Track C: Outcomes & Impact Evaluation of HIV Testing, Prevention & Care

ABSTRACT 61

Internal Medicine and Emergency Medicine Physicians Lack Knowledge of CDC HIV Testing Recommendations and Infrequently Offer HIV Testing

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OBJECTIVE: Implementation of 2006 recommendations for universal opt out HIV screening in healthcare settings has been incomplete. Physicians in clinical practice are pivotal to increased HIV testing. We evaluated knowledge and attitudes of resident and attending specialists in emergency medicine (EM) and internal medicine (IM) regarding HIV screening, current recommendations, and barriers to testing.

METHODS: We conducted an electronic anonymous cross-sectional 41-question survey of physicians at the University of Cincinnati Academic Health Center.

RESULTS: Of the 324 physicians surveyed, 232 (71.6%) responded. EM residents were more likely to assess risk factors for HIV transmission compared with IM residents in the outpatient setting (71.4% vs. 36.2%, p=0.0027). EM residents were also more likely to routinely offer HIV testing compared to residents in internal medicine (60.7% vs. 27.8%, p=0.0009). Overall, there was no difference in offering HIV testing by gender of physician (32% vs 35.6%) or by residents versus attendings (33.8% vs 33.3%). Physicians were more comfortable asking about a history of injection drug use (89.9%, p<0.0001) and previous sexual transmitted diseases (85.1%, p=0.00022) compared to asking about sexual orientation of their patients (69.3%). Residents who stated they received encouragement from attendings to offer HIV testing were more likely to offer it (68% vs 27.1%, p<0.0001). Only 70 physicians (30.9%) were aware of the current CDC recommendations. Attendings were more aware of it compared to residents (41.7%, 26%, p=0.017). Awareness of the CDC recommendations was not associated with increased testing (35.7% vs 32.7%). The most common reasons cited for not offering routine HIV testing were: "not medically indicated" (53.1%), "lack of time" (37.6%) and "not high enough priority on my list" (23.5%). The most common physician identified methods that would enhance testing were: "making it a core measurement required for every patient" (61.5%), "changing the process of performing the consent by allowing nurses and other health care staff to obtain it" (47.8%) and "changing the federal/state/hospital laws by making the consent for testing not required" (46.9%).

CONCLUSIONS: EM and IM residents and attendings fail to offer HIV testing or assess for HIV transmission risk factors at sufficient levels. There is also a gap in knowledge of the current CDC recommendations. To identify more persons with undiagnosed HIV, physicians will need enhanced knowledge combined with other testing strategies to more fully implement universal screenings.

ABSTRACT 62

Opt-out HIV Screening in Clinical Practice: Provider Readiness to Change

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OBJECTIVE: Assess current practices and readiness to conduct opt-out HIV screening and linkage to care according to the 2006 recommendations of the CDC.

METHODS: A baseline CME-certified survey assessed: (1) current clinical practices; (2) perceived benefits of and barriers to implementation; and (3) clinicians' confidence in their ability to conduct opt-out screening and linkage to care in multiple real-world settings. The survey was posted on MedscapeCME http://cme.medscape.com/viewarticle/721205 on 5/21/201 and data collected through 6/2/2010 were analyzed; 770 of the 2761 participants were clinicians, of whom 559 (73%) could be classified in the Transtheoretical Model's stages-of-change.

RESULTS: Nearly 75% of primary care physicians (n=155) were not conducting opt-out screening: 52 (33.6%) were not intending to change, 38 (24.5%) were intending to change within 6 months, 22 (14.2)% were intending to change within 30 days. Among all specialties (n=559), 220 (39.4%) were not intending to change, 127 (22.7%) were intending to change within 6 months, 68 (12.2%) were intending to change within 30 days. Clinicians who were not yet screening were more likely to report that they did not know whether opt-out screening was legal in their state $X^2(8)=97.86$, $P<.001$, compared with those in later stages. Over 65% of clinicians who were not intending to change reported not knowing state laws. Consent type obtained (written vs. opt-out) varied by stage; clinicians in earlier stages were more likely to obtain written consent, $X^2(4)=40.16$, $P<.001$. Level of agreement with the statement "Opt-out screening is the community standard of care" varied by stage in the overall sample $F(4, 554)=16.61$, $P<.001$, $\eta^2=.11$; in primary care $F(4, 150)=4.96$, $P<.01$, $\eta^2=.12$, and in emergency medicine $F(4, 57)=2.12$, $P>.05$, $\eta^2=.13$.

Additional parameters that varied significantly across stages included: awareness of benefits and barriers $F(8, 964)=10.09$, $P<.001$, $\eta^2=.08$., with those in the Precontemplation stage least likely to endorse benefits; and clinician confidence, $F(4, 451)=6.74$, $P<.001$, $\eta=.06$. Clinicians in the Precontemplation stage were significantly less confident than individuals in the Preparation, Action, and Maintenance stages.

CONCLUSIONS: Given the high proportion of clinicians in pre-action stages for conducting opt-out screening and linkage to care, education and behavior change efforts should be targeted to clinician readiness to change. The lack of knowledge regarding local laws is likely important, given that very few states still have laws that are inconsistent with the CDC recommendations.

ABSTRACT 63

Are African-American Patients in a High Prevalence City Aware of HIV Testing Recommendations?

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OBJECTIVE: In 2006 the U.S. CDC recommended routine opt-out HIV testing of all persons ages 13-64 in healthcare settings with high HIV prevalence. Limited data indicate 40-60% of patients in primary care settings still refuse HIV testing when offered routinely by their providers. Low risk perception continues to be cited as a reason for refusing testing. In a clinic serving predominantly African-American patients in a high HIV prevalence city, the purpose of this study was to understand patients' beliefs about who should be tested for HIV in order to examine at least one determinant of low risk perception. Understanding these beliefs could guide campaigns to educate patients about the current HIV epidemiologic profile and the benefit of routine HIV testing in healthcare settings.

METHODS: In a clinic serving predominantly African-American patients in Houston, TX, anonymous self-administered questionnaires were completed by patients ages 18-64.

RESULTS: One-hundred ninety-eight patients participated. One-hundred seventy-six (89%) were African-American. We report the data from African-American participants. Over 94% of African-Americans felt the following people should be HIV tested: people who use IV drugs, people who have sex for money or drugs, men who have sex with men, and people who have more than one sex partner. Approximately 20% of African-Americans felt that healthy teenagers and healthy adults should not be tested for HIV. Another 6% were not sure if healthy teenagers should be tested and another 7% were not sure if healthy adults should be tested. There were no significant differences when responses were compared between genders or between younger (< 40) or older (= 40) patients.

CONCLUSIONS: To our knowledge, this is the first study in the routine opt-out HIV testing era of a predominantly African-American patient population's beliefs about who may be at risk for HIV and should be tested. Nearly all participants felt that historical high risk populations should be tested. Approximately 20% did not think healthy teenagers and adults should be tested; perhaps highlighting a lack of awareness that approximately 30% of people with HIV in the U.S. are not men who have sex with men or IV drug users. It is possible that participants believe that only non-healthy teenagers and adults should be tested, highlighting a misperception that people with HIV will look or feel sick. Our findings highlight an unawareness or disagreement with the 2006 CDC routine opt-out HIV testing recommendations; these are potential barriers to accepting testing in healthcare settings.

ABSTRACT 64

Do Veterans Affairs Physicians Know and Agree with the Latest HIV Testing Recommendations? Assessing Barriers to Testing Veterans

PE

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OBJECTIVE: The purpose of this study was to assess knowledge and opinions of the latest HIV testing recommendations in a Veterans Affairs (VA) primary care clinic staffed by Baylor College of Medicine physicians. These results could guide initiatives to improve HIV testing in VA primary care settings.

METHODS: Thirty-nine Baylor College of Medicine physicians providing care in the VA primary care clinic completed the self-administered anonymous questionnaire. There were 12 faculty and 27 internal medicine trainees in this sample.

RESULTS: Only 56% of physicians (83% faculty, 44% trainees) knew that the CDC has recommended HIV testing for all patients 13-64 years of age. Only 64% of physicians (75% faculty, 55% trainees) knew that the VA has recommended that all veterans regardless of age be tested. Seventy-two percent of physicians (67% faculty, 74% trainees) agree that testing should be routine for all adult patients. Only 67% of physicians (75% faculty, 63% trainees) feel comfortable raising the topic of HIV testing with their patients. There were no statistically significant differences between faculty and trainee responses.

CONCLUSIONS: Nine of ten Veterans have never been tested for HIV. Despite 2006 recommendations for routine HIV testing and 2009 VA recommendations for routine testing, a majority of VA practicing physicians who participated in our study were unaware of or disagreed with the latest testing recommendations. Many also felt uncomfortable talking about HIV testing with their patients. These barriers may help explain the low testing prevalence among Veteran populations. A recently published internet survey of Veterans found that nearly three-quarters of respondents indicated that they would "very likely" get an HIV test if their doctor recommended it. This finding, along with our results, suggest a need for campaigns targeting physicians with HIV testing recommendations. Campaigns should highlight the clinical and public health benefits of routine HIV testing and could model the physician-patient interaction around testing.

ABSTRACT 65

False Reactives with Oraquick® HIV1/2 Point-of-care HIV Test: A Synthesis of Evidence

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OBJECTIVE: Though OraQuick® offers a convenient and non-invasive HIV testing option, the occurrence of false positives has reduced confidence in the test in both the public and providers. With a view to create the evidence base and to inform clinicians, public health professionals

and policy makers, we systematically reviewed studies that reported excess false reactive results.

METHODS: We searched four electronic databases (i.e., MEDLINE, EMBASE, WEB OF SCIENCE, CINAHL) for the period of Jan 2000- July 2010 and reviewed global evidence on Oraquick® RAPID and ADVANCE HIV1/2 Point-of-Care HIV tests. After meta-analyzing diagnostic accuracy outcomes, we evaluated the literature on excess false reactive results.

RESULTS: Our search resulted in a total of 16 studies, a majority (10/16, 63%) of which were reported from the U.S. Of 16 studies, 5 reported on false positives (FPs), 3 on false negative (FNs), and 8 reported on both. Of 16, 6 (38%) studies were reported in chronic infection, 2 (12%) in acute HIV infections and the remaining did not specify the HIV stage. Ranges of sensitivity (Sn) and specificity of the test reported were 75% -100% (Sn) and 93.64-100% (Sp). Of the 16 studies reporting on excess false reactive results, 7 (44%) were incomplete in reporting all cell values, restricting our ability to pool the studies. Hence, these outcomes were narratively synthesized.Excess false positive results were attributed to: i) over-collection of OMT sample (double swabbing), ii) over interpretation of partial test lines, iii) specimen contamination, iv) medical conditions (Epstein barr virus, Hepatis A & B, rheumatoid factor), and v) use of test kits closer to the expiration date. Fewer false positives were reported with the newer ADVANCE Oraquick® (introduced in 2009) versions than older versions (introduced in 2004). Excess false negative results were reported in acute HIV infection and attributed to: (i) presence of low HIV antibody levels during acute phase of the infection, and (ii) undetectable HIV viraemia in patients on therapy. Given the limitation of OraQuick being an antibody based test, these false negatives are expected.

CONCLUSIONS: In sum, as with any rapid test, the occurrence of false reactives does exist with Oraquick®. To mitigate their occurrence, enhanced quality control and assurance and the use of modified algorithms (HIV RNA tests, NAATs and rapid Antigen/Antibody combination assays) have been recommended. As we expand routine HIV testing across United States, a critical evaluation of false reactive results is key to preventing their occurrence in future.

ABSTRACT 66

A Cost Comparison Between Rapid and Conventional HIV Testing Offered at Jail Entrance

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OBJECTIVE: Rapid HIV tests have created new opportunities for jail-based HIV screening. Since jail incarceration is often brief, rapid testing may provide more efficient delivery of results and linkage to care than conventional testing. However, the cost of rapid HIV testing may be a barrier to implementation. Our objective was to determine the precise costs of rapid versus conventional testing within the Rhode Island Department of Corrections (RIDOC) jail as offered to detainees during the routine medical examination.

METHODS: Historically, the RIDOC has offered routine opt-out HIV testing upon jail entrance utilizing a conventional HIV enzyme immunoassay (EIA) with reflex confirmatory testing. In 2008-2009, we conducted a pilot program of rapid testing using the OraQuick® Advance HIV 1/2 test using an oral specimen. During the pilot program we selected 5 separate days of rapid testing and 5 separate days of conventional testing and collected data on: 1) staff time related to preparation, specimen acquisition, and processing; and 2) supplies consumed. We used these data in conjunction with costs to RIDOC for rapid and conventional assays, supplies and salaries to estimate the cost per detainee for rapid and conventional HIV testing for negative results. We then estimated the costs of confirming conventional and rapid tests with repeat EIA, immunofluorescent antibody, and western blot as currently conducted.

RESULTS: We collected cost data on 100 detainees who completed rapid and 112 who completed conventional testing. The cost of the rapid test (including supplies) was $12.50 and the cost of the conventional EIA (including venipuncture and supplies) was $12.36. Adding staffing costs increased the cost per detainee to $16.29 for rapid testing and $15.95 for conventional testing. The estimated costs

for confirming reactive rapid and conventional tests were an additional $136.95 and $121.00, respectively.

CONCLUSIONS: The average cost of a negative rapid test conducted in the RIDOC jail was $0.34 more expensive than a negative EIA. Confirming a positive rapid test was $16.29 more expensive than a positive EIA. In a jail facility that conducts approximately 13,000 negative and 150 positive HIV tests per year, this translates into an increased expenditure of $6863.59 for rapid testing. However, this cost may be negligible to the benefits of earlier identification of HIV infection and improved linkage to HIV care and treatment as a result of rapid HIV testing. Further research is needed to evaluate the cost-effectiveness of rapid HIV testing among jailed populations.

ABSTRACT 67

How Much Does it Cost to Identify a Case of HIV in the ED?

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OBJECTIVE: There is conflicting data on the cost effectiveness of ED HIV screening. We analyzed the costs and outcomes of an ED HIV screening program supported by a CDC grant in a high prevalence area, using a rapid oral test as for screening. The program analyzed uses additional staff to provide the HIV screening, and does not provide routine pre- or post-test counseling.

METHODS: We reviewed the ED HIV screening data over a two-year period. We abstracted the numbers of patients screened, the numbers that were identified as preliminary positive and the numbers of those with confirmed HIV infection was. This data was then analyzed with the program costs.

RESULTS: Over the two-year period (October 2007-Spetember 2009) 23,088 patients were offered an HIV screening test, of which 14,028 (61%) accepted. The screening test was reactive in 79 patients, and HIV infection was confirmed in 72 (0.05% of those screened). There were 6 patients with a negative confirmatory test, and 3 who declined any confirmatory testing. Over the two-year period the program costs were $500,000, and the screening test costs were $154,308. The cost per patient screened was $47, and the cost per patient identified was $9,112.

CONCLUSIONS: It cost $47 to screen a patient and about $9,000 to identify a case of occult HIV in the ED using a rapid oral HIV screening test provided by additional staff in a high prevalence area. These costs should be compared with prior estimates of the costs of HIV screening that have been published. These range from $20-$103 (Walensky AJM 2005) to as little as $13 per test (Holtgrave PLOS 2007). The cost of $9,000 to detect a new case of HIV compares favorably with the costs of detecting HIV by RNA screening, which was $17,000 per index case (Pilcher NEJM 2005). We encourage programs to publish similar analyses so that better estimates of the cost-effectiveness of routine ED HIV screening can be made.

ABSTRACT 68

Evaluation of Distinct HIV Testing Models Among Three Short-stay Correctional Facilities

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OBJECTIVE: The primary objective of the HIV testing programs in the short-stay correctional facilities is to increase inmates' awareness of HIV and to identify previously undiagnosed HIV infections and facilitate linkage to medical care for newly identified.

METHODS: Shortly after CDC's 2006 revised recommendations for HIV screening of adults in healthcare settings were published, LAOPH received funding to implement routine HIV screening in clinical settings as part of the CDC expanded testing initiative. HAP met with several correctional facilities with the goal of replacing CBO testing in the jails with routine testing provided by the medical staff. Eventually, HAP developed three very distinct HIV testing models with three different correctional facilities. The purpose of this presentation/poster is to evaluate the impact of these three HIV testing models in terms of the proportion of inmates tested, the number of new

HIV diagnoses made, and how well HIV positive inmates (both newly and previously diagnosed) were linked to / maintained in HIV care following their release from the correctional facilities. Only data from calendar year 2009 are analyzed so that there has been sufficient time elapsed for accurate linkage / maintenance to care analyses to be conducted.

RESULTS: Results indicate that the routine opt-out HIV testing model (most closely aligned with CDC recommendations) achieved the highest overall number of inmates tested as well as the highest proportion of total inmates tested. However, this program had the lowest percentage of positive inmates linked / maintained in care (both newly and previously diagnosed). The other two models were very similar in terms of their effect on linkage / maintenance in HIV care for their positive inmates but the Routine Opt-In CTRS provided by medical staff model was clearly superior to the Opt-In CTRS provided by CBO staff model in terms of the number of inmates tested and the overall proportion of inmates tested.

CONCLUSIONS: Results suggest that the more integrated HIV screening is with routine healthcare services provided in correctional facilities; the more successfully inmates will be tested for HIV and HIV diagnoses made. However, it appears that additional resources / services are required to assist inmates with getting to HIV care following release – especially for positive inmates who received the most integrated HIV screening and medical services during their incarceration.

ABSTRACT 69

Predictors of Women Newly Diagnosed with HIV in an Urban Emergency Department (ED) Cohort

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OBJECTIVE: According to the US Centers for Disease Control and Prevention, women comprise a growing percentage of HIV positive patients. This study sought to determine predictors of women testing HIV positive in a large urban ED.

METHODS: A prospective cohort study was conducted on a convenience sample of female patients presenting to an urban level 1 trauma ED. Demographics and HIV risk factors were analyzed comparing patients testing positive for HIV versus the female cohort between 10/13/05 to 7/31/09. Means and standard deviations were calculated for continuous variables and proportions for categorical variables. Group comparisons were made using Chi-Square and Student's t-tests. Bivariate regression analyses were used to determine predictors of infection among women.

RESULTS: Over the study period, 22,108 women were tested for HIV through the ED program. Of these, 0.2% (55) tested positive for HIV. Demographics for HIV+ females were: mean age 40.1 ± 13.3 years, 47.3% African-American, 29.1% Hispanic. Demographics for HIV- females were: mean age 35.2 ± 11.6 years, 33.4% African-American, 53.9% Hispanic. Self-reported risk factors for HIV+ females and HIV- females were, respectively: 74.1%/82.5% were HIV tested before (p=0.10), 24.5%/26.1% had multiple male partners (p=0.99), 9.1%/11.8% had anal sex in the past 3 months (p=0.566), 62.6%/80.2% described condom use as never, almost never, or sometimes (p=0.10), and 24.5%/18.1% had history of an STD (p=0.228).

CONCLUSIONS: The results suggest there is no difference in risk factors between women testing HIV positive versus those testing HIV negative. This supports routine non-targeted testing for women. Further studies are necessary to determine the validity of these findings in other populations.

ABSTRACT 70

Predictors of Early Diagnosis of HIV in an Emergency Department (ED) Cohort

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OBJECTIVE: Despite increasing availability of HIV testing in the USA, diagnosis of HIV late (T-cells < 200) is common. This study sought to identify factors predictive of earlier diagnosis of HIV.

METHODS: A prospective cohort study was conducted on a convenience sample of patients newly diagnosed with HIV via a non-targeted HIV screening program in an urban ED. Demographics and HIV risk factors of newly diagnosed HIV patients without AIDS (T-cells >200) were compared to newly diagnosed patients with AIDS (T-cells < 200). Group comparisons were made using Chi-Square and Student's t-tests. A logistic regression analysis was performed to identify predictors of earlier HIV diagnosis.

RESULTS: The testing program identified 123 patients with HIV. Of these, 52.8% (65) had T-cell counts >200. Most patients (58.6%) had visited our hospital network in the year prior. The logistic regression model contained previous HIV test, anal sex, condom use, and STD variables. The demographics of HIV+ (non-AIDS) patients were: mean age 38.1 ± 11.6 years, 70.8% male, 52.6% African-American, 18.5% Hispanic, 20.0% multi-racial. The demographics of HIV+, concurrent AIDS patients were: mean age 42.3 ± 12.1 years, 65.5% male, 46.6% African-American, 34.5% Hispanic, and 17.2% multi-racial. Age < 40 was the only significant predictor of earlier diagnosis (adjusted OR 3.75; 95%CI: 1.19 to 11.83).

CONCLUSIONS: There was no difference in sexual risk factors between patients presenting with early HIV infection versus those with AIDS. Non-targeted, high volume HIV testing in EDs could help identify patients earlier.

ABSTRACT 71

The Emergency Department's Role in Diagnosing HIV Infection in Men Who Have Sex With Men

ST

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OBJECTIVE: In the US, HIV disproportionately impacts men who have sex with men (MSM). MSM have a rate of HIV diagnosis 44 times that of non-MSM and account for approximately half of the 56,000 new HIV infections occurring each year. The goal of this study was to determine the rate of undiagnosed HIV in male ED patients agreeing to rapid HIV testing and reporting sexual activity with a male in the past 12 months.

METHODS: A prospective observational study was conducted over a 22 month period as part of a voluntary opt-out HIV screening program in an inner-city ED. Eligible patients were English speaking, 18 or older, and had no known HIV diagnosis. The OraQuick Rapid HIV test using oral fluid was administered. Western blots and CD4 counts were drawn on patients testing positive. Risk factors such as unprotected sex and intravenous drug (ID) use were accessed. Descriptive and parametric statistics were conducted using SAS.

RESULTS: Of the 3,827 male or male-to-female patients tested, 233 (6.1%) reported being MSM. MSM were younger than non-MSM with mean age of 34.0 versus 40.5 ($p < 0.05$). MSM were significantly more likely to report having sex with an HIV positive partner (7.3% vs. 0.8%), with a known ID user (3.4% vs. 0.8%), and without a condom (75.9% vs. 65.2%). MSM were significantly more likely to have had a prior HIV test (80.2% vs. 72.6%).There was no difference between groups in regards to ID use or race. MSM were almost 9 times more likely than non-MSM to have undiagnosed HIV (14.6% vs. 1.7%, RR 8.6). Over half of positive MSM were between the ages of 18-30 (58.8%). Positive MSM were significantly more likely than positive non-MSM to have sex without a condom (82.4% vs. 59.0%) and have sex with a person who is HIV-positive

(11.8% vs. 1.7%). There was no difference in mean CD4 count of positive MSM compared to positive non-MSM (217 vs. 259 cells/uL) or linkage to care (73.5% vs. 77.1%).

CONCLUSIONS: MSM had an 8.6 fold higher rate of undiagnosed HIV compared to non-MSM ED patients of similar race and age. Public health campaigns should focus on young MSM to reduce risky behaviors such as unprotected sex and sex with HIV positive partners to reduce the transmission of HIV. It is imperative to further explore the role of the ED in providing HIV testing and prevention education to this patient population.

ABSTRACT 72

Behavioral and Demographic Differences between Older and Younger Men Who Have Sex with Men (MSM) Tested for HIV at Commercial Sex Venues in New York City (NYC)

ST

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OBJECTIVE: Young Men Who Have Sex With Men (MSM) represent the highest number of new HIV cases diagnosed in New York City (NYC). The objective of this sub study of the Men's Sexual Health Project (M*SHP) is to identify differences between younger and older men utilizing testing services offered at bathhouses and sex clubs.

METHODS: M*SHP is a program that provides HIV and Sexually Transmitted Infection testing at 3 commercial sex venues in NYC. To date, the 2045 unique male subjects in our database includes 572 men <30 years of age (28.1% of M*SHP clients). Demographic and behavioral differences were compared between men younger and older than 30 years of age through a retrospective analysis of this database. Univariate analysis have been conducted and odds ratios are presented where appropriate. P values reported are calculated using Chi Squared Test or Fisher's Exact Test.

RESULTS: Men under 30 years of age utilizing testing services were demographically and behaviorally distinct from other clients. Younger men were more likely to be non-white (p<.001). Specifically, younger men were more likely to be Asian or Black. They were less likely to be gay identified (p<.001) and more likely to report having sex with women (p=.024). Younger men were more likely to be tested for a sexually transmitted infection (STI) than older men, and had slightly higher rates of STIs. Younger men were significantly less likely to have ever been tested for HIV prior to their M*SHP visit than older men (OR= 1.903 95%CI 1.349-2.685). Younger men were less likely to report unprotected insertive anal sex (OR=.780 95% CI .629-.967), but were more likely to report unprotected receptive anal sex (OR=1.409 95%CI 1.114-1.781). However, unprotected sex rates overall were similar between groups. Older men reported a greater number of sex partners in the three months before survey. Young men reported different patterns of drug use, with increased report of Marijuana, Cocaine, and MDMA use. Poppers and erectile dysfunction drugs were more commonly reported by older men. There was no significant difference in number of new HIV diagnoses between groups.

CONCLUSIONS: Young MSM may represent a socially and demographically distinct group from their older counterparts. Age appropriate interventions and testing strategies are necessary to better target this group to reduce behaviors that may increase risk of HIV transmission among these men.

ABSTRACT 73

How Routine is HIV Testing? Utilization of EMR to Measure Missed Opportunities

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OBJECTIVE: Since 2006, the CDC has recommended HIV testing for all individuals ages 13 to 64 at least once in their lifetime. To measure the gap between policy and practice, we evaluated HIV testing in an urban safety-net hospital and associated community-based health care clinics to assess the

rates and characteristics of missed opportunities for HIV testing occurring in this setting.

METHODS: Inpatient and outpatient primary care encounters of individuals ages 13 to 64 between January 2008 and December 2009 were reviewed. Patients previously diagnosed HIV+ were excluded. 33,773 encounters of hospitalized individuals and 335,842 outpatient encounters met the inclusion criteria and were analyzed to determine whether the encounter included an HIV test, as well as if the individual had been tested in our system within the previous 10 years.

RESULTS: Despite an increase in HIV testing between 2008 and 2009, only a small proportion of individuals were tested (2.1%). Most individuals, 71.4% in 2008 and 70.7% in 2009, had never been tested for HIV within the health system. Similar to the outpatient findings (Table 1 & Table 2), most inpatients had never been tested with almost twice as many men (81.5%) never tested compared to women (48.2%). Additionally, 8 in 10 individuals newly diagnosed with HIV in 2008 and 2009 had not been previously tested despite prior encounters in the health system.

Table 1. Outpatient Encounters by Race and Gender, 2008

Encounter Type,	%Never Tested,	Total Encounters,	P-value
Total Female,	59.8%,	131363	
Total Male,	86.0%,	37405,	P < .001
Black Female,	56.7%,	73251	
Hispanic Female,	55.7%,	15318	
White Female,	65.4%,	38184,	P < .001
Black Male,	84.2%,	18712	
Hispanic Male	84.9%,	5202	
White Male,	87.9%,	11613,	P < .001

Table 2. Outpatient Encounters by Race and Gender, 2009

Encounter Type,	%Never Tested,	Total Encounters,	P-value
Total Female,	57.2%,	128638	
Total Male,	84.1%,	38436,	P < .001
Black Female,	53.6%,	72106	
Hispanic Female,	51.6%,	14658	
White Female,	64.0%,	36958,	P < .001
Black Male,	81.6%,	19308	
Hispanic Male,	84.0%,	5226	
White Male,	86.6%,	11588,	P < .001

CONCLUSIONS: Despite CDC recommendations for routine testing and support from most medical professional societies, HIV testing is far from universal in this urban healthcare system. Current testing practices likely limit the number of HIV-infected individuals being identified. The magnitude of missed opportunities is greatest among men, the same group who is most affected by HIV in our community. Educational efforts alone have not been effective at changing provider behavior and systems changes are needed.

ABSTRACT 74

Falling Through the Cracks? Missed Opportunities for Earlier Diagnosis of HIV Infection

PE AS ST

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OBJECTIVE: Determine the proportion of patients with a new diagnosis of HIV who presented to our hospital system in the 3 years prior to diagnosis. Describe the characteristics of newly diagnosed patients and of "late testers" (patients with CD4 < 200 at time of diagnosis) in whom prior health care encounters represent clear examples of missed opportunities for earlier diagnosis.

METHODS: Chart review of newly positive patients between 5/1/06 and 12/31/09 at St. Luke's-Roosevelt Hospital Center in New York City. Identified all patients that tested HIV positive for the first time in the Emergency Department (ED), inpatient setting, outpatient clinics, OB/GYN unit, and community outreach programs as part of a public health grant used to establish and offer free rapid testing.

RESULTS: During the study period, 23271 HIV tests were performed, and 253 persons were newly diagnosed with new HIV infection (1.1%). 153 new positives (60%) made at least one visit for medical care to one of our facilities prior to their positive test, for a total of 958 visits. The average number of prior visits was 6.2 per person for people with at least one prior visit. The mean duration between first presentation within a three year period and date of positive HIV test was 335 days. 42% (n=407/958) of prior visits were to the ED, 47% (n=454/958) were to outpatient facilities and 10% (n=97/958) were inpatient admissions. The average CD4

count within 60 days of diagnosis in whom that number was available (n=158) was 227. A total of 95, or 60% of newly diagnosed patients, were late testers with a CD4 count <200. Late testers made 439 prior visits total, or an average of 7.0 visits per person. 45% (176/383) of late tester visits were to the ED, 43% (166/383) were to outpatient facilities, and 11% (41/383) were inpatient admissions. The mean duration of time between first visit and date of diagnosis was 310 days.

CONCLUSIONS: Most newly diagnosed HIV positive patients identified had multiple health care encounters prior to diagnosis. A large proportion of these presented with AIDS, indicating that multiple opportunities to identify HIV infection, engage patients in care, and potentially reduce spread of the disease were missed. This work supports increased efforts to implement routine HIV testing in health care settings including the ED as part of a comprehensive public health strategy.

ABSTRACT 75

Rapid HIV Testing in a New York City Emergency Department and Identification of Late Testers

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OBJECTIVE: Determine the proportion of HIV-positive patients identified in our urban ED that were 'late testers' (CD4 count <200 at the time of diagnosis). To determine the uptake and feasibility of our free rapid HIV testing program and to describe the demographic characteristics of those testing positive.

METHODS: Chart review was performed on all patients diagnosed with HIV in the ED during the operation of a free rapid testing program. We reviewed charts of positive testers from 5/1/06 through 12/31/09 at St. Luke's-Roosevelt Hospital Center, an urban ED with an annual census of approximately 150,000 adult patients in 2009. During the study period, rapid oral swab HIV testing was available during daytime hours with an HIV counselor, and rapid serum testing was available through a blood sample sent to the laboratory during off hours. Triage nurses offered testing, and flyers were hung in waiting rooms, common areas, and individual patient rooms. New York State required written informed consent for HIV testing (opt-in testing). We logged all positive patients' demographic information as a routine part of our testing program, both for linkage to care and for mandatory state reporting. Data abstractors were blinded to hypothesis, instructed by investigators using formal training sessions, and data forms were formatted with terms defined before abstraction. Investigators reviewed all abstracted records for agreement and accuracy, and descriptive statistics were used.

RESULTS: During the study period, 8476 patients were tested, representing approximately 2% of the overall census. Among tested patients, 184 (2.2%) were confirmed positive. Of these, 51 were known or believed to be positive previously, i.e. 'repeat testers', leaving 132 new positives, or 1.6%. The average age was 37.5 years (range 18-75); 75% were male. The majority were black (55%); 25% were Hispanic. A CD4 count was available in 100/132 newly diagnosed patients, with an average CD4 count of 248 (range 1-1385). Among available CD4 counts, 44/100 (44%) were <200. 81% of the newly HIV positive patients were successfully linked to follow-up care.

CONCLUSIONS: Rapid HIV testing was feasible in our busy urban ED, though our overall testing rate was poor. Positivity rate was, however, consistent with other ED reports throughout the literature. A shockingly large proportion of of our positive patients presented with AIDS at the time of diagnosis, a finding we believe strongly supports the potential public health utility of increased efforts to offer routine HIV testing, particularly in high-risk settings.

ABSTRACT 76

The South Carolina Linkage Program for Inmates (SCLPI)

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OBJECTIVE: The South Carolina Linkage Program for Inmates (SCLPI) is designed to address the core goals of identifying HIV-infected individuals in jails and promoting their participation in HIV primary care and other support services as they re-enter the community. The program implements three key components of the HIV/AIDS care continuum in a detention facility through: rapid testing, education and a seven session intervention that facilitates linkage to medical care for HIV positive inmates.

METHODS: The SCLPI provides voluntary HIV rapid tests to inmates at a local detention center which books over 20,000 annually. Tests are conducted 4 times a week. Female inmates are tested once a week in the medical unit. Males are tested three days a week in the holding dormitory multi-purpose room. For those individuals who accept testing, demographic data is collected, along with information on sexually transmitted diseases, criminal and sexual history. For those that test positive, a brief linkage coordination intervention is initiated. This intervention supports the HIV positive inmate from the time he is diagnosed in the detention center through his linkage and retention in community-based care.

RESULTS: Between August 2008 and April 2010, 4355 incarcerated individuals were randomly selected to participate in HIV rapid testing. Individuals were selected regardless of their current HIV status in order to obtain an unbiased HIV prevalence. With more than 4355 test offered and 3876 (89%) accepting testing and 479 (11%) refusing. The study reported an HIV seroprevalence rate of 2.0% for new cases.

CONCLUSIONS: As a result of this project, the jail is in a better position to manage the complex needs of HIV-positive inmates. The testing component of SCLPI is essential to the success of the program, as it is the only entity providing any kind of HIV testing in the jail. Rapid HIV testing can be conducted successfully in a jail setting, if the testing process is structured properly. The SCPLI has found that the linkage coordination is effective in encouraging linkage because: (1) assist clients in identifying and resolving immediate needs —needs that the client may see as more important than linking with care; and (2) identifying barriers that interfere with linkage (Rapp, 2006).The mean number of Linkage Coordinator contacts in the jail with the inmates is 1.8; and the average encounter is 48 minutes. In the community, the mean number of contacts is 2 with the average encounter at 105 minutes.

ABSTRACT 77

Optimization of Adolescent HIV Screening in an Urban Pediatric Emergency Department Using an Electronic Charting System Prompt

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OBJECTIVE: In July 2008, the Saint Louis Children's Hospital emergency department (ED) launched a free confidential integrated rapid opt-out HIV screening program for adolescents 15 and older. Our study is an observational study of a prospective cohort presenting to a university based urban ED. In the first year, 11% of patients were tested (785/7175), rates comparable to data from adult ED testing programs. In our second year, we sought to increase the percent being tested.

METHODS: In August 2009, two modifications were introduced in the existing HIV screening program. Our original method of approaching adolescents for testing after they had been separated from their parents was replaced by approaching them with parents in the room. Parents were still asked to exit the room so that results could be provided confidentially to the adolescent. Second, we initiated an electronic prompt in the ED electronic charting system with automated order entry, requiring HIV testing to be documented by the primary nurse as completed or to provide the reason it was not done for each patient. This also allowed us to gather further data on non-testers.

RESULTS: From August 1, 2009 to April 30, 2010, 41% of eligible patients seen during testing hours were screened for HIV (1619/3945), compared with 11% previously. In patients who accepted testing, 100% were actually tested. Of eligible patients, 6.1% patients (N=240) met exclusion criteria, 22% refused screening (N=849) and another 22% had incomplete compliance data (N=886). There were no positive tests or false positive tests. Race and gender were not significantly different between testers and non-testers. Older patients were more likely to accept testing OR 1.06 (95% CI 1.006, 1.1). Of note, the ED saw a 15% decline in visit length during the study period.

CONCLUSIONS: An HIV testing program can be successfully implemented in a pediatric ED setting, and does not appear to decrease ED efficiency. Our program has achieved HIV testing rates in the targeted age group far surpassing published data for other integrated ED HIV testing programs for any age. Testing can be maximized by streamlining testing approach and usage of electronic charting tools. Further implementation research should explore these methods and others to promote successful ED HIV testing programs for adolescents.

ABSTRACT 78

Racial/Ethnic Disparities in Diagnoses, Care, and Treatment among People Living with HIV/AIDS in Washington DC

PE

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OBJECTIVE: Over nearly three decades of the HIV/AIDS epidemic in the United States, racial/ethnic disparities is an ongoing observation in diagnoses, care, and antiretroviral treatment of HIV/AIDS cases. This study was to assess the continuing racial/ethnic disparities among people living with HIV/AIDS in Washington, DC.

METHODS: Statistical analyses of the enhanced HIV surveillance report system (eHARS) and an epidemiologic studies were performed to assess the diagnoses, care, and treatment of residents living with HIV/AIDS though 2008 in the Washington, DC.

RESULTS: As of December 31, 2008, 3.2% (16,513) adults and adolescents aged =13 years in Washington DC were reproted living with HIV/AIDS. Rates by race/ethnicity show that 4.7% of Blacks, 2.1% of Hispanics and 1.5% of Whites were living with HIV/AIDS. The highest burden of disease is among Black males at 7.1%. From 2004 to 2008, a total of 3,312 new AIDS cases were diagnosed in DC. Blacks/African Americans accounted for the highest proportion of diagnoses overall (86%) with 82% and 94% of diagnoses among males and females, respectively. Improved early diagnosis, link-to-care and treatment have led to one-third decrease (from 164 cases per 100,000 to 107 cases per 100,000, $p<0.001$) in the numbers of newly diagnosed AIDS cases from 2004 to 2008. The decrease was 58% among Hispanics/Latinos ($p<0.001$), 32% among blacks/African Americans ($p<0.01$), and 23% among whites ($p<0.001$). The overall proportion of persons newly diagnosed with HIV who had a CD4 count within 3 months of diagnosis increased with the only significant increase in this proportion by racial/ethnic group among blacks/African Americans, from 2004 to in 2008. The average community viral load among Blacks living with HIV/AIDS as of 2009 (101,880copies/ml) was significantly higher ($P<0.05$) than among Whites (63,487copies/ml) and Hispanics (86,475 copies/ml) and it was similar to those of other race/ethnicities (99,955 copies/ml). Only 13.9% of Blacks had an HIV viral load suppression (=70 copies/ml) compared to 31.2% for Whites, 23.9% for Hispanic, and 18.4% among other race/ethnicities. Approximately 90% of Whites and Hispanics survived HIV/AIDS after 5 years and 10 years from their diagnoses, while 75% of Blacks survived after 5 year and 67% after 10 years. Improved treatment resulted in fewer deaths with a 30% decrease of deaths due to AIDS from 2004 to 2007.

CONCLUSIONS: New and improved prevention strategies, including expanded HIV testing, targeted communications, timely link-to-care, and early treatment, urgently needed to help address disparities particularly among Blacks.

ABSTRACT 79

Missed Opportunities for HIV Testing among STD Patients in a North Carolina Emergency Department

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OBJECTIVE: To assess emergency department (ED) adherence to program guidelines that recommend HIV testing for all patients who are evaluated for an STD.

METHODS: In June 2008, an expanded HIV testing program started in an suburban, academic ED in North Carolina. Analysis included patients visiting the ED from January 1, 2009 through December 31, 2009 who were tested for syphilis, gonorrhea, or Chlamydial infection. Patients with a prior diagnosis of HIV or an HIV test within 6-months of the ED visit were excluded. The proportion of STD testers who were also tested for HIV was assessed, for all STD-related ED visits and stratified by STD. The potential association between HIV testing and various demographic and clinical factors was evaluated by multivariate logistic regression with a robust variance estimator to account for repeated individuals.

RESULTS: Of the 64,000 visits to the ED during the study period, 2395 (3.7%) patient visits included an STD evaluation; these visits accounted for 494 syphilis tests, 1944 gonorrhea tests, and 1936 tests for Chlamydial infection. Only 179 STD-related ED visits also included an HIV test (7.5%, 95% confidence interval [CI]: 6.4-8.5%). Nearly 30% of patients tested for syphilis also received an HIV test (28.3%, 95% CI: 24.4-32.3%). Among syphilis testers, HIV testing was associated with younger age, a less severe presenting condition at triage, and hospital admission following the ED visit. Fewer than 4% of gonorrhea and Chlamydial infection testers were also tested for HIV (gonorrhea: 3.8, 95% CI: 3.0-4.7 3.8%, 95% CI: 2.9-4.6; Chlamydial infection3.8%, 95% CI: 2.9-4.6). Among gonorrhea and Chlamydial infection testers, HIV testing was associated with being male and discharge following their ED visit.

CONCLUSIONS: All patients receiving an STD test in clinical settings should also be tested for HIV, as recommended by both CDC HIV testing guidelines and the recommendations set forth by this expanded HIV testing program. However, in fewer than 10% of STD-related ED visits was an HIV test ordered concurrently. HIV testing was highest among patients tested for syphilis, yet still did not reach over 30%. These results indicate multiple missed opportunities for HIV testing; increased ED provider education and the inclusion of HIV testing in the standard order panel for patients suspected with STDs may increase HIV testing.

ABSTRACT 80

Integrating Routine HIV Screening into Correctional Settings: Preliminary Reports from the Pennsylvania Expanded HIV Testing Initiative (PEHTI)

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OBJECTIVE: To examine the association between demographic characteristics and HIV seropositivity for individuals accepting HIV testing in 27 State Prisons and 3 County Jails between October 2008 and September 2009 as part of the Pennsylvania Expanded HIV Testing Initiative.

METHODS: HIV testing was performed using conventional test technologies (Blood ELISA and OraSure©). Multivariate logistic regression was used to determine the association between demographics (age, race/ethnicity, gender) and HIV seropositivity. Strata-specific analyses by race/ethnicity and gender were also performed.

RESULTS: Of the 7,967 tests performed, 65 (0.82%) were HIV positive. HIV seropositivity was associated with female gender (OR=3.8; 95% CI= 2.3-6.3), Hispanic ethnicity (any race) relative to white non-Hispanic race/ethnicity, (OR= 2.7;95%CI=1.3-5.6) and age >= 40 years compared

to persons age 18-29 years (OR=5.9; 95% CI= 2.8-12.5 for those 40-49; and OR= 4.4; 95% CI=1.8-11.0 for those > 50 years of age). Stratum specific sub-analyses revealed that female gender was associated with HIV-seropositivity for all racial/ethnic groups, and that older age was associated with HIV-seropositivity for individuals reporting race as White or Black, but not for individuals of Hispanic ethnicity.

CONCLUSIONS: Among those who accepted testing in incarcerated settings in Pennsylvania during the reference period, older age, female gender and Hispanic ethnicity were associated with HIV seropositivity. These observations require further study especially regarding HIV-testing acceptance rates, length of incarceration, and exposure risk factors . HIV prevalence and risk factors in incarcerated older individuals is particularly needed, since younger age groups (age 13-64 years) are the primary target of current testing protocols.

ABSTRACT 81

A Review of Baseline (2008) Data on New York City (NYC) Testing, Linkage and Outcomes Indicators from the 2009-2012 Comprehensive Strategic Plan for HIV/AIDS Services

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OBJECTIVE: To demonstrate the utility of integrating program/provider-reported data with HIV/AIDS surveillance data in outcomes research and evaluation. To describe the methods used to translate programmatic objectives into measurable indicators.To describe differences in outcomes between NYC Ryan White Part A clients and NYC HIV-infected persons overall, on key indicators developed for the New York Eligible Metropolitan Area (EMA) Comprehensive Strategic Plan for HIV/AIDS Services (2009-2012).

METHODS: Data from contractually-required submissions by NYC Ryan White Part A-funded providers in 2008 were analyzed by the NYC Department of Health and Mental Hygiene (DOHMH) according to indicators in the New York EMA Comprehensive Strategic Plan for HIV/AIDS Services. Similar analyses were conducted using 2008 surveillance data gathered through legally mandated physician and laboratory reporting in the HIV/AIDS Reporting System (HARS). The indicators for newly diagnosed cases included timely diagnosis (represented by the proportion of concurrent HIV and AIDS diagnoses) and linkage to care (defined as evidence of a primary care visit within 90 days of HIV diagnosis). For prevalent cases, the indicators included interruptions in care (having a greater-than-6-month gap in documented primary care visits), viral suppression (maintaining a viral load below 500 copies/μL) and CD4 count stability or improvement (achieving and/or maintaining CD4 counts above 200 cells/μL).

RESULTS: Compared to NYC residents overall, Ryan White Part A clients fared better on timely HIV diagnosis (18% concurrent diagnoses vs. 24.6% citywide) and on CD4 improvement (from below 200 to above 200) among prevalent cases (39% vs. 29% citywide). Ryan White clients showed worse outcomes on documented linkage to care after diagnosis (43% vs. 70% citywide) and interruptions in care among prevalent cases (47% vs. 26% citywide). There were no statistically significant differences in sustained viral suppression or maintenance of CD4 counts above 200 cells/μL.

CONCLUSIONS: These findings provide baseline measures against which the NYC DOHMH will measure progress in NYC HIV testing and care outcomes through 2012. They also highlight some potential disadvantages in the Ryan White Part A client population with respect to care access and health outcomes. The validity of this comparison was limited by incomplete documentation in the current NYC Ryan White Part A reporting system, particularly regarding evidence of primary care. Next steps for future assessments include the matching of NYC Ryan White Part A clients against the HIV/AIDS surveillance registry (HARS), to permit better comparisons between HIV-infected NYC residents with and without Ryan White Part A services.

ABSTRACT 82

Factors Associated with Offering Routine HIV Testing among HIV Care Providers in the US

PE

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OBJECTIVE: To decrease the number of people with undiagnosed HIV, diagnose HIV-infected persons at earlier stages of infection, link newly infected persons into care, and prevent new infections, in 2006 CDC recommended HIV screening as part of routine medical care for all persons aged 13-64 years. Few data have been presented on the adoption of routine testing by health care providers. We examined self-reported adherence to the CDC recommendations among a sample of HIV care providers in the U.S. to determine if known providers of HIV care are offering routine testing in outpatient settings.

METHODS: We analyzed data from the Medical Monitoring Project Provider Survey, administered to a sample of 1,718 HIV care providers in 20 states June-September 2009. The survey included questions about provider demographics, length of time in practice, self-assessed knowledge about HIV, practice characteristics, and offering HIV testing to patients. Our analysis was restricted to providers whose practices included HIV-negative patients. We used logistic regression to determine characteristics of providers and providers' practices associated with offering HIV screening to all patients aged 13-64 years.

RESULTS: Of 723 survey respondents, 494 (68%) had HIV-uninfected patients. Approximately 47% of providers were >=50 years of age, 42% were female, and 71% were white. The majority (79%) were physicians, 14% nurses, and 7% physicians assistants. Most (64%) have provided HIV care for >10 years. Sixty percent reported offering HIV screening to all patients 13 to 64 years of age, 31% offered screening mainly to those at high risk, and 9% reported not offering HIV screening to patients. Being a nurse practitioner or physician assistant (adjusted odds ratio [aOR]=3.5, 95% confidence interval [CI]=1.8-7.1) compared to physician was associated with offering HIV testing to all patients according to the recommendations. Providers having an HIV-infected patient load per month that was low (1-19 patients) (aOR=0.2, 95% CI=0.1-0.5) or medium (20-74 patients) (aOR=0.4, 95% CI=0.2-0.7) were less likely to offer HIV testing to all patients compared with providers with high (=75 patients) patient loads.

CONCLUSIONS: Although providers of HIV care likely have an increased awareness of the benefits of routine HIV screening and early identification of HIV-infected patients, many are still conducting risk-based instead of routine testing. Among HIV care providers surveyed, we found that provider profession and HIV-infected patient load were associated with offering HIV testing. Providers should use patient encounters as an opportunity to offer routine HIV testing to patients per the CDC recommendations.

ABSTRACT 83

Reported CD4+ T-Lymphocyte and Viral Load Results for Adults and Adolescents, 2005-2007--37 States

PE AS

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OBJECTIVE: To complement traditional HIV infection case surveillance data on adults and adolescents by describing with CD4 and viral load test results: the degree of immunosuppression at diagnosis of HIV infection; the extent to which patients received care within 3 months of diagnosis; and the most severe stage of HIV infection experienced by persons living with HIV in 37 states, 2005-2007.

METHODS: Using data from 37 states for 2005-2007, we assessed stage at diagnosis with CD4 test results within 3 months after diagnosis of HIV infection among adults and adolescents, and stratified by stage in accordance with the 2008 CDC case definition. Baseline care was assessed with CD4 and viral load results within 3 months after diagnosis in 2007. Additionally, longitudinal CD4 counts were used

to classify persons living with HIV by most severe stage experienced at any time through the end of 2007.

RESULTS: Of 115,725 persons diagnosed during 2005-2007: 6.1% were at diagnosed at stage 1 (CD4 count = 500); 14.7% stage 2 (CD4 200-499); 29.9% stage 3 (< 200); and 49.3% stage unknown (no CD4 count). Among 40,298 persons diagnosed in 2007, 58.4% received and had reported to CDC either a CD4 and/or a viral load test within 3 months after diagnosis. A lower percentage of blacks/African Americans (52.9%) had a CD4 and/or viral load test within 3 months after diagnoses compared to whites (64.1%) and Hispanics/Latinos (60.4%). Of 577,450 persons living with HIV at the end of 2007, 57.7% had stage-3 disease at some point.

CONCLUSIONS: Absence of test results was common, and may be due to patients not having received care and/or underreporting to surveillance programs. Among patients diagnosed in 2005-2007, severe immunosuppression was common. Efforts are needed to increase uptake of HIV testing for early diagnosis and strengthening linkage to care to determine treatment needs, as well as improving completeness of reporting of all CD4 and viral load test results.

ABSTRACT 84

Factors Associated with Progression to AIDS within One Year of Initial HIV Diagnosis among Persons Living with AIDS in Shelby County, TN

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OBJECTIVE: This study aims to identify factors associated with a greater likelihood of progression to AIDS within one year of HIV diagnosis in Shelby County, TN.

METHODS: 2,861 persons living with AIDS as of December 31, 2009 in Shelby County, TN were identified through the Electronic HIV/AIDS Reporting System (EHARS). Of these, only 932 (33%) had a CD4 test result that was reported to the Shelby County Health Department within one year of initial HIV diagnosis. Only persons with a CD4 count within one year of initial diagnosis were included in the sample. Ninety percent (839) had progressed to AIDS within one year of initial HIV diagnosis, while 10% (93) progressed to AIDS after more than one year of initial HIV diagnosis. Several variables hypothesized to have an association with progression to AIDS within one year were assessed through chi-square analysis. A multivariate logistic regression was used to determine the association with progression to AIDS within one year for the following variables: gender, age at initial HIV diagnosis, Race, Risk Transmission Category and Residency (Memphis v. Non-Memphis).

RESULTS: Results indicate that females demonstrate a decreased risk (OR=.481, p <.0001) in progression to AIDS within one year of HIV diagnosis as compared to males. Youth diagnosed with HIV between the ages 15-24 (OR= .133, p=<.0001) and adults between the ages of 25-44 (OR=.439, p=<.0371) were also at a decreased risk of progressing to AIDS within one year as compared to adults aged greater than 45 years. In addition, persons within the IDU (OR=.363, p=.0529) and MSM/IDU (OR=.184, p=.0071) risk transmission categories showed a protective effect in progression to AIDS within one year, but this significance is questionable due to a small sample size.

CONCLUSIONS: Males and adults aged 45 and above should be targeted for Early Intervention Services to delay progression of AIDS. CD4 and viral load reporting gaps within the state of Tennessee need to be assessed to increase surveillance of health outcomes among persons living with HIV and AIDS. Further assessment is also needed to determine health outcomes among persons out-of-care, as a high percentage of persons living with AIDS did not receive a CD4 count within one year of their initial HIV diagnosis.

ABSTRACT 85

Likelihood of Concurrent Diagnoses of HIV and AIDS (HIV Stage 3) as an Indicator of Late Diagnoses and the Need for Expanded Early HIV Testing in Pennsylvania

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OBJECTIVE: To examine the likelihood of concurrent diagnoses of HIV and AIDS (HIV stage 3) as an indicator of late diagnoses and the need for expanded early HIV testing, and how this varies according to demographic and risk characteristics.

METHODS: The HIV surveillance dynamic cohort studied included 11,613 adults/adolescents (>13 years of age at the time of HIV diagnosis) with a definitive HIV diagnosis from January 2, 2004 through January 1, 2008, and excluded those with a probable pediatric mode of acquiring HIV. Multiple logistic regression analyses were performed to estimate likelihoods of concurrent HIV and AIDS diagnoses (within 12 months of each other) by several risk factors/covariates such as race/ethnicity, age group at HIV diagnosis, HIV service region of residence at diagnosis, probable mode of transmission(risk), race/ethnicity, sex, and year of HIV diagnosis.

RESULTS: The proportion of concurrent HIV-AIDS diagnoses (HIV stage 3) was ~34%. The likelihood of concurrent HIV-AIDS diagnoses was greater for: a) those who were 30-39 years of age at HIV diagnosis (OR=1.64;95%CI=1.45-1.86) compared to the age group 13-29, and increased with each successive age group; b) blacks (OR=1.14;95%CI=1.04-1.25) compared to whites, who were comparable to Hispanics and 'all others'; and c) those whose HIV diagnosis was in 2005 (OR=1.62;95%CI=1.43-1.84), and in successive years through 2007, although there was no apparent trend. Concurrent HIV-AIDS diagnoses were less likely for: a) females (OR=0.77;95%CI=0.70-0.85) compared to males; b) those who were residents of the Northcentral HIV service area/region at the time of diagnosis (OR=0.69;95%CI:0.55-0.87), and the Northeast region (OR=0.75;95%CI:0.58-0.97), compared to the AACO region (Philadelphia and the surrounding 4 counties in Pennsylvania), which was comparable to those resident in the other four regions. There were no differences by risk category. In sex-stratified sub-analyses, black males were more likely to experience concurrent diagnoses than white males, and residents of the Northeast were comparable to AACO residents. Among females, there were no differences by race/ethnicity.

CONCLUSIONS: The substantial proportion (approximately 1/3) of concurrent HIV-AIDS diagnoses suggests continuing urgent need among the risk groups identified for expanded early HIV testing and linkage to HIV prevention and care. Program planning and resource allocation to expand and intensify outreach for early HIV testing should consider these findings to assure timely access and linkage to HIV treatment and HIV prevention services (to prevent transmission from this apparently late-diagnosed reservoir of potential sources of HIV infection).

ABSTRACT 86

Diagnostic Performance of Oraquick® Test in Oral and Finger Stick Specimens: Results from a Meta-analyses (Period: 2000-2010)

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OBJECTIVE: Oral point of care(POC) assays have great potential in expansion of routine HIV testing in the United States. Although FDA approved in 2004, a head-to-head comparison of diagnostic performance in oral and finger stick samples has not yet been performed. In this systematic review, we synthesized global evidence on Oraquick® with an exclusive focus on diagnostic performance.

METHODS: For the period Jan 2000-June 2010, we searched literature from five worldwide databases, abstracted data and critiqued quality with QUADAS and STARD check-lists. We explored heterogeneity in forest plots, subgroup analyses and generated pooled diagnostic accuracies generated with Random Effects Bi-variate Regression (BVR) Analyses. We created three subgroups of studies : i)subgroup 1a and 1b- with head-to-head comparisons of oral and fingerstick; ii) subgroup 2- in oral samples; and, iii) subgroup 3- in fingerstick (fs) samples.

RESULTS: Of 43 studies on Oraquick ®, a majority (85%) of the studies were conducted in high risk populations in developed settings. Of 43 studies, only 25 studies reporting raw cell numbers were pooled. Of 25, 8 reported within study (subgroup 1a and 1b), and 17 reported between study comparisons(subgroup 2, 3). In Homogenous within-study comparison (subgroup1a and 1b), the pooled sensitivities (Sn) and specificities (Sp) of Oraquick® in OMT(subgroup 1a) and fingerstick (subgroup 1b) were: Subgroup 1a oral (n=8) [(Sn): 97.99%; 95%CI (94.85 ,99.23]); [(Sp): 99.76%;95%CI (99.48, 99.89)]; Subgroup 1b blood (n=8) [Sn: 99.53%; 95% CI (96.88, 99.93), Sp 99.91%; 95% CI (99.84, 99.95)]. In between study comparison, pooled accuracy of oral Oraquick® (subgroup 2, n=6) were: [Sn: 99.43%; 95% CI (95.28,99.94)], [Sp: 99.86%; 95% CI (99.22 ,99.98)], and in finger stick blood Oraquick® (subgroup 3, n=11) were: [Sn: 99.65%; 95% CI (98.88,99.89)]; [Sp: 99.69%;95% CI (99.11, 99.89)].

CONCLUSIONS: In a homogenous within study comparison subgroups, the pooled accuracy of Oraquick in oral samples was found to be slightly lower (i.e., Sn 97.99%; 95%CI (94.85 ,99.23), than fingerstick, Sn 99.53%; 95% CI (96.88, 99.93), albeit with overlapping confidence intervals. The pooled specificities of thèse subgroups were however comparable (Sp oral 99.76 vs. Sp fs 99.91). This is the first meta-analysis to demonstrate that oral Oraquick is slightly lower in pooled sensitivity but equally comparable in pooled specificity to the finger stick Oraquick test. This fact should be borne in mind when considering Oraquick® role in expansion of HIV testing not only in US but also globally.

ABSTRACT 87

Opt-in Consent Rates For ED HIV Testing Differ By Patient Selection Method

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OBJECTIVE: Consent rate is a major factor determining the success of different HIV screening approaches. The effect of patient selection strategy on consent rate is unknown. This investigation determined whether conventional opt-in, signed, consent depends on whether patients are targeted or offered testing universally. We secondarily described the reasons for declining HIV testing for each patient selection method.

METHODS: This study is part of an ongoing, randomized comparison of targeted and universal HIV screening in a large, urban, academic ED. Screening program counselors vary their strategy for patient selection randomly by time of day and patient location within the ED. During targeted periods, counselors offer an HIV test to all patients with any indication of HIV risk, apparent through chart notations or ED staff referral. Risk factors prompting the testing offer could be used to encourage testing. During universal periods, counselors approach all patients on a non-targeted basis. Counselors could encourage testing as recommended for all but not emphasize individual risk. Data for a 12-month period beginning January 1, 2008 were used. Patients for whom the testing offer could not be completed (e.g. age, impaired cognition, etc.) were excluded. Reasons for declining were recorded for refusing patients. Chi square or Fisher's Exact test were used for comparisons.

RESULTS: Counselors offered testing to 1307 patients; 528 were in the targeted arm and 779 were in the universal arm. Median age in the targeted arm was 38, 55% were male, and 57% were black. In the universal arm, median age was 41, 47% were male, and 53% were black. The HIV risk factors reported by consenting patients were similar between study arms.Patients in the targeted arm consented to testing more frequently than in the universal arm (46% compared with

38%; p=0.006). Prior HIV testing was the most common reason for refusing a test, and was more frequent in the targeted arm than in the universal arm (55% v 45%, p=0.01). In the targeted arm, 25% refused testing because they denied risk compared with 32% in the universal arm (p=0.058).

CONCLUSIONS: The frequency of conventional, opt-in consent for ED HIV testing differs based on patient selection strategy. The difference may be associated with more frequent prior testing and less denial of risk in the targeted arm. Universal screening may access a population not previously tested, but effectiveness may be limited without other consent methods.

ABSTRACT 88

Linkage to Care after HIV Testing in Public Health Medical Settings, San Francisco, 2009

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OBJECTIVE: Increasing the proportion of newly diagnosed patients linked to clinical care within three months is an objective of the 2010 National HIV/AIDS Strategy. Laboratory data routinely collected by HIV/AIDS Surveillance programs has been shown to be an appropriate tool for measuring outcomes for HIV testing programs. To evaluate HIV testing in county public health medical settings, we used HIV/AIDS Surveillance registry data to identify new HIV diagnoses and assess subsequent linkage to medical care.

METHODS: We analyzed persons with confirmed positive HIV test results in select county medical settings in 2009. These medical settings included the San Francisco county hospital, county public health primary care clinics and the county jail system. This data was matched to the county HIV/AIDS Surveillance registry. Linkage to medical care was defined as receiving a plasma HIV viral load test or CD4 T cell test after the HIV diagnosis date. Persons included in the analysis were San Francisco residents at time of diagnosis who had at least six months of follow-up time after HIV diagnosis. The proportion of cases linked to care within three months after HIV diagnosis was evaluated by demographic and risk categories. Multivariable logistic regression was used to assess which demographic and risk categories were independently associated with linkage to medical care within three months.

RESULTS: Ninety-five new HIV diagnoses were identified in county medical settings. The majority of new diagnoses were among persons age 30 years and older, persons of color, and men who have sex with men (MSM). Overall, 69% were linked to care within 3 months. Males and females had similar proportions linked to care (69% and 70%, respectively), while persons age 50 years and older (94%), Hispanics (78%), non-MSM IDU (87%) and people diagnosed with AIDS concurrently (82%) had higher proportions linked to care. After adjusting for demographic and risk characteristics, persons age 50 and older were 10-fold more likely to be linked to care within 3 months (Odds Ratio: 9.7 [95% C.I. 1.0, 93.4]).

CONCLUSIONS: Among persons newly diagnosed with HIV in public health medical settings, more than two-thirds were linked to care within three months with older age being a significant factor. HIV testing programs may consider utilizing HIV Surveillance data to routinely evaluate and refine efforts to link patients to timely clinical care.

ABSTRACT 89

Implementation of Oral Rapid HIV Screening in the Pediatric Emergency Department in an Urban Area with High Prevalence of HIV Infection

PE AS

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OBJECTIVE: Children's National Medical Center (CNMC), Washington, DC, is located in an area with

high prevalence of HIV infection. In March 2009, with the support of DC DOH, CNMC implemented an opt-out oral rapid HIV screening in the Emergency Department (ED) for patients =13 yrs as a point of care test administered through nursing personnel. The objective of this study was to quantify the implementation and acceptance of the oral rapid HIV test in adolescents (=13 yrs) and to study the barriers towards such screening in a large urban pediatric ED.

METHODS: We prospectively studied the rates of HIV testing in adolescents during the first 12 months of the start of the HIV screening in our pediatric ED. In addition, we investigated the barriers towards the HIV screening through structured review of the ED clinical database and evaluation of program performance.

RESULTS: During March 2009–March 2010 there were 15715 ED visits by patients =13yrs. Of all ED adolescent visits, 3880 (24.7 %) were evaluated for screening and 3085 (19.6%) were approached. Of the 3085 adolescents approached, 1798 (58.3%) had a guardian present, and 1353 (75.2%) of the guardians agreed to have the adolescent tested. Of all adolescents approached 2084 (67.5%) did not opt out and a total of 1875 patients were tested (mean age=16.6 yrs (±2.2); 1121 (59.8%) females; 1540 (82.1%) Black). A small proportion of adolescents (177=8.5%) who did not opt out were not tested because their guardian declined. The presence of the guardian was not associated with choosing to opt-out of the test ($\chi 2$= 0.603; p= 0.271). Following the implementation of the program, the initiation of the screening path occurred in only 50%. The ED staff saw the HIV test as an additional burden that distracted them from their primary care and created complex emotional and legal interactions with the adolescent and/or guardian. The rates of HIV screening were directly related to the presence of funded testing personnel. The implementation of the triage nursing order has significantly facilitated the initiation of the screening path.

CONCLUSIONS: Oral rapid HIV screening in the pediatric ED is accepted by the majority of the adolescents and their guardians. Support by ED staff and leadership, implementation of the triage nursing algorithm and eventual transition to the billable procedure are required to create an efficient ED HIV testing integrated in standard clinical care.

ABSTRACT 90

Comparative Cost-effectiveness of Two Strategies for HIV Testing at 15 Publicly Funded Counseling and Testing Sites (CTS) in NJ

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OBJECTIVE: Prior to 2009, New Jersey followed an HIV testing procedure based upon a single rapid HIV test which was followed, when it was positive, by Western Blot (WB) confirmation. The notification rate for newly confirmed HIV positive clients was approximately 60%. In 2009, NJDHAS implemented a new rapid HIV testing algorithm (RTA) at publicly funded HIV CTS utilizing a second, different, rapid HIV test to verify a preliminary positive rapid test at the initial visit to allow immediate referral to care and hopefully improve the rate of client notification and the linkage to available health care. The objective of this study was to assess the cost effectiveness of this new testing algorithm compared to the traditional algorithm based upon a two visit sequence with confirmation by WB.

METHODS: Study Design: Retrospective cost consequence analysis, public funds perspective. Data sources: NJHIVRTP records, NJDHAS grant documents, and counseling time estimates from an online survey of site supervisors. Costs included test kits and personnel costs/ testing outcome calculated for each site from the month of RTA implementation through November 30, 2008 and 2009. Incremental cost effectiveness ratios were calculated for the percent of confirmed positives notified and for mean # days to notification.

RESULTS: 15 sites implemented the RTA in 2009: data were available for 14 in 2008 and for all in 2009. 13 provided counseling time estimates time via survey. 19,655 and 20,297 tests were performed in 2008 and 2009 respectively of which 19430 and 20113 were negative, 245 and 182 were positive and 19 and 35 were discordant. With the rapid testing algorithm, 9.12% more clients testing positive were notified at a mean of 11.4 days earlier assuming all patients were informed and referred on the date of testing. The costs in

pre and post RTA implementation respectively were $26.11 and $22.61 / test and $2095.06 and $2521.80 /positive test: an incremental cost effectiveness ratio (ICER) of $46.79 per additional percent notified and $37.33 per day earlier notification, Mean modeled cost/positive test by RTA if the WB were eliminated was $2272.38

CONCLUSIONS: The RTA is a cost effective improvement over standard testing in achieving more complete and earlier notification at a cost between $37.33 and $46.79 per positive test. If the WB were eliminated, the cost would be $15.51 per additional percent notified, $19.44 per day earlier notification, and a savings of $21.82 to $27.35 per positive person using RTA.

ABSTRACT 91

Missed Opportunities to Diagnose HIV-infection in Women Not of Reproductive Age

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OBJECTIVE: This study investigates missed opportunities for early HIV testing of women in different health-care settings.

METHODS: A retrospective cohort study design linked case reports from the South Carolina HIV/AIDS Reporting Surveillance system (eHARS) to several statewide health-care databases. Medical encounters occurring before the first positive HIV test (missed opportunities) were categorized by diagnosis/procedure codes to distinguish visits that were likely to have prompted an HIV test. Women were categorized as late testers (AIDS diagnosis <12 months from first HIV test date), early testers (no AIDS diagnosis during study period or diagnosis of AIDS >12 months of HIV diagnosis), of reproductive age (13-44 years old), and not of reproductive age (>44 years old). Adjusted odds ratios (aOR) and 95% confidence intervals (CI) were used to estimate risk and its statistical significance.

RESULTS: Of 3,303 HIV-infected women diagnosed during the study period, 2,408 (73%) had missed opportunity visits. Late testers (39%) were more likely to be black than white (aOR 1.48, 95% CI 1.12-1.95), be older (>44 years old; aOR 7.85, 95% CI 4.49-13.7), and have >10 missed opportunity visits (aOR 2.17, 95% CI 1.62-2.91). Fifty-four percent of women >44years old were also late testers. Late testers and women >44 years old had lower median initial CD4 counts ($p<0.001$). Of ~17,000 missed opportunity visits, the top two procedures were the same for all groups of women but mammography was ranked fourth and Papanicolau smears was ranked seventh for women >44 years old.

CONCLUSIONS: Routine HIV testing should occur in non-traditional settings, such as mammography and Papanicolau screenings, in order to identify older (not of reproductive age) HIV-infected women.

ABSTRACT 92

Health Department Initiative to Increase Public Health Partner Services for Human Immunodeficiency Virus in New York City

PE

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OBJECTIVE: HIV partner services (PS) can lead to the early identification of undiagnosed HIV-positive sexual or needle-sharing partners of HIV-infected individuals. In 2006, the New York City (NYC) Department of Health and Mental Hygiene began placing highly skilled sexually transmitted disease intervention specialists (DIS) at 8 NYC hospitals to increase the proportion of HIV-infected patients receiving PS.

METHODS: DIS interviewed newly diagnosed patients on-site or in the community to elicit exposed sexual or needle-sharing partners. DIS met with partners at clinical sites or in the community to perform exposure notification and facilitate HIV testing - including field testing for named

partners - and assisted patients and partners with linkage to care. We evaluated the impact of this initiative by measuring PS outcomes before (2003-2005) and after (2007-2009) implementation at the 8 partner facilities.

RESULTS: From 2003 to 2005, before the placement of DIS on-site at the HIV clinics, an average of 801 HIV cases was diagnosed each year at the 8 hospitals. From 2007 through 2009, after the placement of clinic-based DIS, an average of 671 patients was diagnosed annually at the same facilities. Compared to the pre-initiative time period, there were significant increases in the average annual number of partners elicited (584 vs. 104, P=<.0001) and number of partners notified of exposure to HIV (278 vs. 59, P=<.0001) at these 8 facilities. Prior to the intervention, partners tested or newly diagnosed with HIV were not reported by providers. After the intervention, 437 named partners with unknown or HIV-negative status were tested, of whom 55 (13%) were newly diagnosed with HIV infection.

CONCLUSIONS: Integrating DIS in HIV clinics to introduce PS to patients soon after diagnosis increased the proportion of newly diagnosed patients who received PS. PS outcomes including partners notified, tested and newly diagnosed with HIV markedly improved. Through June 2010, the health department-assisted PS services program has been expanded to 18 hospitals, their associated satellite clinics, and NYC jails.

ABSTRACT 93

A Continuum of Services; From Preliminary Positive to Primary Care

A Vertovec

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OBJECTIVE: To describe the ways in which the NO/AIDS Task Force has successfully created a tracking system for clients receiving preliminary positive results through its testing program.To illustrate how to create an electronic tracking system so that enrollment in services, declination of services, loss to follow-up etc are known and easily monitored and reportedTo discuss the importance of having a solid referral network for clients testing preliminary positive.

METHODS:

a. During pre-test counseling, inform client of the process of getting into care, how it works, why it's important to access care, etc.
b. Upon delivery of preliminary positive result, link client directly to confirmatory testing and schedule follow-up appointment with primary medical care department or elsewhere if needed
c. C/T staff work with primary medical care and usually have a client scheduled for his/her first medical appointment within two weeks of receiving confirmatory result
d. C/T and Wellness Management Coordinators keep track of all new positives in a shared, secured database on agency Intranet site (password protected)
    i. Information in the database includes: client name, testing number, confirmatory lab number, last 4, date of preliminary test, date of confirmatory test (usually the same day), date confirmatory result delivered to client, date client scheduled first medical appointment, and a section for notes (reason(s) client did not make appointment, if client sought care elsewhere, etc)
    ii. Once a client is enrolled in care, the Wellness Manager is able to access medical records to ensure the client has made appointments and is adhering to care

RESULTS: The database allows us to track clients along the stages from C/T to care in order to increase retention and ensure access of HIV related services.Our loss-to-follow up with clients has decreased as tracking of clients becomes more efficientThroughout the years, over 90% of clients testing preliminary positive through the NO/AIDS Task Force are known have enrolled in primary medical care Since the agency tests nearly 2,500 individuals annually, with a consistently high (usually around 3%) positivity rate, tracking clients from testing to care makes for accurate and efficient monitoring and reporting of testing data.

CONCLUSIONS: By creating a secured, electronic, online data base, the NO/AIDS Task Force has been able to successfully follow clients as they travel through the

continuum of HIV services—from preliminary positive to primary medical care. Both the C/T coordinator and Wellness Manager can update and modify the database from any of our offices, at any time by logging on to the secured database.

ABSTRACT 94

Use of HIV Surveillance Data to Monitor Progress Towards Achieving the National HIV/AIDS Strategy Outcomes

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OBJECTIVE: The National HIV/AIDS Strategy (NHAS) aims to 1) reduce new HIV infections, 2) increase access to care and improve health outcomes for people living with HIV, and 3) reduce HIV-related disparities and health inequities. Each objective has several outcomes that are expected to be achieved by 2015. HIV surveillance data, in states that have complete laboratory reporting of HIV-related tests, can be used to monitor progress towards achieving NHAS outcomes.

METHODS: In Louisiana, all CD4 and viral load results are reportable, and the state has developed a comprehensive electronic laboratory reporting system to obtain and import results into the statewide HIV database. Surveillance data from 2009 were analyzed to determine baseline measures for several NHAS outcomes, including the proportion of newly diagnosed persons linked to care, the proportion of Ryan White ADAP (RW) program clients who are in continuous care, and the proportion of diagnosed gay/bisexual men, Blacks, and Latinos with undetectable viral loads. In addition, subgroup analyses were conducted to help plan and evaluate linkage to care interventions.

RESULTS: 1) New infections: In 2009, 1,249 persons were newly diagnosed with HIV in Louisiana, a 14% increase from 2008, largely due to the expansion of rapid testing in emergency departments (EDs) and correctional facilities. Approximately 17,000 persons were known to be living with HIV and 4,500 persons were estimated to be either unaware of their status or undiagnosed. 2) Access/maintenance in care: In 2009, 70% of newly diagnosed persons entered care within 3 months, which is above the national percent (65%) but below the 2015 goal of 85%. Women (74%), Whites (82%) and persons testing at EDs (84%) or inpatient facilities (88%) were more likely to enter care than men (68%), Blacks (66%) or persons tested at blood banks (21%) or correctional facilities (49%). Among RW clients, 71% were in continuous care in 2009, which is an improvement from 2006 (62%) but below the 2015 goal of 80%. 3) HIV-related health disparities: In Louisiana, 59% of gay/bisexual men, 66% of Latinos and 49% of Blacks had an undetectable viral load in 2009. The NHAS hopes to increase the proportion with a viral load by 20%.

CONCLUSIONS: HIV surveillance data can be used to track annual progress towards meeting NHAS 2015 outcomes. Louisiana data show several areas where enhanced interventions are needed to link persons into care, maintain them in care and reduce health disparities, particularly among Blacks and those tested in certain settings.

ABSTRACT 95

HIV/AIDS Diagnosis and Care Among Foreign-born Persons in the Washington DC: A Hidden Epidemic?

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OBJECTIVE: The foreign-born population has been historically stigmatized for introducing HIV to the United States. Research among the foreign-born population has shown deficiencies in HIV/AIDS knowledge, lack of access to health care, and delays in accessing HIV-related testing and treatment. Analyses of HIV surveillance data do not routinely assess the proportion of diagnoses and care occurring in foreign-born US residents. As of December 31, 2008, 3.2% (16,513) adults and adolescents aged = 13 years in Washington DC were reported living with HIV/AIDS. This study was to determine the proportion of reported HIV diagnoses and retained in care occurring in foreign-born residents in Washington DC.

METHODS: An analysis of the enhanced HIV surveillance report system (eHARS) was used to generate the cumulative diagnosed cases of foreign born residents living with HIV/AIDS though 2008 in the Washington, DC.

RESULTS: Foreign-born residents accounted for 12.9% of the District population ages 13 and older, which contributed to 4.2% (N=687) of HIV/AIDS diagnosis in Washington DC. The prevalence (1%, n= 687) of HIV/AIDS diagnoses among foreign-born individuals was less than that in the US-born residents (3.6%, n=15,826). Of the foreign-born residents living with HIV/AIDS, 34.9% were in women; 52.6% and 37.4% were among Blacks and Hispanics, respectively. Nearly half (45.0%) of foreign born residents living with HIV/AIDS were African-born and nearly a quarter (23.0%) non-US North American-born. Over half (51.2%) acquired HIV via heterosexual contact , a quarter (25.7%) via male-to-male contacts; more than one-fifth (22.1%) had no health insurance coverage; and 55.7% received a CD4 or viral load test within 12 months from their diagnoses. Among the CD4 testers (N=169), 36.1% had CD4 cell counts at <200/ml with lower percentage among for Whites (25%) than Blacks, (35.2%), Hispanics (37.3 %), and people of another other races/ethnicities (42.9%). Among the viral load testers (N=223), 57.4% had viral load at <400copies/ml with slightly lower percentage among Blacks (51.7%) than among Hispanics (64.5%), Whites (57.1%), and other races/ethnicities (57.1%).

CONCLUSIONS: The prevalence rate of diagnosed HIV/AIDS cases among foreign-born residents was high. HIV/AIDS cases among the foreign-born population presents a substantial proportion of HIV/AIDS diagnosed cases in Washington DC. Country of birth should be consistently included in the analyses of HIV surveillance data. Identifying the magnitude of the epidemic among the foreign-born population is essential for effective intervention, care and treatment program development to tailor local HIV control strategies to the foreign-born community.

ABSTRACT 96

Routine HIV Testing in Memphis Jails

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OBJECTIVE: To provide routine HIV testing in two large Memphis jails, and to determine rates of HIV positivity and linkage to care.

METHODS: Routine opt-out HIV Testing is provided at booking in Memphis' two largest jails: the Criminal Justice Center (CJC; men's facility) and CJC-East (women's facility). Health Department testers approach individuals in the order in which they were booked. Known HIV positives are discouraged from repeat testing. HIV screening (coupled with syphilis screening) is conducted on whole blood; preliminary results are available the next workday and are conveyed by health department personnel. Confirmatory Western Blot testing is conducted using left over blood from screening. For known positives, out of care (OOC) is defined as absence of HIV care within 12 months of testing. Linked to care (LTC) is defined as attending at least 1 medical appointment with an HIV provider.

RESULTS: From January 1 through December 31, 2009, 14,748 individuals were tested at the two jails. Fifty-four percent were men and 46% women; 82% were black, 18% white, 3% unknown and 1% other. Overall HIV positivity was 1.4% (211), with 1.1% (211) prior positives and 0.3% (46) newly confirmed positives. Of prior positives, 18% (29) acknowledged status by self-report (SR), while 82% (136) denied positivity by self-report but had evidence of prior laboratory confirmation (DSR / PLC). Of the 165 prior positives, 55% (91) were OOC. Sixty-one percent (28) of new positives and 52% (47) of those OOC were linked to care. Between facilities, there were no significant differences with respect to race, ethnicity, HIV positivity (overall or new), or OOC and LTC rates.

CONCLUSIONS: High HIV positivity rates were observed in Memphis jails. The vast majority of previously known HIV positive individuals did not acknowledge their HIV status when tested. More than half of prior positives were out of

care. In the populations tested, increased support is needed in areas of disclosure, linkage to, and retention in care.

ABSTRACT 97

Improved Access to Care using an HIV Testing Algorithm in which a Reactive Rapid HIV Test is Verified with an Antigenically-different Rapid HIV Test

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OBJECTIVE: The NJ HIV Rapid Test Support Group analyzing rapid HIV test practices in New Jersey identified two significant problems with the traditional rapid HIV testing algorithm used to diagnose HIV infection (a reactive rapid test followed by a confirmatory Western blot): (1) 7.1% of patients refuse the confirmatory test; and (2) 21.8% fail to return for a second visit to receive results. Therefore, only 70% of patients receive their confirmed positive HIV result. This significantly delays their entry into healthcare, sometimes for years, and many never access care. An alternative approach of providing rapid verification of the preliminary reactive rapid result could represent an important solution. With the availability of FDA-approved, antigenically-different rapid HIV tests of high specificity and sensitivity, NJ HIV implemented a statewide rapid verification format (Rapid-Rapid Testing). This approach was successfully validated using repository sera available in PHEL and implemented at NJ sites beginning in December, 2009.The purpose of this study was to determine whether implementation of the rapid-rapid testing algorithm, consisting of a positive rapid HIV test verified by a second rapid HIV test at the time of the initial patient visit would (1) increase the number of patients getting into treatment and (2) decrease the time between diagnosis and treatment.

METHODS: A retrospective analysis was conducted using data from CDC's PEMS forms, including local field information on referral to treatment and attendance at the initial medical visit. The PEMS data were submitted by 17 HIV Counseling and Testing Centers located in New Jersey for the time period of December 1, 2008 through March 31, 2010. Data analysis included descriptive statistics of demographic data, percent of patients who attend their first medical visit, and the elapsed time between diagnosis and treatment.

RESULTS: Data from 55 patients indicate that 37 (67%) attended their first medical visit, 4 (7.2%) were already in care, 9 (16%) declined medical care, 3 (5%) did not keep their first medical appointment and 2 (4%) did not receive a referral for medical care. For the 37 patients who attended their first medical visit, the average time between diagnosis and treatment (medical visit) was 12.1 days.

CONCLUSIONS: The data indicate that a larger percentage of patients attend their initial medical visit using a rapid testing algorithm. The average time between diagnosis and the initial medical visit is markedly shorter than when a rapid testing Western blot testing algorithm is used.

ABSTRACT 98

Online Sex-seeking Behaviors among Men who Have Sex with Men in Washington DC Metropolitan Area

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OBJECTIVE: This study aimed to assess factors associated with online sex seekers and to compare the risk for HIV and other sexually transmitted diseases (STDs) among men who have sex with men (MSM) in DC.

METHODS: A cross-sectional survey was conducted in 2008 in Washington DC using venue-based sampling strategies to provide demographics, sexual and drug-use risk behaviors, status of HIV and other STDs, and HIV testing service utilization.

RESULTS: Of the 499 participants, 48.3% were White non-Hispanic, 31.5% were Black, 84.9% considered themselves

homosexuals; 26.5 aged 18 to 24 years old, 56.1% received bachelor or higher education, 44.9% ever sought sex online in the past year, 39.7% had =5 sex partners, 14% infected with HIV and 15.4% had at least one STD diagnosis in the past year. In multivariate model, online sex seekers were more likely to have more sex partners, sex with younger partners, shorter relationship, higher level education, to be full-time students and non-injecting drug users. Of ever online sex seekers, 43% reported seeking sex online daily or weekly (frequent online sex seekers). They were more likely to use phosphodiesterase type-5 (PDE-5) inhibitor, had a STD diagnosis, and less likely to have higher level education, and less likely to ever been arrested or used drug during the last sex.

CONCLUSIONS: This study found that online sex seeking behavior was associated with more sexual partners and diagnosis of STDs and it might promote unprotected anal sex with casual sex partners. The findings highlighted that the Internet-based programs should encourage MSM who are at risk to reduce their numbers of sexual partners, decrease the frequency at which they engage in unprotected sex, increase disclosure of HIV status to the partners, reduce use of PDE-5 inhibitor and drug, and seek HIV testing and other STD care and treatment.