 samples,  $R^2=0.88$ ;  $R^2=0.94$  without n=104 genotype 4 samples). Clinical Utility was demonstrated on n= 328 subjects treated with pegylated Interferon plus ribavirin with a strong positive predictive value at week 4 (RVR = rapid virologic response) of 0.9 and an odds ratio of 10.5. Comparison of n=277 samples (109 HCV RNA negative and 168 HCV RNA positive) to two FDA-approved qualitative tests showed an overall composite concordance of 99.3%.

**CONCLUSIONS:** In conclusion, the COBAS® HCV v2 test demonstrated excellent performance and sensitivity across all HCV genotypes. The test demonstrated clinical utility in a treatment patient cohort and high concordance with qualitative assays due to the expanded linear range. The COBAS® HCV v2 test should be well suited for the management of HCV patients in today's treatment environment. Performance specifications are pre-commercialization and subject to regulatory approval. The CAP CTM HCV Quantitative Test, v2.0 is currently in development and not yet commercially available.

## ABSTRACT 20

### Increasing Hepatitis B Screening in Asian and Pacific Islander Communities: Best Practices and Lessons Learned in Philadelphia

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**OBJECTIVE:** Hep B United Philadelphia is a community-based coalition and citywide program led by the Hepatitis B Foundation, to address the burden and disparities of hepatitis B in Philadelphia Asian and Pacific Islander (API) communities, through improved screening, vaccination and linkage to care.

**METHODS:** Hepatitis B Foundation initially conducted a community-based needs assessment and local resource mapping that led to creating the Hep B United coalition in 2010, consisting of community, health, social service, cultural, business and research organizations. An innovative campaign and strategy to improve community awareness of HBV was executed via print, audio-visual, social media, and non-traditional components. Strategic trainings and seminars have been implemented to improve coalition partner knowledge and enhance participation. Free, community-based screening and education events are conducted in a variety of settings. A plan to improve citywide infrastructure has been developed to enhance sustainability of HBV-related screening and vaccination services.

**RESULTS:** The Hep B United Philadelphia coalition has over 60 organizational partners, and has participated in over 125 community and cultural events in 24 months. The awareness campaign, including social media and flash mobs resulted in greatly improved awareness of HBV as a local health priority. Strategic outreach was successful in recruiting the support of the Mayor, the Philadelphia City Council, and both the Mayor's Advisory Commission and Governor's Commission on Asian Affairs. Over 3,000 API individuals have been reached through public education and awareness. Evaluation of training and education seminars has indicated improved HBV-related knowledge among coalition partners and within the targeted API community. Over 1,200 have completed free HBV screening, and 96% of infected individuals have been successfully linked with appropriate health care. A new, free Mobile HBV Vaccine Clinic has been implemented with the Philadelphia Department of Health, to remove cultural, financial and transportation barriers and improve rates of vaccination among high-risk API adults.

**CONCLUSIONS:** Multiple barriers to HBV screening, vaccination and linkage to care continue to exist in urban API communities. Community-based, non-traditional strategies can be successful in addressing these gaps. These programs must be tailored to the individual needs of target communities. Additionally, multi-disciplinary collaboration, continued partner and community engagement, and support of city leadership are necessary to see sustainable improvements. Continued evaluation will

allow us to assess the long-term impact of this community coalition and HBV campaign.

## ABSTRACT 21

### Barriers to On-Site Rapid HIV Testing in New Jersey Substance Abuse Treatment Programs

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**OBJECTIVE:** The New Jersey Division of Mental Health and Addiction Services (DMHAS) provides rapid HIV testing kits and services to select substance abuse treatment programs (SATPs) in New Jersey, at no cost to the programs. However, uptake of on-site rapid HIV testing in these programs has been slow. To inform initiatives to increase on-site rapid HIV testing in substance abuse treatment, this study evaluated HIV testing and barriers to on-site rapid HIV testing in New Jersey SATPs.

**METHODS:** An email with a link to a secure online survey service was sent to clinical administrators at 205 New Jersey SATPs. The e-mail instructed the administrators to forward the survey link to the person most informed about HIV testing practices in their programs. Also, DMHAS data on each site's client population was linked to survey responses by a unique site identification number.

**RESULTS:** Surveys were completed by administrators or staff at 109 New Jersey SATPs. Thirty-nine percent of programs reported that 50% or more of their active clients have been tested for HIV. The most common reported barriers to on-site rapid HIV testing were preferring to refer elsewhere for testing (49%), inadequate staffing (33%), phlebotomy not available (44%), HIV counseling not available (33%), cost (44%), and inadequate system to handle positive results (35%). Among the programs eligible to receive rapid HIV test kits at no cost to them

(n=18), 47% reported that the number of rapid HIV tests completed is 50% or more of the number of admissions since becoming eligible for free tests. Testing 50% or more of admissions had a significant negative association with clients frequently or always refusing testing because it is not a priority to them or they don't want know if they are HIV infected, percent of clients who are male, percent of clients uninsured, and percent of clients age 19–30. On-site rapid HIV testing had a significant positive association with percent of clients who are Black.

**CONCLUSIONS:** HIV testing is low in most SATPs in New Jersey. The most common reported barriers to on-site rapid HIV counseling are related to program resources. However, among programs that have access to rapid HIV test kits at no cost to them, client related factors significantly predict HIV testing rates. Initiatives to increase on-site rapid HIV testing in substance abuse treatment need to target both program level and client level barriers.

## ABSTRACT 22

### Testing Preferences and Knowledge of HBV and HCV Among a New York City Emergency Department Patient Population

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**OBJECTIVE:** The majority of the 4.5 million people living with hepatitis B (HBV) or hepatitis C (HCV) in the United States remain unaware of their infection. This study sought to assess patients' knowledge of hepatitis and the acceptability of hepatitis B/C screening during an emergency department (ED) or pharmacy visit.

**METHODS:** A prospective study was conducted on a convenience sample of New York City ED patients and pharmacy clients. Eligible participants completed anonymous written hepatitis knowledge tests and testing acceptability and preference surveys.



**RESULTS:** The study population (n= 2,122) was 45.3% male, 47.1% Hispanic and 42.0% black. Mean age was 38.94, SD  $\pm$  15.0 years. 72.1% (1,516/2,104) responded that they would get tested for hepatitis B/C if a free test were made available. Of those interested in testing, 56.8% (852/1500) indicated preference for a rapid oral swab, 25.5% (383/1500) for a blood draw, and 17.7% (265/1500) for a fingerprick. 69.1% (1025/1484) of those interested in hepatitis B/C testing responded that they would elect to take the test in conjunction with an HIV test. There were no differences in acceptability, testing method preference, or preference for combined hepatitis and HIV testing among racial, ethnic and gender groups. 44.8% (930/2078) of subjects correctly answered that HBV and HCV can be spread through intercourse, 59.1% (1235/2089) knew that people infected with HBV or HCV can live for years without knowing, 60.9% (1267/2081) knew that alcohol can damage the livers of hepatitis-positive people, 43.9% (913/2082) knew that there was a vaccine to prevent HBV, and only 19.8% (412/2079) knew that there was no vaccine for HCV. Subjects with self-reported knowledge of HBV or HCV and subjects who reported having been previously tested for either virus were statistically significantly more likely to answer each knowledge question correctly.

**CONCLUSIONS:** A free hepatitis B/C screening program could see high levels of participation in an ED setting. Patients seeking care in an inner-city ED require educational materials to increase knowledge of hepatitis B/C prior to testing.

## ABSTRACT 23

### **Routine HIV Testing in the US Department of Veterans Affairs (VA): Impact of National Policy Change and Operational Interventions 2009–2011**

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**OBJECTIVE:** With over 24,000 HIV+ veterans in care, Department of Veterans Affairs (VA) is the single largest provider of HIV care in the United States. Since 1988, Federal law and regulations barred widespread HIV testing

in VA and mandated signature consent and scripted pre/post-test counseling for testing. As recommended by the U.S. Centers for Disease Control and Prevention, Federal law and VA regulations were revised in mid-August 2009 to allow HIV testing in VA with verbal consent and provision of written informational material. VA monitors annual HIV testing rates to evaluate the impact of these national policy changes and operational interventions such as electronic clinical reminders to increase testing rates.

**METHODS:** Using a standardized electronic extract, data collected annually from all VA medical facilities included number of Veterans ever tested for HIV, number tested at the facility in the calendar year, and number with positive test results in the CY. In 2011, data collection expanded to include sex, race, ethnicity, and age.

**RESULTS:** Nationally, the proportion of Veterans in care in VA ever tested for HIV increased from 9.2% in 2009 to 20% in 2011. The observed seropositivity rate was 1.2% in 2009, 0.6% in 2010 and 0.4% in 2011. Among Veterans in VA care in 2011, testing was documented in 30.5% of females, 37.0% of Blacks, 26.8% of individuals aged < 30, 28.8% aged 30–49, 23.3% 50–69, and 10.1% aged >70.

**CONCLUSIONS:** The proportion of Veterans in VA care with documented HIV testing more than doubled from 2009–2011. The observed HIV seropositivity rate in 2011 remained above 0.1%, CDC's threshold for routine HIV testing. Elimination of policies requiring written informed consent and pre/post test counseling, operational interventions, and electronic reminders contributed to the increase in HIV testing rates. VA supports routine HIV testing as a key component of a national HIV prevention strategy.

## ABSTRACT 24

## Increasing Routine Viral Hepatitis Testing: Technical Consultation Report Findings

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**OBJECTIVE:** Chronic viral hepatitis affects up to 5.3 million Americans and over half of them are unaware of their infection. Accurate blood tests are available however, due to low knowledge, awareness and the reluctance of providers and patients to discuss risk factors; lack of health insurance coverage; conflicting federal guidelines regarding who should be tested; and limited resources, testing has not been effectively implemented. In order to understand how to increase routine viral hepatitis testing, it is important to examine various testing approaches to testing for hepatitis B virus (HBV) and hepatitis C virus (HCV) and to identify barriers and needs, strategies to improve testing, best practices, and models for working with specific populations.

**METHODS:** A technical consultation was convened by the Department of Health and Human Services on increasing routine viral hepatitis testing. Representatives were invited from federal agencies and other stakeholder groups including physician associations, state and local health departments, community health centers, community based organizations, researchers, and hepatitis advocacy organizations to develop strategies and describe approaches to viral hepatitis testing in a variety of public and private settings.

**RESULTS:** There is no national HBV or HCV testing program as there is for HIV and access to testing can be difficult, especially for individuals at risk. Therefore, approaches to viral hepatitis testing have focused on effectively identifying individuals at highest risk; understanding health care provider and patient attitudes about testing; and understanding the roles of health departments, community health centers and other health care providers, corrections, substance abuse treatment providers, and community-based organizations. A number of barriers and needs were identified including the need

to identify/create and disseminate best practices; educate providers; create clinical measures; address laboratory challenges; and overcome the limited resources available for testing. Strategies that emerged included facilitating closer linkage of screening programs with confirmatory testing and care; leveraging established HIV and other systems serving individuals at risk; utilization of electronic medical records to support testing through clinical decision support and patient registries; and using non-physician centered models of care or a team approach to increase routine viral hepatitis testing.

**CONCLUSIONS:** Routinization of viral hepatitis testing will require continued efforts in the key areas listed above and may be further supported by the identification and dissemination of best practices and by policy changes such as inclusion of consistent viral hepatitis language into grant announcements.

## ABSTRACT 25

## Opportunities for Expanding HIV Testing Through Health Reform

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**OBJECTIVE:** The Patient Protection and Affordable Care Act (ACA) includes many new opportunities to cover HIV testing. The author will provide an update on how HIV testing will be covered under ACA by Medicare, Medicaid, and private insurance, including through women's preventive services and how advocates have and can continue to impact coverage decisions. The role the U.S. Preventive Services Task Force (USPSTF) plays in coverage determinations and the essential health benefit (EHB) process will be assessed. Testing coverage variability across state Medicaid programs will also be evaluated. Finally, the author will discuss how implementation of HIV testing at state and federal levels can be improved and barriers addressed.

**METHODS:** The author will review how changes in ACA promote coverage of HIV testing for each payer, discussing

the implementation process, including how coverage decisions are made and how they can be affected.

**RESULTS:** The new opportunities in ACA that expand HIV testing have resulted from advocacy efforts and subsequent administration decisions. After years of advocacy, private insurance plans must now cover HIV screening for women. As the EHB are defined at the state and federal levels, plan selection presents opportunities to ensure HIV testing is covered by private insurance and for the expanded Medicaid population. About half of states currently do not cover routine testing in their traditional Medicaid program and there are opportunities to increase that. Decisions regarding coverage of services are still being made and continued advocacy at the federal and state levels is critical. Advocates have also been urging the USPSTF to change its grade for routine HIV screening, which impacts all payers. Many coverage determinations are guided by USPSTF grades and a positive grade change, which may come out in draft this fall, could dramatically improve access to HIV testing. Collectively, these efforts will help improve coverage of HIV testing across payers and states. Finally, even with coverage, implementation has been hampered by lack of awareness and billing issues.

**CONCLUSIONS:** Coverage for HIV testing is greatly enhanced through ACA implementation across all payers. However, because most coverage of preventive services is tied to USPSTF A and B grades, routine testing is not covered. A change to the USPSTF grade for routine testing, which is currently under review, would greatly enhance coverage. In addition, implementation barriers must be considered as coverage of routine HIV testing does not automatically translate to usage.

## ABSTRACT 26

### **Mandatory HIV Testing in the Emergency Department: An Evaluation of Statewide Testing in NY Since the 2010 Legislation Making it Law**

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**OBJECTIVE:** In 2010, NY State passed landmark legislation mandating that HIV testing must be offered to all persons between the ages of 13 and 64 receiving hospital or primary care services, including Emergency Departments (EDs). We evaluated the statewide implementation of this new testing requirement in EDs and determined whether differences existed based on HIV prevalence or site-specific designated AIDS centers (DACs). For EDs complying with the mandate, we also evaluated policies for linkage to care.

**METHODS:** An electronic survey was administered to all ED directors in NY excluding Veterans' Affairs hospitals. Investigators developed questions related to all provisions of the HIV testing legislation and linkage to care. ED and HIV physicians tested face validity. Basic descriptive statistics were used for analysis.

**RESULTS:** The response rate was 96% (183/191). All respondents were aware of the testing legislation. Of the 180 respondents who answered the question about testing, 86% reported offering HIV testing in their EDs. All EDs not currently offering testing reported plans to initiate it. EDs located in NYC, in high prevalence areas and in state DACs were more likely to offer HIV testing. Although the law eliminated the requirement for separate written consent for an HIV test, most facilities (107/159, 67%) still used this technique. Only 11% incorporated HIV testing language into the general treatment consent and 19% used verbal consent for rapid tests as allowed by the law. The testing offer was primarily performed by clinicians but also included clerical staff, public health advocates,

social workers and through written testing information. Most EDs used rapid testing (67%) including both point-of-care ED testing and rapid laboratory testing. Only 62% of EDs provided HIV test results to the patient while still in the ED. Most EDs (90%) had a linkage to care protocol in place, however only 33% of those confirm successful linkage.

**CONCLUSIONS:** We provide the first report of statewide ED HIV testing practices in NY since the passage of a new testing law in 2010 mandating an offer of HIV testing to all patients ages 13–64. With 96% of EDs reporting, most offer HIV testing but to varying degrees. Challenges to full implementation still exist, as many EDs are not delivering HIV test results to patients while they are still in the ED. Linkage to care protocols for patients testing preliminary positive are in place, but few EDs follow-up to determine if linkage has occurred.

**ABSTRACT 27**

**Blood or Swab? Effect of Changing from an Oral Swab to a Whole Blood Finger Stick HIV Test on Rates of Acceptance**

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**OBJECTIVE:** Two kinds of point of care rapid HIV tests are currently approved by the FDA. One uses whole blood obtained from a finger stick, and the other uses a swab of the oral mucosa. We hypothesized that the acceptance rates for a routine HIV test in the emergency department would be the same regardless of which kind of test was offered.

**METHODS:** The DC Dept. of Health has supplied point of care HIV test kits to the George Washington University Hospital Emergency Department HIV screening program since 2008, but switched the test from the oral to the finger stick test late in September 2011. We determined the acceptance rate for the finger stick test (Clearview Complete HIV 1/2) over a 6-month period, and compared it to the acceptance rate of the oral test (OraQuick Advance Rapid HIV-1/2 Antibody Test) over the same 6-month

period in the prior year. A one-month learning period (October 2011) was not included in the analysis which compared the six month period from November 1 2011–April 30, 2012 when the finger stick test was offered with the six month period from November 1, 2010–April 30, 2011 when the oral test was offered. Over the study periods there were usual turnovers in the staff that offer the test, but no other changes in the administration of the test itself.

**Results: Oral swab test**

Finger stick testperiod	11/1/10–4/30/11	11/1/11–4/30/12
Number approached	5938	3661
Accepted	3224	2003
Declined	1791	1259
Acceptance rate	64.3%	61.4%

A two tailed data analysis was performed using the Chi-squared test with Yates’ correction.  $X^2=6.936$  with one degree of freedom. The P value was 0.0084.

**CONCLUSIONS:** Our hypothesis that there would be no difference in the acceptance rates for the point of care test was not supported. The acceptance rate for a routine opt out HIV test in an urban emergency department showed a statistically significant decrease when the program switched from a point of care oral test to one that required a finger stick. Since the acceptance rate is critical to large scale HIV testing programs, this effect, if confirmed, should be considered when programs are determining which kind of HIV test to offer patients.

**ABSTRACT 28**

**An Algorithm Using Electronic Medical Record Data Accurately Identifies Patients with Unknown HIV Status in a Large, Urban Healthcare System**

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**OBJECTIVE:** Expanded routine HIV testing is a critical strategy toward improving early HIV diagnosis and preventing transmission. Designing effective HIV

testing interventions requires the ability to ascertain the proportion of patients with unknown HIV status and monitor trends over time. However, significant logistical hurdles impede the determination of these data. We sought to develop and validate an algorithm to identify patients with unknown HIV status using data from the electronic medical record (EMR) of a large, integrated, urban healthcare system

**METHODS:** We used HIV-related data in the EMR to develop criteria that classified patients as known HIV status (HIV infected or HIV negative) or unknown HIV status. The predictive values of individual criteria were calculated by comparing results to a chart review of patients randomly selected from each category of HIV status. This process was repeated to validate a final algorithm that included a sub-set of the most highly predictive criteria. Sensitivity of the algorithm for identifying HIV infected patients was calculated by comparing results to an independent internal registry of HIV infected patients in care.

**RESULTS:** The final algorithm included criteria comprising laboratory and point of care tests, inpatient and outpatient ICD9 codes, and the clinical problem list. Greater than 450 charts were reviewed as part of the validation process. The positive and negative predictive values for identifying unknown HIV status were 100% (92.9–100%) and 96.5% (94.3–98.0%), respectively. The sensitivity of the algorithm for identifying those who were HIV infected was 99.7% (99.4–99.8%).

**CONCLUSIONS:** An algorithm using commonly available EMR data accurately identified patients with unknown HIV status in a large, integrated, urban healthcare system. This algorithm can be applied in diverse clinical settings to calculate baseline rates of unknown HIV status, support planning of expanded HIV testing strategies, and monitor the impact of new testing strategies over time. Furthermore, this algorithm can be integrated into EMR-based clinical decision support programs to help providers identify which patients should be offered HIV testing.

## ABSTRACT 29

### Primary Care Physician Implementation of Routine HIV Screening in Washington, DC: An Assessment of Perceptions, Challenges and Barriers

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**OBJECTIVE:** Primary care providers are critical partners for addressing the HIV epidemic. However, the implementation 2006 CDC guidelines for routine HIV screening lags considerably among these practitioners. Furthermore, HIV-positive persons in Washington DC are often diagnosed in late state disease despite having a primary care provider. Therefore, given frequent missed opportunities for early diagnosis of HIV infection in primary care, data are needed to explain challenges and barriers to integration of HIV screening as standard of care in the primary care settings.

**METHODS:** A database of DC-based primary care physicians was created and limited to those actively practicing medicine. Physicians were stratified and prioritized by client volume with those with >500 clients deemed highest priority. Physicians were contacted to schedule attendance at group case discussions or one-on-one discussions with an HIV-trained physician. Physicians were also invited to become a peer champion to provide assistance in garnering colleague support for routine HIV screening. Physicians were asked to respond to queries about their approach to HIV testing and to offer explanations for gaps in routine screening in the primary care setting.

**RESULTS:** Over 2000 physicians were identified. Of these, 375 (16%) were targeted for participation. Of these, 198 (61%) agreed to participate and 125 (63%) attended group discussion and 73 (37%) engaged in a brief one-on-one. One hundred-twenty five responded to queries. Of these, 45% were unaware of CDC testing guidelines, 71% not aware of local testing guidelines establishing routine screening as standard of care and 19% were routinely screening for

HIV. Barriers to routine screening included the perception HIV testing as too time-consuming (29%), reimbursement concerns (21%), confusion about the linkage process (14%) and limited time for counseling (21%). Other barriers to screening included discomfort returning HIV results, concerns about losing HIV-positive clients to specialists and confusion about the consent process. Three provider champions were identified to influence peers to implement screening but impact was limited due to time physician time constraints to interact with peers.

**CONCLUSIONS:** Despite the magnitude of the HIV epidemic in Washington, DC, HIV screening in PCP settings is low. Physician education and awareness about the need for and tailored strategies to implement routine HIV screening are imperative. Effective strategies to reach and impact physicians about their role in identifying HIV infection are also needed. Billing and reimbursement concerns for HIV screening urgently warrant further investigation and intervention. Use of a peer-based strategy may prove effective.

#### ABSTRACT 30

### Implementation of an Emergency Department HIV Routine Screening Program in Inner City Washington, DC: Lessons Learned and New Frontiers.

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**OBJECTIVE:** In 2010, United Medical Center, in Washington, D a safety net hospital for residents east of the Anacostia River, implemented its first HIV screening program in the emergency department (ED). Program challenges and successes provide insights about strategic approaches needed to ensure program sustainability.

**METHODS:** Interviews were conducted among hospital administrators, leadership and clinical staff to gauge interest in and commitment to routine HIV screening.

Existing ED procedures and flow were reviewed. Hospital infection control and testing policies for barriers to program implementation were reviewed. Multiple recurring HIV-related educational sessions, including grand rounds and workshops were held for medical staff. A proposal was developed to request a standing HIV testing order for all admitted patients from the ED.

**RESULTS:** Hospital leadership including the chief medical officer and CEO supported routine HIV screening. Consequently, within 2 months HIV testing consent incorporated into the general consent for care form. Because no external funding was initially available, for four months routine screening was integrated in ED triage. Of the 1359 (~339/month) ED clients tested in triage, 31 (2.3%) were HIV-positive. Demographics for these newly-diagnosed patients included, median age 47, range (20–55). 55% were male.. When external funding was obtained, testing shifted from triage to a designated tester model. Of the 8415 (701/month) patients tested since this change, 88 (1%) were new HIV-positives. Of these, 38% were male, median age 41 (range 17–84). HIV testing volume plateaued between 600–800/monthly or 20% of ED volume. Repeat program assessment identified complete reliance on a designated tester model as the primary limitation in testing expansion. To expand testing volume, an HIV standing admission order is being reviewed by hospital leadership. Advanced HIV testing diagnostic capability including p24 Antigen testing via Abbot Architect is being explored as a mechanism to increase ED testing volume and identification of new and acute infections.

**CONCLUSIONS:** Early success of the new routine screening program implementation was due to leadership and healthcare team commitment and buy-in. However, in hospital settings, reliance on designated tester models as the primary mechanism for identification of HIV infection limits the ability to expand testing. In addition, dependency on external funding for testing jeopardizes long-term program sustainability. Transition to physician directed testing and integration of testing within the flow is likely more feasible than current approaches. Implementation of novel and cutting-edge testing strategies and related policies require commitment and support from hospital leadership and each member of the healthcare team.

## ABSTRACT 31

## The Impact of HCV Rapid Testing on Individuals Knowledge of Their HCV Status

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**OBJECTIVE:** Hepatitis C virus (HCV) infection is a major public health problem. It is estimated that over half of those infected with HCV do not know their status. The OraQuick® HCV Rapid Antibody Test is the only rapid testing technology currently available for HCV screening. It allows people to receive their screening results in 20 minutes. HCV screening tests cannot diagnosis someone with active HCV infection. To diagnose someone with HCV, a HCV RNA test must be performed. The New York State Department of Health (NYSDOH) has collaborated with OraSure Technologies, Inc. on a project to determine the impact: 1) of rapid testing on the number of people that know their HCV status, and 2) on acceptance and follow through with referrals to diagnostic testing, care and treatment.

**METHODS:** Eleven sites across NYS were selected to perform HCV rapid testing. Sites were selected based on their proximity to a NYSDOH funded HCV care and treatment provider. Sites included needle exchange programs, AIDS service organizations, community health centers and hospital based clinics. Each person screened received appropriate counseling messages based on screening test results and risk behaviors identified. Individuals with reactive tests either had HCV diagnostic testing performed on-site or were given a referral appointment for diagnostic testing. Client level data, including basic demographics, HCV risk, testing history, other testing conducted, rapid test result and referral outcome was reported to the NYSDOH.

**RESULTS:** Since February 2012, 1,568 rapid HCV screening tests have been conducted, 104 (6.6%) have had a reactive result and 1,460 (93.2%) were non-reactive. Overall, 99.2% received their test results, 100% of clients with reactive tests received their results. Of these sites

performing HCV diagnostic testing on-site (n=3), 51.5% returned for their results, 12.1% did not return, and 36.4% refused PCR testing with at least 15.2% of those refusing because they already knew their status. Of the sites referring out for HCV diagnostic testing (n=8), 30.6% kept their referral appointment, 26.5% missed their appointment, 18.4% were unknown and 24.4% refused testing with at least 7.1% stating they already knew their status.

**CONCLUSIONS:** HCV rapid testing technology is effective in ensuring people get screened for HCV and receive their screening results. However, more work needs to be done to motivate and educate those with reactive antibody tests to ensure they are properly diagnosed with HCV and linked to care.

## ABSTRACT 32

## Mapping the Co-Occurrence of HIV, Hepatitis C, and Chlamydia in New York City (NYC) to Support Targeted Testing at Federally Qualified Health Centers (FQHCs)

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**OBJECTIVE:** As part of the CDC-funded Program Collaboration and Service Integration (PCSI) initiative at the New York City Department of Health and Mental Hygiene (DOHMH), we aimed to use infectious disease data to better target the delivery of integrated services to the public. We analyzed surveillance data to identify neighborhoods with high rates of HIV, chlamydia, gonorrhea, syphilis, TB, hepatitis B, and hepatitis C. We sought to prioritize neighborhoods for integrated testing by mapping zip codes with co-occurring high morbidity for these diseases; and to partner with FQHCs in these areas to increase their capacity to provide integrated testing.

**METHODS:** We calculated diagnosis rates per 100,000 persons by zip code using data reported to DOHMH for 2010. We defined a high morbidity zip code as a rate in the top quintile (20%) of all zip codes in NYC for two or more of the diseases studied. Zip codes were scored by the number

of diseases for which they were in the top quintile, with 7 being the highest possible score. We created maps based on the zip code scores using ArcGIS. We then mapped NYC FQHCs and identified those within the highest scoring zip codes as potential partners for a targeted screening project.

**RESULTS:** Of 181 zip codes, 60 (33%) have more than one disease in the top quintile. Of these 60, 15 (25%) have high morbidity for HIV, hepatitis C, and chlamydia. They are located in the South Bronx, Harlem and North-Central Brooklyn. We are working with four FQHCs in these neighborhoods to evaluate current protocols for HIV, hepatitis C and STD testing, and to increase testing for individuals at risk for one or more of these diseases through staff training, technical assistance, and enhancements to electronic health records. Although the project is too new to provide data at this time, we will measure hepatitis C testing among HIV-positive patients, and the number of patients offered HIV testing upon diagnosis with chlamydia.

**CONCLUSIONS:** Mapping infectious disease data allowed us to identify specific neighborhoods in NYC that have high rates of infectious disease and might benefit from increased testing for HIV, hepatitis C, and chlamydia. FQHCs are important partners for health departments, because of their location in neighborhoods where infectious disease services are needed. Local health departments can use surveillance data to partner with providers in high risk neighborhoods.

## ABSTRACT 33

### **Routine HIV Testing at Montefiore Medical Center: Scale-Up Case Studies from New York City's Second Largest Hospital System**

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**OBJECTIVE:** Montefiore Medical Center (MMC), the 2nd largest hospital system in the New York City

area, has made numerous care, research and prevention contributions to the fight against HIV/AIDS. In response to New York State's landmark HIV test offer mandate, MMC is employing new strategies to ensure all adult and adolescent patients are offered HIV testing when they visit any inpatient, outpatient or emergency department across its three campuses. MMC's objective is to de-stigmatize HIV testing, engage more patients in HIV prevention and most importantly, identify and link HIV positive patients to life-saving care.

**METHODS:** MMC has built a fully integrated service delivery system informed by innovative information technology tools. In September 2010, MMC convened a routine HIV testing task force led by the System's senior medical director and comprised of the directors of the adult and adolescent HIV/AIDS programs, the medical directors of the inpatient, outpatient and emergency departments as well as representatives from key departments including information technology, laboratory medicine and risk management. Using existing personnel and data resources, the task force obtained buy-in from key sector leaders, amended testing protocols and consent processes, developed decision support applications through its electronic medical records, trained outpatient department providers and administrators and conducted a survey to inform a provider communications campaign. The outpatient department launched the routine offer of HIV testing January 2012, with training occurring between February and April 2012. The inpatient and emergency departments will launch routine testing November 2012.

**RESULTS:** Between February and April 2012, 31 trainings were conducted with outpatient sites, reaching 443 staff members. Trainings oriented staff on the NY State HIV test offer mandate, the new outpatient HIV testing work flow, streamlined counseling using the ACTS (Advise, Consent, Test, Support) system, linkage to care and how to navigate the HIV testing improvements made in the electronic medical record. Analysis of HIV testing in the outpatient department shows a steady increase in testing since launch/training: 12,957 tests in the three months preceding launch/training compared to 14,964 tests in the three months following training, a 15.5% increase after only three months.



**CONCLUSIONS:** Multi-layered approaches are needed to successfully launch practice change throughout a large medical institution. MMC's approach — obtain buy-in from key stakeholders, modify protocols, policies and systems as needed, institute electronic decision support modules in the EMR, train key staff and communicate expectations and performance — is a replicable model for facilitating routine HIV testing in other large medical institutions.

#### ABSTRACT 34

### Self-Testing in the Emergency Department (ED) by Kiosk

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**OBJECTIVE:** Despite successes in nationwide efforts to integrate HIV testing as part of routine care in the emergency department (ED) challenges remain. Kiosk-directed HIV self-testing offers a novel approach to address this challenge. We conducted a pilot study to evaluate the feasibility, acceptability, and accuracy of having ED patients use a kiosk to conduct a rapid, point-of-care (POC) self testing before routine HIV testing.

**METHODS:** ED patients were recruited to volunteer to perform a rapid POC HIV self-test in conjunction with the standard-of-care HIV POC test. The self-test offered was OraQuick Advance (oral fluid) test. Consented patients performed the self POC HIV test prior to the routine standard-of-care POC HIV test. Patients aged 18–64 years without previous HIV diagnosis were eligible. Acceptability and ease of use was assessed by questionnaire.

**RESULTS:** Of 955 patients approached, 473 (49.5%) consented to perform a self POC HIV test; 467 completed the test. Of patients performing a self-test, 100% had concordant results with those obtained by health-care professionals. One newly diagnosed HIV infection was identified in a 48 year-old woman. Median age was 41 years, 59.6 % were female, 74.8% were African American, and 19.6% were White. 99.8% of patients believed the POC self-

test was “definitely” or “probably” correct, 91.7% of patients “trusted their results” “very much”. Interestingly, 99.8% reported that “overall” it was “easy or somewhat easy” to perform the test. Of patients, 96.9% would “probably” or “definitely” test themselves at home if the rapid HIV test were available over-the-counter (OTC) for purchase. Approximately 33% of patients would pay up to a maximum of \$10 for the test, whereas only 32% would pay up to a maximum of \$30. Overall, 25.9% of patients preferred self-testing and 34.4% preferred health-care professional testing ( $p>0.05$ ). For location of testing, 26.1% preferred home self-testing and 32.8% preferred clinic/ED testing ( $p>0.05$ ).

**CONCLUSIONS:** Kiosk initiated testing proved to be highly feasible, acceptable, and accurate method of conducting rapid HIV self-testing in this pilot study; however rates of engagement were only moderate, with almost half of patients volunteering to perform an HIV test. Patients' results were concordant with those obtained by research assistants. Most stated they would test themselves at home if an OTC were available. More research will be required to ascertain the barrier to increased engagement, as well as the practical value of more widespread kiosk-facilitated HIV testing in the ED for testing larger numbers of patients.

#### ABSTRACT 35

### Scaling Up Community-Based HIV Antibody and RNA Testing Among Gay Men in San Francisco

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**OBJECTIVE:** Demand for sexual health services at Magnet continues to exceed capacity. In 2010, Magnet provided 4,174 HIV antibody tests and still was unable to accommodate an estimated 2,000 additional clients. Changes within San Francisco Department of Public Health (SFDPH) in 2011 allowed for Magnet to dramatically increase capacity. Counseling is no longer required. SFDPH now recommends that all HIV-negative MSM men test for HIV twice annually regardless of risk

behavior. This shift underscored Magnet's need to increase capacity.

**METHODS:** In August 2011, Magnet launched a model by which clients are triaged into either express (15-minute) or standard (30-minute) appointments. Clients are assigned to a standard session if: 1) client requests counseling, 2) client is a contact to an STI within the past 60 days, or 3) client is experiencing symptoms indicative of an STI. Others are assigned into express appointments. Magnet employs a rapid test algorithm (RTA) allowing for same-day verifications and immediate initiation of partner services and linkage to care. The Clearview HIV 1/2 Stat-Pak is the first screening tool utilized. If reactive, a second test (OraQuick ADVANCE Rapid HIV 1/2 Antibody Test) is run. If both tests are reactive, the client is informed of the positive test result. Confirmatory samples are sent to SFDPH laboratory. Previously, RNA tests were only conducted on men who had UAI within the previous 90-days. Now, screening for HIV RNA is conducted on all MSM testing HIV antibody negative at the current visit. Blood specimens for RNA screening are sent to the SFDPH laboratory. When HIV RNA is detected in a specimen, SFDPH notifies Magnet, and the corresponding client is contacted and scheduled for an in-person appointment. At the time of disclosure, linkage to care and partner services are initiated; and a confirmatory specimen is collected and sent to SFDPH.

**RESULTS:** From August 2010–July 2011, prior to the express model, a total of 5,173 HIV antibody tests were provided with 88 (1.7%) new HIV infections diagnosed. 1,754 HIV RNA tests were conducted with 10 acute infections detected. From August 2011–July 2012, after the implementation of express testing, 8,557 HIV tests were conducted with 103 (1.2%) new antibody diagnoses. RNA testing saw the greatest increase with 7,826 tests conducted and 19 acute infections detected.

**CONCLUSIONS:** Streamlined approaches to offering HIV testing in a community setting can dramatically increase uptake of HIV testing among gay men and lead to an increase in HIV diagnoses,

## ABSTRACT 36

### Impact of Electronic Medical Record and Revised Triage Process on Routine HIV Screening in the Emergency Department.

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**OBJECTIVE:** As part of a CDC funded grant, PS07-768, in compliance with the 2006 CDC recommendations for HIV screening, Memorial Hermann Texas Trauma Institute Emergency Department (ED), a tertiary referral center began HIV screening 6/2008. Additional funding was received to expand testing to 6 of 8 Memorial Hermann community hospitals. All locations have positivity rates exceeding the national average with a range of 0.03% as a low to the highest of 0.11%. During the third year of funding, the electronic medical record (EMR) platform for the ED changed and a revised triage process was initiated. Formerly the HIV screening field was a mandatory requirement at triage for 7 facilities that were testing and not visible to the sites uninvolved. The previous EMR had the ability to significantly “flex” functionality from site to site by location which is not possible with the new EMR. The current EMR is an enterprise wide solution with a central server. Split flow triage provides an immediate point of entry assessment designed to reduce wait times. Split flow does not allow for department specific screening questions at triage that a comprehensive triage obtains. These changes negatively impacted the routine HIV screening process we had implemented.

**METHODS:** We evaluated the monthly HIV screening numbers pre and post EMR/triage implementation.

**RESULTS:** The number tested dropped dramatically with the new EMR. Testing decreased in all but 1 site from 20–77%. The site that increased from 211 to 385 chose to continue comprehensive triage and did not implement split flow triage. Pre change monthly average screened by location — TMC-1049, SW-1076, NW-285, NE-309, MC-

171, SE-280, Katy-211. Post change monthly total screened by location — TMC-835, SW-248, NW-155, NE-230, MC-94, SE-71, Katy-385. The HIV screening process has returned to triage at two facilities and within one month been positive by returning to near pre-implementation numbers. MC-164, SE-192.

**CONCLUSIONS:** While uncertain which variable had the greater impact to the HIV screening process, success with routine HIV screening is optimal when addressed at triage and when the screening tool is a mandatory field in the computer system. It assures that all patients who access the emergency department for services and are able to opt out for testing are screened for HIV. Testing has improved to near goal with addressing HIV screening during the triage process despite split flow requirements. The same implementation will begin at the remainder of the campuses to optimize HIV testing.

#### ABSTRACT 37

### Comparison of Enhanced Targeted Rapid HIV Screening Using the Denver HIV Risk Score to Nontargeted Rapid HIV Screening in an Urban Emergency Department and Urgent Care Setting

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**OBJECTIVE:** The Centers for Disease Control and Prevention recommends nontargeted HIV screening in healthcare settings, including emergency departments (EDs). Since 2006, 11 studies have reported modest effectiveness of nontargeted screening in this clinical setting. Recently, a clinical risk prediction tool, the Denver HIV Risk Score (DHRS), was developed to identify high risk patients and help focus HIV screening efforts. Our goal was to compare the effectiveness of targeted HIV screening

using the DHRS to nontargeted HIV screening in an ED setting.

**METHODS:** Design: Quasi-experiment. Setting: Urban, academic ED and urgent care (UC) with an approximate annual combined census of 110,000 visits. Patients: All patients 13 years of age or greater who were clinically stable and capable of providing consent. Intervention: Targeted rapid HIV screening of patients identified as high-risk by nurses using the DHRS (defined as a DHRS of 30 or greater) during medical screening during a 4-month period in 2011. Control: Nontargeted rapid HIV screening offered by nurses during medical screening during a comparable 4-month period in 2010. Analysis: Association between targeted HIV screening and newly-diagnosed HIV infection, adjusting for patient demographics and payer status.

**RESULTS:** During the targeted phase, 28,506 eligible patients were included, 1,718 (10%) were identified as high-risk, and 551 completed HIV testing. Of these, 7 (1.3%, 95% confidence interval [CI]: 0.5%–2.6%) were newly-diagnosed with HIV infection. During the nontargeted phase, 29,510 eligible patients were included and 3,591 completed HIV testing. Of these, 7 (0.2%, 95% CI: 0.1%–0.4%) were newly-diagnosed with HIV infection. Targeted HIV screening was significantly associated with identification of newly-diagnosed HIV infection when compared to nontargeted screening (adjusted RR = 10.4, 95% CI: 3.4–32.0). The median CD4 counts for patients newly-diagnosed during the targeted phase and during the nontargeted phase were 244 cells/ $\mu$ L (IQR: 101–434) and 272 cell/ $\mu$ L (IQR: 254–285), respectively ( $p=0.8$ ). The median viral loads for patients newly-diagnosed during the targeted and nontargeted phases were 42,435 copies/mL (IQR: 17,275–844,498) and 192,551 copies/mL (IQR: 110,681–301,223), respectively ( $p=0.9$ ). Additionally, of the 14 newly-diagnosed patients, 4 (29%) had CD4 counts  $>350$  cells/ $\mu$ L, of which 3 (75%) were identified during the targeted phase.

**CONCLUSIONS:** Targeted HIV screening using the DHRS was strongly associated with new HIV diagnoses when compared to nontargeted screening. Although both HIV screening methods identified the same absolute number of newly-diagnosed patients, significantly fewer

tests were required during the targeted phase to achieve the same effect.

## ABSTRACT 38

### Novel Emergency Department Registration Kiosk for HIV Screening Increases Engagement of High Risk Patients

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**OBJECTIVE:** Emergency Department (ED) HIV screening has proven critical to the national strategy for identification of unrecognized HIV cases. Unsustainable costs and low screening rates challenge sustainability. Free-standing registration kiosks could potentially reduce the marginal costs of ED HIV screening, and improve overall rates of testing. We sought to evaluate feasibility and impact of leveraging ED registration based kiosks for offering HIV screening.

**METHODS:** A rapid oral fluid HIV testing program was instituted in a U.S. ED since 2005. Three phase quasi experimental design. Phase I as reference examined existing testing with exogenous staff offering HIV testing at bedside; II (tablet prototype with manual login) and III (enhanced kiosk with automated login) at ED registration. Feasibility operationally assessed by rate at which HIV tests offered, accepted, completed, and resulted in new HIV-positive diagnoses. Socio-demographic data collected via staff-interview (Phase I) or kiosk-based questionnaire (Phases II & III). Descriptive statistical analysis and chi-squared tests performed.

**RESULTS:** The numbers of eligible ED patients for screening, proportions of these tested, or socio-demographic characteristics of patients eligible for screening were similar among 3 phases. However, number and proportion of patients offered testing of those eligible for screening increased significantly across phases [I: 32% (936/2975), II: 37% (965/2605), III: 40% (1030/2571),  $p < 0.05$ ]; slightly higher rates of newly diagnosed HIV

positivity observed with kiosk versus bedside testing [I: 0% (0/538); II: 0.2% (1/475); III: 0.5% (2/430)]. Compared to phase I, those tested via kiosk were more likely to be younger, female, black, and report high risk sexual behaviors and/or injection drug use (age: 39 years, 35 years, 35 years for phase I, II, III; female: 55%, 63%, 62%; Black: 67%, 75%, 78%; high risk sexual behaviors: 30%, 52%, 51%; injection drug use: 1%, 8%, 7%)(all  $p < 0.05$ ).

**CONCLUSIONS:** HIV screening via registration based kiosks in an ED was feasible and yielded comparable rates of testing and increased rates of higher-risk patients engagement for testing. This novel approach may offer a solution to sustaining screening and yield more diagnoses of unrecognized HIV infection in EDs.

## ABSTRACT 39

### Kiosk-Facilitated Patient Self Testing for HIV in an Emergency Department Rapid HIV Screening Program

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**OBJECTIVE:** Innovative approaches are required to offset costs and resource of HIV screening in medical settings. Here we conduct a pilot study to evaluate utility of kiosks for patient HIV self-testing, as the routine mode of emergency department (ED) HIV screening, measuring rates of uptake and successful completion of HIV testing.

**METHODS:** For this program evaluation we built upon a 2-phase kiosk system integrated into ED operations in 2011 for rapid oral-fluid HIV testing which includes 'registration kiosk' (for offering HIV screening) and 'risk assessment kiosk' (for collecting demographic and risk behavior information). A series of instructional self-testing kiosk screens were added to the risk assessment kiosk which provides step-by-step instructions for self-testing. Test results were read by trained testing facilitators. We alternated 10 weekday 16-hour per day where kiosk self-testing was offered as the routine model with 10 weekday 16-hour per day where kiosk-facilitator testing was offered

for a total of 40 days. During the self-testing phase patients who accepted HIV testing but subsequently declined to perform their own test were tested via a facilitator. Testing facilitators observed how a patient performed the self-testing, and provided assistance when requested. Descriptive statistical analysis and chi-squared tests performed.

**RESULTS:** During the study period, ED census and numbers of eligible patients for screening were similar (kiosk self-testing: 4,241 and 2,446 patients, respectively; versus kiosk facilitator testing: 4,230 and 2,409 patients, respectively). Among them, 877 and 884 eligible patients (kiosk self-test, vs. kiosk facilitator test) were offered HIV testing; 352 and 350 of those eligible accepted and received an HIV test, respectively. During the kiosk self-testing phase, 155 (44%) patients agreed to perform self-testing while 197 patients declined self-testing and received testing by a facilitator. Among those who completed self-testing, 134 (86%) patients successfully performed the test; 33 (25%) requested assistance from the staff. One (0.3%) patient had a reactive result in each phase; 1 was newly diagnosed HIV infection in the kiosk self-testing phase and the other was false positive.

**CONCLUSIONS:** This is the first demonstration of kiosks for engaging patients and guide HIV self-testing in a health care setting. Notably, while rates of agreement for self-testing were similar to facilitator testing, more than half of patient declined to perform their own test; further a substantial number of patients needed assistance from staff or failed to complete self-testing. Operational and educational improvements are required prior to consider full implementation of kiosks for HIV self-testing in EDs.

## ABSTRACT 40

### Undiagnosed HIV Infection in an Urban Emergency Department: a Blinded, Cross-Sectional Serosurvey

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**OBJECTIVE:** CDC recommends routine HIV testing in Emergency Departments (EDs). Jacobi Medical Center has a well-established ED rapid testing program, however not all patients are eligible for or accept testing. We measured the prevalence of undiagnosed HIV infection in the ED.

**METHODS:** This blinded, cross sectional serosurvey took place in a large Bronx, NYC Adult Emergency Department. During the 8- week study, remnant specimens from all clinically indicated ED blood draws were collected. Patient identifiers were matched to the NYC HIV Registry and the ED rapid testing program database to assess previous HIV diagnosis and acceptance of HIV testing. After matching, all patient identifiers were permanently removed from study specimens and databases, and the remnant specimens were tested for HIV antibody.

**RESULTS:** During the study, 8,347 patients entered the ED. Of these, 3,597 had blood drawn and 1,776 accepted rapid testing. We salvaged and tested 94% (N=3,373) of available blood specimens. Of the specimens tested with a third generation EIA and confirmatory Western Blot, 111 were positive, yielding an ED prevalence of 3.3%. Fourteen (13.5%) of positive specimens came from individuals who were not in the HIV Registry. These individuals are assumed to have undiagnosed HIV infection. The prevalence of undiagnosed infection was higher than expected among those over 64 years old and whites, although these differences were not significant due to small absolute numbers. Undiagnosed infection was not associated with sex, discharge status, or inpatient admission.

**CONCLUSIONS:** This ED had a high rate of undiagnosed HIV. EDs and hospitals should use multiple testing

strategies targeting ED entrants and inpatients in order to capture as many patients as possible and truly routinize testing.

#### ABSTRACT 41

### Implementing a Rapid HIV Testing Program in a New York City Hospital-Based Dental Clinic

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**OBJECTIVE:** This study aimed to implement and assess patients' acceptance of a rapid HIV testing program within an urban, hospital-based dental practice as part of making HIV testing a routine part of all medical care.

**METHODS:** A prospective cross-sectional study was conducted on a convenience sample of patients seen at the dental clinics of two urban hospitals in the Bronx, New York. Rapid oral HIV testing was offered 5 days a week, between 9am and 5pm from 08/01/2011 to 2/14/2012. Individuals aged 13 years and older were recruited by trained HIV counselors while in the dental clinic waiting room. Patients who reported testing within the previous 6 months or who reported being HIV-positive were considered ineligible for HIV testing. Patients received both pre- and post-test counseling in a screened-off area in the waiting room. Data were collected on the number of patients offered testing, the proportion accepting testing and newly diagnosed HIV infections. Population characteristics were analyzed using descriptive statistics.

**RESULTS:** Of 1,642 people approached, 797 (48.5%) were eligible for HIV testing, of which 430 (53.9%) accepted testing. The population of tested patients was 38.6% male, 37.2% Hispanic, and 46.3% non-Hispanic black, with a mean age of  $36.7 \pm 13.6$  years. 76.3% (328/430) of patients tested reported prior HIV testing. Of eligible patients who refused testing, 17.4% (139/797) considered themselves at no risk for HIV. Individuals 30 years and under were more likely to accept testing (57.5%) than those over the age of

30 (51.8%). Testing acceptance did not differ by gender or race. No new HIV infections were identified.

**CONCLUSIONS:** Rapid HIV testing in a New York City hospital-based dental clinic resulted in modest rates of patient acceptance. Future work should concentrate on improving patients' privacy in offering testing in order to increase acceptance of testing in this non-traditional setting.

#### ABSTRACT 42

### Increasing HIV Testing Among African-Born Immigrants in Dublin, Ireland: A Qualitative Study of Challenges and Opportunities in the Irish Health Service

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**OBJECTIVE:** In 2009, 31.3% of all new cases of HIV in Ireland were diagnosed in African-born immigrants. Individual and structural factors, including stigma, health system factors and socioeconomic circumstances continue to hinder access to voluntary counseling and testing (VCT) services. Existing strategies aimed at encouraging VCT are ineffective because they are culturally insensitive to the needs of this important population group. This qualitative project studied the barriers and challenges to HIV testing among African-born Immigrants.

**METHODS:** We utilized a qualitative study design to obtain data through focus group discussions among African-born immigrants living in Dublin Ireland to explore the challenges and opportunities to increasing VCT. Six focus groups were held: 2 male groups, 2 female groups and 2 mixed-gender groups with 25 individuals consisting of 13 males and 12 females. Prior to the discussion, participants were shown and requested to share their opinions on a video that was developed and

used to increase VCT among African migrants attending emergency room in a Bronx, US hospital. The discussion guide specifically explored issues highlighted in the video as well as opportunities for increasing VCT among migrants.

**RESULTS:** Widespread stigma and the belief that HIV is primarily a disease of African immigrants were identified as challenges that constrain VCT and access to care. Other factors, including the organization and location of health care and testing services, attitude of health workers- primary care physicians and nurses, and policies that mandate HIV testing for immigrants seeking to access social welfare benefits were cited as constraints to VCT. Participants indicated that a significant change in the organization of HIV testing services is needed to encourage testing among migrants- for example, including training health workers to be aware of and respect migrants' cultures, intensifying efforts at eradicating stigma as well as identifying and engaging other stakeholders- churches, social groups, immigrant councils- in the planning and provision of VCT services that target African migrants.

**CONCLUSIONS:** African immigrants living in Dublin, Ireland continue to face a variety of challenges with HIV, especially related to structural, cultural and personal factors that continue to hinder access to testing services and access to healthcare. Addressing these challenges will require development and implementation of strategies that acknowledges the cultures of immigrant groups.

## ABSTRACT 43

### Hepatitis C Virus Screening Practices Among Primary Care Physicians in Four Large Primary Care Settings

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**OBJECTIVE:** In 1998, CDC published Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-related Chronic Disease, recommending HCV testing for populations most likely to be infected with HCV. However, the implementation of risk-based screening has not been widely adopted in health care settings and at least one-half of infected U.S. adults remain unidentified. The goal of this study was to examine knowledge and attitudes among primary care physicians regarding HCV screening and testing practices in four, large primary care settings in the United States.

**METHODS:** Semi-structured interviews were conducted and data were analyzed using NVivo 9.0 by a multi-disciplinary team using Grounded Theory. Nineteen physicians: 6 Primary Care Physicians (PCP), 8 Hepatologists, and 5 Administrators (responsible for primary care policy changes) were interviewed.

**RESULTS:** We identified four main themes and 19 sub-themes: 1) PCPs, Hepatologists and Administrators were aware that HCV screening guidelines or recommendations exist, however they were not aware of most risk factors identified within the guidelines. 2) Injection drug use was identified as the most recognizable risk factor; however PCPs were uncomfortable assessing risk for HCV. When PCPs did assess risk, they did not follow recommended screening practices. 3) PCPs, Hepatologists and Administrators reported that abnormal alanine transaminase (ALT) test results were a frequent trigger for

a HCV test. 4) PCPs, Hepatologists and Administrators reported that resource constraints (lack of time spent with patient and insurance coverage for treatment) and low PCP knowledge were barriers to linking anti-HCV positive patients to hepatitis C care and treatment.

**CONCLUSIONS:** PCPs are not fully utilizing the current recommended risk-based screening strategy and other strategies should be considered. PCPs require a better understanding of hepatitis C as an infectious disease as well as resources available for treatment and care. PCPs are in need of support for identifying those at risk for hepatitis C infection.

#### ABSTRACT 44

### Acceptability and Ease of Use of Home Self-Testing for HIV Among Men Who Have Sex with Men

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**OBJECTIVE:** Assess the acceptability and ease of use of home self-testing among men who have sex with men (MSM).

**METHODS:** High-risk MSM are being randomized to have access to home self-testing using the OraQuick ADVANCE Rapid HIV-1/2 Antibody Test on oral fluids or to standard clinic-based testing for 15 months. At enrollment, subjects complete a self-administered survey, receive HIV/STI screening, and are advised to test quarterly in accordance with local guidelines. Men randomized to home self-testing are trained to use the test, receive a test kit, and can contact the study for additional kits as needed. During follow-up, men can test for HIV at any location and are then supposed to complete online surveys. A 24-hour contact is available for counseling and technical assistance. Acceptability of home self-testing is assessed at baseline. Post-test surveys describe home self-testing experiences and ease of use.

**RESULTS:** Of 153 enrolled subjects, 84% reported that access to home self-testing would increase how often they test for HIV. Almost half (45%) reported that the most they

would pay for a home self-test was less than \$20, 27% would pay \$20–40, 18% would pay \$40 or more, and 10% would only use one if it were free. How often men thought they would use a home self-test varied by the cost; 87% expected to test at least 4 times per year if kits cost \$5 compared to 29% if kits cost \$50. 77 subjects were randomized to home self-testing and followed for a median of 14 months (IQR 10–15). These men received a kit at baseline, and 56 (73%) requested additional kits (1–5 per subject, 127 total). 51 men completed 103 surveys about testing at home. Subjects reported that the kit was ‘very easy to use’ in 98 (96%) of these surveys and ‘somewhat easy to use’ in the other 4. The 24-hour contact was used only to request new kits. All subjects reported non-reactive tests (by post-test surveys or when requesting new kits) except 1 reactive, 2 invalid, 2 misplaced, 1 incorrectly performed, and 2 damaged tests.

**CONCLUSIONS:** MSM are willing to use a rapid antibody test on oral fluids to test themselves at home, found it easy to use, and required little counseling or technical support. These results demonstrate that access to home HIV self-testing could increase HIV testing frequency among MSM, but this may depend on the cost of the test.

#### ABSTRACT 45

### Point-of-Sex Testing: Intentions of Men who Have Sex with Men to Use Home-Use HIV Tests with Sex Partners

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**OBJECTIVE:** Examine intentions of men who have sex with men (MSM) to use home-use HIV tests with sex partners.

**METHODS:** The iTest Study is a randomized trial of home self-testing using the OraQuick ADVANCE® Rapid HIV-1/2 Antibody Test on oral fluids. The end-of-study survey asks questions about HIV testing during the 15-month study period and attitudes towards home testing in the future.



**RESULTS:** Of 69 subjects who have completed follow-up, 16 (24%) and 32 (46%) reported they would be very likely to test at home with a new partner before sex if the test took 25 versus 5 minutes, respectively ( $p < 0.001$ ). Men reported being very likely to test with partners when beginning new relationships (64%), in ongoing open relationships (59%), when deciding whether to use condoms (66%), or when worried a partner has HIV (61%). When asked where they would prefer to test, 60% preferred testing at home, 6% at a clinic, and 34% said it depended on the situation. When asked about preferences in specific situations, men preferred home testing before sex with a new partner (86%), when deciding whether to use condoms (75%), and for regular testing (73%). Men preferred clinic-based testing after having unprotected sex or sharing needles with an HIV-infected person (65%) or being notified of exposures by partners or public health (70%). When asked how sure they would be that a partner's negative home-use test was a true negative, 3% reported they would be very sure, 55% somewhat sure, 25% somewhat unsure, and 16% very unsure. However, subjects were twice as likely to report being very likely to have unprotected anal sex if they tested at home with a partner and both tested negative (25%) than if the partner disclosed being negative (13%) ( $p < 0.001$ ). Thirty-four subjects were randomized to home self-testing. We previously reported on a partner who had a reactive home test after unprotected sex with a study subject. At the end-of-study survey, one additional subject reported testing a friend who was concerned about an exposure.

**CONCLUSIONS:** MSM intend to use home-use tests with sex partners to inform sexual decision-making. However, approximately 25% of HIV-infected MSM using home-use tests in Seattle are likely to obtain false-negative results during the highly-infectious stage of acute HIV infection because of the test's three month window period. Efforts are needed to ensure that MSM understand the test's limitations if they will be able to test safely with partners.

## ABSTRACT 46

### Endocarditis as a Sentinel Marker for New Epidemics of Injection Drug Use and Hepatitis C Virus Infection

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**OBJECTIVE:** It is difficult to determine the prevalence of drug abuse, particularly that of heroin abuse, due to its social unacceptability and illegal nature. We examined admissions for infective endocarditis (IE) at a tertiary care teaching hospital over a ten-year span to evaluate if an increase in hospitalizations for IE and increase in hepatitis C virus (HCV) in patients (pts) with IE could predict a new epidemic of injection drug use (IDU). As IDU is a risk factor not only for IE, but also for HCV and HIV, we examined the screening rates for HIV/HCV of IE pts with known IDU either by their admitted current or past history of IDU or as identified by a positive toxicology (tox) screen.

**METHODS:** Retrospective chart review of all hospitalized pts discharged with the diagnosis of IE as defined by the modified Dukes criteria from 1999–2009 (542 confirmed cases). We used a chi-square test to calculate all  $p$  values.

**RESULTS:** There were 542 admissions among 392 unique pts with IE; 104 pts were readmitted 2–7 times. Of the total admissions, 304 (56%) were not screened for HCV, and of those tested, 86 (49%) were HCV+; 404 (74.5%) were not screened for HIV, and of those tested, 28 (20.3%) were HIV+. Pts asked about a current or prior history of IDU were more likely to be tested for HCV, 60% vs. 29% ( $p < .0001$ ), and for HIV, 58% vs. 13% ( $p < .0001$ ). Those with a positive tox screen for opiates were more likely to be tested for HCV, 59% vs. 21% ( $p < .0001$ ), and for HIV 59% vs. 12% ( $p < .0001$ ).

**CONCLUSIONS:** Over the ten-year period there was a 2-fold increase in IE admissions, a 4-fold increase in HCV prevalence and a 6-fold increase in known IDU by positive tox screens, but no appreciable increase in HIV positivity in this group. This is an underestimation of the actual prevalence as not all admissions were screened for IDU, HCV and HIV. As IDUs are known to have a greater

risk for HIV, HCV and IE, observation of a sharp increase in IE cases overall could be used as an indicator of a new IDU epidemic. In turn, among pts admitted for IE, IDU status needs to be assessed and screening for HCV and HIV should be performed in the inpatient setting so that linkage to appropriate outpatient care can be implemented.

#### ABSTRACT 47

### Missed Opportunities in HIV Testing in New York City

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**OBJECTIVE:** In early 2006, the New York City Department of Health and Mental Hygiene (NYC DOHMH) began expanding HIV testing in NYC. Later that year, the Centers for Disease Control and Prevention (CDC) recommended routine HIV screening for individuals aged 13–64 years in healthcare settings. NYC DOHMH encouraged implementation of these recommendations through various mechanisms, from use of the contracting process to launching community-level initiatives to further expand HIV testing. In September 2010, New York State (NYS) law mandated the offer of an HIV test to all patients aged 13–64, with limited exceptions. To evaluate how well healthcare providers are implementing 2006 CDC HIV testing recommendations and 2010 NYS law in New York City, we surveyed NYC residents in 2011.

**METHODS:** A random telephone survey of NYC adults was conducted from June–August 2011. The survey collected information on demographics, healthcare use, and behavior and attitudes about HIV testing.

**RESULTS:** Overall, 2,473 NYC residents aged 18 years and older completed the survey; 84% (2,078) were aged 18–64, of whom 68% reported ever testing for HIV. Among the 32% of residents aged 18–64 years who reported never testing for HIV, 77% (475) had seen a healthcare provider in the prior 12 months. Of them, 93% were not offered

an HIV test at their last healthcare visit, although 77% of them said they would get an HIV test on their healthcare provider's recommendation.

**CONCLUSIONS:** While 68% of NYC residents surveyed report ever testing for HIV, NYC healthcare providers' incomplete implementation of CDC recommendations and NYS law represents missed opportunities for residents to learn their HIV status. Given these findings, we estimate that full provider implementation of an HIV test offer could lead to a) 955,000 18–64 year old NYC residents getting tested for HIV for the first time and b) 6,500 persons with previously undiagnosed HIV infection learning their HIV status and promptly linking to care.

#### ABSTRACT 48

### HIV Testing in Free, Mobile Dental Clinics in North Carolina

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**OBJECTIVE:** HIV testing in dental settings can reach persons who are in need of HIV testing but may be missed by other HIV testing programs. We assessed the feasibility and acceptability of implementing a rapid, routine HIV testing program in free, mobile dental clinics in North Carolina.

**METHODS:** North Carolina Missions of Mercy (NC MOM), an outreach program affiliated with the North Carolina Dental Society, provides free dental services at 2-day clinics. These clinics occur monthly across North Carolina and offer a wide variety of dental services. Free, opt-out rapid HIV testing was offered to patients attending the NC MOM clinics in New London (rural setting) and Greensboro (urban setting). Patients were approached for HIV testing after clinic registration and collection of vital signs. OraQuick Advance Rapid HIV-1/2 Antibody Test

was used on oral fluid. Results were provided to patients either while waiting for, or at the completion of their dental services. Counseling for personal risk assessment and risk reduction was provided by trained counselors; opt-in counseling was performed at the New London clinic, whereas opt-out counseling was performed at the Greensboro clinic. Both testing and counseling were provided by trained graduate student volunteers. The protocol for preliminary positive results included Western Blot confirmation, syphilis testing, and referral to a local HIV provider.

**RESULTS:** In New London, 88% of dental patients were approached for opt-out HIV testing (n=140/160). Over 90% of these patients (n=127/140) accepted a rapid HIV test; none tested HIV-positive. Almost all patients (95%, n=120) received their test results on-site; only 28% (n=33/120) participated in opt-in risk assessment/risk reduction counseling. In Greensboro, 70% of dental patients were approached for opt-out HIV testing (n=210/300); only 75% of patients accepted a rapid HIV test (n=158/210). None of the patients tested HIV-positive. Nearly 90% of patients received their test results (n=139/158). Over 50% participated in opt-out risk assessment/risk reduction counseling. A large proportion of patients at both clinics had never before been tested for HIV (New London: 45%, Greensboro 37%).

**CONCLUSIONS:** The integration of HIV testing into a mobile dental clinic setting is both feasible and acceptable. HIV testing is needed in this patient population; this testing encounter was the first for 37–45% of patients. Partnerships with community-based organizations would remove the reliance on student volunteers, improving sustainability, continuity, and the ability to provide HIV testing at all NC MOM clinics across North Carolina.

## ABSTRACT 49

### Culture Change and Expanded HIV Testing

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**OBJECTIVE:** In an effort to routinize HIV testing, the Centers for Disease Control revised their recommendations for HIV testing in 2006. To support increased HIV testing in medical settings the CDC released funds to 30 jurisdictions in the United States to support the development of the Expanded HIV Testing Initiative. This poster explores the success of this initiative in one jurisdiction, focusing on the unique approach used to encourage medical providers to participate in the testing project

**METHODS:** Potential test sites were interviewed about their attitudes towards routinized HIV screening. Two of the primary barriers to routinizing HIV testing identified were the stigma associated with the test itself and fears about delivering positive test results. Based on these responses, the Ohio Department of Health developed social marketing supplies, training materials, webinars and other resources to address the stigma associated with the test and to alleviate provider fear of delivering positive test results. The concept behind this approach was rooted in the belief that there must be a 'culture change' around the HIV test in order to address provider apprehensions. All materials developed aimed to normalize the idea of being tested for HIV and being aware of one's status.

**RESULTS:** Ohio recruited and has retained 25 new HIV testing sites resulting in an annual increase of 12,000 tests conducted and the identification of 120 new positives. Additionally, with the use of social marketing materials, implementation of provider training, and a focus on linkage to care, new providers are more eager to join the testing initiative and are less fearful of giving positive results.

**CONCLUSIONS:** Implementing an approach to increased testing that accounts for known barriers and attempts to remove those barriers through social marketing, provider

training and program development can be an effective way to routinize administration of the HIV test.

## ABSTRACT 50

### The Implementation of Hepatitis C (HCV) Rapid Testing Technology in HCV Counseling and Testing Sites in Ohio

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**OBJECTIVE:** To assess the feasibility, acceptability, and cost-effectiveness of implementing HCV rapid testing technology into an existing HCV counseling and testing project and to create an HCV rapid testing counseling and testing protocol.

**METHODS:** Seven HCV counseling and testing sites in Ohio were selected to participate in a pilot project to assess the feasibility, acceptability, and cost-effectiveness of implementing HCV rapid testing technology into their existing HCV counseling and testing programs. Sites collected baseline data on time and effort spent providing counseling, testing and results under the current program which utilizes the Home Access® Hepatitis C CheckSM collection kit. A draft protocol for HCV rapid testing was developed and staff at the seven sites were trained on the use of the new HCV rapid test. Each site received a finite number of HCV rapid tests, and after they had used approximately 75 percent of their allotment, they collected data on time and effort spent providing counseling, testing and results using the HCV rapid tests. Verbal feedback was also collected from participating sites both informally and through a conference call. Positive HCV rapid test results were antibody-confirmed through the use of the Home Access® Hepatitis C CheckSM collection kit which utilizes the signal-to-cut-off ratio or RIBA for antibody confirmation.

**RESULTS:** Sites are currently in the process of collecting the post-implementation data and finalizing baseline data. Based on verbal feedback from sites, however, the HCV rapid test is both feasible and more acceptable than

the Home Access® Hepatitis C CheckSM collection kits. A preliminary look at available baseline data show that approximately 76 to 81 percent of clients testing for HCV with the Home Access® Hepatitis C CheckSM collection kits received results with an average of 40 to 66 minutes spent following up on clients who do not return for results. Of those reactive HCV rapid tests that were antibody-confirmed using Home Access® Hepatitis C CheckSM collection kits and for which results are available, all confirmed positive.

**CONCLUSIONS:** HCV rapid testing technology is feasible, acceptable, and cost-effective. Sites prefer the new technology over the older technology. Clients testing HCV positive with the rapid test can bypass antibody confirmation and be referred directly for HCV-RNA testing.

## ABSTRACT 51

### HIV Risk Screening Practices Among Internal Medicine Residents in 2012

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**OBJECTIVE:** Men who have sex with men (MSM) bear a disproportionate burden of HIV disease. As novel and effective HIV prevention strategies such as PrEP become available, it is becoming increasingly important that primary care providers screen their patients for HIV risk behaviors, and that we understand if and how physicians in training are incorporating risk screening into their practice.

**METHODS:** Medical interns and residents who had completed at least 1 year of training, and had a primary care practice at an Academic Medical Center in the Boston area were asked to participate in an online survey to assess their attitudes, practices and education about HIV risk screening, as well as their comfort with Lesbian/Gay/Bisexual/Transgender (LGBT) health issues.

**RESULTS:** Fifty-seven residents provided informed consent and 53 completed the survey. The majority of the residents planned to do specialty training and did not

anticipate providing primary management of HIV infection in their clinical practice after residency. Fifty-seven percent asked most or all of their male patients if they had sex with other men, and only 49% agreed with the statement that they had the “skills to provide effective medical management to patients with LGBT identity”. With regards to screening for risky behavior, only 30% stated that they had training in the screening of risky behavior in residency, and 50% felt that their clinical preceptors only had a small influence on their decision to perform risk assessments for HIV and sexually transmitted infections. Although 89% knew that guidelines recommend that HIV testing should be done at least once in a patient’s lifetime, only 47% stated that every patient they see gets tested for HIV.

**CONCLUSIONS:** A substantial proportion of Internal Medicine residents in an urban setting do not routinely assess their male patients for HIV risk behaviors or ensure that all patients have been tested for HIV at least once. An increased focus on risk screening through both didactic and clinical mentoring in residency programs could help improve efforts to identify and test high-risk men, thereby providing enhanced opportunities to offer novel HIV prevention modalities to those individuals at greatest risk for HIV acquisition.

## ABSTRACT 52

### Engaging Philadelphia’s Immigrant African and Caribbean Communities in HIV Testing: Lessons Learned

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**OBJECTIVE:** To develop a program of HIV testing and facilitated linkage to care in the immigrant African and Caribbean communities of Philadelphia, engaging the target communities in the planning and implementation of the program.

**METHODS:** A panel of community advisors (Advisors) was convened to determine the needs of the community

and to discuss best ways of delivering the proposed HIV testing and linkage to care service. Advisors served as a guide through the project implementation. Advisors were leaders of various religious institutions, of country associations and other organizations and businesses serving the target communities. Advisors introduced the program to their constituents in a series of Clinics Without Walls, where an integrated panel of testing for HIV, hypertension and diabetes was conducted for attendees, together with health and local resource education. Clinics Without Walls were conducted largely in churches of various denominations, mosques, community centers, and meetings of country associations.

**RESULTS:** Between February 2011 and July 2012, 2,114 African and Caribbean immigrants from 51 countries received HIV testing through 98 Clinics Without Walls. Among these, 35 tested positive for HIV for a rate of 1.7%. With a median time to initial appointment of 3 days, all of the identified HIV-positive individuals were successfully linked to care. Lessons learned include the importance of having community leaders support the project, introduce the Clinics Without Walls to their respective communities, and provide ongoing feedback about emerging and newly identified needs, and improved strategies to achieve project goals. In addition to the introducing Advisor, determining a Project Champion within each community has been invaluable. These Project Champions work closely with project staff to provide insight into the community and avoid any cultural mis-steps. They work with the target community to optimize participation in events. Offering an integrated package of health screening emerged as critical to the success of the Clinics Without Walls. Emphasizing linkage to care has been one of the strategies most well-received by the target communities. Topics of particular interest for discussion during Clinics Without Walls included only non-HIV related topics such as accessing health resources, patient confidentiality, maintaining health in the transition to the US, and reproductive health. HIV education was most effectively offered singly to individuals participating in screening.

**CONCLUSIONS:** In conducting HIV testing in immigrant African and Caribbean communities, incremental success has depended largely on the advice and support of community leaders and project champions, and

on integrating lessons learned during the implementation process.

## ABSTRACT 53

### Back to Basics: A model for Ensuring Consistent HIV Screening and Testing in Multi-Service CBOs

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**OBJECTIVE:** The burden of HIV morbidity within Central and East Harlem is among the highest in the United States; new HIV diagnoses are the second- and third-highest, respectively, in Manhattan— far above the national and NYS averages. To address these needs, Harlem United provides services through its Federally Qualified Health Center (FQHC), dental clinic, and substance use recovery programs. Although the offer of HIV and STI screenings is standard throughout Harlem United's programs, some of our high-risk and homeless clients are inconsistently screened at intake to new services. The goal of the Rapid Testing Integration Project is to ensure clients are offered HIV screening at every entry point to the agency.

**METHODS:** To engage individuals at the highest risk, Harlem United is taking a safety net approach, offering an HIV test to people who test STI-positive and integrating HIV testing into our clinics in a more systematic way. To this end, we now offer integrated HIV/STI screenings as follows: 1. At entry and 6-month follow-up points for medical care 2. At the entry point for dental 3. At entry point for recovery services 4. To all STI positives with unknown HIV status Through these strategies, we aimed to screen an additional 1650 unique clients per year, with 1430 (87%) receiving a rapid HIV test.

**RESULTS:** We have made significant strides toward these goals by creating an opt-out system of routine screening and testing for the above programs. To build capacity for testing across programs, Harlem United provides ongoing training on HIV screening, testing procedures, and HIPAA regulations for non-traditional providers, such

as dental staff and medical office assistants. Our EMR was also adapted to host a behavioral screener that flags high-risk clients for immediate testing and issues alerts for re-engagement every 3 months for those reporting high-risk behavior at intake. Through this aggressive implementation plan, since January 2012 our Rapid Testing Integration project has tested 861 patients during routine enrollment at our FQHCs, with a seropositivity rate of 5%.

**CONCLUSIONS:** As HIV/AIDS CBOs grow to address the full constellation of risk factors and an ageing HIV-positive population, it is easy for complementary programs such as dental or recovery services to become atomized, allocating responsibility for testing to testing programs. To address this hazard while still offering a wide spectrum of services, Harlem United has created a safety net for its most vulnerable clients by standardizing HIV screening and testing as a as a universal service imperative.

## ABSTRACT 54

### A Comparison of Time Requirements for Targeted and Non-Targeted Counselor-Based Emergency Department HIV Screening

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**OBJECTIVE:** When considering the trade-offs between targeted and non-targeted HIV screening strategies, it is important to know how much time is spent looking for patients that meet eligibility criteria and how much time is allocated to testing itself under the two approaches. This study was designed to quantify the time spent in various component activities of HIV testing when using a targeted approach and when using a non-targeted approach.

**METHODS:** This was a time-and-motion study of a counselor-based HIV counseling and testing program in an urban, academic emergency department. During selected periods of time between June 2008 and September 2012,

the program 1) used conventional signed, opt-in consent, 2) alternated between targeted and non-targeted patient selection, and 3) switched from conventional HIV assay with delayed result availability to rapid assay using an oral swab. During 33 six-hour observation periods, trained personnel recorded all counselor actions and timed them using a stop watch. There were 17 non-targeted and 16 targeted periods. Conventional assay was used in 21 periods and rapid assay in 12 periods. Observed activities were coded and time spent on each activity was calculated.

**RESULTS:** There were 159 patients approached and 83 patients tested during observation periods. There were 61 different types of activity observed, which were grouped into 10 parent categories. The mean minutes spent per activity per patient approached for targeted and non-targeted screening was: general clinical activities (16 v 15), data management and record keeping (14 v 7), patient selection and approach (9 v 9), sample collection and assay (5 v 7), post-result counseling (7 v 2), introduction and testing offer (4 v 3), administrative and non-work activities (4 v 2), risk-assessment (3 v 2), pre-result counseling (1 v 1).

**CONCLUSIONS:** There was no important difference in the amount of time required to select and approach the next patient between targeted and non-targeted screening strategies. This suggests that individuals at-risk for HIV are rapidly identifiable in urban EDs and that the cognitive and informational aspects of patient selection are not the primary components of the time required to approach patients for testing. Time required for targeting should not contribute to the controversy between targeted and non-targeted patient selection strategies.

## ABSTRACT 55

### Indications for Testing Among Reported Cases of Hepatitis C Virus Infection from Enhanced Hepatitis Surveillance Sites – United States, 2004–2010

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**OBJECTIVE:** In the United States, approximately 3.2 million persons are chronically infected with hepatitis C virus (HCV); of these one-half are unaware of their infection. CDC has developed recommendations for a one-time HCV test for persons born from 1945 through 1965 (the “Baby Boom” cohort) to be used in addition to current risk-based testing recommendations. We examined indications for testing by birth cohort (before 1945, 1945–1965, and after 1965) among persons with past or current HCV.

**METHODS:** Cases were determined by positive HCV laboratory markers reported by four surveillance sites to health departments from 2004–2010. Health department staff abstracted demographic and indications for testing from medical records of cases and compiled this information into a surveillance database. Indications for testing data included: history of injection drug use, elevated liver enzymes, transfusion or transplant history before 1992, mother-to-child transmission, chronic hemodialysis, or healthcare exposure.

**RESULTS:** Of 110,223 cases of past or current HCV infection reported during 2004–2010, 74,578 (68%) were among persons born during 1945–1965. Indications for testing were abstracted for 45,034 (41%) cases; of these, 29,544 (66%) identified at least one CDC-recommended risk factor as a reason for HCV testing. Injection drug use was the main risk factor reported for persons born in birth cohorts after 1945 (60% and 80%). Overall, 74% of reported cases were born from 1945–1965 or had a history of injection drug use.

**CONCLUSIONS:** These data support augmenting the current HCV risk-based screening recommendations by screening those adults in the 1945–1965 birth cohort.

## ABSTRACT 56

### Texas' Experience with Routine HIV Testing in Healthcare Settings.

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**OBJECTIVE:** In 2008, Texas implemented routine HIV testing in healthcare settings according to the 2006 CDC recommendations. The program assists sites in implementing sustainable and integrated routine HIV testing to increase the proportion of Texans diagnosed early in their HIV disease and successfully link them to medical care.

**METHODS:** The project has focused on counties with the highest HIV prevalence counts and rates. Sites in these counties were chosen by volume of indigent patient population, leadership interest and support, and capacity to implement testing, and include: emergency departments (ED), urgent care centers (UCC), STD clinics, corrections, community health and teen clinics. Basic demographics, limited behavioral risk information, test results and linkage to care information are submitted monthly for program evaluation.

**RESULTS:** The sites are located within nine of the top ten counties with the highest number of infected persons and fourteen of the top twenty highest rate counties. These sites serve the populations disproportionately impacted by HIV. Currently, 12 EDs, six UCCs, five STD clinics, two local primary care health departments, 102 community health center clinics, eight corrections sites, and seven teen clinics have implemented routine HIV testing. Over 555,000 HIV tests have been performed with over 4,800 HIV positive tests including over 3,000 newly identified positives. Of those tested, over 36% are Hispanic, 33% Black, and 26% White. Men comprise 50% of those tested; the opportunity to test men during a health care encounter is essential, as they comprise of over 77% of the living HIV cases in Texas.

Of the HIV positives, over 65% have been linked to HIV care services.

**CONCLUSIONS:** Supported sites continue to adjust their protocols, standing delegation orders, and processes for HIV testing. Sites have experienced challenges such as; leadership and staff turnover, transition to electronic medical health records, and corporate administrative changes. It is important that sites identify internal champions, create cross-disciplinary teams to plan and monitor implementation, choose the appropriate test technology to build a sustainable testing model, create protocols that are specific to their system, incorporate the testing into their quality improvement processes, and have access to peer technical assistance and guidance. Through the support of these projects, populations with the greatest HIV prevalence have learned their HIV status and received the opportunity to be linked to medical care and prevention services. This demonstrates the value of routine HIV testing as a standard of care in healthcare settings.

## ABSTRACT 57

### Can a Video Substitute for an In-Person Discussion in Delivering HIV Pre-Test Information to Spanish-Speaking Latinos and Better Serve Those with Lower Health Literacy?

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**OBJECTIVE:** We developed an animated and live-action short-feature video employing easy-to-understand language to inform Spanish-speaking Latinos about HIV testing. In a non-inferiority trial, we then assessed the equivalence of the video to an in-person discussion with an HIV counselor regarding patient comprehension of HIV and HIV testing fundamentals, and evaluated if the video was more effective for those with lower health literacy.

**METHODS:** Through a multi-step, iterative process, we created a professional quality video addressing



fundamental concepts of HIV testing. We conducted two rounds of cognitive-based assessments of the video among 120 18–64-year-old Latino patients or clients at three non-clinical community-based organization study sites (Chicago, Miami, and San Antonio), and three clinical study sites at an ambulatory medical clinic (Providence), an ED (Los Angeles), and a department of health clinic (San Juan). In addition, we conducted interviews of 30 bilingual (English- and Spanish-speaking) Latino HIV test counselors at the community-based organizations. We revised the video based upon our review of the results of the cognitive-based assessments. Next, Spanish-speaking Latinos from an emergency department, a clinic, and community-based organizations in Providence were randomly assigned in a non-inferiority trial to receive pre-test information from a video or an in-person discussion prior to being HIV tested. Random assignment was stratified by health literacy level (lower vs. higher). Comprehension of the pre-test information was measured using a questionnaire, and health literacy was measured using the SAHL-S. The non-inferiority criterion for the video would be met if the 95% CI of the difference ( $\Delta$ ="video"-"in-person") in questionnaire mean scores was less than a 10% decrease in the in-person discussion group's mean score. Wilcoxon rank-sum testing was used to evaluate the effectiveness of the video among lower health literacy participants.

**RESULTS:** Of the 150 participants, 63% were female, 78% had = 12 years of formal education, 39% met criteria for lower health literacy, and 75% had previously been tested for HIV. The mean scores on the questionnaire for the video (20.4; 95% CI: 19.5~21.3) and in-person discussion (20.6; 95% CI: 19.7~21.5) groups ( $\Delta$ = -0.15; 95% CI: -1.4~1.1) were similar, which satisfied the non-inferiority criterion. However, mean scores among lower health literacy participants were not greater for the video group (18.3 (video) vs. 19.6 (in-person);  $p < 0.30$ ).

**CONCLUSIONS:** Among Spanish-speaking Latinos the video is a reasonable substitute for an in-person discussion in terms of patient comprehension of HIV pre-test fundamentals, but does not demonstrate an advantage among those with lower health literacy.

## ABSTRACT 58

### What Affects Acceptance of Routine HIV Screening in Pediatric Emergency Departments by Adolescents?

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**OBJECTIVE:** Routine HIV screening of adolescents has been endorsed by the Centers for Disease Control since 2006 and by the American Academy of Pediatrics since 2011. In 2009 Children's National Medical Center, located in the area of the high HIV prevalence in Washington, District of Columbia (DC), implemented a universal opt-out rapid oral fluid HIV screening of adolescents =13 years old in the Emergency Department (ED). Subsequently, the HIV screening program extended to the second affiliated pediatric ED in DC. This study aimed to investigate the factors affecting the acceptance of rapid oral fluid HIV screening by the adolescents in pediatric EDs.

**METHODS:** A prospective, cross-sectional study of patients =13 years in two pediatric EDs was conducted over 36 months. Data on patient demographics and reasons for opting-out of screening were collected. Logistic regression was used to identify factors associated with acceptance of HIV screening.

**RESULTS:** A total of 13,966 HIV tests were offered, 10,508 (75%) adolescents did not opt-out, and of those 9,886 (94%) were screened. The majority of screened patients were black (83%), female (59%), with the median age of 16 years, and 68% were DC residents. The most common reasons adolescents cited for opting-out of testing included a self-reported prior negative test (39%;  $n=1334$ ) and reporting being not at risk (16%;  $n=550$ ). During the first 24 months of the HIV screening in EDs 686 (15%) of the patients accepted the test, but were not tested due to the guardian declining the screening. One year later (after 36 months) a significantly smaller number of adolescents (5.7%;  $n=734$ ) were not tested due to a guardian declining the HIV test. Younger adolescents (13–14 yrs) were significantly more

likely to opt-out of testing than older adolescents (OR: 1.56; 95% CI: 1.36–1.8).

**CONCLUSIONS:** The majority of adolescents and guardians accepted routine oral fluid rapid HIV screening in the pediatric EDs. Older adolescents (=15 yrs old) were more likely to accept routine HIV screening in the EDs. During 36 months following the implementation of the HIV screening program, there has been a significant decline in the number of the guardians refusing the HIV screening of the adolescents. Further studies aimed at evaluating the factors affecting acceptance of routine HIV screening may help develop educational and programmatic interventions to increase the number of adolescents and the guardians accepting routine HIV screening as a standard of care in pediatric EDs.

#### ABSTRACT 59

### **National Hispanic Hepatitis Awareness Day (NHHAD): Adapting a Highly Effective Community Mobilization Model and Social Marketing Campaign**

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**OBJECTIVE:** As the largest minority group in the U.S., Latinos are disproportionately affected by Hepatitis C (HCV). Latinos have a 40% increased chance of being infected with HCV as compared to whites and progress to cirrhosis faster than any other group (Stevenson, L. et al. 2004). Given the connection between HIV and HCV, NHHAD was initiated to work in synergy with National Latino AIDS Awareness Day (NLAAD), to improve the ability of community based-organizations and non-traditional partners to raise HCV awareness, provide testing, prevention and education services. Since 2003, NLAAD has demonstrated its success by solidifying support from over 800 organizations in over 45 states across the United States, Puerto Rico and the U.S. Virgin Islands. Through these efforts, tens of thousands have been tested and enabled access to care. The goal of NHHAD

is to build on the success of NLAAD and integrate HCV awareness, services and policies into the community and national conversations.

**METHODS:** The first NHHAD took place on May 15, 2012 and was evaluated to assess the reach and initial outcomes of the community-level intervention. All organizations that registered as NHHAD sites (n=14) were asked to complete an online survey on their specific activities and outcomes, as well as their experience being a part of the first year of this new intervention.

**RESULTS:** 14 organizations held NHHAD events and represented states with the largest Hispanic populations (Texas, California and New York), as well as states with emerging populations (North Carolina). Of the 14 participating organizations, 10 completed the survey. Of the 13 NHHAD participating cities, 83% reported an increase in discussion and awareness in the local Latino community about viral hepatitis. 67% conducted testing for viral hepatitis and tested over 100 individuals. The most common barriers described were lack of funding and lack of staff time.

**CONCLUSIONS:** There is an urgent need for a disease integrating, community-level intervention to address the need for testing and treatment using culturally-appropriate messages for the community and service providers. NHHAD is an innovative and promising approach to address this need, and is positioned through its evaluation efforts to build on these early successes to create long-term change in communities and the health systems that serve them.

#### ABSTRACT 60

### **Assessment of Need for Targeted Acute HIV Screening in the Emergency Department**

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**OBJECTIVE:** Patients with undiagnosed Acute HIV infection (AHIV) frequently present to the Emergency

Department (ED) with symptoms of viral syndrome. During AHIV, viral load is at its highest and the patient is most infectious. Routine antibody based screening methods, commonly used in the ED; usually have a negative result during the window period. Patients are not able to begin appropriate therapy and are sent back into the community without the knowledge that they can be spreading the virus to others. We hypothesize that a significant number of patients have presented to our ED with symptoms of AHIV and have received a negative HIV screening result.

**METHODS:** Subjects include all patients who tested positive for HIV during a one year period. Charts were retrospectively reviewed by two independent reviewers to determine the number of patients that presented to the ED with symptoms of an acute viral syndrome and had a negative Oraquick within the 3 months prior to the positive Oraquick and reflex Western blot.

**RESULTS:** 20/125 subjects who tested positive for HIV in the 12 month study period had documented previous negative test(s). Prior to the visit on which they tested positive, 25% were seen in ED for viral symptoms and had a negative Oraquick and 20% were seen for complaints unrelated to viral syndrome and had a negative Oraquick. Prior to the visit on which they tested positive, 15% had a negative Oraquick followed by an ED visit(s) for viral symptoms and 35% had a negative Oraquick followed by another ED visit for complaints unrelated to viral syndrome. One outlier had no prior ED visits, and tested (+) with complaints of viral symptoms.

**CONCLUSIONS:** 15.2 % of all patients who tested positive for HIV antibodies during the study period had a previous negative HIV antibody test in the months prior to seroconversion. 40% were evaluated in the ED for viral symptoms prior to seroconversion, and so were probably in the AHIV phase. Antigen testing should be made available, especially in high prevalence areas, to insure early treatment and to decrease the spread of acute infection.

## ABSTRACT 61

### Fostering International Collaborations to Improve HIV Testing and Linkage to Care in a Randomised Study: The Mater-Bronx Rapid HIV Testing (M-BRiHT) Project

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**OBJECTIVE:** Up-scaling HIV testing is advocated as an approach to stemming the HIV epidemic. In Ireland almost 6,000 people have been diagnosed HIV positive, the majority residing in the greater Dublin area (estimated prevalence 1.5/1000), thus making it a suitable target region for up-scaled HIV screening. Of recent diagnoses, 63% occurred in those born outside Ireland and 5% in injecting drug users. Such patients are less likely to encounter pre-existing screening opportunities but may use the Emergency Department (ED) for primary healthcare.

**METHODS:** The M-BRiHT project, an international, collaborative study, has adapted the testing model used in Project BRIEF, a well-established, high-throughput HIV testing programme developed in the Bronx, New York. This program integrates video-delivered HIV counselling, rapid point-of-care HIV testing and linkage to specialist HIV care. To further explore the acceptability of HIV screening in a culturally and socially diverse population, the M-BRiHT Project randomises unselected, ED attendees in Dublin to either allocation of standard video counsellor (Project BRIEF model) versus choice of video counsellors from differing genders and ethnicities. This is coupled with detailed data collection and rapid HIV testing (oral swab).

**RESULTS:** Over six months (March to August 2012), the M-BRiHT project was developed and implemented according to precise timelines. Counselling videos were adapted to meet local regulatory requirements, with four videos developed with identical scripts; 2 with female counsellors (one white, one black) and two male (one white

one black). Detailed demographic, socioeconomic and behavioural data-sets are captured through direct entry on a tablet PC, with data mapping between the M-BRiHT Project and Project BRIEF to facilitate shared analyses. Staff training was coordinated centrally in New York, with rapid testing kits from a common manufacturer.

**CONCLUSIONS:** To our knowledge, the M-BRiHT project represents the first time automated counseling and testing for HIV has been implemented in a European ED. This ambitious collaboration demonstrates how successful, up-scaled HIV testing programmes, such as Project BRIEF, can be readily adapted for use in other acute medical environments internationally, despite very different research and regulatory requirements. These novel programmes can help realise the international goals of increasing HIV testing rates and de-stigmatise HIV testing.

## ABSTRACT 62

### Acceptability and Implications of Rapid HCV Test Among High Risk Young Injection Drug Users

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**OBJECTIVE:** In the U.S. it is estimated 50% to 75% of the those infected with hepatitis C virus (HCV) have not been tested. People who inject drugs are at highest risk of infection in the U.S., yet have limited access to HCV testing. Newly available, FDA approved, and accurate rapid point-of-care anti-HCV testing coupled with post-test counseling in community-based settings can help accelerate the identification of HCV infections and introduce risk reduction education in this high risk group. We administered a short survey to young active injection drug users (IDU) participating in an ongoing prospective study to evaluate the views toward and acceptability of HCV rapid testing.

**METHODS:** Data collection began in May 2012, and is ongoing. Young adult active IDU (<30 years, injected once in the last 30 days at baseline) participating in the

UFO HCV Study in San Francisco were offered rapid anti-HCV testing (OraSure Technologies: Bethlehem, PA), and then to respond to a short questionnaire assessing the participant's perception of its accuracy, their preferred testing procedures, and reasons for said preferences. Participants were given the option to undergo standard laboratory-based anti-HCV testing via venipuncture. Blood samples were collected to ascertain HCV viremia status (Procleix® HIV-1/HCV assay, Novartis, Emeryville, CA). All participants received pre- and post-test risk reduction counseling.

**RESULTS:** To date, a total of 54 participants (median age 25 years) completed the acceptability survey. More than half of those surveyed (56%) believe the rapid test to be just as accurate as a standard test. 40 (74%) participants opted for the rapid test; of those, 64% stated wanting a fast result as their main reason. 14 participants chose laboratory-based anti-HCV testing (14, 26%); most of whom (38%) believed it to be an older, and more trusted test. After receiving the test, 82% of rapid test takers, reported preferring the procedure to its standard counterpart, and most (97%) would recommend the procedure to others. Only 2 participants (6%) felt the results were available too quickly, preferring a one-week waiting period.

**CONCLUSIONS:** Point-of-care testing for anti-HCV among young IDU was well received. Rapid HCV tests have the potential to increase testing in community-based settings to screen at-risk populations for HCV in high volume and in a timely manner. This useful and practical way of informing high-risk individuals of their HCV status will help prevent the spread of HCV.

## ABSTRACT 63

### Three Years of Routine Screening for HIV in a Large Urban Hospital System: What Has Been Achieved?

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**OBJECTIVE:** To establish a routine HIV screening program in emergency centers of a large urban hospital system, including linkage to care for newly diagnosed patients and re-linkage for previously diagnosed individuals who were found to be out of care.

**METHODS:** Harris County Hospital District (HCHD; Houston, TX) started the Routine Universal Screening for HIV (RUSH) program in August 2008. Every patient 16 years of age or older presenting to the emergency center and who was having blood drawn for other reasons was tested for HIV unless the patient opted out. Positive results were checked by the City of Houston against national databases to identify new diagnoses. Newly identified positive patients as well as previously known positive patients not in care at the time of test received counseling and were offered linkage to care.

**RESULTS:** A total of 171,867 tests were performed by April 2012 at HCHD's two emergency centers, including 3,219 tests with a positive result, of which 589 (0.34% of total tested) were new diagnoses. Male, black, and young to middle-aged individuals had a disproportionately higher positivity rate. New positives prevalence decreased by 0.05% annually, from 0.44% in 2008 to 0.23% in 2012 ( $P=0.0008$ ). Previous positives prevalence did not change significantly ( $P=0.17\%$ ). Patients who had a primary care physician visit within 6 months of their positive test were considered linked to care. By October, 2011 (to allow 6 months for linkage to care), 532 new diagnoses had been made, of which 259 (49%) were linked to care. Linkage to care increased by 11.4% annually from 25% in 2008 to 62% in 2011. Linkage data include only Ryan White funded providers in the Houston area, so likely represent a lower bound for the true linkage rate.

**CONCLUSIONS:** The program has been highly successful in identifying positive patients, potentially reducing undiagnosed infection rates as suggested by decreasing new positive prevalence. While the new positive prevalence has been decreasing, it remains much higher than the CDC threshold of 0.1%. Linkage to care has improved over time but remains challenging.

## ABSTRACT 64

### Transmission Network Targeting: Incorporating Social Network and Partner Testing with an Emergency Department HIV Screening Program

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**OBJECTIVE:** Transmission network targeting (TNT) is a strategy that uses information from high-risk or HIV-positive individuals to access social networks and partners who are at particularly high-risk of undiagnosed HIV. Public health programs have used TNT, but require index cases from which to trace the networks. Healthcare screenings provide index cases but rarely consider TNT outside of health department notification for partner testing. We evaluated a counselor-based TNT strategy implemented within an established emergency department (ED) HIV screening program and its affiliated infectious diseases clinic (IDC).

**METHODS:** TNT was implemented from May 2011 to mid-August 2011 at an urban, academic ED that sees 90,000 adult visits and at the affiliated IDC serving 1,800 patients. High-risk (MSM, sex partner of HIV+, heterosexual with multiple partners, injection drug use, or exchanging sex for drugs or money) or HIV-positive patients were identified by counselors and recruited as index cases. Index cases provided access to their networks by: 1) compensated coupon-based peer-referral, 2) on-site testing of companions present with them, 3) partner notification by health department specialists. Contacts provided by indexes were offered participation as next

generation index cases if they were high risk or HIV-positive.

**RESULTS:** There were 181 first generation index patients in the program (121 ED, 59 IDC) leading to 443 additional TNT tests, over as many as 8 generations of recruitment. Of these, 4 people were newly diagnosed as HIV positive. Index-contact relationships were as follows: Friend (54.9%), Family (16.0%), Acquaintance (11.3%), Partner (9.0%), and Stranger (8.5%). Risks among TNT participants were: heterosexual with multiple partners (21%); HIV-positive (13%), IV drug use (13%), exchange of sex for money or drugs (10%), MSM (5%), and HIV-positive sex partner (3%). All 181 first generation index patients participated in the coupon-based peer referral program. This led to 429 additional tests and 79 participating as next generation peer-recruiters. For the companion program, 21 index patients had a companion present, resulting in 13 TNT tests, and 4 next-generation index patients. For the partner services program, 6 patients were interviewed by the health department, leading to 1 companion being tested.

**CONCLUSIONS:** It was possible to implement a comprehensive TNT program seeded by ED screening and IDC patient encounters, and many high risk patients were identified as a result of the program. Whether combining TNT with healthcare screening represents an opportunity to capitalize on resources expended for testing is an area of ongoing study.

## ABSTRACT 65

### Building Sustainable Universal HIV Screening Programs in Pediatric Emergency Departments: A Comparison

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**OBJECTIVE:** In 2006 the U.S. Centers for Disease Control and Prevention recommended universal opt-out HIV screening in healthcare settings including

Emergency Departments (EDs). In 2011 the American Academy of Pediatrics endorsed routine HIV screening among adolescents. The data on developing HIV screening programs in pediatric EDs are limited. This study aimed to evaluate the implementation of HIV screening programs in two pediatric EDs of Children's National Medical Center's (Children's National's) located in the area of high HIV prevalence in Washington, DC.

**METHODS:** The study prospectively evaluated the implementation and performance of two different algorithms for universal opt-out HIV screening of adolescents and young adults with a rapid oral fluid test at two pediatric EDs during 18 months (October 2010–March 2012). The study compared the dedicated testers-based algorithm implemented at the Sheikh Zayed campus ED (SZED) with an ED personnel-based algorithm at the United Medical Center campus ED (UMCED). The rates of screening and staff involvement were compared between the two models.

**RESULTS:** During the 18 month period, 6,095 patients aged 13–24 years old were seen at UMCED; 2,875 (47%) were approached for HIV screening and 2,070 (34%) were tested. SZED had 22,722 patient visits for patients aged 13–24 years; 5,069 (22%) were approached and 3,863 (17%) were tested. The rates of testing at the SZED were completely dependent upon the presence of the dedicated testers and did not demonstrate sustainability in the absence of the funded staff. Overall, the rates of testing at the UMCED personnel-based algorithm were significantly higher (6%–53% eligible patients tested) when compared to the SZED dedicated testers-based algorithm (3%–32% eligible patients tested). Feedback on the performance of the HIV screening and enhanced education about HIV conducted at both EDs significantly improved the performance of the program at the UMCED and had little to no effect at the SZED.

**CONCLUSIONS:** The personnel-based algorithm for universal opt-out HIV screening of adolescents has proven to be more effective in the pediatric ED. At the current stage of weaning from funded support in the pediatric ED HIV screening program, the ED personnel-based algorithm at UMCED has become the model for sustainability. This model is being introduced to the dedicated-tester SZED program with active participation by the UMCED staff.

Ongoing implementation research will allow for evaluation of the best strategy for transitioning from funded support to standard-of-care for HIV screening in pediatric EDs.

## ABSTRACT 66

### From Recommendation to Implementation: The Long Road to Routine HIV Screening

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**OBJECTIVE:** To reduce systems barriers to routine, opt-out HIV testing in Philadelphia's healthcare settings through capacity building activities, including: skill building workshops, development of provider materials, and on-site consultations.

**METHODS:** Pennsylvania/MidAtlantic AIDS Education and Training Center's (PA/MA AETC's) Philadelphia performance site at the Health Federation of Philadelphia identified and engaged local HIV testing champions in Philadelphia healthcare settings. Targeted disciplines included: physicians, physician assistants, nurse practitioners, nurses, medical assistants, healthcare administrators, lab personnel, healthcare lawyers, risk managers, managed care organizations, electronic medical record system consultants, and state and local policy makers. An assessment of each healthcare system identified successes and challenges, and the PA/MA AETC provided customized technical assistance and/or clinical education.

**RESULTS:** Local HIV champions in Philadelphia's healthcare systems were contacted from ten hospital systems, 11 Federally Qualified Health Centers (FQHCs), and eight FQHC look-alikes. Major barriers to testing routinely for HIV include: provider education/attitudes, reimbursement, patient flow, and lack of staff time. To-date, the PA/MA AETC provided 18 customized trainings and/or technical assistance on routine HIV testing throughout Philadelphia. Two webinars were developed to educate providers about changes to Pennsylvania's HIV testing law and indications for routine HIV testing, initially reaching over 24 local champions. Philadelphia's

Health Commissioner hosted a provider meeting with Dr. Phillip Peters, Medical Officer of the Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, and Dr. Amir Qaseem, Policy Director of the American College of Physicians, to encourage primary care providers to routinely test for HIV. Since the inception of Pennsylvania's new law, four large hospital systems have changed their institutions' protocol on HIV consent, and three are in the process of changing their policy. At least two FQHCs have implemented opt out HIV testing strategies.

**CONCLUSIONS:** The barriers to routine HIV testing in healthcare settings are complex; however, engaging and supporting local champions to make institutional change is essential. Successful policy and practice changes originated from local champions' identification of systems barriers to routine HIV testing. Reimbursement for routine HIV tests by health insurance companies is a major barrier in all healthcare settings. A change in USPSTF recommendations to upgrade HIV screening to routine preventative care will address many of the barriers.

## ABSTRACT 67

### A Qualitative Exploratory Study of Social Network Testing Among Three High Risk Populations

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**OBJECTIVE:** Recent emphasis has been placed on identifying and testing individuals at high-risk for HIV who do not routinely access health care services. Since these individuals may not get tested for HIV, they may be unaware of their HIV status. Social network testing for HIV has emerged as a strategy to engage these hard to reach high-risk populations and has been implemented in the District of Columbia. The objective of this study was to obtain perspectives regarding the use of social network testing as an approach to increasing HIV testing among high-risk individuals.

**METHODS:** Qualitative data were collected during three separate focus groups which included 1) injection drug users; 2) male-to-female (MTF) transgenders; and 3) African-American men who have sex with men (MSM). Additionally, key informant interviews were conducted among relevant staff at three local community-based organizations with experience implementing social network testing as a part of their HIV screening strategies. Atlas.ti was used to code the interview and focus group data. Thematic analysis was conducted to identify relevant themes and patterns in the data.

**RESULTS:** Data showed common network characteristics among the three groups; however, each group discussed issues related to the types of network associates that might be able to facilitate access to HIV testing. MTF transgender participants expressed difficulty in identifying associates who were not already HIV-infected. Men who have sex with men revealed that younger MSM looked up to older mentors for guidance and assistance with life decisions and thus may serve as facilitators to encourage testing. Injection drug users provided insight regarding the difficulty of initiating conversations about HIV in general. Interviews with staff at the three community-based organizations revealed that social network testing among their service population has been replete with successes and challenges.

**CONCLUSIONS:** Our findings provide insightful interpersonal and contextual facilitators and challenges that characterize social network testing among specific high-risk populations. Social network testing programs may have increased efficacy when taking into account the socio-cultural and socio-contextual dynamics of high risk populations such as MSM, MTF transgender and injection drug users. The specific nuances that are inherent in each high-risk group need to be considered for implementation and conduct of a successful social network testing program.

## ABSTRACT 68

### Integrating Hepatitis C Risk Assessment into HIV Counseling, Testing, and Referral Data Collection Systems

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**OBJECTIVE:** In 2011, the Hawaii Department of Health's (DOH's) STD AIDS Prevention Branch sought to facilitate enhanced integration of hepatitis B and C testing and/or referrals at all contracted and partner agencies that offered HIV rapid testing provided through DOH. The DOH contracted with the Luther Corporation to create a modified version of EvaluationWeb to not only collect mandated CDC reportable data but also to collect hepatitis risk assessment and testing data.

**METHODS:** When developing the data collection form and data entry portal, the DOH included the Adult Viral Hepatitis Prevention Coordinator as well as hepatitis-focused partner agencies as part of the planning process. The resulting form MANDATED that all agencies that provide HIV testing through DOH also ask hepatitis B and C risk assessment and testing/referral questions as part of the testing session. EvaluationWeb provides an easy report generator to determine the number of hepatitis tests conducted, associated risk factors, and positivity rate for hep C antibody and/or hep B antigen tests. These measures will be compared to the previous rates from the prior risk assessment collection system to show any changes in testing rates.

**RESULTS:** By mandating the inclusion of viral hepatitis risk factors into the HIV testing session, the amount of hepatitis C testing increased from the average 1000 tests during the 6 months prior to EvaluationWeb implementation (on June 1, 2011) to 1360 for the 6 months after implementation. From January 1 2012–June 30 2012, the testing numbers increased to 1496 tests, most likely due to HCV rapid testing at each agency.



**CONCLUSIONS:** The increase in testing at the partner and contracted agencies that already were providing HIV and hep C testing indicates that streamlining, integrating, and requiring viral hepatitis risk assessment as part of HIV CTR data collection can impact viral hepatitis screening rates for at-risk individuals who present for HIV screening. By including risk factor and geographic data in data collection, the integrated EvaluationWeb model also provides enhanced program evaluation and monitoring for both HIV and viral hepatitis CTR.

## ABSTRACT 69

### Never-Testing for HIV Among New York City (NYC) Adults Aged 18–64 Years, 2010

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**OBJECTIVE:** HIV testing is central to HIV prevention in the U.S. As efforts to routinize HIV testing in NYC continue toward the National HIV/AIDS Strategy target that 90% of HIV-infected persons know their status by 2015, clear understanding of the characteristics and behaviors of persons who have never tested for HIV is needed to guide ongoing testing efforts.

**METHODS:** Data from a 2010 telephone survey representative of NYC adults ≥18 years (Community Health Survey) were used to determine characteristics of New Yorkers who had never tested for HIV. Analysis was restricted to adults aged 18–64 years (n=8,665) to align with 2006 HIV screening recommendations from CDC. Data were weighted to account for unequal selection probabilities and nonresponse; analyses were age-adjusted to the 2000 U.S. Standard Population. Prevalence estimates and 95% confidence intervals (95%CI) of never-testing were calculated. Multivariate logistic regression model was used to determine independent correlates of never-testing; adjusted odds ratios (aOR) were reported with corresponding 95%CI.

**RESULTS:** One-third of NYC adults aged 18–64 years (33.2%; 95%CI: 31.5, 35.0) had never tested for HIV with wide variation, from black females aged 25–44 years (4.3% never tested; 95%CI: 2.6, 6.9) to Asian-Pacific Islander-other race/ethnicity males aged 18–24 years (78.7% never tested; 95%CI: 54.9, 91.8). Groups with high never-tested proportions (>40%) were persons aged 18–24 and 45–64 years, those of non-black or Hispanic race/ethnicity, and Queens and Staten Island residents. The most significant independent correlates of never-testing were not having a provider recommend an HIV test in the past year (aOR 6.7; 95%CI: 3.9, 11.5) and not being sexual active in the past year (aOR 4.1, 95%CI: 2.3, 7.1). Among the never-tested population, 57.9% (95%CI: 54.4, 61.4) received preventive care in the past year (cholesterol measurement, influenza vaccination, mental health treatment) suggesting engagement in primary care, yet only 2.3% (95%CI: 1.0, 5.4) received a provider recommendation to test.

**CONCLUSIONS:** The proportion of all NYC adult residents who are unaware of their HIV serostatus is small, with wide variation by demographic subgroup. Never-testing generally tracked with risk behavior, yet the strongest independent correlate of never-testing was lack of provider recommendation to test. Many of those not yet tested have had recent clinical encounters. This analysis suggests that support for further implementation of provider offer to HIV test, now mandated by New York State law (Chapter 308, Laws of 2010), can play an important role in reducing the size of the never-tested population.

## ABSTRACT 70

## Reducing Barriers to HIV Testing – What Influences Testing Offer and Uptake? Lessons Learned from the HIV in Europe Initiative

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**OBJECTIVE:** HIV in Europe is a pan-European initiative providing a platform for activities aiming to increase early diagnosis and care for people living with HIV across Europe. Research includes investigating indicator conditions associated with a risk of HIV and encouraging testing as a strategy within healthcare systems and investigating the impact of stigma on HIV test uptake.

**METHODS:** Through collaborative projects, conferences and advocacy, barriers to testing on provider, client and administrative levels are investigated. The HIDES study (HIV Indicator Diseases Across Europe Study) investigated HIV prevalence within possible indicator conditions in health care settings across Europe. Through the implementation of the People living with HIV Stigma Index, reasons for delay in HIV test seeking were investigated in 5 Eastern European countries.

**RESULTS:** The strategy to increase HIV testing through indicator condition guided HIV testing is feasible and (cost)-effective. Among a 3588 individuals in 17 clinics routinely offered testing in 14 countries, eight indicator conditions associated with HIV were investigated and demonstrated an HIV prevalence of > 0.1%. Healthcare professional related barriers were concerned with time limitations, perception of HIV as exceptional in regard to consent process, and lack of training. Respondents from Eastern Europe (n participants = >2500), reported in The Stigma Index, many fears that could delay uptake of both testing and care.

**CONCLUSIONS:** Indicator condition guided HIV testing is a feasible and effective strategy to reduce the level of undiagnosed HIV infection in Europe. A strategy led by the

HIV in Europe initiative is being developed to implement this novel public health initiative across Europe. Expanding HIV testing in health care settings requires training — including on stigma as a barrier to testing, political support on the national and European levels as well as auditing, monitoring and evaluation for impact. The results of the research are a good basis for advocacy.

## ABSTRACT 71

## Extent of Hepatitis C Screening and HIV Testing and Linkage to Care Services Among Substance Use Treatment Programs in New York City

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**OBJECTIVE:** The historic overlap between substance use, HIV and hepatitis C in NYC has necessitated co-location of drug treatment and HIV and hepatitis prevention, testing and care services. Nevertheless, rates of on-site testing among drug treatment providers have increased slowly. A 2010 New York State law requires the routine offer of HIV testing in clinical settings, including substance use treatment programs. State law also requires agencies offering methadone maintenance treatment to screen clients for hepatitis C. In 2011, the NYC Department of Health and Mental Hygiene (DOHMH) undertook an online survey to assess the extent of hepatitis C screening and HIV testing and linkage to care services at licensed substance use treatment programs across NYC.

**METHODS:** We asked 395 licensed substance use treatment programs in NYC (detox, residential, out-patient and methadone maintenance) to complete an online survey, and received 154 responses that provided data from 225 (57%) of 395 licensed programs. The survey assessed hepatitis C and HIV testing (available on site, via referral, or not offered), aspects of linkage to care, and program characteristics, including program affiliation and types of drug treatment offered.

**RESULTS:** Hepatitis C screening was available at 42% of programs; agencies offering methadone maintenance treatment were significantly more likely to offer on-site screening (80% vs. 27%,  $p < .0001$ ). For HIV, 49% of programs provided testing on-site; 36% reported off-site referral for testing and 17% did not offer HIV testing. On-site confirmatory HIV testing was offered by 29% of programs. Including sites that did not offer testing, 80% had an established method for linking clients to HIV primary care, including 38% that linked to an on-site facility. Programs affiliated with a hospital or community health center were significantly more likely to offer HIV testing on-site than programs affiliated with a community-based organization (82% vs. 38%,  $p < .0001$ ); outpatient programs were significantly less likely to offer HIV testing on-site than all other program types ( $p < .0001$ ).

**CONCLUSIONS:** Less than half of substance use treatment programs in NYC offer on-site screening for hepatitis C or HIV. The absence of accessible HIV testing is especially widespread among community-based organizations and outpatient treatment programs, while hepatitis C screening is offered by few treatment programs beyond those providing methadone maintenance. Findings will be used by NYC DOHMH to provide technical assistance to drug treatment programs to expand on-site hepatitis C and HIV testing and linkage to care in accordance with New York State law.

## ABSTRACT 72

### Expanding Our Reach: State and Local Health Department Efforts to Increase Access to and Utilization of HIV and HCV Testing

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**OBJECTIVE:** The release of the National HIV/AIDS Strategy, the National Viral Hepatitis Action Plan, and implementation of the Affordable Care and Patient Protection Act are having marked impact on health department HIV and HCV portfolios. Throughout 2012–2013, NASTAD will assess the current state of health

department supported HIV and HCV testing programs, including examining the impact of federal policy and funding; adoption of new testing strategies; efforts to enhance revenue through third-party reimbursement; and efforts to improve linkage to and retention in care. Assessment activities will also identify structural and operational challenges and opportunities associated with expansion of testing and improved access to care.

**METHODS:** Through a series of self-administered questionnaires, NASTAD will survey all state and local health department HIV and HCV program managers. The first survey conducted in May of 2012 addressed HIV testing. In September 2012, NASTAD will conduct two additional surveys: one will address third party billing and reimbursement practices and capacities for HIV and HCV services. The second will address HCV, including testing programs, integration of services, funding, and capacity to expand testing and linkage to care services.

**RESULTS:** The HIV testing survey had an 84 percent response rate. The volume of health department HIV tests increased between 2009 and 2011 by 12 percent. Rapid HIV tests accounted for 58 percent of tests. Multi-rapid test algorithms are used by 21 percent of health departments. Health departments support integrated HIV and STD testing (89 percent) and HIV and HCV testing (45 percent). Only 31 percent reported that Medicaid reimburses for routine HIV testing. Health departments rely heavily on federal prevention funds to support linkage to care efforts; 93 percent use CDC HIV prevention funding. Seventy percent of health departments' project more tests will be performed in clinical settings in 2012 compared with 2011; and 27 percent project fewer tests conducted on a targeted basis. Provisional findings from the two surveys on hepatitis C and reimbursement will be presented.

**CONCLUSIONS:** Health departments have been successful in strengthening HIV and HCV testing and linkage to care programs through strategies such as integration of services, adoption of new and emerging testing strategies, and leveraging multiple sources of funding. Financing HIV and viral hepatitis testing remains a serious challenge due to barriers to obtaining third-party reimbursement and shifting federal grant funds.

## ABSTRACT 73

## Hepatitis C Antibody Testing and Follow-Up in Primary Care Settings: A Retrospective Study of Four Large, Primary Care Service Centers

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**OBJECTIVE:** The Centers for Disease Control and Prevention has published a new recommendation for one-time HCV testing of persons born from 1945–1965. In this study, we collected data on the effectiveness of CDC's 1998 risk of exposure based recommendations to establish a baseline of service utilization information for comparison with the birth cohort recommendation.

**METHODS:** We retrospectively collected electronic medical data on hepatitis C antibody (anti-HCV) testing and subsequent within-system HCV RNA testing, genotyping, and biopsies from all newly enrolled patients who utilized at least 1 primary care outpatient service over a five-year period.

**RESULTS:** We collected data from 209,370 individuals over a total of 467,821 outpatient visits. A total of 17,468 (8.3%) of those observed received an HCV antibody test of whom 1,123 (6.4%) of those tested were anti-HCV positive. Of those who tested anti-HCV positive, 759 (67.5%) received a HCV RNA test, of whom 548 (72.2%) were RNA positive. Of the 548 confirmed with HCV infection, 436 (79.5%) received a genotype test of whom 72.2% were genotype 1, 20.4% were other genotypes, and 7.3% had missing or inconclusive results. We observed 98 biopsy stage results among the 436 patients who were RNA positive for HCV. Of these, 37 results indicated the patient was pre-cirrhotic but did not otherwise provide a stage, 9 were in stage zero, 35 in stage 1, 22 in stage 2, 10 in stage 3, and 18 in some form of cirrhosis. A total of

27,778 individuals were indicated for screening based upon the 1998 screening guidelines. Of these 2,750 (16.7%) received anti-HCV testing. By risk factor, 14.3% of those with elevated liver enzymes, 52.8% of people with HIV, 13.4% of people with hemophilia, 54.6% of those who had undergone hemodialysis, and 21.5% of those with indicators of injecting drug use received HCV testing. This compares to 5.5% of those without risk factors and 8.47% of those born during 1945–1965.

**CONCLUSIONS:** Limited implementation of CDC's 1998 screening guidelines resulted in a low level of anti-HCV testing in the settings observed. Only 8.3% of individuals with a primary care visit were screened for HCV. Screening rates were also low for individuals with possible clinical indicators or prior risks of exposure to HCV, although patients with HIV and those who received hemodialysis experienced higher rates of testing. Less than ideal numbers of patients who were positive for anti-HCV received HCV RNA testing and genotyping.

## ABSTRACT 74

## Educational Tools to Enhance Routine HIV Testing in Adolescents and Young Adults

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**OBJECTIVE:** Approximately 25 percent of Americans with HIV are unaware of their infection but more significantly, this percentage increases to 48 percent for HIV infected youth. Current recommendations include routine HIV testing of youth ages 16–18 however awareness of the routine HIV testing in several medical settings and the community is lacking. Pediatricians can play a key role in preventing and identifying HIV infection by promoting risk-reduction counseling and offering routine testing to the youth. Resources, knowledge, and tools to implement routine HIV testing in primary care pediatric settings is limited.

**METHODS:** A broad team of experts including clinicians, peer educators, nurse educators, and a statistician reviewed current policies, guidelines and existing materials on HIV testing in youth. Emphasis was placed on current knowledge, attitudes, and beliefs of providers and youth regarding HIV testing.

**RESULTS:** Educational materials were designed and produced to assist youth, parents and providers in implementing routine HIV testing in medical settings. Information on HIV infection, types of testing and local resources was included as well as legal terms related to HIV testing, counseling, and consent. Youth and adult surveys were created to be administered at community events, youth clinics, and primary care offices to assess efficacy, accuracy, and impact of educational materials on the willingness and interest in seeking, offering, and/or providing HIV testing.

**CONCLUSIONS:** Despite great progress in treatment and continued efforts to increase HIV testing, only a portion of pediatricians are aware and implement current recommendations for routine HIV testing in youth. Educational materials targeted towards youth, adults and providers may facilitate increase in awareness of the recommendations for routine HIV testing in youth and can serve as a tool to facilitate HIV testing at the pediatric office setting.

## ABSTRACT 75

### Integrating Routine HIV Testing in Primary Care

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**OBJECTIVE:** Efforts to diagnose people with HIV have been mostly risk based, however, the 2006 CDC recommendations for routine HIV testing has prompted many states to revisit and change their HIV testing laws, and health institutions to rethink how they approach HIV screening. Utilizing the Institute for Healthcare Improvement (IHI) Learning Model, Ed Wagner's Chronic Care Model, and The Model for Improvement (PDSA)

Urban Health Plan (UHP), a Federally Qualified Health Center (FQHC) providing primary and specialty care in the South Bronx and Corona Queens, New York, integrated routine HIV screening into regular primary care. By implementing an internal multi site interdisciplinary team learning collaborative driven by the effective use of health information technology-the electronic health record (EHR) HIV testing is incorporated as a component of standard medical care helping to capture people who are undiagnosed and enhancing opportunities for early treatment and engagement in care.

**METHODS:** UHP transformed its system from a counselor driven/dedicated tester model to a primary care data driven model in which the primary care provider and medical assistant are responsible for offering HIV testing to patients 13 to 64 years old. As part of this shift, the EHR was modified adding a prompt to offer the HIV test to eligible patients, test orders and order documentation was simplified, and systems were put in place to track provider level offer and acceptance rates. Monthly data reports are shared with all team members. The strategy for successfully implementing routine HIV testing across all community health center sites include: forming an Expert Panel to engage in program planning for implementation of routine HIV testing; setting up a multi site Learning Collaborative; deploying a training program across all sites; monitoring the results through a provider data feedback system; standardizing the system across all sites through the development of policies and procedures, flow charts, decision support tools in the EHR, and ongoing data monitoring.

**RESULTS:** UHP internal learning collaborative comprised of primary care provider and medical assistant teams resulted in a successful scale up to 84% HIV test offer rates, and an increase in HIV testing rates from a baseline of 8% to 51%.

**CONCLUSIONS:** Routine offering in the primary care setting may help to normalize and de-stigmatize screening in impoverished communities. Awareness of HIV status should result in improved linkage to care for positives and changes in risk behavior. The ultimate public health benefit is early treatment and reduction of HIV transmission.

## ABSTRACT 76

## A Qualitative Assessment of Facilitators and Challenges to the Scale up of HIV Testing in the District of Columbia

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**OBJECTIVE:** Since the release of the 2006 CDC HIV testing recommendations, the District of Columbia Department of Health (DOH) has supported the implementation of routine HIV testing in addition to more targeted strategies. Despite its success in increasing testing, data suggest that missed opportunities persist. This qualitative study assessed current scale-up efforts of HIV testing in the District through a review of current programming and policies, an assessment of how testing is being implemented amongst providers, an exploration of different models of testing, and the identification of barriers and facilitators associated with HIV testing.

**METHODS:** Semi-structured interviews were conducted with seven testing coordinators from six DOH-supported testing sites, including two community-based organizations (CBO), two health clinics, and two hospital emergency departments (ED). Interviews were also conducted with four DOH staff. Atlas.ti was used to conduct the qualitative data analysis and coding. Thematic analysis was conducted to identify relevant themes and patterns.

**RESULTS:** Qualitative data analysis revealed the following: favorable understanding and perceptions of the importance of testing, existence of evidence-based policies and procedures, a variety of implementation strategies ranging from routine testing in EDs and health clinics to testing in venue-based and outreach settings, as well as social/sexual network testing. Different testing technologies were utilized based on the testing environment. Rapid test technology was used in all settings while conventional testing was conducted in primarily health clinic settings. Variation was evident in regard to opt-out versus opt-in testing, consent practices, pre/post

test counseling, confirmatory testing, and linkage to care strategies. Facilitators to testing included: a favorable policy environment that does not require signed consent or pre/post test counseling, enactment of legislation mandating reimbursement for ED testing, receipt of free rapid tests kits from DOH, and strong testing staff commitment. Barriers to testing included: difficulty in securing full or partial reimbursement for routine HIV testing by third party payers, the requirement to track and report on testing efforts, competing priorities amongst providers, and limited resources for continued scale up and sustainable testing programs.

**CONCLUSIONS:** This study identified varying approaches, practices, and strategies to the implementation of HIV testing by DOH-supported providers in addition to shared barriers and facilitators. Identifying best practices and sharing lessons learned may facilitate the continued scale up of HIV testing in the District.

## ABSTRACT 77

## CDC's Evidence-Based Recommendations for the Identification of Hepatitis C Virus (HCV) Infection Among Persons Born During 1945–1965 in the United States

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**OBJECTIVE:** In the United States, 3.2 million persons are living with HCV infection. In 2007, HCV-related deaths surpassed those from HIV. HCV therapies can clear (i.e., cure) HCV in > 70% of persons treated. However, up to 75% of HCV-infected persons are unaware of their infection. CDC recommends HCV testing based on transmission risks; however, prevalence data suggest that regardless of risk, persons born during 1945–1965 are five times more likely to be HCV-infected than other adults. CDC recently issued evidence-based recommendations for testing persons born during 1945–1965 to improve

identification of persons chronically infected with HCV and linkage to appropriate care and treatment.

**METHODS:** A work group followed the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) framework to develop research questions, determine critical decision-making outcomes, assess the quality of evidence, and determine the strength of the recommendations. Systematic reviews were conducted on critical patient-important outcomes: treatment failure, severe adverse events (SAEs), mortality, hepatocellular carcinoma, and brief alcohol interventions (BAIs). Recommendations were determined by considering quality of evidence, values and preferences, benefits and harms, and resource implications. The recommendations were vetted through external peer review, the US government clearance process, and public comment.

**RESULTS:** HCV treatment with triple compared to dual therapy reduced risk of treatment failure (RR=0.53; 95% CI=0.47, 0.60) but increased SAEs (RR=1.34; 95% CI=0.95, 1.87). Sustained virologic response (i.e., virologic cure) was associated with decreased mortality (RR=0.70; 95% CI=0.59, 0.83) and hepatocellular carcinoma (RR=0.24; 95% CI=0.18, 0.31). When provided to a general population, BAIs reduced drinking by a mean of 38.42 grams/week (65.44–30.91 g/w). The work group determined that benefits of testing outweighed the harms, was acceptable among the target population, and was cost effective.

**CONCLUSIONS:** The use of GRADE was appropriate for assessing the quality of public health data and strengthened the evidence base for these recommendations. The new CDC recommendations will be discussed in the context of other HCV testing recommendations in the US and CDC's implementation plan will be presented. CDC recommendations for the identification of persons infected with HCV: Recommendation 1: Adults born during 1945 to 1965 should receive one-time testing for HCV without prior ascertainment of HCV risk. (Strong recommendation; moderate-quality evidence). Recommendation 2: All persons with identified HCV infection should receive a brief alcohol screening and intervention as clinically indicated, followed by referral to appropriate care and treatment services for HCV infection and related conditions. (Strong recommendation; moderate-quality evidence).

## ABSTRACT 78

### **Routine HIV Testing and Linkage to Care Services Offered at Public Aid Offices can Help Identify Undiagnosed HIV Infections and Facilitate Linkage to HIV Care in Urban High Risk Minority Communities**

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**OBJECTIVE:** Strategies to expand HIV testing and facilitate linkage to HIV care services are needed to reduce HIV infection. We evaluated the impact of offering HIV testing and linkage to care services at public aid offices in minority Chicago neighborhoods with high HIV prevalence rates. Our primary objectives are to describe the key components of our intervention model, share lessons learned, and report process and outcome evaluation findings.

**METHODS:** As part of a national initiative to increase routine HIV testing (HIV Focus), we formed a collaboration of 4 organizations (1 lead and 3 minority-based agencies) and developed a coordinated HIV screening and linkage to care program model entitled the Bridge Project. Using HIV surveillance data, we identified 3 low-income community neighborhoods with high HIV prevalence rates. We then partnered with public aid offices located in these neighborhoods to provide HIV prevention services across settings. From May 2011 through July 2012, the testing collaborative provided 199 days of HIV testing and linkage to care services and administered 6,182 HIV screenings.

**RESULTS:** Of those screened, 47.7% were first time testers, 63.5% women, 84.7% African American, 10.9% Hispanic, and 3.2% white, with an average of 34. We identified 35 positives for an overall seropositivity rate of 0.6%. HIV seropositivity rates varied by gender (1.0% for males vs. 0.3% for women,  $p = .001$ ). Of those positive, 24 (68%) self-reported being newly diagnosed and 51.4% were successfully linked to HIV primary care services.

Contextual factors at sites (e.g. client volume and space) impacted HIV testing acceptance rates, yet across sites, 90.5% reported being “very satisfied” with services. Linkages to care activities proved more challenging to initially implement without established mechanisms to quickly link clients to HIV primary care services. We also found that the presence of these services can serve as outreach mechanism to “re-link” those HIV+ individual disengaged from HIV care.

**CONCLUSIONS:** Routine HIV testing and linkage to care services in public aid offices can reach high numbers of first-time testers and at risk individuals who might otherwise not be tested. Evaluation findings suggests that with administrative buy-in from public aid offices it’s feasible to implement routine community based HIV testing and linkage to care programs in non-clinical settings. Established processes and working relationships with area HIV primary care providers are essential to facilitate quick linkage of HIV+ clients screened at non-clinical settings with medical services.

#### ABSTRACT 79

### Oral Fluid is Inferior to Fingerstick Point-of-Care HIV Tests Among Seattle MSM

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**OBJECTIVE:** The Rapid Test Study is an ongoing, real time comparison of four point-of-care (POC) HIV tests designed to determine their relative abilities to detect early HIV infection.

**METHODS:** HIV-negative men who have sex with men (MSM) and transgender persons seeking HIV testing were recruited at the Public Health — Seattle & King County (PHSKC) STD Clinic, Gay City Health Project Wellness Center, and University of Washington Primary Infection Clinic (PIC). Study procedures included one POC test performed on oral fluids (OraQuick, Orasure

Technologies) and two or three POC tests performed on finger stick whole blood specimens: OraQuick (5µL), Uni-Gold Recombigen HIV Test (Uni-Gold, Trinity Biotech, 50µL), and Determine HIV-1/2 Ag/Ab Combo (Determine, Alere Inc., 50µL). Serum specimens from subjects with negative POC results were sent for EIA and pooled nucleic acid amplification testing (NAAT). McNemar’s exact tests were used to compare the numbers of HIV-infected subjects detected by the different POC HIV antibody tests.

**RESULTS:** Between February 2010 and June 2012, 1822 subjects were enrolled. Of 1806 MSM seen at the STD Clinic and Wellness Center, 64 (3.5%) were newly diagnosed with HIV infection. Only 48 (75%) had reactive results on all POC tests, and 4 (6%) additional subjects had discordant results with at least one reactive and one non-reactive POC test. Data comparing test performance were analyzed for these 64 HIV-infected subjects plus 16 HIV-infected men enrolled at the PIC. Of these 80 total subjects, 57 (71%) had concordant reactive POC test results, 5 (6%) had concordant non-reactive POC tests but a reactive 3rd generation EIA, and 8 (10%) of subjects had acute HIV infection. Ten (12%) subjects had discordant POC test results, including one subject with a reactive Determine p24 antigen and an HIV RNA level of 5.7 million copies/mL. OraQuick performed on oral fluids identified fewer men with discordant results compared to both OraQuick performed on fingerstick (0 versus 6, p=.03) and Uni-Gold (1 versus 7, p=.07).

**CONCLUSIONS:** Our data show that oral fluid POC testing is inferior to finger stick and should be the specimen collection method of choice only in rare circumstances. These data also reinforce published data from the PHSKC Pooled HIV NAAT Program that have shown that rapid HIV antibody tests correctly diagnose fewer than 80% of HIV-infected MSM in Seattle. In high HIV incidence populations like ours, currently approved POC tests are inadequate and must be supplemented with pooled NAAT or 4th generation assays.



## ABSTRACT 80

## HIV Testing in US Emergency Departments, Outpatient Ambulatory Medical Departments, and Physician Offices, 1993–2010

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**OBJECTIVE:** Since 1993, the US Centers for Disease Control and Prevention (CDC) has issued a series of recommendations advocating for a progressive expansion of HIV diagnostic testing and screening in healthcare settings. The aims of this study were to: (1) estimate the rates of HIV testing among 13–64-year-old patients in three US healthcare settings: emergency departments (EDs), outpatient ambulatory medical care departments (OPDs), and physician offices from 1993 to 2010; (2) determine the responsiveness on a national level of these healthcare settings to CDC recommendations to expand HIV testing, particularly in light of the growing HIV epidemic and advances in HIV testing and medical care over this time period.

**METHODS:** ED and OPD visits from the National Hospital Ambulatory Medical Care Survey (NHAMCS) and physician offices visits from the National Ambulatory Medical Care Survey (NAMCS) were analyzed using data collected for 1993–2010. HIV testing rates were estimated for each healthcare setting. Logistic regression models were constructed to evaluate trends in HIV testing for each healthcare setting over this time period. Odds ratios (ORs) with accompanying 95% confidence intervals were estimated. Student's t-tests were used to compare testing rates across healthcare settings. All analyses were adjusted per CDC recommendations for the multi-stage sampling design of the surveys.

**RESULTS:** From 1993 to 2010, HIV testing rates in OPDs ranged from 0.65% to 1.63%, and were significantly greater than HIV testing rates in EDs ( $p < 0.0001$ ), which ranged 0.19% to 0.55%; and were higher than rates in physician offices ( $p < 0.0001$ ), which ranged 0.29% to 0.56%. Logistic regression tests of trend for the entire study period did not

demonstrate significant increases in testing rates at any of these three healthcare settings: EDs (OR 1.02 [0.99–1.05]), OPDs (OR 1.12 [0.33–3.81]), and physician offices (OR 0.94 [0.89–1.00]).

**CONCLUSIONS:** As estimated using national probability surveys, US HIV testing rates did not change significantly from 1993 to 2010 in the three healthcare settings: EDs, OPDs, and physician offices. There was no demonstrable increase in testing rates according to these data despite recommended expansion of HIV testing by CDC through successive revisions of US HIV testing recommendations. Furthermore, HIV testing did not increase significantly even with a growing HIV epidemic and improvements in HIV testing technologies over this period, breakthroughs in antiretroviral medications to combat HIV, reductions in AIDS-related mortality, and recent efforts by CDC to streamline HIV testing methods.

## ABSTRACT 81

## Routine HIV Testing as a Vital Sign – Two Years' Experience

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**OBJECTIVE:** HIV prevalence in the District of Columbia (DC) is high at 3.2%. Following CDC recommendation and the DC HIV testing initiative Unity Health Care Inc. (UHC) serving 80 000 patients in 24 health care sites throughout Washington city implemented a program called “5th vital sign”. In this program rapid HIV testing is offered to patients once a year at vital sign intake. The objective is to integrate routine HIV testing to existing health care system. We present our experience for the years 2010 and 2011.

**METHODS:** Health care sites posted signs about routine HIV test offers. Written consent by patients and pre-test counseling was not required. When patients age 13–84 years old present for primary care visit the medical assistant offers rapid HIV test as part of the vital sign. If patient declines the testing, provider discusses importance of testing and offers to add HIV test to the blood work.

This is called the “double knock” approach. All rapid HIV test results are delivered by providers. Data was collected from electronic medical record. HIV tests made on clinical indications are excluded.

**RESULTS:** In 2010 and 2011 total of 45532 HIV tests (29414 females and 16118 males) were made of these 23020 were rapid oral swab tests. Of those tested by oral swab test 36 women and 71 men have confirmed positive results. Of those tested by serum HIV test (ELISA) 25 women and 45 men have confirmed positive results. 38 patients had CD4 count below 200.

**CONCLUSIONS:** Routine HIV testing is feasible and acceptable to both patients and health care workers. It does not require extra personnel and space. Routine testing independent of presumed risk factors should identify patients who are not aware of their HIV status. Our approach is replicable, and serves as a model for health facilities.

## ABSTRACT 82

### **Preliminary Results from “Do One Thing”: A Comprehensive Neighborhood-Based HIV and HCV Testing, Prevention and Media Campaign in Southwest Philadelphia**

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**OBJECTIVE:** Philadelphia’s HIV infection rate is five times the national average. African Americans represent 70% of new infections and 2% of African Americans in Philadelphia live with HIV/AIDS. Limited HIV testing and care services in Philadelphia neighborhoods with the highest infection rates may contribute to racial disparities in HIV infection, including in Southwest Philadelphia. Home-based HIV testing programs in Africa have successfully diagnosed and linked individuals to HIV care

services early in the course of their infection. We developed a neighborhood-based HIV and HCV testing, awareness and media program entitled “DO ONE THING” to stimulate demand for and provide HIV and HCV testing across zipcode 19143 in Southwest Philadelphia.

**METHODS:** DO ONE THING’s primary components include: 1) routinely offering HIV testing at the Health Annex, a FQHC, and maintaining those who test positive in care; 2) a door-to-door HIV testing and linkage to care campaign in four census tracts in zipcode 19143; 3) a large-scale social marketing campaign promoting testing that includes billboards, texting, digital media, business posters, yard signs, door knockers, phone apps and other media; 4) massive mobilization of community leaders, block captains, clergy and businesses; 5) training health professional students and local residents in community outreach and HIV counseling and testing protocols.

**RESULTS:** We more than quintupled HIV testing rates at a FQHC in six months by transitioning from risk-based to routine testing; 850 individuals were tested at the Health Annex, of whom four tested positive. All have been retained in care. Thirty new health professions students and residents have been trained in HIV testing and counseling. In the first six weeks of door-to-door and community-based testing, we tested 212 individuals, of whom four tested positive and are currently being linked to care. In fall 2012, we will begin offering HCV testing along with HIV testing in non-clinical settings.

**CONCLUSIONS:** We have expanded HIV testing in this neighborhood over 7-fold by combining routine HIV testing in clinical settings with a media campaign, door-to-door outreach, community mobilization and HIV testing in non-clinical settings. Pairing HCV testing with our HIV testing model may also help diagnose HCV in this neighborhood with high rates of HCV infection. This comprehensive, neighborhood-based testing and linkage to care program is a novel model for addressing racial disparities in HIV and HCV infection and may provide important lessons for other urban areas.

## ABSTRACT 83

## Using Conventional HIV Tests for HIV Diagnosis on Oral Fluid Specimens.

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**OBJECTIVE:** There is a need for more tests using non-invasive specimen collection. This will be helpful to broaden the reach of testing programs and to perform large scale epidemiological studies. In this study three different ELISA assays (Vironostika HIV Ag/Ab, Enzygnost Anti-HIV 1/2 Plus and Genscreen HIV 1/2 v2) were optimized for the detection of HIV antibodies in oral fluid specimens collected with the OraCol device.

**METHODS:** Firstly we optimized three HIV screening tests (ELISAs). Secondly we assessed the stability of the specimen and thirdly we elaborated a testing algorithm for use in epidemiological studies and for diagnosis. Three oral fluid swabs were taken from 302 HIV positive and HIV negative individuals. The specimens were kept for three different time points (day 0–1, day 3–5 and day 7) at ambient temperature before processing the specimens and were kept at –20°C until testing. Optimization of the protocol was done by doubling the sample volume for Vironostika and Enzygnost and kept the same for Genscreen. The optimal cut-off for each of the tests was assessed. Sensitivities and specificities were calculated by comparing the oral fluid tests with the gold standard testing on a paired blood sample. Testing algorithms were elaborated with a lowest misclassification rate for surveillance studies and with a highest sensitivity for diagnosis.

**RESULTS:** Based on day 7 data we obtained a sensitivity of 97.8% (95% CI:92.3–99.4) and a specificity of 100% (95% CI:98.2–100) for Vironostika HIV Ag/Ab, a sensitivity of 97.8% (95% CI:92.3–99.4) and a specificity of 99.5% (95% CI:97.3–99.9) for Enzygnost Anti-HIV 1/2 Plus and a sensitivity of 100% (95% CI:95.9–100) and a specificity of 97.6% (95% CI:94.5–99.0) for Genscreen HIV 1/2 v2.

**CONCLUSIONS:** The present study has demonstrated that different ELISAs can be used with oral fluid after adaptation of the sample input and calculation of the cut-off. A serial algorithm with two tests should be used in order to obtain correct prevalence data in epidemiological studies and only one test (Genscreen) can be used to screen individuals for further testing on blood. Therefore the oral fluid collection becomes a more useful tool for outreach HIV testing and anonymous sentinel surveillance in community settings.

## ABSTRACT 84

## Creating, Sustaining, and Expanding a Comprehensive HIV Program in an Emergency Department and Community Health Center Setting

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**OBJECTIVE:** To describe the performance characteristics and process to create, sustain, and expand a HIV screening and outreach program from the Emergency Department (ED) into community health centers (CHCs).

**METHODS:** • An inner-city ED-based HIV program offers non-targeted and targeted screening programs, outreach services, and mechanisms for linkage to care. The electronic medical record determines known HIV status or patient eligibility (based upon the 2006 CDC criteria) for HIV screening upon ED registration and certified HIV Counselors schedule those with known HIV with our Program Manager (PM) or perform screening tests on eligible patients. Confirmatory testing is obtained in the ED on reactive patients and appointments are scheduled with the PM within 1–2 weeks. The PM integrates patients into the Infectious Disease (ID) clinic. • A description of our budget details the funding sources for sustaining the ED-program and expansion into the CHCs. • An electronic notification system also alerts the HIV PM of known positive patients that are seen in the ED and of all HIV tests sent from the ED. The patient records are reviewed by

the PM and integrated into care if no ID visit has occurred in the previous 6 months.

**RESULTS:** • Since 2008, the program has performed over 13,000 tests with .4% confirmed newly HIV positive and 58% identified with CD4 counts above 200. 9 patients confirmed positive had a prior diagnosis. 81% of the newly diagnosed have been linked to care and 58% of those patients were linked in less than 30 days. The consent rate for screening is 87%. The outreach program has linked over 70% of our patients to ID care. • The program has received over \$1.2 million in grant awards and in-kind donations. Staff position/ hourly wages include: PM (social work)/ \$22.65; Counselor/ \$13.14 (8 counselors); data specialist \$11.05. Testing hours are from 10a to 10p 7 days a week. 6 testers are assigned to the ED and 2 to the CHC. The program tests approximately 300–400 patients monthly in the ED. • A 5-year renewable \$90,000 grant funds the CHC expansion. The model for screening and outreach mirror the ED-based program. The plan for CHC sustainability is to train the CHC staff to be self-sustaining after 1 year.

**CONCLUSIONS:** We describe a model for a comprehensive HIV program in a resource limited hospital that is feasible, effective, and cost-efficient thereby allowing expansion into community health centers.

## ABSTRACT 85

### A Review of HIV Home Self-Testing: Issues and Implications from a Global Perspective

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**OBJECTIVE:** Recent pilot studies in HIV Home-Self-Testing (HST) and the upcoming release of the FDA-approved OraQuick In-Home HIV Test in October 2012, has introduced self-screening as an emerging testing approach. This literature review of HST research over the past decade aims to inform HIV planning and policy.

**METHODS:** A literature review was performed of articles, abstracts, and a convenience sample of gray literature using keyword searches ‘HIV Self-Testing’ and ‘HIV Home-self-testing’ across the following databases: Google Scholar, Academic Elite, Medline; public FDA OraQuick In-Home HIV-Test documents were included. Out of 42 publications identified, we included 22 studies comprising rapid field assessments, clinical trials, acceptability/feasibility studies, mathematical models, systematic reviews, prospective/retrospective cohort studies, and cross-sectional studies using primary data. Home-based collection studies were excluded.

**RESULTS:** 22 studies were included across multiple countries. A recommendation and/or conditional recommendation for HST based on study findings was included for 15 studies, eight of which recommend were US-based with five among MSM populations. The four studies in African countries all recommend and/or conditionally recommend HST (two studies are among predominately female health care workers). Three key gap areas were identified across included studies: testing accuracy (6 studies), the need for a target population in a low-prevalence setting (regarding studies with specific sample populations, e.g. health workers, MSM) (5 studies); and need for guidelines (3 studies). Of six studies which recorded findings on telephone counseling services, all six found that HST users generally used the service for procedural and interpretation questions rather than counseling. Only one Singapore study (using a blood-based test kit) did not recommend HST; despite nearly 90% acceptance rates, 85% performed operational errors, 56% had invalid results.

**CONCLUSIONS:** A majority of studies made a recommendation for HST. Studies varied by geographic location and population: US-based studies were conducted among MSM populations; 50% of Africa-based studies involved primarily female healthcare workers. Despite differences, US-based and Africa-based studies reported underutilization of counseling through 24/7 hotline services. Key gaps/issues identified involve quality assurance/testing accuracy (for users and tests), lack of national guidelines/frameworks, lack of evidence among general populations and non-MSM, key populations, and the need for further evidence on telephone counseling.

As self-screening expands, domestic and developing country implementation research is needed to address key concerns, assess use in diverse populations and settings, understand the implications of HST on current prevention and treatment practices, and inform policy and practice.

## ABSTRACT 86

### Routine Opt-Out HIV Screening on the U.S. – Mexico Border, Opportunities for Diagnosis and Prevention

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**OBJECTIVE:** Currently the U.S. Centers for Disease and Control and Prevention is recommending routine 'opt out' HIV testing in emergency departments, in April, 2010 the Texas Department of Health and Human Services implemented an HIV Opt-Out screening program in El Paso, Texas with the collaboration of Texas Tech University Health Sciences Center and the University Medical Center serving the El Paso County residents.

**METHODS:** University Medical Center is funded publicly and serves as an academic hospital for Texas Tech University Health Sciences Center. It is the only Level 1 trauma center within 280 miles of El Paso, Texas. The ER sees an average of 4500 patients per month with high volume reaching 6000 plus, including residents living across the border in Juarez, Mexico. Since April 2010, all patients between the ages of 18–64 who presented to the ER of the University Medical Center were eligible for routine opt-out HIV Screening. Screening tests were performed on blood samples using chemo-luminescent batch analyzer at low cost (reagent est.\$3.50/test); hence only patients having blood drawn as part of their workup are screened. On-call counselors are advised by UMC lab 24/7 of any positive patients. Patients with positive results are referred to community resources and treatment after receiving a confirmatory Western Blot.

**RESULTS:** For the program period of April 2010–April 2012 there have been 23,942 HIV tests through the ER

of UMC. Testing averages > 1,100 per month. There have been 39 total number of positive results and 118 identified previous positive from April 2010–April 2012, and of those confirmed positive 85% are confirmed and linked to care. Tests by gender include 46.7% Male and 53.3% female. Test by race include 10.8% White, 3.0% Black, 80.9% Hispanic and 5.3% unidentified.

**CONCLUSIONS:** The implementation of the HIV opt-out screening program at University Medical Center/Texas Tech appears to be successful in detecting new cases with a case finding rate of 2.7/1,000. Of those new cases found, the majority are early in their disease course. Further efforts are ongoing to increase compliance with screening and reach a goal of screening >85% of patients 18–64 who have blood drawn. This is a low cost program with a total PROGRAM cost per patient screened of \$25 and cost of finding a new case \$9,090. To establish the program as sustainable (self funded through billing collections), UMCEP/TTUHSC plans transitioning payment to insurance and private payment.

## ABSTRACT 87

### Status of HIV Diagnostic Testing in U.S. Public Health Laboratories

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**OBJECTIVE:** In 2012 APHL in collaboration with the Centers for Disease Control and Prevention (CDC) launched the fourth HIV Testing Survey to determine the capability, capacity and test methods used in U.S. Public Health Laboratories. Data were compared with that from previous APHL surveys conducted in 2004, 2005 and 2009 to identify trends in testing volume and methodology.

**METHODS:** A 20-question electronic survey instrument was created by the APHL/CDC HIV Steering Committee and administered through Qualtrics, a web-based survey instrument. The survey was sent to 130 state and local public health laboratories. Sixty-five (50%) laboratories responded: 44 of 51 (86%) state public health laboratories and 21 of 79 (27%) territorial and local public health laboratories.

**RESULTS:** From 2005 to 2011 the volume of specimens tested for HIV infection in U.S. public health laboratories decreased by more than 30%. The survey also indicated that public health laboratories are rapidly implementing fourth generation HIV antibody/antigen immunoassays. At the time the survey was conducted 37% of responding laboratories had implemented or were completing verification studies on an HIV antibody/ antigen testing platform and an additional 34% were expecting to purchase a fourth generation immunoassay platform in the next 12 months. Respondents were less likely to be in the process of moving away from using Western blot (WB) or IFA as their supplemental test. Nearly 80% of respondents are still using WB or IFA as the supplemental assay, with more than 60% of those laboratories citing the lack of formal recommendations as their main reason for delaying the switch.

**CONCLUSIONS:** The widespread use of rapid HIV assays available at the point of care has had a significant impact on the volume of HIV diagnostic testing conducted at Public Health Laboratories and the way that HIV testing services are delivered over all. However, despite the decrease in workload, public health laboratories continue to be eager and rapid adopters of the latest HIV testing technologies. Regulatory requirements and the need for formal testing recommendations were cited as the most common reasons for public health laboratories to continue to use WB and IFA as the supplemental test, rather than adopting newer strategies for supplemental testing — such as HIV-1/HIV differentiation assays.

## ABSTRACT 88

### Who Better than Us? Recruiting Individuals with Histories of Incarceration and Substance Abuse to Increase Access to HIV and HCV Testing and Linkage to Care

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**OBJECTIVE:** In Washington DC's Wards 6, 7 and 8, the Community Education Group (CEG) faced the challenge of addressing service gaps for a community of African Americans suffering from 5 times the US national per capita rate of HIV/AIDS. Researchers questioned if CEG's intervention using the social networks and skills of community health workers (CHW) with histories of incarceration and substance abuse could increase counseling, testing and linkage to care outcomes in Wards 6, 7, and 8?

**METHODS:** CEG recruited, retained, trained and hired Ward 6, 7, and 8 community members to provide HIV/HCV prevention outreach, testing and linkage to care activities. Individuals recruited participated in a 90-day program to increase their capacity to provide venue based HIV/HCV prevention outreach, testing and linkage activities to high risk African Americans in Wards 6, 7, and 8 of Washington, D.C. Mixed methods were employed for efficacy test. Data was obtained from interviews, program outcomes, and health records with a target population of heterosexual males and females at high risk for HIV/AIDS, HCV and other concurrent issues such as substance abuse and homelessness over the past 3 years. Multi-theoretical research design was based on CHW model, social network theory, and stages of change.

**RESULTS:** Between 2009 and 2011, CEG provided outreach and risk behavior counseling to over 4.31% of the population. HIV testing increased overall by 371%; HCV testing increased overall by 158%; 361 % in males; 380% in females. Of those tested in 2011: 99% received counseling, 93% received confirmatory testing and linkages to care; and 23% received substance abuse treatment; up from 0% in 2009. Interview data attributes outcomes to service mix;

organizational culture; reentry citizen's communication, familiarity, advocacy, and community investment.

**CONCLUSIONS:** The results of this targeted yet holistic approach add clarity to the surmounting efficacy evidence supporting CHW strategies and emphasize the need for dual targeted programs such as this reentry and HIV/AIDS and HCV intervention. As in most multifaceted approaches, the relative strength of any individual strategy can't be enumerated. Yet, engaging disadvantaged groups in the community to use their community knowledge and social networking skills has shown to drastically increase HIV/AIDS and HCV counseling, testing and linkage to care outcomes among high risk African American in Wards 6, 7, and 8 of Washington, D.C. These outcomes are attributed to a comprehensive strategy that was developed to address community health disparity in an innovative way.

#### ABSTRACT 89

### **Umndeni Care Program (UCP): Lessons Learned from Home HIV Testing and Linkage to Care in the South African Generalized Epidemic**

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**OBJECTIVE:** The Umndeni Care Program (UCP) focuses on providing community-based, in-home HIV testing, linkage to care and treatment, social support, tuberculosis screening, adherence monitoring, HIV prevention and health care professional training in rural KwaZulu-Natal (KZN), South Africa.

**METHODS:** UCP uses an incentive-based system of community health care workers to perform community-based in-home HIV counseling, testing, prevention education, tuberculosis screening, adherence monitoring and linkage to care. Community health workers are given incentives for successful linkages to care and additional bonuses for continued adherence in their patients.

**RESULTS:** In the first seven months of 2012, our counselors tested 1,118 (87%) individuals of the 1,289 who were offered confidential in-home point-of-care HIV testing. From those who tested, we found 149 (13%) new HIV infections. Ninety-two (62%) of the newly diagnosed received their CD4 results and 53 (57%) met national criteria for initiation of antiretroviral therapy (ART). Of the UCP patients newly diagnosed as HIV infected by rapid testing, 56 initiated ART. Only five (9%) patients who qualified for ART did not initiate therapy as of July 31, 2012. In addition, we detected 25 cases of sputum positive tuberculosis from random home visits. Acceptance rates for in-home HIV testing have risen from 64% in 2010 to 87% in 2012.

**CONCLUSIONS:** With the recent approval of home self-testing and increasing access to point-of-care diagnostics for HIV in the United States, using similar methods developed in Africa could potentially increase the number of newly identified cases. Using community health care workers to facilitate testing and linkage to care has shown to be a powerful method of detecting early, asymptomatic patients as well as patients less inclined to access the health care system.