

# 2015 National Summit

ON HCV AND HIV DIAGNOSIS, PREVENTION AND ACCESS TO CARE



## FINAL PROGRAM AND ABSTRACT BOOK



Forum for  
Collaborative HIV Research

Berkeley  School of  
Public Health

JUNE 4 - 6, 2015  
HYATT REGENCY CRYSTAL CITY  
ARLINGTON, VIRGINIA, USA

# 2015 National Summit

ON HCV AND HIV DIAGNOSIS, PREVENTION AND ACCESS TO CARE

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## HIVMA SCHOLARSHIP OPPORTUNITY

Thanks to support from the HIV Medicine Association, HIVMA and the Forum for Collaborative HIV Research are able to provide scholarships to individuals working with underserved populations and whose attendance will contribute to the mission of the Summit and further their work in HIV medicine.

Recipients of the 2015 HIVMA Scholarship Awards are:

- Renita Madu, PA-C, Central Care Community Health Center-Riverside, Houston, TX
- Gloria Searson, ACSW, Coalition On Positive HEALTH Empowerment, New York, NY

Through the HIVMA Clinical Fellowship Program, HIVMA supports physicians in pursuing a year of HIV clinical training working with medically underserved patient populations. More information is available at [www.hivma.org](http://www.hivma.org) or by emailing [info@hivma.org](mailto:info@hivma.org).



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# 2015 National Summit

ON HCV AND HIV DIAGNOSIS, PREVENTION AND ACCESS TO CARE

## PROGRAM

### THURSDAY JUNE 4, 2015

3:00 PM	<b>REGISTRATION</b> .....	<b>Independence Foyer</b>
5:00 PM	<b>OPENING PLENARY SESSION</b> .....	<b>Regency Ballroom E &amp; F</b>
	<b>WELCOME</b> John G. Bartlett, MD, Johns Hopkins University School of Medicine, Belden, Mississippi Kenneth Mayer, MD, The Fenway Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts Veronica Miller, PhD, Forum for Collaborative HIV Research, Washington, DC	
5:15 PM	<b>INTRODUCTION OF KEYNOTE SPEAKER</b> .....	<b>Regency Ballroom E &amp; F</b>
	Kenneth Mayer, MD, The Fenway Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts	
5:20 PM	<b>KEYNOTE SPEAKER</b> .....	<b>Regency Ballroom E &amp; F</b>
	Ronald O. Valdiserri, MD, MPH, Office of HIV/AIDS and Infectious Disease Policy, Department of Health & Human Services, Washington, DC	
5:35 PM	<b>OPENING PLENARY PANEL</b> .....	<b>Regency Ballroom E &amp; F</b>
	Jonathan Mermin, MD, MPH, Centers for Disease Control and Prevention, Atlanta, Georgia (Moderator)	
5:40 PM	John Ward, MD, Centers for Disease Control and Prevention, Atlanta, Georgia .....	<b>Regency Ballroom E &amp; F</b>
5:55 PM	Laura Cheever, MD, ScM, Health Resources and Services Administration, Rockville, Maryland .....	<b>Regency Ballroom E &amp; F</b>
6:10 PM	Gloria Searson, ACSW, Coalition on Positive Health Empowerment, New York, New York .....	<b>Regency Ballroom E &amp; F</b>
6:20 PM	<b>PANEL DISCUSSION</b> .....	<b>Regency Ballroom E &amp; F</b>
6:40 PM	<b>AWARD PRESENTATION</b> .....	<b>Regency Ballroom E &amp; F</b>
	Veronica Miller, PhD, Forum for Collaborative HIV Research, Washington, DC	
7:00 PM	<b>2015 C. EVERETT KOOP PUBLIC HEALTH LEADERSHIP AWARD CEREMONY</b> .....	<b>Regency Ballroom E &amp; F</b>
	John G. Bartlett, MD, Professor Emeritus, Johns Hopkins University School of Medicine, Belden MS	
7:30 PM	<b>DINNER</b> .....	<b>Regency Ballroom E &amp; F</b>



## FRIDAY JUNE 5, 2015

7:30 AM	<b>REGISTRATION</b> .....	<b>Independence Foyer</b>
7:30 AM	<b>BREAKFAST</b> .....	<b>Regency Ballroom E &amp; F</b>
8:30 AM	<b>SPECIAL PLENARY SESSION</b> .....	<b>Regency Ballroom E &amp; F</b>
	<p>Strategies to Improve the HCV Continuum of Care: Best Practices in Testing, Linkage to Care, &amp; Treatment  <i>Co-sponsored by the Office of HIV/AIDS and Infectious Disease Policy, US Department of Health and Human Services</i></p> <p>The plenary will review and describe the hepatitis C continuum of care, identify gaps in the continuum, and showcase model programs and strategies to address the gaps at the federal, state, and local levels. These programmatic efforts contribute to the overall implementation of the national Viral Hepatitis Action Plan which provides a framework and a focus for our national response to hepatitis C.</p> <p>Ronald O. Valdiserri, MD, MPH, Office of HIV/AIDS and Infectious Disease Policy, Department of Health &amp; Human Services, Washington, DC (Moderator)</p> <p>Colleen Flanagan, RN, MS, New York State Department of Health, Albany, New York</p> <p>Michael Ninburg, MPA, Hepatitis Education Project, Seattle, Washington</p> <p>David Ross, MD, PhD, US Department of Veterans Affairs, Washington, DC</p> <p>Chinazo Cunningham, MD, MS, Albert Einstein College of Medicine, New York, New York</p>	
10:00 AM	<b>BREAK</b> .....	<b>Regency Ballroom E &amp; F Prefunction Area</b>
10:30 AM	<b>BREAKOUT SESSIONS (see page x)</b>	
	<p><b>A1. Routine and Expanded Testing:</b> HCV Testing: Testing the Birth Cohort and Beyond ..... <b>Regency Ballroom C</b></p> <p><b>CC1. Cross-Cutting Session:</b> Testing, Prevention and Care across Correctional Settings.....<b>Potomac Room 4</b></p> <p><b>C1. Outcomes and Impact Evaluation:</b> Program Continuity and Establishing Continuum of Care for HIV and HCV .....<b>Potomac Room 6</b></p> <p><b>D1. Access, Linkage and Retention in Care:</b> Integrating HCV and HIV Care into Primary Care Settings ..... <b>Regency Ballroom D</b></p>	
12:00 PM	<b>LUNCH</b> .....	<b>Regency Ballroom E &amp; F</b>
12:45 PM	<b>AFTERNOON PLENARY SESSION</b> .....	<b>Regency Ballroom E &amp; F</b>
	<p>The Current State and Future Prospects for Bio-Behavioral HIV Prevention</p> <p>Kenneth Mayer, MD, The Fenway Institute, Beth Israel Deaconess Medical Center, Harvard Medical School , Boston, Massachusetts (Moderator)</p> <p>Carl Dieffenbach, PhD, Division of AIDS, National Institute of Allergy and Infectious Diseases, NIH, Bethesda, Maryland (Presenter)</p> <p>Phill Wilson, Black AIDS Institute, Los Angeles, California</p> <p>Adaora Adimora, MD, MPH, University of North Carolina-Chapel Hill, Chapel Hill, North Carolina</p>	
2:00 PM	<b>BREAKOUT SESSIONS (see page xii)</b>	
	<p><b>A2. Routine and Expanded Testing:</b> HCV and HIV Testing: Integrating Testing into Primary Care Settings ..... <b>Regency Ballroom C</b></p> <p><b>B. Prevention Models:</b> Prevention with Persons Living with HIV or HCV.....<b>Potomac Room 4</b></p> <p><b>C2. Outcomes and Impact Evaluation:</b> HCV Programs: Outcomes and Epidemiology .....<b>Potomac Room 6</b></p> <p><b>D2. Access, Linkage and Retention in Care:</b> HCV and HIV Care: Costs and Coverage..... <b>Regency Ballroom D</b></p>	
3:15 PM	<b>BREAK</b> .....	<b>Regency Ballroom E &amp; F Prefunction Area</b>

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3:30 PM	<b>BREAKOUT SESSIONS (see page xiv)</b>	
	<b>A3. Routine and Expanded Testing:</b> HCV and HIV Testing: Models for Routine Testing, and Reimbursement Issues.....	<b>Regency Ballroom C</b>
	<b>CC2. Cross-Cutting Session:</b> Interventions for Persons who Inject Drugs.....	<b>Potomac Room 4</b>
	<b>C3. Outcomes and Impact Evaluation:</b> Advancing Methods to Support Early HIV Detection .....	<b>Potomac Room 6</b>
	<b>D3. Access, Linkage and Retention in Care:</b> HCV and HIV Care: Models that Support Linkage and Retention in Care.....	<b>Regency Ballroom D</b>

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5:00 PM	<b>POSTER SESSION</b> .....	<b>Independence Center</b>
	Track A. Routine and Expanded Testing Posters 1 – 63	
	Track B. Prevention Models Posters 64-73	

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6:00 PM	<b>POSTER SESSION</b> .....	<b>Independence Center</b>
	Track C. Outcomes and Impact Evaluation Posters 74-97	
	Track D. Access, Linkage and Retention in Care Posters 98-140	

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7:00 PM	<b>DINNER</b> .....	<b>Regency Ballroom E &amp; F</b>
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## **SATURDAY JUNE 6, 2015**

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7:00 AM	<b>REGISTRATION</b> .....	<b>Independence Foyer</b>
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7:00 AM	<b>BREAKFAST</b> .....	<b>Regency Ballroom E &amp; F</b>
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8:00 AM	<b>RAPPORTEUR SESSION</b> .....	<b>Regency Ballroom E &amp; F</b>
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9:30 AM	<b>CLOSING PLENARY SESSION</b> .....	<b>Regency Ballroom E &amp; F</b>
	<b>Special Panel: Recent Outbreaks of HIV and HCV</b>	
	Sally Hodder, MD, West Virginia University School of Medicine, Morgantown, West Virginia (Moderator)	
	Jennifer Walthall, MD, Indiana State Department of Health, Indianapolis, Indiana	
	Amy Lansky, PhD, MPH, Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, on detail to the White House Office of National Drug Control Policy and Office of National AIDS Policy, Washington, DC	
	Carolyn Wester, MD, MPH, Tennessee Department of Health, Nashville, Tennessee	

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10:30 AM	<b>BREAK</b> .....	<b>Regency Ballroom E &amp; F Prefunction Area</b>
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11:00 AM	<b>Special Panel: Strategy and Vision for Moving Forward</b> .....	<b>Regency Ballroom E &amp; F</b>
	John G. Bartlett, MD, Johns Hopkins University School of Medicine, Belden, Mississippi (Moderator)	
	Kenneth Mayer, MD, The Fenway Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts (Moderator)	
	Veronica Miller, PhD, Forum for Collaborative HIV Research, Washington, DC (Moderator)	
	Shyam Sundaran Kottlil, MBBS, PhD, University of Maryland School of Medicine, Baltimore, Maryland	
	Amy Lansky, PhD, MPH, Division of HIV/AIDS Prevention, Centers for Disease Control and Prevention, on detail to the White House Office of National Drug Control Policy and Office of National AIDS Policy, Washington, DC	
	Murray Penner, National Alliance of State and Territorial AIDS Directors, Washington, DC	

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12:00 PM	<b>ADJOURN</b>	
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# BREAKOUT SESSIONS

**Friday June 5, 10:30 AM – 11:45 AM**

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**TRACK A. ROUTINE AND EXPANDED TESTING ..... Regency Ballroom C**

**A1. HCV Testing: Testing the Birth Cohort and Beyond**

Moderators: John Ward, MD, Centers for Disease Control & Prevention, Atlanta, Georgia  
Vignetta Charles, PhD, AIDS United, Washington, DC

Abstract 7. NO PATIENT LEFT BEHIND: A CASE FOR UNIVERSAL HCV SCREENING  
David Collymore, MD, MBA, Acacia Network, Bronx, New York

Abstract 110. LOW HCV TESTING UPTAKE OF THE CURRENT BIRTH COHORT TESTING GUIDELINES  
Dawn Fishbein, MD, MedStar Washington Hospital Center, Washington, DC

Abstract 26. DETERMINING HCV REACTIVITY FOR BABY BOOMERS SCREENED AT COMMUNITY-BASED ORGANIZATIONS  
Megan Haseltine, LMSW, NYSDOH AIDS Institute, New York, New York

Abstract 27. EVALUATION OF CDC RECOMMENDATIONS FOR HCV TESTING IN AN URBAN EMERGENCY DEPARTMENT  
Yu-Hsiang Hsieh, PhD, MSc, Johns Hopkins University, Baltimore, Maryland

Abstract 28. WHO PARTICIPATES IN COMMUNITY-BASED SCREENING FOR HEPATITIS C INFECTION  
Donald Kotler, MD, Mount Sinai St. Luke's and Roosevelt Hospitals, New York, New York

Abstract 30. NON-RISK BASED HCV SCREENING AMONG BABY BOOMERS IN SURVEILLANCE-IDENTIFIED HIV RISK AREAS  
Irene Kuo, PhD, MPH, George Washington University Milken Institute School of Public Health, Washington, DC

Abstract 39. HEPATITIS C BIRTH-COHORT TESTING AND LINKAGE TO CARE, SELECTED U.S. SITES, 2012-2014  
Rajiv Patel, MPH, Oak Ridge Institute for Science and Education, Atlanta, Georgia

Abstract 90. PATIENT MISUNDERSTANDING OF HIV AND HCV TESTING IN AN URBAN EMERGENCY DEPARTMENT WITH AN INTEGRATED SCREENING PROGRAM  
Sarah Pfeil, Highland Hospital - Alameda Health System, Oakland, California

Abstract 133. INCREASING HEPATITIS C VIRUS (HCV) SCREENING AND CONFIRMATORY TESTING IN A LARGE INTEGRATED HEALTH SYSTEM  
Carla Rodriguez, PhD, MPH, Kaiser Permanente Mid-Atlantic States, Rockville, Maryland

Abstract 45. EXPANDED TESTING FOR HEPATITIS C VIRUS INFECTION IN A PUBLIC HEALTH DEPARTMENT AND LINKAGE TO CARE IN DURHAM, NORTH CAROLINA  
Arlene Sena, MD, MPH, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

Abstract 61. RESULTS OF A RAPID HEPATITIS C VIRUS SCREENING AND DIAGNOSTIC TESTING PROGRAM IN AN URBAN EMERGENCY DEPARTMENT  
Douglas White, MD, Highland Hospital - Alameda Health System, Oakland, California

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**CROSS-CUTTING SESSION..... Potomac Room 4**

**CC1. Testing, Prevention and Care across Correctional Settings**

Moderators: Barry Zack, MPH, The Bridging Group, Oakland, California  
Michael Ninburg, MPA, Hepatitis Education Project, Seattle, Washington

Abstract 71. PRISONER HEALTH IS COMMUNITY HEALTH, THE NEW MEXICO PEER EDUCATION PROJECT (NMPEP): ASSESSING THE IMPACT AND REACH OF A PEER-LED HEALTH EDUCATION INTERVENTION UTILIZING HARM REDUCTION STRATEGIES IN AN INCARCERATED POPULATION  
Miranda Sedillo, MS, BS, University of New Mexico Health Sciences Center, Albuquerque, New Mexico

Abstract 29. FEASIBILITY OF HCV RAPID TESTING AMONG PROBATIONERS AND PAROLEES IN RHODE ISLAND  
Emily Patry, BS, The Miriam Hospital, Providence, Rhode Island

Abstract 108. HEPATITIS C TREATMENT EXPERIENCE IN THE NEW MEXICO STATE PRISON SYSTEM  
Rosemary Garcia, MD, University of New Mexico Health Sciences Center, Chula Vista, California

Abstract 46. CDC-FUNDED HIV TESTING, HIV POSITIVITY, LINKAGE, AND REFERRAL SERVICES IN CORRECTIONAL FACILITIES IN THE UNITED STATES  
Puja Seth, PhD, Centers for Disease Control and Prevention, Atlanta, Georgia

Abstract 104. BARRIERS AND STRATEGIES FOR LINKING INMATES TO CARE RECEIVING TREATMENT FOR HEPATITIS C VIRUS (HCV) UPON RELEASE FROM PRISON  
Colleen Flanigan, RN, MS, New York State Department of Health, Albany, New York

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**TRACK C. OUTCOMES AND IMPACT EVALUATION ..... Potomac Room 6****C1. Program Continuity and Establishing Continuum of Care for HIV and HCV**

Moderators: Michael Horberg, MD, MAS, FACP, Mid-Atlantic Permanente Medical Group, Rockville, Maryland  
Murray Penner, National Alliance of State and Territorial AIDS Directors, Washington, DC

Abstract 103. THE SOUTH CAROLINA RURAL-URBAN HIV CASCADE OF CARE

Babatunde Edun, MD, University of South Carolina School of Medicine, Columbia, South Carolina

Abstract 107. DEVELOPMENT OF AN HIV CONTINUOUS QUALITY IMPROVEMENT TOOL TO MONITOR HIV TESTING, RESULTS AND LINKAGE TO CARE WITHIN A LARGE MEDICAL CENTER

Donna Futterman, MD, Adolescent AIDS Program, Children's Hospital at Montefiore Medical Center, Bronx, New York

Abstract 109. IMPROVING THE HCV CARE CASCADE: YEAR 1 RESULTS FROM A DYNAMIC, INTEGRATED LINKAGE TO CARE NAVIGATION MODEL

Alexander Geboy, MS, MedStar Health Research Institute, Washington, District of Columbia

Abstract 114. COLLABORATING ACROSS STATES TO ACHIEVE THE END OF AIDS - HIV CROSS-PART CARE CONTINUUM COLLABORATIVE (H4C)

Michael Hager, MPH, MA, New York State Department of Health AIDS Institute Office of the Medical Director, New York, New York

Abstract 123. THE NEW YORK CITY PUBLIC HEALTH APPROACH TO HEPATITIS C

Fabienne Laraque, MD, MPH, New York City Department of Health and Mental Hygiene, New York, New York

Abstract 54. ADVOCACY & POLICY ACTION SUPPORTING THE ELIMINATION OF HCV IN THE UNITED STATES

Chris Taylor, BA, National Alliance of State and Territorial AIDS Directors, Washington, DC

Abstract 94. OREGON'S FIRST STATE VIRAL HEPATITIS EPIDEMIOLOGIC PROFILE

Ann Thomas, MD, MPH, Oregon Public Health Division, Portland, Oregon

Abstract 139. LEVERAGING RESOURCES TO CREATE A COMPREHENSIVE HCV PROGRAM

Allison Vertovec, MPH, NO/AIDS Task Force, New Orleans, Louisiana

Abstract 140. VISUALIZING GEOGRAPHIC PATTERNS IN THE HIV CARE CONTINUUM IN FIVE MAJOR US CITIES

Cory Woodyatt, Emory University, Atlanta, Georgia

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**TRACK D. ACCESS, LINKAGE AND RETENTION IN CARE ..... Regency Ballroom D****D1. Integrating HCV and HIV Care into Primary Care Settings**

Moderators: Kathy McNamara, RN, National Association of Community Health Centers, Bethesda, Maryland  
Carol Brosgart, MD, University of California, San Francisco, Berkeley, California

Abstract 100. CREATING A HEPATITIS C NAVIGATION AND LINKAGE-TO-CARE PROGRAM

Augustin Corroero, MFA, NO/AIDS Task Force, New Orleans, Louisiana

Abstract 106. ENGAGING HIGH-RISK PERSONS WITH HEPATITIS C IN CARE AND TREATMENT THROUGH COMMUNITY-BASED CARE COORDINATION: CHECK HEP C YEAR 2

Mary Ford, MS, New York City Department of Health and Mental Hygiene, New York City, New York

Abstract 113. HOW TO EMBED A HEPATITIS C TREATMENT PROGRAM INTO AN EXISTING URBAN COMMUNITY CLINIC

Kristina Gunhouse-Vigil, BA, Mission Neighborhood Health Center, San Francisco, California

Abstract 122. THE HIV CARE COLLABORATIVE: IMPLEMENTING HEALTH SYSTEM NAVIGATION AS A LINKAGE AND RETENTION STRATEGY IN PUBLIC HEALTH SETTINGS

Helena Kwakwa, MD, MPH, Philadelphia Department of Public Health, Philadelphia, Pennsylvania

Abstract 125. OPPORTUNITIES FOR SCREENING, CARE AND TREATMENT FOR HCV IN A COMMUNITY HEALTH CLINIC THROUGH PRIMARY CARE

Renita Madu, PA-C, Central Care Community Health Center-Riverside, Houston, Texas

Abstract 134. SUCCESSFUL MODEL FOR PROVIDING HEPATITIS C VIRUS SCREENING AND TREATMENT AT A FEDERALLY QUALIFIED HEALTH CENTER IN NEW ORLEANS

Monir Shalaby, MD, Excelth, New Orleans, Louisiana

Abstract 136. THE PATIENT CENTERED MEDICAL HOME (PCMH): A MODEL FOR IMPROVING ACCESS AND ENGAGEMENT IN CARE FOR HIV AND HCV PATIENTS

Judith Steinberg, MD, MPH, University of Massachusetts Medical School, Shrewsbury, Massachusetts

**Friday June 5, 2:00 PM – 3:15 PM**

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**TRACK A. ROUTINE AND EXPANDED TESTING ..... Regency Ballroom C**

**A2. HCV and HIV Testing: Integrating Testing into Primary Care Settings**

Moderators: Rupali Doshi, MD, MS, Health Resources and Services Administration, Rockville, Maryland  
Victoria Cargill, MD, MSCE, National Institutes of Health, Bethesda, Maryland

Abstract 5. ASSESSMENT OF PCP KNOWLEDGE OF HCV SCREENING, RECOMMENDATIONS, AND TREATMENT OPTIONS  
Allison Brodsky, BA, Drexel University College of Medicine, Philadelphia, Pennsylvania

Abstract 41. ELECTRONIC MEDICAL RECORD FLAGS HAVE A LIMITED IMPACT ON HEPATITIS C VIRUS BIRTH COHORT  
SCREENING IN THE PRIMARY CARE SETTING: RESULTS OF A MULTIFACETED INTERVENTION TO IMPROVE SCREENING  
Ponni Perumalswami, MD, Mount Sinai Hospital, New York, New York

Abstract 57. IMPACT OF INTEGRATING EMR HCV TESTING PROMPTS IN A DIFFICULT TO NAVIGATE EMR SYSTEM  
Stephanie Tzarnas, BA, Drexel University College of Medicine, Philadelphia, Pennsylvania

Abstract 8. DUAL ROUTINE HCV AND HIV TESTING AS A METHOD TO IMPROVE DETECTION AND LINKAGE TO CARE OF HCV  
AND HIV-POSITIVE PATIENTS AT A NETWORK OF COMMUNITY HEALTH CENTERS IN PHILADELPHIA, PA  
Catelyn Coyle, MPH, MEd, National Nursing Centers Consortium, Philadelphia, Pennsylvania

Abstract 10. CHANGING HIV TESTING HABITS AT COMMUNITY HEALTH CENTERS: STRATEGIES AND LESSONS FROM THE FIELD  
Megan Crowley, MA, MPH, Alameda Health Consortium, San Leandro, California

Abstract 3. NORMALIZING THE TEST: EFFECTIVE, HIGH-QUALITY OPT-OUT HIV TESTING PROGRAM IN A COMMUNITY  
HEALTH CENTER SETTING  
Daniel Pohl, MPH, Howard Brown Health Center, Chicago, Illinois

Abstract 12. PUBLIC HEALTH DETAILING CAMPAIGN TO IMPLEMENT ROUTINE HIV SCREENING AMONG PRIMARY CARE  
PROVIDERS IN BALTIMORE CITY  
Leigh Curvin, RN, Johns Hopkins School of Medicine, Baltimore, Maryland

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**TRACK B. PREVENTION MODELS ..... Potomac Room 4**

**B. Prevention with Persons Living with HIV or HCV**

Moderators: Myron Cohen, MD, University of North Carolina School of Medicine, Chapel Hill, North Carolina  
Kenneth Sherman, MD, PhD, University of Cincinnati College of Medicine, Cincinnati, Ohio

Abstract 66. 2014 RECOMMENDATIONS FOR HIV PREVENTION WITH ADULTS AND ADOLESCENTS WITH HIV IN THE US:  
RECOMMENDATIONS FROM CDC, HRSA, NIH, AND 5 NON-GOVERNMENTAL HIV PREVENTION AND CARE  
ORGANIZATIONS  
Kathleen Irwin, MD, MPH, Centers for Disease Control and Prevention, Atlanta, Georgia

TEXT AND EMAIL REMINDER-RECALL TO INCREASE HPV IMMUNIZATION UPTAKE IN YOUNG HIV-1 INFECTED PATIENTS  
Susana Keeshin, MD, University of Utah, Salt Lake City, Utah

Abstract 112. FIGHTING OPPRESSION TO ACHIEVE SUPPRESSION: ATTACKING UNSUPPRESSED VIRAL LOADS HEAD ON  
Kristina Gunhouse-Vigil, Mission Neighborhood Health Center, San Francisco, California

Abstract 130. MARKERS OF CARE AND VIRAL SUPPRESSION AMONG HIV+ WOMEN PRIOR TO REFERRAL FOR RE-ENGAGEMENT  
SERVICES  
Evelyn Byrd Quinlivan, MD, University of North Carolina at Chapel Hill, Chapel Hill, North Carolina

HCV CURE AS PREVENTION  
Michael Ninburg, MPA, Hepatitis Education Project, Seattle, Washington



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**TRACK C. OUTCOMES AND IMPACT EVALUATION ..... Potomac Room 6****C2. HCV Programs: Outcomes and Epidemiology**

Moderators: Irene Kuo, PhD, MPH, George Washington University Milken Institute School of Public Health, Washington, DC  
Linda Valleroy, PhD, MS, Centers for Disease Control and Prevention, Atlanta, Georgia

Abstract 95. UTILIZING ELECTRONIC LABORATORY REPORTING DATA TO ASSESS THE BURDEN OF HEPATITIS C IN ARIZONA  
Clarisse Tsang, MPH, Arizona Department of Health Services, Phoenix, Arizona

Abstract 79. GEOGRAPHIC EPIDEMIOLOGY OF HEPATOCELLULAR CARCINOMA AND VIRAL HEPATITIS IN NEW YORK CITY  
Mary Ford, MS, New York City Department of Health and Mental Hygiene, Queens, New York

Abstract 118. REASONS NEW YORK CITY PATIENTS ARE NOT PRESCRIBED HEPATITIS C TREATMENT  
Andrea King, MPH, New York City Department of Health and Mental Hygiene, Queens, New York

Abstract 105. HEPATITIS C VIRUS (HCV) TREATMENT OUTCOMES IN THE PRIMARY CARE SETTING  
Colleen Flanigan, RN, MS, New York State Department of Health, Albany, New York

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**TRACK D. ACCESS, LINKAGE AND RETENTION IN CARE ..... Regency Ballroom D****D2. HCV and HIV Care: Costs and Coverage**

Moderators: Camilla Graham, MD, MPH, Beth Israel Deaconess Medical Center; Harvard Medical School, Boston, Massachusetts  
Steven Young, MSPH, Health Resources and Services Administration, Rockville, Maryland

Abstract 137. EFFICIENT, CENTRALIZED PORTAL ACCESS TO HIV MEDICATION SIGNIFICANTLY IMPROVES BIOLOGIC OUTCOMES FOR THE UNINSURED  
Donna E. Sweet, MD, AAHIVS, MACP, University of Kansas School of Medicine, Wichita, Kansas

Abstract 132. RETAINED AND POORLY RETAINED PATIENTS WITH HIV HAD SIMILAR TOTAL COSTS IN THE FIRST TWO YEARS OF DIAGNOSIS  
Lauren Richey, MD, MPH, Medical University of South Carolina, Charleston, South Carolina

Abstract 119. POLICY IMPLICATIONS OF THE IMPLEMENTATION OF A HEALTH INSURANCE PREMIUM PAYMENT PROGRAM FOR PEOPLE LIVING WITH HIV IN CALIFORNIA  
Valerie Kirby, MPH, University of California, San Francisco, San Francisco, California

Abstract 140LB. EXAMINING HCV TREATMENT ACCESS  
Robert Greenwald, JD, Harvard Law School, Jamaica Plain, Massachusetts

Abstract 124. HOW A MEDICAID HIV SPECIAL NEEDS MANAGED CARE PLAN IN NYC ACHIEVED COST SAVINGS AND SUCCESSFUL CLINICAL OUTCOMES  
Terry Leach, PharmD, Amida Care New York, New York, New York

Abstract 81. HEALTH CARE COSTS AND RESOURCE USE ASSOCIATED WITH SEQUELAE AND COMORBIDITIES ON AMONG PATIENTS WITH CHRONIC HCV  
Boris Gorsh, PharmD, Bristol-Myers Squibb, Plainsboro, New Jersey

THE RYAN WHITE HIV/AIDS PROGRAM IN THE AGE OF HEALTH CARE REFORM  
Sean Cahill, PhD, The Fenway Institute, Boston, Massachusetts

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**TRACK A. ROUTINE AND EXPANDED TESTING ..... Regency Ballroom C**

**A3. HCV and HIV Testing: Models for Routine Testing, and Reimbursement Issues**

Moderators: Patrick McGovern, Gilead Sciences, Inc., Foster City, California

Richard Rothman, MD, PhD, FACEP, Johns Hopkins University School of Medicine, Baltimore, Maryland

Abstract 31. PREVALENCE OF HEPATITIS C VIRUS INFECTION IN AN UNSELECTED MIDWESTERN EMERGENCY DEPARTMENT POPULATION

Michael Lyons, MD, MPH, University of Cincinnati, Cincinnati, Ohio

Abstract 19. CURRENT STATE OF HIV TESTING IN A COMPREHENSIVE CANCER CENTER

Bruno Granwehr, MD, MS, University of Texas MD Anderson Cancer Center, Houston, Texas

Abstract 43. SELF-REQUESTS FOR ED-BASED HIV TESTING YIELD HIGHER POSITIVITY RATES THAN RISK-BASED TARGETING

Andrew Ruffner, MA, LSW, University of Cincinnati, Cincinnati, Ohio

Abstract 59. BILLING AND REIMBURSEMENT AS A MODEL FOR SUSTAINABLE EMERGENCY DEPARTMENT HIV SCREENING?: REPORT FROM THE 2012 NATIONAL EMERGENCY DEPARTMENT HIV TESTING CONSORTIUM MEETING

Michael Waxman, MD, Albany Medical College; UAlbany/NYSDOH PMR, Albany, New York

Abstract 50. CHALLENGES TO ENHANCED RELIANCE ON THIRD PARTY REIMBURSEMENT FOR HIV TESTING IN THE DISTRICT OF COLUMBIA

Jennifer Skillicorn, DrPH, George Washington University, Washington, DC

Abstract 40. ASSESSING BILLING PRACTICES FOR ROUTINE HIV AND HCV TESTS IN PHILADELPHIA'S CLINICAL SETTINGS

Tina Penrose, RN, MSN, MPH, The Health Federation of Philadelphia, Philadelphia, Pennsylvania

Abstract 13. IMPLEMENTING AND SUSTAINING ROUTINE HIV SCREENING OF ADOLESCENTS IN PEDIATRIC EMERGENCY DEPARTMENTS

Nicole Ellenberger, MPH, Children's National Health System, Washington, DC

Abstract 38. AS ROUTINE AS IT GETS: FIVE YEARS OF ROUTINE HIV SCREENING IN TWO HOUSTON EMERGENCY CENTERS

Siavash Pasalar, PhD, Harris Health System, Houston, Texas

Abstract 18. IMPLEMENTING AND TRACKING PROGRESS TOWARD ROUTINE HIV TESTING IN A LARGE HOSPITAL OUTPATIENT DEPARTMENT

Donna Futterman, MD, Adolescent AIDS Program, Montefiore Medical Center, Bronx, New York

Abstract 52. EXPANSION OF HIV TESTING – THE 2014 EUROPEAN HIV TESTING WEEK

Ida Sperle, CHIP, Rigshospitalet, University of Copenhagen, Copenhagen, Denmark

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**CROSS-CUTTING SESSION..... Potomac Room 4**

**CC2. Interventions for Persons who Inject Drugs**

Moderators: Andrew Reynolds, Project Inform, San Francisco, California

Judith Feinberg, MD, University of Cincinnati College of Medicine, Cincinnati, Ohio

Abstract 6. PROJECT IMPACT: HIV AND HCV TESTING IN THE ORLEANS PARISH MUNICIPAL COURT AND AT A SYRINGE ACCESS

Anne Burgess, BA, MAA, CrescentCare, NO/AIDS Task Force Division, New Orleans, Louisiana

Abstract 126. BARRIERS TO ENGAGEMENT IN HCV TREATMENT AFTER COMMUNITY-BASED SCREENING IN OAKLAND, CA

Loris Mattox, HIV Education and Prevention Project of Alameda County, Oakland, California

Abstract 117. INCORPORATING A CO-LOCATED INFECTIOUS DISEASE CLINIC IN SYRINGE ACCESS SERVICES

Elby Katumkeeryil, MS, Prevention Point Philadelphia, Philadelphia, Pennsylvania

Abstract 102. ACCEPTABILITY OF EXTENDED-RELEASE NALTREXONE AS A CONDUIT TO CARE FOR HIV+ CRIMINAL JUSTICE POPULATIONS

Sandra Springer, MD, Yale University, New Haven, Connecticut

Abstract 70. APPLICATION OF THE INFORMATION- MOTIVATION BEHAVIORAL SKILLS MODEL TO HIV AND HCV RISK AND NEEDLE SHARING BEHAVIORS AMONG PERSONS WHO INJECT DRUGS

William Robinson, PhD, LSU School of Public Health - Louisiana Office of Public Health STD/HIV Program, New Orleans



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**TRACK C. OUTCOMES AND IMPACT EVALUATION..... Potomac Room 6****C3. Advancing Methods to Support Early HIV Detection**

Moderators: Bernard Branson, MD, Scientific Affairs, Atlanta, Georgia

Donna E. Sweet, MD, AAHIVS, MACP, University of Kansas School of Medicine, Wichita, Kansas

Abstract 44. SCALING UP HIV TESTING IN AN ACADEMIC EMERGENCY DEPARTMENT: AN INTEGRATED TESTING MODEL WITH BOTH FOURTH-GENERATION TESTING AND POINT-OF-CARE (POC) TESTING

Mustapha Saheed, MD, The Johns Hopkins University, Baltimore, Maryland

Abstract 36. LABORATORY DRIVEN EXPEDITED HIV SCREENING AND CONFIRMATION AT AN URBAN EMERGENCY DEPARTMENT IN WASHINGTON, DC

Tammy Naab, MD, Howard University Hospital, Washington, District of Columbia

Abstract 80. ACUTE HIV INFECTION AND SERO-CONVERSION: WHY YOU SHOULD SCREEN FOR HIV AND WHY YOU SHOULD KEEP DOING IT

Thomas Giordano, MD, MPH, Baylor College of Medicine, Houston, Texas

Abstract 34. IDENTIFYING ACUTE HIV INFECTIONS IN THE EMERGENCY ROOM: BENEFITS OF FOURTH GENERATION HIV TESTING

Mike Menchine, MD, MPH, Los Angeles County + University of Southern California, Los Angeles, California

Abstract 97. THE IMPACT OF 4TH GENERATION HIV TESTING IN TENNESSEE: IDENTIFICATION AND LINKAGE TO CARE OF INDIVIDUALS WITH ACUTE HIV INFECTION

Carolyn Wester, MD, MPH, Tennessee Department of Health, Nashville, Tennessee

Abstract 93. ROUTINE HIV SCREENING, ACUTE INFECTION DIAGNOSIS, AND PARTNER ENGAGEMENT: THE EXPERIENCE OF A SAFETY NET PROVIDER IN CHICAGO

Monique Rucker, MPH, Sinai Health System, Chicago, Illinois

Abstract 53. PERFORMANCE OF DETERMINE COMBO AND OTHER POINT-OF-CARE HIV TESTS AMONG SEATTLE MSM

Joanne Stekler, MD, MPH, University of Washington, Seattle, Washington

Abstract 58. EVALUATION OF THE BIOPLEX® 2200 HIV AG-AB ASSAY\*: A NEXT GENERATION FULLY AUTOMATED SCREENING METHOD PROVIDING DISCREET DETECTION OF HIV-1 p24 ANTIGEN, HIV-1 ANTIBODY AND HIV-2 ANTIBODY \* PENDING FDA APPROVAL

William Link, MS, Bio-Rad Laboratories, Hercules, California

Abstract 97LB. EVALUATION OF THE XPERT® HIV-1 QUAL ASSAY AND XPERT® HIV-1 VIRAL LOAD ASSAY

Jeanne Jordan, PhD, George Washington University, Washington, DC

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**TRACK D. ACCESS, LINKAGE AND RETENTION IN CARE.....Regency Ballroom D****D3. HCV and HIV Care: Models that Support Linkage and Retention in Care**

Moderators: Andrea Weddle, MSW, HIV Medicine Association, Arlington, Virginia

Chris Taylor, National Alliance of State and Territorial AIDS Directors, Washington, DC

Abstract 129. RESTRUCTURING LINKAGE-TO-CARE: FINDING A MODEL THAT WORKS FOR YOU AND YOUR CLIENTS

Joseph Olsen, BA, MPH, CrescentCare, NO/AIDS Task Force Division, New Orleans, Louisiana

Abstract 138. IMPLEMENTING HEPATITIS C TREATMENT PROGRAMS IN COMPREHENSIVE HIV CLINICS: THE HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA) SPECIAL PROJECTS OF NATIONAL SIGNIFICANCE (SPNS) HEPATITIS C TREATMENT EXPANSION INITIATIVE

Melinda Tinsley, MS, HRSA Special Projects of National Significance, Rockville, Maryland

Abstract 101. IMPLEMENTATION OF AN HCV LINKAGE TO CURE PROGRAM AT AN URBAN SAFETY NET HOSPITAL

Jennifer Devries, BA, Sinai Health System, Chicago, Illinois

Abstract 127. INCREASING ACCESS TO HIV CARE THROUGH INSTITUTIONAL POLICY IN THE ACUTE CARE SETTING

Lucy Miner, BSN, University of Maryland Medical Center, Baltimore, Maryland

Abstract 135. PATIENT EXPERIENCE AND SATISFACTION WITH THE USE OF HIV TELEMEDICINE SERVICES AMONG HIV+ INDIVIDUALS LIVING THROUGHOUT RURAL ALABAMA

Tomas Soto, PhD, MPH, Broward House, Fort Lauderdale, Florida

Abstract 121. ENHANCING ACCESS TO CARE FOR AFRICAN AND CARIBBEAN IMMIGRANTS WITH HIV INFECTION

Helena Kwakwa, MD, MPH, Philadelphia Department of Public Health, Philadelphia, Pennsylvania

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# **Track A:**

# **Routine and Expanded Testing**



## ABSTRACT 1

## Routine HIV Screening in Community Health Centers in a Large Publically Funded Healthcare System

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**OBJECTIVE:** To determine if CDC and USPSTF HIV testing recommendations have been adopted, the objective of this study was to review HIV testing rates in community health centers in one of the largest publicly funded healthcare systems in the country.

**METHODS:** This study took place in the Harris Health System in Harris County (Houston), TX. In 2008 Harris Health started a routine HIV screening program in one emergency center, and then gradually expanded it to the rest of the organization including 13 community health centers between 2009 and 2012. In this program patients 16 years of age and older who receive a blood draw for other reasons may be tested for HIV unless they opt out of testing.

To capture baseline data and the potential impact of HIV testing recommendations by the CDC in 2006 and the USPSTF in 2013, HIV testing laboratory and demographic data were abstracted from the electronic medical records from 2004 to 2014. Proportions of patients visiting each community health center each year that were tested within the past 12 month of their visit as well as at any time in the past were calculated.

**RESULTS:** Proportion of patients visiting the community health centers that were tested at any time in the past in the Harris Health System - including Harris Health System hospitals and emergency departments – constantly increased (13%, 16%, 20%, 24%, 26%, 32%, 40%, 49%, 56%, 62%, and 67% for 2004 to 2014 respectively). Proportion of patients tested within the past 12 months had a similar trend (from 11% in 2004 to 45% in 2014).

In 2014, a total of 44,776 HIV tests were performed across the 13 community health centers including 96 tests with a positive result (0.23% overall positivity rate).

**CONCLUSIONS:** Routine HIV screening at Harris Health community health centers has been successful in testing more and more patients each year. However, over 30% of patients still have not been tested and may not know their status, and over 50% have not been tested in the past year. Given recent modeling studies demonstrating that HIV testing should be performed at least annually for high prevalence areas and the program's 0.23% HIV positivity rate, routine HIV screening should continue. To improve screening rates, system wide changes are needed including provider and patient education, and utilizing EMR capabilities to optimize and facilitate the screening process and frequency.

## ABSTRACT 2

## Implementing Universal, Opt-Out HIV Screening in a High-Prevalence Urban Community Hospital Emergency Department

*J Bailey<sup>1</sup>, A Babiker<sup>1</sup>, L Nguyen<sup>1</sup>, K Bullock<sup>2</sup>, W Strudwick<sup>1</sup> and J Bordon<sup>1</sup>*

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**OBJECTIVE:** Providence Hospital is located in one of the highest HIV prevalence communities in the US, Washington DC. The emergency department (ED) treats approximately 47,000 patients annually. In November 2012, we implemented an opt-out, routine HIV screening program in the ED and report the results of that program here.

**METHODS:** We implemented an HIV screening program that involved a consistent set of activities: integrated testing into the normal ED flow, which included systemic policy change, HIV consent built into the general ED consent form, triage nurse-led opt-out screening, electronic medical record modification; development of linkage-to-care services; feedback and quality improvement. The ED routine HIV screening program used a combination of both rapid point-of-care HIV testing and provider-led conventional testing. Patients with positive screening

tests were informed of their results, counseled by a patient navigator, and offered linkage-to-care services, including follow-up care with an infectious disease specialist. We conducted a retrospective evaluation of testing program outcomes.

**RESULTS:** Combined baseline Providence-wide HIV screening (ED + outpatient + inpatient) was 4,076 in 2009 and 2010. With implementation of the routine ED screening, between November 1, 2012 and October 31, 2014, 30,913 HIV tests were performed. Of those tested during the routine screening period, 579 were positive (1.87% seropositivity) and 83 were new HIV diagnoses (0.27% incidence). Of the newly identified positives, 63 were successfully linked to care (75%), 19 were lost to follow-up, 1 moved. There were 496 known positives identified. Of those, 344 were already in care, 89 were successfully re-linked into care at Providence, 61 were lost to follow-up, one moved, and one died. The overall adjusted linkage-to-care rate was 65.5%.

**CONCLUSIONS:** Universal HIV ED screening is an effective screening modality in a high prevalence urban setting, both for detecting new HIV infections and for identifying known positive patients that need to be re-linked into care, which helps to achieve the goals of the CDC's national HIV strategy. Further development is needed to improve linkage-to-care rates for new and known HIV-positive patients identified from our population.

### ABSTRACT 3

## Normalizing the Test: Effective, High-Quality Opt-Out HIV Testing Program in a Community Health Center Setting

*K Baker<sup>1</sup> and D Pohl<sup>1</sup>*

<sup>1</sup>Howard Brown Health Center, Chicago, Illinois, United States of America

**OBJECTIVE:** Routine opt out conventional HIV testing in community health centers has historically been challenging. Difficulty contacting patients for results, reimbursement, lack of time, and competing priorities have

resulted in low yield of patients being tested on a routine basis in many community health settings.

**METHODS:** The core of the program developed methods that included routine testing, training, EHRS integration, and seamless linkage to care. The project utilized Medical Assistants, trained through scripts, to introduce routine rapid HIV testing as a standard of care for eligible patients presenting for a range of health concerns at the time of rooming/vitaling the patient. A point-of-care (or "rapid") HIV test, initiated by the MA, saves time for the patient as well as opens up a dialogue about sexual risk at the time of giving the patient the rapid test result. A custom, specially-designed screen served as a reminder in the Electronic Health Records System (General Electric's Centricity Practice Solution) to offer HIV testing to patients automatically designated as "eligible" and to assist them in documenting consent/refusal, reason for refusal, and rapid HIV test results, as applicable. Immediate Linkage to Care and connection to LTC support staff for patients testing preliminary positive on the rapid test was made available.

**RESULTS:** 1,865 patients were offered the HIV test during the project period and 1,709 tests were conducted resulting in only 8.4% of patients refusing the test. The reasons for refusal were captured in the EHRS. 19 new positives were identified, of which 3 were acute HIV. 100% were linked to care the same day at the time of the visit. A survey was also conducted at to gather feedback from the staff involved in the project. The feedback was overwhelmingly positive. The medical assistants felt proud to work at the top of their license and providers gave positive feedback having the test result upon entering the room. It was an effective bridge to discuss sexual health and helped improve patient/provider lines of communication.

**CONCLUSIONS:** Normalizing HIV testing at the beginning of the clinic visit eased the conversation around sexual health between the provider/patient and increased awareness and opportunities to educate around prevention. Patients testing positive at the time of the rapid test were seamlessly linked to care and were able to be in a supportive environment. For FQHC's receiving flat encounter rates, further analysis needs to be done in the area of reimbursement for the point of care test.

## ABSTRACT 4

# Routine HIV Screening in an Urban, Federally Qualified HealthCare Center: Easy as 1-2-3-4

*M Bradford<sup>1</sup>, J Clemons<sup>1</sup>, Z Yusuf<sup>1</sup> and M Morgan<sup>1</sup>*

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**OBJECTIVE:** The objective of this presentation is to outline an replicable model for routine HIV screening in primary care settings. Mercy Care Services (MCS) is a federally-qualified healthcare center in Atlanta, Georgia, which implemented routine opt-out screening at 15 primary care sites throughout the city. The goal of the program is to achieve a systemic and sustainable model which willfully integrate HIV testing into its primary care setting. With the uptake of routine HIV screening, high rates of HIV has been revealed, the primary care clinical workforce has changed from risk based screening which has assisted in decreasing HIV related stigma, and the customization electronic medical records has helped streamline the process. After successful intergration, our routine HIV screening model has proven to be effective, easily replicable and feasible option for primary care sites serving marginalized populations.

**METHODS:** Using the Four Pillars of Routine HIV Screening, MCS began piloting HIV testing at 5 clinical sites. With established support from senior stake holders, customizations to the electronic medical records, staff training and quality improvement measures, screening was easily incorporated into the clinical workflow. Policies were put into place to encourage staff to consistently screen. Brochures were developed to explain the importance of HIV screening and to satisfy a pre-test requirement by the State of Georgia. Certified Medical Assistants informed patients of the screenings during triage and providers discussed the need for patients to be aware of their HIV status. Data was monitored using patient medical records.

**RESULTS:** Since implementation of routine HIV screening, MC has tested approximately 9000 patients. 52% of patients screen were primarily women. The median age was in the range of 41-50. 45 newly identified positives were identified and an additional 12 patients disclosed their previously known HIV-positive status to their providers.

28% of newly identified patients has at least one prior medical visit. 32 % of the patients screened were Hispanic. The sero-positivity rate of Hispanics that were screened was .26%. This is twice the local average.

**CONCLUSIONS:** Moving to models that support easy uptake of routine HIV screening is imperative in shifting the HIV epidemic. Routine HIV screening is easy and easily replicable. In our efforts to support the "test and treat" framework, patients who are unaware of their HIV status should be offered HIV screening in settings that they access frequently. Routine HIV Screening provides an opportunity to meaningfully address missed opportunities as well decrease HIV related stigma.

## ABSTRACT 5

# Assessment of PCP Knowledge of HCV Screening, Recommendations, and Treatment Options

*A Brodsky<sup>1</sup>, M Allen<sup>1</sup>, L Magaldi<sup>1</sup>, C Moy<sup>1</sup>, S Tzarnas<sup>1</sup> and S Trooskin<sup>1</sup>*

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**OBJECTIVE:** According to the CDC 50-75% of those chronically infected with HCV are unaware of their infection. Moreover, adults born between 1945-1965 have rates of HCV five times higher than other adults. CDC guidelines recommend that all baby-boomers be tested for HCV at least once in their lifetime. We aimed to assess primary care provider (PCP) knowledge of HCV screening guidelines and treatment options. We also assessed the accuracy of self-reported testing practices.

**METHODS:** A baseline survey to assess PCP and support staff knowledge about HCV testing, treatment, and guidelines was developed. Only practice-level identifiers were used, the survey was blinded with respect to individual identity. We administered the survey to PCPs at seven primary care practices in the Drexel Medicine network, including MDs and DOs, and to support staff including medical assistants and RNs. Self-reported testing practices were then compared to practice-level testing data extracted from the electronic medical record (EMR).

**RESULTS:** We surveyed 57 PCPs and 42 support staff. Twenty-seven percent of PCPs and 9% of support staff surveyed knew that cure rates of HCV are >70% for patients who undergo treatment. About 41% of PCPs and 27% of support staff surveyed were aware that HCV can now be cured in 12-24 weeks. Seventy percent of the PCPs, surveyed during May and June 2014, knew the CDC guidelines for birth cohort testing. Sixty-eight percent of PCPs stated they would refer all positive HCV patients to subspecialty care, regardless of other factors. In May, 6.9% of the 1658 baby-boomers seen in the primary care practices were screened for HCV.

**CONCLUSIONS:** Less than half of the PCPs and support staff surveyed could accurately identify cure rates or treatment duration for HCV, indicating a lack of awareness of recent developments in HCV treatment options. Providers are aware of testing guidelines for baby-boomers, but are not routinely implementing them in their practice. Not all providers were willing to refer all positive HCV patients to care. Targeted education to PCPs and support staff regarding new HCV therapies should be provided. Education, however, may not be the only solution; additional tools to assist practices in integrating CDC testing recommendations into clinical workflow are needed. These may include prompts in the electronic medical record and involvement of support staff in the implementation of standardized testing/order placement protocols.

## ABSTRACT 6

### **Project IMPACT: HIV and HCV Testing in the Orleans Parish Municipal Court and at a Syringe Access**

*A Burgess<sup>1</sup> and J Olsen<sup>2</sup>*

<sup>1</sup>CrescentCare, NO/AIDS Task Force Division, New Orleans, Louisiana, United States of America

**OBJECTIVE:** The purpose of Project IMPACT (PI) is to serve individuals who are at risk, but who do not routinely test in a clinic environment. We are an innovative HIV and Hepatitis C (HCV) testing program that recruits individuals summoned for the Orleans Parish

Municipal Court's (OPMC) morning and afternoon court sessions and individuals participating in the New Orleans Syringe Access Program (NOSAP) for voluntary testing, counseling, and referrals. For the past several years New Orleans has consistently ranked in the top 5 for both estimated AIDS and HIV case rates among large metropolitan areas, according to the CDC. The 2013 CDC report also estimates that roughly 2% of the population of Louisiana has HCV-Past or Present Infections (HCV-PPI), with the highest prevalence in the "baby-boomer" and injection-drug-using populations. OPMC oversees cases for more than 20,000 arrests made in Orleans Parish; a disproportionate number of whom are either low-income, African American, substance abusers, sex workers, homeless or otherwise high-risk. NOSAP is the only legal syringe access service in the region and disposed of 286,000 syringes last year.

**METHODS:** The program uses an opt-in recruiting strategy, asking everyone passing through the court building and NOSAP during testing hours if they want to be tested for HIV, and testing those who volunteer. In addition, if the person also has risk factors for HCV, a free, rapid HCV antibody test is offered. For those testing preliminarily positive for HIV, secondary tests are performed onsite in accordance to the Rapid/Rapid testing model, an HIV patient navigator is notified, and linkage to care is arranged with a local HIV/AIDS service organization. For those testing positive for HCV antibodies, an HCV patient navigator is notified, RNA testing and linkage to care is arranged with a local Federally Qualified Health Clinic that offers HCV treatment.

**RESULTS:** Since its inception in February 2013, PI has conducted 3,511 HIV and 285 HCV tests with an HIV positivity rate of 0.79% and HCV-PPI rate of 36% overall. At NOSAP, the HIV positivity rate is 1% and HCV-PPI rate is 50%. Of all of those tested, 20% had no previous testing history for HIV, and almost none had taken an HCV test.

**CONCLUSIONS:** Testing and linkage to care numbers have continued to improve from year to year, as has buy-in from the courthouse and the community. For 2015, PI is increasing HCV testing to reach 1000 tests and HIV testing to reach 3000.



## ABSTRACT 7

**No Patient Left Behind: A Case for Universal HCV Screening***D Collymore<sup>1</sup>, E Hart<sup>1</sup> and P Marcus<sup>1</sup>*<sup>1</sup>Acacia Network, Bronx, New York, United States of America

**OBJECTIVE:** The objective of this study is to provide evidence to support a case for annual universal HCV screening in comparison to the current NYS mandate to provide a singular lifetime screen for the baby boomer population. With data support, the current NYS mandates leave great room for missed opportunity.

**METHODS:** The methods of this study involved an analytic review of data collected across a network of community health centers for 12 months (January 2014–December 2014). Acacia Network integrated a routine HIV/HCV testing workflow in 7 health centers in the South Bronx and Central Harlem, New York, that expanded upon the state minimum testing requirement. The workflow prompted providers to screen all previously known HCV negative or previously untested individuals (ages 13+) at a minimum of once a year and/or upon expressed risk. Among the total of 11,000 unique patients in the network, 4,686 HCV screens were administered. Data was captured and monitored through the electronic health record.

**RESULTS:** Over 12 months, 4,686 HCV Screens were administered. Results show 749 HCV Ab Positive individuals in the network (16% of tested population). 345, or 46%, of the individuals fall outside of NYS targeted testing range (individuals born between 1945 and 1965); the majority of these individuals (44% of total Ab Positive population) are younger than the Baby Boomer age group. To continue to breakdown the data, 31% of total Ab Positive population is 45 years old or younger, 30% of the positive population are 35 years old or younger, and 10% of the positive population are 30 years old or younger.

**CONCLUSIONS:** If Acacia Network were to solely follow NYS guidelines on HCV screening, 46% of our HCV Ab Positive population would not have been identified unless risk was expressed to prompt testing. While the current state policies provide a movement to express the urgency and need to increase HCV screening, they do not cover the

full extreme to which the pandemic is growing. While this illness has greatly impacted the Baby Boomer population, with the current trends in substance use and other high risk activities, levels of HCV infection are increasing in the younger population. With what is now a curable disease, there is great benefit to increasing the mandate to universally screen individuals on an annual basis to ensure knowledge of diagnosis and access to care for treatment.

## ABSTRACT 8

**Dual Routine HCV and HIV Testing as a Method to Improve Detection and Linkage to Care of HCV and HIV-Positive Patients at a Network of Community Health Centers in Philadelphia, PA***C Coyle<sup>1</sup>*<sup>1</sup>National Nursing Centers Consortium, Philadelphia, Pennsylvania, United States of America

**OBJECTIVE:** To describe a replicable and sustainable dual HCV and HIV testing model piloted at five federally qualified health centers managed by Public Health Management Corporation (PHMC) in Philadelphia, PA.

**METHODS:** National Nursing Centers Consortium implemented a dual routine HCV and HIV testing model in five community health centers in Philadelphia, Pennsylvania. Routine opt-out HCV and opt-in HIV testing was replaced by bundled routine opt-out HCV and HIV testing. The medical-assistant initiated testing model used laboratory-based reflexive testing and electronic medical record modifications to prompt, track, report, and facilitate reimbursement for uninsured individuals. A Linkage to Care Coordinator aided HCV and HIV positive patients' transition from primary to specialist care.

**RESULTS:** From September 1, 2013 to December 31, 2014, the health centers performed 4,055 HCV and 6,728 HIV tests; 527 (13.0%) and 63 (0.9%) were HCV-antibody and HIV-positive, respectively. Of the patients with positive HCV-antibody screening tests, 508 (96.4%) had a confirmatory HCV test and 360 (70.9%) patients progressed to chronic infection, 158 (43.9%) of which

were newly identified. Of the chronically infected, 324 (90.0%) received their positive-RNA results, 276 (76.7%) were referred a specialist for medical evaluation and 193 (53.6%) were successfully linked to specialist care, with an additional 36 (10.0%) patients with upcoming specialist appointments. Of the 63 HIV-positive patients, 60 (95.2%) received their confirmed HIV-positive result and referral to an HIV specialist, and 55 (87.3%) went to their first medical appointment, of which 53 (96.4%) are receiving care in the PHMC Health Network. Of those patients, 48 (90.6%) have active viremia at the time of testing, 37 (69.8%) are on antiretroviral therapy and 25 (47.2%) are virally suppressed.

**CONCLUSIONS:** Our dual HCV and HIV testing model shows that integrating routine dual testing in a primary care setting is feasible and leads to increased HCV and HIV screening, enhanced seropositive diagnosis, and improved linkage to specialty care. Routine screening promotes earlier diagnoses and reveals the actual burden and epidemiology of the disease in an FQHC network/population. We found rates of chronic HCV infection were lower, while rates of HIV seropositivity were higher than seen in published literature. The Linkage to Care Coordinator position is an effective way of increasing patient engagement and retention to care.

## ABSTRACT 9

### Electronic Medical Record Modifications to Support Integrated Routine HCV and HIV Screening and Linkage to Care in Five Community Health Centers in Philadelphia, PA

C Coyle<sup>1</sup>

<sup>1</sup>National Nursing Centers Consortium, Philadelphia, Pennsylvania, United States of America

**OBJECTIVE:** To describe how modifications to electronic medical records (EMR) increased HCV and HIV testing, linkage to care for positive patients and patient care for those treated within the health center network.

**METHODS:** National Nursing Centers Consortium modified a shared EMR to routinize integrated HCV

and HIV testing. Goals were to simplify and automate portions of the testing and linkage to care process to increase adoption across testing sites, decrease missed opportunities and improve patient care.

**RESULTS:** The process was: 1) Identification of eligible patients: a) Generate a one-time query identifying patients born 1945-1965 and attach an automatic chart reminder stating HCV testing eligibility; b) Generate weekly query identifying patients with upcoming appointments, at least 13 years old without an HIV diagnosis or HIV test ordered within the past 12 months and attach an automatic reminder stating HIV testing eligibility. 2) Obtaining tests: a) MA offers HIV test with patient's verbal consent response documented in fields added to the EMR; b) An "HIV/ Hep C Screening" folder automatically prepopulated a laboratory order for patients tested; c) Facilitate payment for HCV and HIV tests performed on uninsured individuals by creating and adding a grant funded account to the EMR. 3) Documenting Results: a) EMR interfaces with commercial laboratories and test results are automatically uploaded into the patient's chart, with abnormal tests highlighted in red; b) Generate an automatic reminder stating eligibility for intensive linkage services for patients with detectable HCV RNA test values in their chart. 4) Quality Control and Tracking: a) Weekly reports by site reporting testing numbers and positive tests to monitor project progress and positive patients' transition from primary to specialist care sent to the project manager; b) EMR flow-sheet was created to identify patients needing HCV and/or HIV confirmatory tests by summarizing test value and at one site monitor patients undergoing HCV and HIV treatment; c) Create templates to collect discrete reporting data and extract monthly report for upload; d) Leverage EMR to promote project evaluation and dissemination through customized data extraction. Using this system, 4,920 HCV and 8,809 HIV tests were performed 9/1/2013-2/28/2015, up from 2,168 HCV and 4,723 HIV tests performed at baseline, 3/1/2012-8/31/2013.

**CONCLUSIONS:** EMR modifications can be an important and successful tool to promote integrated testing and linkage to care in ambulatory care with goals accomplished of creating efficient identification of eligible

patients, clear processes for medical assistants, and fidelity in tracking results when positive.

## ABSTRACT 10

### Changing HIV Testing Habits at Community Health Centers: Strategies and Lessons from the Field

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**OBJECTIVE:** In 2014, four community health centers, representing over 20 clinic sites in a large metropolitan area, implemented routine, opt-out HIV screening as part of an initiative to improve HIV testing rates and move away from the limitations of risk-based testing in the region. This project has resulted in a 107% increase in HIV testing, with 21,934 tests completed in the first 12 months.

**METHODS:** All health centers updated their HIV screening policies to align with CDC and USPSTF guidelines, and implemented one or more of the following interventions: trainings, EHR alerts, EHR panel management reports, and provider report cards. The timing and specific components of the program were determined by individual health centers, resulting in similar, but distinct projects across the four sites. Members of the implementation team at each site met together quarterly to share successes, challenges, and best practices in a collaborative learning network.

**RESULTS:** We used monthly HIV screening data to compare testing rates both within and between sites, based on the timing of various interventions. Analysis of monthly HIV testing data consistently revealed increases in HIV testing rates following interventions. For instance, the average increase in HIV testing rates at a health center in the two months following a training was 35%. Furthermore, sites that implemented more than one intervention increased HIV testing numbers a higher rate than sites that only implemented one intervention. The health centers that implemented a combination of EHR tools and work flow trainings resulted in a 108% increase in HIV testing numbers as compared to a 5% increase for

the health center that only provided informational staff training during the measurement period.

**CONCLUSIONS:** A combination of interventions, ranging from educational to systematic changes, can effectively facilitate significant increases in HIV testing rates at community health centers. In our testing program, the combination of EHR tools and staff work flow training were necessary to successfully sustain routine, opt-out HIV screening in primary care settings.

## ABSTRACT 11

### Facilitating Change in the Integration of Routine HIV and HCV Screening at a Federally Qualified Health Center in Atlanta, Georgia: A Multi-Disciplinary Team Approach

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**OBJECTIVE:**

- Implement routine HIV and HCV screenings within clinical flow
- Identify HIV and HCV positive clients that would normally be missed
- Provide a medical home for HIV and HCV treatment
- Successfully link clients into care for treatment

**METHODS:** Beginning June 1, 2012 and ending October 30, 2014, Opt-out serum HIV screens were offered to all individuals age 13-64 years, with known or unknown HIV status, presenting for a visit in a group of primary care clinics located in the Metro Atlanta area. While, beginning March 1, 2014 and ending November 30, 2014, routine HCV testing was integrated to test birth cohort 1945-1965.

**RESULTS:** During the two years sited, 16822 serum HIV screens were performed with additional testing to confirm positive screens. One hundred eight of the individuals tested (0.64%) were found to be HIV positive. (95%) of the individuals found positive were African-American, (57%) were male and (27%) were between the ages of 23-30 years.



During the seven months sited, 1356 serum HCV test performed within the 1945-1965 birth cohort with additional test to determine RNA positivity. Thirteen of the individuals tested (0.9%) were found RNA positive. (100%) of those individual found positive were African American, (85%) were male and (15%) were female.

**CONCLUSIONS:** Of the individuals (108) testing HIV positive, seventy-two (66%) did not know they were HIV positive and thirty-six (34%) later reported they were previously determined positive for HIV prior to the routine HIV screen performed. All one hundred eight (100%) of these individuals, regardless of newly or previously determined HIV positive status, were linked to and completed at least one visit with a medical care provider and were given treatment related to their positive HIV status. It was also determined that 66% of the patients newly diagnosed were established patients within the primary care clinics and had not been offered HIV screening until routine HIV screening was established.

As for HCV, of the individuals (13) tested RNA positive, seven (51%) did not know they were HCV positive. Seven (51%) of the individual found positive receive linkage to treatment. As treatment is changing and continuing to develop, the six (49%) of the individual without linkage will have medical treatment. For the promotion routine testing and access to care our clinicians are screening and diagnosing HIV and HCV, while treating clients for HIV before disease progression.

## ABSTRACT 12

### Public Health Detailing Campaign to Implement Routine HIV Screening Among Primary Care Providers in Baltimore City

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**OBJECTIVE:** As funding for local health departments and HIV prevention changes, primary care providers will play an increasingly important role in HIV prevention. A joint effort between the Baltimore City Health Department and the Center for Child and Community Health Research at Johns Hopkins School of Medicine sought to develop relationships with primary care providers in high HIV transmission areas in order to implement routine HIV screening and to understand associated opportunities and barriers.

**METHODS:** An HIV Testing Action Kit that included local epidemiology, testing and reporting laws, screening algorithms, pre- and posttest counseling scripts, billing details, linkage to care and patient education materials was developed with a local design school. Two public health detailers visited primary care providers and practice managers to present the kit. Detailers educated, trained, and supported participants repeatedly from January to December 2014. Evaluation interviews were conducted at baseline and during followup 4-6 after baseline.

**RESULTS:** Reach: Detailers visited 85 (100%) primary care practices with a combined patient volume of 150,337, distributed 281 kits, and interviewed 166 (79%) providers and 68 (86%) practice managers at baseline. At followup, 91 providers (66% of eligible) and 39 practice managers (57% of eligible) were interviewed.

**SCREENING BEHAVIOR:** Providers' readiness to test was assessed on a 1-5 scale. At followup, 39% increased by 1 step, 31% increased by 2 steps, 5% increased by 3

steps, 3% decreased and 21% experienced no change. 73% state HIV screening increased as a result of the campaign. 58% report changing activities associated with screening (distributing educational materials, changing Electronic Medical Records). 43% of providers report screening rates in the prior week that were increased over baseline levels. Overall, the percent of patients offered HIV tests increased from 22% to 25%.

**SATISFACTION:** At followup, 96% of providers report being satisfied or very satisfied with the campaign and 48% were interested in more training or materials.

**CONCLUSIONS:** The in-person, support-focused detailing intervention achieved considerable reach to providers, practice managers, and, by extension, their patients. It enabled detailers to understand participants' needs and attitudes towards HIV screening and deliver tailored support. Though detailing, several sites were identified that were interested in more intensive support to implement screening and those partnership are ongoing. Finally, this campaign identified providers who would be important to additional HIV prevention initiatives, such as Pre-exposure Prophylaxis training.

## ABSTRACT 13

### Implementing and Sustaining Routine HIV Screening of Adolescents in Pediatric Emergency Departments

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**OBJECTIVE:** Routine HIV screening of adolescents in healthcare settings including Emergency Departments (EDs) is recommended by the CDC and the USPSTF.

Since 2009 Children's National Health System (CNHS) has implemented routine opt-out oral HIV screening of adolescents  $\geq 13$  years in the pediatric ED. A dedicated tester model was used at the high-acuity main campus ED (since 2009) and was transitioned to a staff based model in 2011. An ED staff based model was used at the community hospital-satellite ED (since 2010). This study reports on the outcomes, successes, and challenges of both models.

**METHODS:** HIV screening was performed according to the same standardized algorithm at both EDs. Testers at both EDs complete an HIV Screening Form for every patient approached for the test which is then collected and analyzed by site by the ED HIV screening program coordinators. In this study we analyzed the performance of both ED programs, based on the model of testing.

**RESULTS:** During the 5 years of the program (03.2009 – 06.2014) 23,811 adolescents were approached and 16,294 of them were screened for HIV in both EDs. Following the transition to a staff based model at the high-acuity main campus ED, screening rates consistently declined in the rates of eligible patients approached from 30% to 5% with rates of testing falling from 21% to 4.5%. Within both models barriers to testing included high patient volumes, limited access to approach patients in triage, and a delay in placing the screening order. The staff based model at the community hospital-satellite ED maintained high levels of HIV screening consistently approaching an average of 58% (range from 37% - 78%) of eligible youth and testing on average 37% (range from 28% - 47%) of eligible youth.

**CONCLUSIONS:** Routine HIV screening of adolescents in pediatric EDs is feasible. The staff based screening model proved successful in the community pediatric ED, while the larger and busier ED failed to maintain the high rates of testing following transition from the required dedicated testers to the staff based model. Flexibility on the model of HIV screening to adjust to the settings of the ED is more likely to provide higher rates of those approached and screened for HIV.

## ABSTRACT 14

## Staff Related Barriers Toward Routine HIV Screening of Adolescents in Pediatric Emergency Departments

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**OBJECTIVE:** Since 2009, Children's National Health System (CNHS) has been conducting universal HIV screening of adolescents  $\geq 13$  years in the Emergency Departments (EDs) at Sheikh Zayed (SZ) campus and United Medical Center (UMC). This study was conducted as a quality improvement project aimed to investigate the ED staff related barriers to routine HIV screening.

**METHODS:** An online electronic anonymous, voluntary survey with 25 multiple-choice questions assessing HIV screening barriers and HIV knowledge was administered to ED staff. The link to the survey was distributed via monthly emails from June through October 2013. Participation in the survey was rewarded with a small financial incentive (5 USD gift card). Descriptive statistics were used to analyze results.

**RESULTS:** A total of 179 ED healthcare workers completed the online survey. The majority of respondents were nurses (41%; n=73) followed by physicians (22%; n=39), technicians (7%; n=13) and other personnel (e.g. NP, PA) (30%; n=54). The majority of respondents (76%; n=136) knew the CDC recommendations for universal HIV Screening among 13-64 year olds. An equal percentage of respondents thought that the ED screening method at CNHS was universal opt-in for adolescents greater than 13 years of age (36%; n=64) and universal opt-out for adolescents greater than 13 years of age (37%; n=66). Higher proportion of the staff (49%; n=87) reported routinely offering targeted opt-in HIV testing,

while smaller proportion (40%; n=71) reported practicing universal opt-out HIV screening approach. The main barriers to offering HIV testing in EDs were: forgetting to offer the test (42%; n=75) followed by lack of time and/or competing priorities (33%; n=59). A large majority of the ED staff (64%; n=115) indicated that the best method to obtain information on universal HIV screening and HIV education was through continuing education units (CEUs). The majority of ED staff (68%; n=122) indicated an interest in learning more about HIV infection.

**CONCLUSIONS:** Despite ongoing universal HIV screening in EDs at CNHS, barriers to the screening remain and targeted testing continues to be practiced by the significant proportion of ED personnel. Potential interventions to address these barriers include prioritizing and re-designing the screening algorithm, introducing an electronic reminder system, and increasing knowledge about HIV through CEUs.

## ABSTRACT 15

## Increased HIV Testing Among Hospitalized Patients who Declined Testing in the Emergency Department

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**OBJECTIVE:** As expanded HIV testing is implemented across care settings, the yield of reoffering HIV testing to hospitalized patients who declined testing while in the Emergency Department (ED) is unknown. We sought to determine whether an intervention to increase HIV testing among hospitalized patients was associated with increased testing among patients who declined a test in the ED.

**METHODS:** Using a retrospective cohort, we assessed whether an electronic medical record (EMR)-based intervention to increase HIV testing among hospitalized patients was associated with increased testing among patients who declined a test in the ED. The study took place in an urban, academic, tertiary care hospital in a region of high HIV prevalence. The intervention consisted of an

automated prompt and order-set that appeared to providers placing any EMR orders on hospitalized patients who had no documented HIV test. The prompt recommended the offer of HIV testing and the order-set facilitated options for offering testing or documenting why testing was not indicated. The study spanned two eight week periods pre- and post-implementation of the intervention. The cohort included all unique patients 21-64 years old who had no documented HIV test, declined HIV testing in the ED, and were subsequently hospitalized. We used bivariate tests to assess differences in patient characteristics and proportions tested for HIV between those included during the pre- and post-implementation periods.

**RESULTS:** In the pre- and post-implementation periods, 220 and 200 patients who declined HIV testing in the ED were hospitalized, respectively. The majority of patients were female (54%) and the median age was 52 (IQR 43-58). Most patients were Hispanic (43%) or black (37%), spoke English (85%), had public insurance (68%), were admitted to medicine units (76%), and median length of stay was 2 days (IQR 0-5). There were no significant differences in these characteristics among patients from the pre- and post-implementation periods. In the pre- and post-implementation periods, 20 (9%) and 76 (38%) patients, respectively, underwent HIV testing prior to discharge ( $p < 0.001$ ).

**CONCLUSIONS:** After implementation of an EMR-based intervention, HIV testing increased among hospitalized patients who declined a test in the ED. A substantial proportion of patients who declined testing in the ED ultimately underwent testing after it was reoffered during hospitalization suggesting that the decision to undergo HIV testing is a dynamic process. Leveraging EMR resources may be an effective tool for expanding HIV testing, and testing should be reoffered to patients who previously declined.

## ABSTRACT 16

### **Making HIV and HCV Screening Routine: An Innovative Partnership Between Community Providers and the Health Department**

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**OBJECTIVE:** Federally Qualified Health Centers (FQHCs) are important partners for health departments, because they are often located in communities with a high burden of preventable diseases. The New York City Department of Health and Mental Hygiene (DOHMH), with support from a Gilead FOCUS grant, implemented a quality improvement project to routinize and strengthen compliance of FQHC providers with Centers for Disease Control and Prevention screening guidelines and New York State HIV and hepatitis C testing laws, gonorrhea testing and treatment.

**METHODS:** We used disease surveillance data to identify neighborhoods with high rates of disease. We mapped surveillance data and FQHC locations. Working collaboratively through the Program Collaboration and Service Integration (PCSI) initiative, DOHMH partnered with 6 FQHCs (representing 15 sites). We assisted FQHCs in improving electronic health record (EHR) utilization, modifying workflows, changing clinic policies, and training providers. To measure progress, FQHCs extracted EHR data for these diseases quarterly. During year 1, data were aggregated by FQHC site and overall entity.

**RESULTS:** During project year 1 (January 2013 – August 2014), all 6 FQHCs revised protocols or processes to strengthen sexual health screening, and two-thirds (67%) modified their EHRs. Half (50%) added structured fields to their EHR to improve documentation and half (50%) modified EHR components to streamline testing. HIV offer rates increased from 19% to 26%, and HIV testing rates from 14% to 18%, from baseline to mid-point. We conducted 10 HIV training courses, 5 hepatitis C courses, and 4 GC courses, reaching over 300 providers and clinical staff. During year 2 (December 2014 – November 2015), FQHCs will implement provider-specific dashboards



to track provider performance. FQHCs will develop a sustainable feedback loop to distribute the dashboards, review with clinical staff, and provide support as needed.

**CONCLUSIONS:** Internal health department collaboration led to coordinated assessment and assurance of high priority infectious disease screening with FQHCs. Findings suggest that innovative partnerships between FQHCs and DOHMH in New York City can assess and improve screening rates.

## ABSTRACT 17

### Integration of HIV Testing into Public Service Sites: Income Maintenance Centers in Washington, DC

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**OBJECTIVE:** Increasing the percentage of individuals who know their HIV serostatus is a key component of the National HIV/AIDS Strategy and essential to ending the HIV/AIDS epidemic. This presentation will discuss the integration of high volume HIV testing into public sites as a feasible strategy to promote and directly increase access to HIV testing, thereby increasing the number of individuals who know their HIV status.

**METHODS:** We will describe the implementation of a novel HIV Testing strategy at Income Maintenance Centers (IMC) in Washington DC, the government offices that provide residents with public benefits including food stamps, financial assistance, and health insurance. Dedicated project staff discusses the importance of routine HIV testing and offer the test to everyone awaiting IMC services. Staff also encourages HIV testing as a routine component of primary medical care. HIV testing using the OraQuick Advance rapid HIV test is conducted in a private office inside the IMC, and all who test positive are immediately referred to primary care and support services.

**RESULTS:** From May 2014 to February 2015, 71,803 individuals were offered an HIV test, 7,339 (18%) accepted,

7,339 (100%) were tested, and 25 (0.3%) were positive. Of the reactive tests 48% (12) were female and 52% (13) were male. Forty Four percent (25) of those testing positive were between the ages of 46-55. Additionally, 43% (3,577) of those testing in the IMC were first time testers.

**CONCLUSIONS:** Conducting HIV testing in high volume non-clinical settings, such as the IMC, is a feasible strategy to engage individuals in HIV counseling and testing services, including those who have never tested before. Expansion of this program model to similar public service sites may be necessary to increase access to HIV testing services, encourage routine screening and increase the percentage of individuals in the general population who know their HIV status.

## ABSTRACT 18

### Implementing and Tracking Progress Toward Routine HIV Testing in a Large Hospital Outpatient Department

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**OBJECTIVE:** The routine offer of HIV testing (HT) in medical settings has been recommended by the CDC since 2003 and was mandated by New York State in 2010. Like other hospitals, Montefiore Medical Center (MMC) in the Bronx, NY has improved HIV testing rates but has not yet achieved the goal of testing all eligible patients (non-pregnant and 13-64 years old). For more than a decade, MMC has worked to routinize HT in its outpatient clinics, which have a relatively stable patient population. To establish more accurate HT saturation levels, this study monitored not only annual testing rates but also percent of patients ever tested.

**METHODS:** Since 2004, the Adolescent AIDS Program (AAP) at MMC has implemented ACTS (Advise, Consent, Test, Support) to overcome routine HT challenges in MMC's outpatient settings. Since 2011, this effort has been supplemented with support from Gilead's FOCUS program. ACTS uses existing clinical staff for testing and

existing data resources, employs a streamlined HT method and follows a practice change process comprised of Buy-in, Implementation Planning, Training and Mentoring, and Monitoring and Evaluation. FOCUS added a complementary practice change framework, and technical assistance staff and materials. We report on eight years of work to “routinize” HT throughout MMC’s outpatient department with analysis of annual HT among eligible patients as well as HT saturation at the sites over time.

**RESULTS:** By 2007 (the first year comprehensive data is available) ACTS was widely implemented in MMC’s outpatient department and that year 29,706 patients were tested for HIV at its various outpatient sites. Annual testing continued to improve and with the addition of FOCUS support in 2011, the number tested rose to 50,921 and continued to increase annually with 58,288 tested in 2014. Analysis of HT saturation over time at 10 high volume outpatient sites found that at baseline (2005) 28% of clients seen that year had evidence of ever testing for HIV, a figure that more than doubled by 2014 when 57% of patients that year had evidence of HT.

**CONCLUSIONS:** Implementation of ACTS and Gilead’s FOCUS program resulted in a significant increase in HT in a complex hospital outpatient department. This work revealed lessons for other outpatient departments considering or implementing routine HT, including: laws and recommendations alone do not change practice; streamlined, provider-delivered HCT is feasible; following the principles of practice change is crucial but requires perseverance; and improvements to policies and IT can enhance routine testing.

## ABSTRACT 19

### Current State of HIV Testing in a Comprehensive Cancer Center

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**OBJECTIVE:** The Centers of Disease Control (CDC), in 2006, and US Preventive Services Task Force (USPSTF),

in 2013, recommend routine opt out HIV testing of patients between 13-64 and 15-65 years of age, respectively. HIV is associated with various cancers, including classically AIDS-related cancers (e.g. Kaposi’s sarcoma, non-Hodgkin’s lymphoma, and cervical cancer), but also non-AIDS-associated malignancies (e.g., lung, liver, anal). Treatment for HIV results in reduced transmission of this cancer-associated virus and improved treatment outcomes in many cancers. HIV testing practices in cancer patients have not been well characterized. Recent CDC data suggest that only 40% of cancer survivors were tested. In our institution, a separate written or documented verbal consent for HIV has been mandatory. We describe the screening pattern of HIV testing between 1999 and 2013 at a major cancer center.

**METHODS:** Retrospective data was obtained on HIV testing performed between 1999 and 2013 from comprehensive databases. Testing of all patients presenting to a major cancer center for evaluation and those who underwent cancer treatment are described. Chi-square statistic was used to compare patients tested before and after 2006, when the CDC recommended routine HIV testing for cancer patients.

**RESULTS:** There were 164,525 patients who presented to our center and received cancer therapy between January 1, 1999 and December 31, 2013. HIV testing was conducted on 26,492 (16.1%) of these cancer patients. Among the patients tested, there were 279 patients who were HIV positive (1.05%). HIV testing among cancer patients receiving cancer therapy ranged from a low of 14.4% in 2009 to a peak of 18.2% in 2013 ( $p < 0.001$ ). In comparison, for the US population over 18 years of age, HIV testing ranged from 32.1% in 2000 to 35.8% in 2006 to 35.9% in 2011.

**CONCLUSIONS:** Despite CDC recommendations since 2006 to conduct routine HIV screening and the significant association between HIV and various malignancies, HIV testing is not consistently performed at a major cancer center. The impact of the USPSTF recommendations issued in April 2013 for routine opt out testing for those between 15 and 65 years of age remains to be determined. In addition, endorsement of the American Society of Clinical Oncology regarding routine HIV testing may be helpful. Efforts to work with institutional leadership have

recently resulted in addition of routine opt out language to the “front door” institutional consent.

## ABSTRACT 20

### Screening for HIV Infection in the Emergency Department of a Comprehensive Cancer Center: Recommendations and Challenges

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**OBJECTIVE:** Our aim was to increase HIV screening in the emergency department (ED) of a comprehensive cancer center. We also sought to provide education to patients and providers regarding the relationship between HIV infection and cancer.

**METHODS:** A joint effort was initiated by the departments of Emergency Medicine and Infectious Disease to perform routine HIV testing (as recommended by the Centers of Disease Control [CDC]) in new patients presenting to the institution through the ED. We conducted educational activities on the relationship between HIV and cancer, recommendations for routine HIV testing, and state legal requirements to the ED staff and institutional committees. Patient education was also provided. Enhancements were made to the ED electronic health records to facilitate ordering and documentation of patient notification. We also devised an algorithm for result verification, reporting, and linkage to care.

**RESULTS:** Implementation of routine opt-out-testing for HIV in our cancer center ED was impeded by controversy regarding testing in the setting of end of life care and the limited capability of existing electronic health records to delineate these patients. However, HIV testing in the ED increased 5 fold in the 6 months that followed the initiation of our program in July 2014 (201 patients tested from July-December 2014 vs. 40 patients tested from January-June 2014). A total of 296 patients were offered HIV testing from July 2014 to the end of January 2015. Only 12% (38/296) of patients declined testing, while 8% (24/296)

of tests were canceled. The rate of positive HIV testing was 0.8% (2/234), including one incident case (0.4%). The institutional approval for the addition of HIV testing to the institutional consent for treatment form was recently obtained.

**CONCLUSIONS:** Routine opt-out-testing for HIV in the ED of our cancer center was not feasible for multiple reasons, including challenges in identifying appropriate patients, failure to draw blood from patients who agreed to testing, and initial difficulties in ordering tests. However, testing rate is rapidly increasing. Implementation of ED testing may improve with the recent modification to the institutional “front door” consent, which now includes routine opt-out language. This will reduce the burden of physician documentation and eliminate the challenge of patient identification. An ongoing educational initiative outside of the ED may enhance testing in other departments.

## ABSTRACT 21

### A Zip Code Analysis - HCV, Location, Location, Location

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**OBJECTIVE:** To analyze zip code data for the purpose of providing awareness to enhance the understanding and knowledge of HCV in the Harris County community.

The CDC estimates that there are 2.7 to 3.9 million people in the US living with Hepatitis C. Because of the slow progression of the disease many of these people are unaware they are infected leaving them at high risk for liver disease and hepatocellular carcinoma.

Hepatitis C virus (HCV) is not a reportable condition in the State of Texas. In addition, HCV surveillance is not routinely conducted or supported. As a result, accurate estimates of the burden of disease in Texas are insufficient for planning, intervention and evaluation.

During the implementation of birth cohort HCV screening in an urban ED, zip code data was collected in an effort to learn the “snap shot” view of HCV infection throughout



Harris County. Houston eligible metropolitan area (EMA) includes Chambers, Fort Bend, Harris (including the City of Houston), Liberty, Montgomery, and Waller counties, with a total population is 5,287,524.

**METHODS:** Study Design: Clinical Quality Improvement Protocol. Participants: all patients born 1945-1965 who access the ED for care and who are able to opt-out of HCV screening. Interventions: Patients are informed of HCV screening and given the opportunity to opt out of testing. The blood sample is processed by IgG antibody methodology and two wash immunoassay using chemiluminometric technology for HCV antibody positivity. Roche COBAS AmpliPrep/COBAS TaqMan HCV real-time RT-PCR IVD system is used to confirm the HCV genome utilizing a dual probe approach.

**RESULTS:** New HIV diagnosis for 2011 occurred in 17 different zip codes. Memorial Hermann HCV prevalence since onset of screening occurred 28 different zip codes. Only 6 zip codes were common for new diagnosis in both HCV and HIV.

**CONCLUSIONS:** While HIV is a concern for Houston's EMA, the characteristics and severity of the disease vary from one area to another and between different risk groups. In considering current HIV and HCV incidence, only 6 zip codes are shared with current MH data: 77004, 77021, 77051, 77033, 77026 and 77079. The majority of MH HCV incidence comes from more suburban areas. Establishing an effective HCV surveillance system needs an ongoing process of case investigation, data collection, analysis of data and dissemination of data to public health professionals and health care providers to better understand the HCV incidence in our community.

## ABSTRACT 22

### HCV Confirmation Testing Coupled with an ED Based Screening Program

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**OBJECTIVE:** To implement and define the feasibility of birth cohort screening in a busy urban and suburban ED's for the purpose of identifying HCV antibody positive persons, identifying active infection and linking patients to care.

The CDC estimates that there are 2.7 to 3.9 million people in the US living with Hepatitis C. Because of the slow progression of the disease many of these people are unaware they are infected leaving them at high risk for liver disease and hepatocellular carcinoma.

In 2012, the CDC recommended testing all individuals born 1945 to 1965 without consideration of risk for HCV. 1/2013, Memorial Hermann Hospital System partnered with Gilead-HIV FOCUS to begin birth cohort HCV testing in the emergency department (ED) at the Memorial Hermann Hospital, Texas Medical Center Campus (MHHS). That program has now expanded to all 9 ED campuses of the Memorial Hermann System adding confirmatory RNA testing to patients identified as antibody positive.

**METHODS:** Study Design: Clinical Quality Improvement Protocol. Participants: all patients born 1945-1965 who access the ED for care and who are able to opt-out of HCV screening. Interventions: Patients are informed of HCV screening and given the opportunity to opt out of testing. The venous blood sample is processed by an IgG antibody methodology two wash immunoassay using chemiluminometric technology for HCV antibody positivity. Roche COBAS AmpliPrep/COBAS TaqMan HCV real-time RT-PCR IVD system is used to confirm the HCV genome utilizing a dual probe approach.

**RESULTS:** December 2014, 773 patients screened, 60 patients antibody positive, 16 patients RNA positive, 10 patients RNA negative. January 2015 - 912 patients tested

for HCV. 87 antibody positive, 45 RNA positive, 10 RNA negative.

**CONCLUSIONS:** Through the process of ED based screening we have demonstrated the feasibility of testing patients for HCV and identifying HCV active infection. Patients will likely continue to access the ED as their primary healthcare location making ED's an important location for infectious disease screening. Additional attention needs to be addressed by the Centers for Medicare and Medicaid Services (CMS) to alter the current definition for reimbursement. The current definition by USPSTF of grade B clearly excludes emergency departments, inpatient hospital settings, as these locations are not considered primary care locations.

## ABSTRACT 23

### Integrating Routine HIV Screening and Birth Cohort HCV Screening in a Busy ED – Can Be Done Seamlessly

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**OBJECTIVE:** To integrate and define the feasibility of adding birth cohort HCV screening to a successful routine opt-out HIV Screening program in a busy urban ED Hospital System.

In 2006, the CDC recommended routine HIV testing due to growing incidence of HIV nationally. Projections indicated 1,039,000 - 1,185,000 were infected with HIV, with 25% unaware of their infection. In 2012, the CDC recommended testing individuals born 1945 to 1965 for HCV estimating that there are 2.7 to 3.9 million people in the US living with Hepatitis C.

Emergency departments (ED) capture a wide variety of individuals who might not seek healthcare in other ways and therefore are the perfect platform for infectious disease screening that finds individuals unknowingly positive and responsible for the spread of the disease in the community. Memorial Hermann Healthcare System entered a partnership with Gilead-HIV FOCUS to add birth cohort HCV screening to a successful routine opt-

out HIV program throughout all 9 ED campuses of the Memorial Hermann Healthcare System.

**METHODS:** Study Design: Clinical Quality Improvement Protocol. Participants: HIV – all patients age 18-65 who access the ED for care and who are able to opt-out of screening. HCV - all patients born 1945-1965 who access the ED for care and who are able to opt-out of screening. Interventions: Patients are informed of screening and given the opportunity to opt out of testing via a built in electronic medical record process.

**RESULTS:** 2014 HIV screening total – 31,514 patients tested, 261 positives, overall .08% positivity. December HCV 2014, 773 patients screened, 60 patients antibody positive (12.8%). January HCV 2015 - 912 patients tested for HCV, 87 patients antibody positive. (10.5%)

**CONCLUSIONS:** Through the process of ED based screening we have been able to demonstrate the feasibility of testing patients for HIV and HCV identifying unknown infection. Routinely testing patients as part of everyday practice removes stigma that frequently prevents patients from seeking out testing. Memorial Hermann Healthcare System has integrated and implemented HIV and HCV screening programs in such a way that testing becomes a standard way of practice built into normal ED workflow so that screening isn't affected by time, process or cost.

## ABSTRACT 24

### New Diagnoses of HIV Among Young Adults Seen in an Urban Emergency Department with a Routine HIV Screening Program

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**OBJECTIVE:** Youth aged 13-24 represent one out of four new HIV diagnoses in the U.S. Furthermore, it is estimated that 60% of youth living with HIV are not aware of their diagnosis. In order to achieve the goals of routine non-targeted HIV screening – to identify patients

early in disease, regardless of perceived risk behaviors - tests must be offered to all eligible demographic groups. In this analysis, we assessed frequency of test offer, offer acceptance, number of new HIV diagnoses, and linkage to HIV care among individuals aged 13-24 years old who were seen in the Emergency Department (ED) of an urban safety-net hospital in the Southeastern US.

**METHODS:** In July 2013, we implemented routine, non-targeted, opt-out HIV screening in the ED of an urban safety-net hospital. Data, about test offer and acceptance, patient demographics, visit information, and lab results were extracted from the Electronic Medical Record (EMR). Linkage to care data were extracted from information collected by designated HIV social work staff. Patients were considered linked to care if they completed at least one medical appointment with an HIV care provider at any point following new diagnosis. Statistical analyses were conducted using SAS 9.3 and the Z-test was used to compare frequencies between younger and older adults.

**RESULTS:** During the first 19 months of routine HIV testing, there were 23,110 visits by young adults (patients aged 13-24), representing 12.8% of all visits, and 13.7% of all patients offered an HIV test were young adults. Among young adults tested, 85.9% were African American, 42.0% were male, and the mean age was 21.2 years (SD=2.0 years). When offered a test, 59.9% of young adults accepted a test, compared to 53.2% of older adults (25-64 years old) ( $p<0.0001$ ). Young adults represented 16.2% of tests completed, and 41 new HIV diagnoses were identified among this cohort (15.5% of all new diagnoses). Among patients newly diagnosed with HIV, 51.2% of young adults were linked to care vs. 53.1% of older adults ( $p=0.82$ ).

**CONCLUSIONS:** This analysis demonstrates that the ED is an effective venue to identify patients with previously undiagnosed HIV and facilitate linkage to care among this epidemiologically very significant patient cohort. This public health role may be especially important among populations such as young adults, who are at elevated risk of having undiagnosed HIV and may not have an established relationship with a primary care provider.

## ABSTRACT 25

### Routine HIV Testing: Uptake and New Diagnoses Among Women Seen in an Urban Emergency Department

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**OBJECTIVE:** Women account for one out of every four individuals living with HIV, and women of color are disproportionately represented when compared to women of other races and ethnicities. In order to achieve the goals of routine HIV screening – to identify patients early in disease, regardless of perceived risk behaviors – it is necessary that testing reach all eligible demographic groups. In this analysis, we assessed frequency of test offer, offer acceptance, new HIV diagnoses, and linkage to HIV care among women seen in an urban Emergency Department (ED) in the Southeastern US.

**METHODS:** In July 2013, we implemented a routine, non-targeted, opt-out HIV screening program in the ED of an inner-city, safety-net hospital in a metropolitan area with a high prevalence of HIV. Data, including test offer and acceptance, patient demographics, visit information, and lab results, were extracted from the Electronic Medical Record (EMR). Linkage to care data were extracted from information collected by designated HIV social work staff. Patients were considered linked to care if they completed at least one medical appointment with an HIV care provider at any point following new diagnosis. SAS version 9.3 was used to conduct data analyses and frequencies were compared using a Z-test between proportions.

**RESULTS:** During the first 19 months after implementation of routine HIV screening, 64,438 patients were offered an HIV test; 34,163 patients accepted a test; and 26,910 tests were performed; 266 new HIV diagnoses were identified (0.99% of tested). 45.0% of patients offered a test were women, and 54.5% of women who were offered the test accepted compared to 50.6% of men ( $p<0.0001$ ). Of the 12,636 women tested for HIV, 84.9% were African American, with a mean age of 39.8 years (SD=15.1 years).

Women represented 47.0% of tests completed and 25.2% of new HIV diagnoses (67 women). Among women newly diagnosed with HIV, 58.2% were linked to care, vs. 50.8% of men ( $p=0.29$ ).

**CONCLUSIONS:** Routine HIV screening in an urban ED is an effective way to identify patients with previously undiagnosed HIV. The ED setting represents a viable and effective way to screen for and identify undiagnosed HIV among woman of color, a population at elevated risk for HIV infection.

## ABSTRACT 26

### Determining HCV Reactivity for Baby Boomers Screened at Community-Based Organizations

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**OBJECTIVE:** The purpose of this study was to determine hepatitis C virus (HCV) antibody reactivity among the birth cohort (1945-1965) receiving HCV rapid testing in community based organizations throughout New York State (NYS).

**METHODS:** The NYS Department of Health (DOH) provides free HCV rapid screening test kits to approximately forty-five agencies to screen high risk populations for HCV. Agencies enrolled in the program are community based organizations (i.e. syringe exchange programs, local health departments, community health centers). Screening is performed free of charge on individuals who do not have a pay source for the test. Program data is collected from all screening sites on numbers of individuals screened and numbers of individuals with reactive antibody status. Agencies have the option to enter data into either the NYS Health Commerce System (HCS) or the AIDS Institute Reporting System (AIRS). HCS data for non-reactives is aggregate data. AIRS data entry requires client level data for both non-reactive and reactive individuals. One third of agencies enrolled in the HCV screening program report data via AIRS. Based on client level data for 2014, the NYSDOH analyzed the reported risks of individuals

tested to determine if community based organizations were effective venues for identifying baby boomers infected with HCV.

**RESULTS:** During the review period, approximately 3900 HCV screening tests were conducted. Client level data is available for 1405 (35%) tests, including 243 HCV antibody reactive tests. 409 (29%) individuals screened identified the birth cohort as one of their risks, with 114 (8%) identifying the birth cohort as their sole risk. Out of those with no other identifying risks than the birth cohort, 5 (4.4%) tested antibody reactive. Baby boomers with additional risks had greater reactivity—baby boomer and IDU (56%), baby boomer and household contact with HCV infected individual (53%), baby boomer and sex with HCV infected person (29%), and baby boomer & tattoo (29%). Overall, individuals who listed baby boomer as a risk had a reactivity rate of 21%.

**CONCLUSIONS:** Baby boomers represent a large proportion of persons undiagnosed with HCV. Community-based organizations offering free HCV rapid testing serve as an important venue for high risk baby boomers to be tested for HCV. However, in the absence of additional risk (IDU, tattoo, household contact), community based organizations do not appear to be effective venues for identifying baby boomers.

## ABSTRACT 27

### Evaluation of CDC Recommendations for HCV Testing in an Urban Emergency Department

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**OBJECTIVE:** In 2012, with a national HCV prevalence of 3.25% among “baby boomers” (born 1945-65), CDC recommended one-time HCV testing without regard to risk in this cohort, in addition to targeted testing for all with risk factors or clinical indications. Emergency departments



(EDs) are a key venue for HCV testing because of their success in HIV screening given the populations they serve. However, few EDs have evaluated the underlining burden of known and unknown HCV infections in their populations before implementing an HCV testing program. Since the Hopkins ED has conducted serosurveys on HCV and HIV for the past two decades, we sought to determine the overall burden of undocumented HCV infection in our inner-city ED in order to provide guidance for an ED-based HCV testing program.

**METHODS:** An 8-week seroprevalence study with identity-unlinked methodology was conducted in an urban adult ED in 2013. All patients with blood specimens as part of their clinical procedures were included. Demographic and clinical information including documented HCV infection was obtained from administrative datasets or from electronic medical records. Anti-HCV antibody testing was performed on excess blood samples by HCV EIA after de-identification.

**RESULTS:** Of 4,713 patients, 652 (14%) were anti-HCV antibody positive. Of these, 204 (31%) patients did not have documented HCV infection. “Baby boomer” patients v. others had a higher overall and undocumented HCV prevalence (overall: 24.8% vs. 7.1%; unknown: 7.1% vs. 2.6%,  $p<0.05$ ). Prevalence of undocumented HCV infection varied by age, gender, and race. Notably, the undocumented prevalence for non-Black male born after 1965 and non-Black women born between 1966 and 1971 was equal to or greater than national prevalence of 3.25% in the “baby boomer” birth cohort. Among patients with undocumented infections, 99 (49%) would be diagnosed based on birth cohort testing approach alone, in addition to 54 (26%) identified on risk-based testing. If our ED adhered to the CDC guidelines, 51 (25%) patients with undocumented HCV would not be screened.

**CONCLUSIONS:** High seroprevalence of both known and undocumented HCV infection were observed, indicating that urban EDs could be a useful venue for HCV testing. “Baby boomer” birth cohort based testing recommended by CDC would augment identification of undocumented HCV infections in this ED two fold, relative to risk-based testing alone. Our data also demonstrated that one quarter of infections would still remain undiagnosed applying current CDC recommendations, suggesting the need to

consider modification of the CDC recommendations for HCV testing in ED settings.

## ABSTRACT 28

### Who Participates in Community-Based Screening for Hepatitis C Infection

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**OBJECTIVE:** The burden of HCV infection on patients and society is substantial. Despite major advances in therapy, a very low proportion of the infected population has been treated. Among the most important current obstacles to effective treatment are co-morbid psychosocial issues, which are frequently found in inner city neighborhoods and which affects both identification of HCV infection as well as linkage to care. We evaluated a program of rapid testing by a community-based organization.

**METHODS:** We present the demographic characteristics and test results of participants other information about insurance coverage, risk factors, and current medical care.

**RESULTS:** Using a rapid testing procedure and fingerstick blood (Orasure), we tested 3,275 people, 45%/55% women/men, mean age 48 years; 44% born between 1945 and 1965, at a series of community events. Eight percent were seropositive, 3.9% of women and 14.0% of men. Around 66% of all seropositives were members of the birth cohort. In 1,609 asked about a history of IV drug use, HCV prevalence was 29.6% vs 2.1% in those answering yes vs no, respectively. A history of IV drug use was a stronger predictor of seropositivity than were sex, race, age in relation to the birth cohort, or possession of health insurance ( $p<0.001$ ). In 1,609 participants queried about insurance coverage; 83.0% answered yes, 10.5% answered no, and 6.5% were uncertain. In a five-question survey was administered to 293 participants, 77-80% claimed to

receive health care, and have a physician who was trusted and could communicate. In contrast, only 42% had ever discussed HCV infection or liver disease with the caregiver.

**CONCLUSIONS:** These data suggest that participants in community HCV screening are engaged in health care, have health insurance, have not had HCV education within the traditional health care system, are interested in learning about HCV serostatus, and are five times more likely to be HCV-infected than is the general population. HCV screening at community events may be a valuable alternative to traditional screening programs.

## ABSTRACT 29

### Feasibility of HCV Rapid Testing Among Probationers and Parolees in Rhode Island

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**OBJECTIVE:** Hepatitis C (HCV) testing and prevention has not been widely addressed among community correction (i.e., probation and parole) populations. In contrast to jail and prison inmates, individuals on probation and/or parole may have more opportunities to engage in HCV risk related behaviors, such as injection drug use. HCV risk is also increased among criminal-justice involved persons residing in the community because of poverty, unemployment, lack of adequate health care, homelessness, sharing of injection equipment, unprotected sex with multiple and high risk sex partners, and untreated mental illness. Many individuals released from prison/jail often resume their pre-incarceration patterns of drug use and risky sexual behavior upon release. In order to address the need for expanded HCV testing in criminal justice populations, we conducted a rapid HCV testing pilot at probation/parole offices in Rhode Island.

**METHODS:** Between January 31, 2014 and February 25, 2015 current probationers/parolees at specific probation and parole offices in Rhode Island were offered participation in the project. Individuals provided voluntary, informed consent and participants completed and individual HCV educational session, rapid HCV antibody testing using the OraQuick rapid HCV assay (Bethlehem, PA), and pre-/post-test counseling with referrals for no-cost confirmatory testing for any person who had a reactive rapid test. In addition to covering the cost of confirmatory testing, participants were offered monetary incentives to complete confirmatory testing, return of confirmatory test results, and for persons diagnosed with chronic HCV infection, referral to a community health provider for HCV evaluation.

**RESULTS:** One hundred and fifty persons were eligible for participation after a brief eligibility screener was administered. Of those, 138 persons were consented and 130 persons accepted rapid HCV testing. Twelve persons had reactive rapid tests, however only five persons presented to a community-based clinic for confirmatory testing, despite being offered a monetary incentive to complete confirmatory testing. Four persons were positive for chronic infection but only three presented to receive their test results. No participants have presented for their scheduled appointment with a provider.

**CONCLUSIONS:** Probation/parole offices are a novel setting for rapid hepatitis C (HCV) testing, providing outreach to populations at increased risk for HCV infection and/or transmitting HCV to others. While some correctional facilities offer HCV testing, many individuals who present to probation/parole offices are never or briefly incarcerated and may not access medical services. Identifying and addressing barriers to HCV confirmatory testing is critical to increasing the uptake of HCV care and treatment in this vulnerable population.

## ABSTRACT 30

## Non-Risk Based HCV Screening Among Baby Boomers in Surveillance-Identified HIV Risk Areas

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**OBJECTIVE:** Despite advances in HCV screening, treatment, and recommendations, approaches for conducting HCV screening among baby boomers have not been fully explored. Because of the lack of hepatitis surveillance data and given shared risk factors for HIV and HCV, we used a novel method of identifying high HIV risk census tracts (CTs) using HIV surveillance data to target community-based HCV testing. We conducted a pilot study to estimate HCV seroprevalence and identify new and out of care HCV-seropositive baby boomers in these areas.

**METHODS:** Between August-September 2014, we conducted community-based HCV rapid testing (OraQuick Rapid HCV Antibody Test) in Washington, DC in high risk CTs identified using an algorithm utilizing routinely reported HIV surveillance data incorporating HIV prevalence and suboptimal HIV care continuum outcomes (e.g., high community viral load and proportions of persons never in/out of HIV care). HCV testing was done by street outreach in the 12 highest ranking CTs. Eligible participants were born between 1945-1965 and not currently engaged in HCV care. Confidential testing and a face-to-face behavioral survey were conducted in a mobile unit or at a local community-based organization office. HCV antibody (HCVAb)-positive individuals were asked to provide a blood specimen for confirmation and referred to HCV care. Confirmatory testing is ongoing, and seropositive participants will be followed prospectively for 3 months to assess linkage to care. We report seroprevalence and baseline behavioral data using frequencies, chi-square and t-tests.

**RESULTS:** Of 196 participants, 94% were black, mean age was 56 (SD±5), 74% were male, and 73% had public health insurance (see Table). 30% had ever injected drugs, 14% had ever been incarcerated, and 24% had ever been tattooed. 79% had never tested for HCV before. Overall, 58 (30%) were HCVAb-positive. 31% already knew their positive HCV status but were not receiving care; 69% were newly identified, of whom 51% had never been HCV tested before. HCV-seropositive individuals were older than negative individuals and were more likely to have ever injected drugs and have a history of incarceration.

**CONCLUSIONS:** Conducting community testing using this algorithm yielded a high HCV seroprevalence and large number of newly identified/out of care seropositive baby boomers. A high proportion had never been HCV tested, suggesting this testing paradigm may be effective in reaching individuals potentially at high risk for HCV in a community-based setting.

## ABSTRACT 31

## Prevalence of Hepatitis C Virus Infection in an Unselected Midwestern Emergency Department Population

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**OBJECTIVE:** Screening for Hepatitis C Virus (HCV) infection is recommended. Implementation of screening programs in the emergency department (ED) setting is challenging and controversial. Better understanding of HCV epidemiology in EDs could motivate and guide screening efforts. We characterized the prevalence of diagnosed and undiagnosed HCV in a Midwestern, urban, ED.

**METHODS:** This cross-sectional seroprevalence study used a repository of samples and self-reported health information obtained from consecutively approached ED patients between 18 and 64 years of age. Subjects consented to a “study of diseases of public health importance”, were



assured that samples would be permanently de-identified prior to analysis, and were compensated for participation. Age was collected in broad categories to assist with de-identification, and specific age values were imputed as needed for analysis. The Biochain ELISA kit for Human Hepatitis C Virus was used for antibody assay. Viral RNA was isolated using the QIAamp UltraSens Virus kit (100uL from each sample), followed by real time RT-PCR using a BioRad CFX96 SYBR Green UltraFast program with melt curve analysis.

**RESULTS:** Samples from 924 unique subjects were included in this analysis. Of these, 47% were age 18-39, 54% were African-American, and 50% were male. Overall, 128/924 (14%, 95% CI 12% - 16%) were antibody positive. Of these, 44 (34%) self-reported a history of HCV or hepatitis of unknown type and 103/128 (81%, 95% CI 73% - 87%) were RNA positive. Two additional patients were antibody negative but RNA positive. Patients with HCV antibody were more often male (64% vs 47%), IV drug users (40% vs. 2%), and someone who traded drugs or money for sex (23% vs 6%). Fully implemented birth cohort screening for HCV antibody would have missed 36/128 (28%) of cases with detectable antibody and 26/105 (25%) of those with replicative HCV infection.

**CONCLUSIONS:** A high proportion of both birth and non-birth cohort patients presenting to this ED were found to have HCV RNA positive infection. The ED is likely to be a uniquely important venue for HCV screening, and work to overcome the logistical challenges of screening in this setting is warranted. Most patients have identifiable risk factors, and many would have been missed by birth cohort screening. This suggests the need to further study the utility of targeted patient selection strategies applied to an expanded age range.

## ABSTRACT 32

### Harnessing the Power of Electronic Medical Record Algorithms to Streamline Routine HIV Screening

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**OBJECTIVE:** The purpose of this project was to utilize electronic medical record (EMR) technologies to facilitate the integration of routine HIV screening into the existing workflow of an urban academic emergency department (ED).

**METHODS:** Project HEAL (HIV testing, Education, Awareness, & Linkage to care ) worked with information systems staff to develop EMR algorithms that electronically screen patients for eligibility for routine HIV screening based on their age and documented testing history. In accordance with CDC guidelines, all patients age 13-64 with no EMR documentation of previous HIV test are eligible for routine HIV screening. Additionally, more complex algorithms were developed to identify high-risk patients to be screened annually. Proxies utilized to electronically assess patients' risk include EMR documentation of any of the following: residence in a zip code with high HIV prevalence, positive STI or HepC screening/s, or social history of MSM, undomiciled or injection drug use. We developed discern rules that ensure a patient care order to "Consent patient for routine HIV screening" is automatically generated for all patients who meet the eligibility criteria. An HIV Consent Process PowerForm was developed to streamline the process of documenting consent or refusal and ordering the HIV test.

**RESULTS:** A visual reminder and an order to "Consent patient for routine HIV screening" informs nurses whom they should screen for HIV. Nurses inform patients they will be tested unless they decline, and use our HIV Consent Process PowerForm to document patients' consent or refusal. If consent is documented, the PowerForm automatically places the order for the HIV test. These EMR innovations remove many barriers and time constraints to

routine HIV screening in the ED setting by streamlining the process of determining patient eligibility, documenting consent, and ordering the HIV test. As a result, HIV testing in our ED increased 9,625.71% within 3 months of the implementation of these EMR innovations, with a previous average of 7 tests per month and a current average of 680 tests per month.

**CONCLUSIONS:** Routine HIV screening in an urban ED is feasible and EMR innovations facilitate rapid improvement in screening practices. Utilization of EMR prompts and automated orders facilitates efficient integration of routine screening into ED workflow and minimizes burden for ED staff. EMR technologies and innovations should be utilized to improve the efficiency, acceptability, and sustainability of routine screening programs in EDs. Innovations should be tailored to the existing workflow in each health care setting to ensure optimal integration.

#### ABSTRACT 33

### Using Agency Policy and the EMR to Expand HIV/HCV Screening

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**OBJECTIVE:** To incorporate universal (opt-out only) HIV/HCV screenings utilizing agency policy and the EMR

**METHODS:** Jersey City has been identified as one of the ten cities with the highest number of people living with HIV/AIDS within the state of New Jersey. Of the 37,511 people living with HIV/AIDS in NJ, 7,166 reside in Jersey City. Current initiatives target high risk populations for testing (particularly MSM's and IDU's) however this overlooks a significant number of residents. In order to capture the patients who may appear to be low risk and are currently asymptomatic, we implemented the following: (1) modified our standing Consent for Treatment policy to include "opt-out only" language for HIV/HCV testing; (2) collaborated with our participating labs to identify and incorporate correct test codes to be used within the EMR templates; (3) adapted the EMR to create new patient visit

types that trigger the automatic population of templates that include standing orders for HIV/HCV testing for all new patients and initial patient visits for the calendar year; (4) educated providers on the new processes.

**RESULTS:** Within the first month of implementation (prior to agency wide implementation) 92 patients were screened for HIV/HCV. Of these 92 patients, 3 (3.2%) tested positive for HIV and 1 (1%) tested positive for HCV.

**CONCLUSIONS:** Adapting policy to include "opt-out only" language for HIV/HCV testing and EMR modification to trigger standing orders for HIV/HCV testing appear to successfully allow for identification and screening of patients who would not otherwise have been tested.

#### ABSTRACT 34

### Identifying Acute HIV Infections in the Emergency Room: Benefits of Fourth Generation HIV Testing

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**OBJECTIVE:** In response to the CDC's 2006 estimate that 25% of the people infected with HIV in the United States were unaware of their diagnosis, the CDC recommended screening for HIV infection in all healthcare facilities including emergency departments. Rapid, point-of-care testing had been the mainstay of ED testing programs until the development and early adoption of lab-based 4th generation HIV testing platforms (e.g. Abbott Architect Analyzer HIV Ag/Ab) which results HIV test results in approximately 1 hour. An additional benefit of this testing platform is that it can identify acute HIV infection between 10-21 days post exposure when patients are most infectious. We examine the impact of a lab-based 4th generation ED screening program on the detection of acute HIV infection in an urban indigent emergency department.

**METHODS:** We conducted a retrospective review of the 'R/O HIV in the LAC+USC ED' program for the 15 months before and after converting from a point-of-care

testing procedure to a lab-based 4th generation program. The LAC+USC ED offers non-targeted testing of adult ED patients between ages of 18 and 64 regardless of chief complaint. The primary outcome of interest was the number of acute HIV infections, defined by the CDC 4th generation testing algorithm, and identified through the testing program.

**RESULTS:** HIV testing increased from 8,983 tests in the 15 months before the 4th generation testing to 22,593 in the 15 months after. Correspondingly, the number of newly diagnosed HIV+ individuals increased from 36 (0.4%) to 115 (0.5%). Zero acute HIV infections were identified prior to 4th generation testing while 14 acute HIV infections (12.2% of new infections) were diagnosed after. Acutely HIV-infected individuals had mean age of 34.8 years and 93% were male, 21.4% were African-American and 79% Latino. Median viral load in this group was 1.7 million copies/ml (3 cases had viral load >10 million copies/ml) and 85.6% of the patients attended at least one HIV-specific outpatient clinic visit.

**CONCLUSIONS:** Converting to a rapid, 4th generation lab based HIV testing platform made identification of critically-important acute HIV cases feasible. Importantly, it is very successful in reaching and identifying acute infections in the minority populations often most challenging to access for HIV testing and diagnosis.

## ABSTRACT 35

### Does a Brief Intervention Among Drug Misusing Adult Emergency Department Patients Increase Uptake of Rapid HIV/HCV Screening?

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**OBJECTIVE:** Among adult emergency department (ED) patients who misuse illicit and/or prescription drugs: (1) assess if a tailored brief intervention (BI) increases uptake of rapid HIV/HCV screening, and (2) identify factors associated with greater screening uptake.

**METHODS:** This randomized, controlled trial recruited 18-64-year-old English- or Spanish-speaking, sub-critically ill or injured ED patients at two urban, medical school-affiliated EDs in Providence, Rhode Island, from July 2010 through December 2012. ED patients whose responses to the Alcohol, Smoking and Substance Involvement Screening Test indicated a need for a drug misuse intervention were enrolled. Participants received either no BI (control arm) or a tailored BI (BI arm) about drug misuse reduction, HIV/HCV risk and HIV/HCV screening need. Afterwards, participants were offered rapid HIV/HCV screening. Audiotapes of BI sessions were reviewed and coded for HIV/HCV screening content areas. Multivariable regression models were used to identify patient, clinical, temporal, and study-related factors associated with greater screening uptake.

**RESULTS:** Of the 957 participants, their median age was 30 years-old (IQR 24-42); 47% were female; and 91% had ever been tested for HIV and 72% for HCV. Marijuana, crack/cocaine and prescription opioids were the most commonly reported misused drugs. Rapid HIV/HCV screening uptake was greater in the control than the BI arm (45% vs. 38%;  $p < 0.04$ ). Uptake varied by time spent in the study (time from consent to test offer); this temporal effect differed by study arm. In the control arm, the relationship of screening uptake and time elapsed was parabolic; uptake peaked at 45 to 60 minutes and was lowest for those who spent <30 minutes or  $\geq 90$  minutes in the study. In the BI arm, screening uptake generally increased over time. In the regression analyses, participant uptake of screening notably depended on which research staff member offered testing. The inclusion of tailored BI content specifically addressing participant HIV/HCV knowledge (OR 1.40 [0.91-2.15]), HIV/HCV risk behaviors (OR 1.03 [0.67-1.60]), or need for HIV/HCV screening (OR 1.30 [0.85-1.99]) did not increase screening uptake.

**CONCLUSIONS:** This tailored BI did not increase rapid HIV/HCV screening uptake among drug-misusing adult ED patients as compared to no BI. However, the study findings suggest factors that should be considered when designing future ED-based HIV/HCV screening initiatives, such as time elapsed in the study (reflecting questionnaire length, engagement in the topic, participant fatigue and duration of the BI), who offers testing (implying

a “personal touch” interaction), and the content of interventions.

## ABSTRACT 36

### Laboratory Driven Expedited HIV Screening and Confirmation at an Urban Emergency Department in Washington, DC

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**OBJECTIVE:** Howard University Hospital, serving an underserved urban population, implemented a laboratory-driven routine HIV screening program for emergency department (ED) patients who did not opt out. We examined screening outcomes from the first year of the program.

**METHODS:** HIV screening tests were ordered in the laboratory for adult patients who had blood already drawn as part of their ED visit. HIV antigen/antibody combo (Abbott Architect) was performed in the main laboratory as the HIV screening test. Rapid HIV tests (Alere Orasure) were performed in the ED Fast Track on patients, who didn't have blood drawn as part of their ED visit. A confirmatory HIV-1 and HIV-2 immunodifferentiation assay (BioRad) was performed on positive screens within one hour. This screening/confirmation approach allowed for rapid lab results which could be delivered to patients while still on site. An HIV care navigator was available 24/7 to link HIV positive patients to care. Unconfirmed positive screens were sent for HIV viral load testing in order to exclude acute HIV infection.

**RESULTS:** In 2014, 15,996 ED patients were screened and 127 (0.8%) were positive. Two acute HIV infections were detected. Baseline testing data from 2013 revealed that an average of 542 tests were performed per month. After the Initiation of the lab driven model sponsored by FOCUS partnership, an average of 1,340 screens were performed per month, representing an increase of 147%. Every ED

patient, who was screened, was counseled, regardless of the screen result, and received a wallet-sized card with the result and a recommendation for retesting when applicable. New HIV positive patients were linked to care immediately by being given an appointment in the hospital-based infectious disease center.

**CONCLUSIONS:** The laboratory can efficiently perform the screening for a large % of ED patients, can do it quickly, and can do it in a way that gets results back to ED patients while still on site, resulting in linkage to HIV care for positive patients from a healthcare underserved urban population.

## ABSTRACT 37

### HIV Accessible Testing: Implementation of Routine HIV Testing within a Large Urban County Health System

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**OBJECTIVE:** The purpose of this presentation is to describe core elements of a model to routinize HIV testing, summarize outcomes, and identify implementation barriers and facilitators.

Despite advances in the availability of HIV diagnostic testing and anti-retroviral treatment, the United States HIV epidemic continues to persist and recent estimates suggest that 55,000 individuals are infected annually. [i] Additionally, research has demonstrated that health systems, using risk and symptom based HIV testing strategies, often diagnose patients later in the course of the disease and frequently after repeated encounters with the medical system. [ii], [iii], [iv]

[i] Hall H, Song R, Rhodes p, et al. Estimation of HIV incidence in the United States. JAMA. 2008; 300(5):520-529.

[ii] CDC. Late versus early testing of HIV - 16 sites, United States, 2000-2003. Morb. Mortal. Wkly. Rep. 2003;52(25):581-586.



[iii] Duffus W, Kettinger L, Stephens T, et al. Missed opportunities for earlier diagnosis of HIV infection – South Carolina, 1997-2005. *Morb Mortal. Wkly. Rep.* 2006;55(47):1269-1272.

[iv] Grigoryan A, Hall H, Durant T, Wei X. Late HIV diagnosis and determinants of progression to AIDS or death after HIV diagnosis among injection drug users, 33 US States, 1996-2004. *PLoS ONE.* 2009;(2):e4445.

**METHODS:** A multi-method case study approach was used to explore the conceptualization, implementation and outcomes of the model to routinize HIV testing.

**RESULTS:** The core elements of the model include policy work, data work, marketing, technology and professional development. Testing has increased across multiple clinic settings. Within community settings, HIV testing rates increased from 10-20% at baseline to 32-49%. Within acute care settings, testing rates grew from <1%-24% to 28-44%. Across all acute care settings 26% of all patients seen with in the CCHHS have been tested for HIV. When you look at the selected community based clinics, the percentage of patients who have been tested for HIV is an average of 40% of the clinic population. Implementation barriers and facilitators were explored. Barriers included institutional issues, leadership, attitudes, role conflict and ambiguity, as well as conflicting messages. Facilitators included reimbursement practices, data and communication routines, role flexibility and creativity, and partnering with internal champions.

**CONCLUSIONS:** We will discuss successful tools/recommendations to scale up routine HIV testing across the system to include: opt-out HIV consent, an EMR pop-up reminder for providers, a CQI process, trainings, a Linkage to Care Manager, promotional and educational materials.

## ABSTRACT 38

### As Routine as it Gets: Five Years of Routine HIV Screening in Two Houston Emergency Centers

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**OBJECTIVE:** To retrospectively study 5 years of routine HIV screening in two of Houston's busiest emergency centers and evaluate the outcomes of the program over the years.

**METHODS:** Harris Health System is the public safety net hospital system in the Houston area. A routine HIV screening program has been running at various sites across Harris Health since 2008. Patients 16 years of age or older visiting the participating sites and requiring a blood draw or IV insertion for other reasons during their visit receive an HIV screening unless the patients opt out. Patients are informed at registration and are given the opt-out form along with other registration forms. For this study we evaluated data from the two emergency centers, which together account for more than half the HIV tests performed in Harris Health. All data were extracted from the health system's unified electronic medical record and electronic laboratory databases.

**RESULTS:** Between 2009 and 2013 a total of 256,888 tests were performed in the two EC's including 3946 tests with a positive result. 757 of the positive tests (0.29% of total tests) were new diagnoses as confirmed by Houston Department of Health and Human Services. Rate of new diagnosis decreased from 0.37% in 2009 to 0.24% in 2013 ( $P=0.002$ ). Proportion of patients with an initial CD4 cell count over 350 had an increasing trend from 20% in 2009 to 32% in 2013 ( $P=0.167$ ). Similarly, the average initial CD4 had an increasing trend from 250 in 2009 to 287 in 2013 ( $r=0.73$ ;  $P=0.164$ ). Linkage to care (49% to 58%;  $P=0.007$ ), retention in care (41% to 47%;  $P=0.026$ ), and viral suppression within 12 months (30% to 46%;  $P<0.0001$ ) improved over the years. Male, black, and young to middle-aged individuals had a disproportionately higher positivity rate. Male, Hispanic, and middle aged and older

individuals showed better linkage, retention, and viral suppression. Visit and laboratory data were not available from external sources, therefore the presented rates are likely lower bounds.

**CONCLUSIONS:** The program has been highly successful in screening patients and identifying undiagnosed HIV-infected persons. Linkage and retention rates are at worst moderately successful. Nearly half the newly diagnosed achieved viral suppression within a year, which is above national estimates. Decreasing rate of new diagnosis and improved initial CD4 over the years indicate that the program has made an impact in the community.

## ABSTRACT 39

### Hepatitis C Birth-Cohort Testing and Linkage to Care, Selected U.S. Sites, 2012-2014

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**OBJECTIVE:** Following CDC's recommendation for one-time hepatitis C virus (HCV) testing of persons born from 1945-1965, CDC implemented a project to conduct birth-cohort testing in several U.S. health settings. Our objectives were to describe HCV infection prevalence and demographics of persons participating in the project and identify strategies that facilitated entry into care for those who were chronically infected (HCV testing-to-care continuum).

**METHODS:** Data were drawn from the Hepatitis Testing and Linkage to Care (HepTLC) project, conducted from 2012-2014. All participants reporting a birth-year from 1945-1965 were tested for HCV antibody (anti-HCV) at 28 health care settings in 15 U.S. cities. The HCV testing-to-care continuum was evaluated using the following indicators: anti-HCV positives (past or present infection), HCV RNA tests, HCV RNA positives (chronic infection), persons referred to medical care, and persons attending first medical appointment. To assess receipt of HCV RNA

testing, we compared the proportion of anti-HCV positives that were tested for HCV RNA the same day as the anti-HCV positive test with the proportion of anti-HCV positives that were tested for HCV RNA any day after the initial anti-HCV positive test. Passive and assisted linkage methods were also evaluated by comparing the proportion of individuals with chronic HCV infection that attended a first medical appointment. Staff either scheduled a date for a medical appointment for persons with chronic HCV infection (assisted linkage) or referred a HCV-infected person to care (passive linkage).

**RESULTS:** Among all persons tested (N = 24,315), 2,970 (11.4%) were anti-HCV positive. Anti-HCV positivity was greatest among non-Hispanic Blacks [1,709 (61.2%)] and males [1,993(73.5%)]. Among all anti-HCV positives, 1,965 (70.4%) received a HCV RNA test, 1,371 (46.1%) were HCV RNA positive, 1,131 (38.0%) were referred to care, and 862 (29.0%) attended their first medical appointment. All (100%) anti-HCV positive persons that received same-day HCV RNA testing were tested for HCV RNA, while only 57.1% of persons that did not receive same-day testing were subsequently tested for HCV RNA. A greater proportion of chronically infected persons were linked to care through assisted methods (84.2%) than through passive methods (62.4%).

**CONCLUSIONS:** Birth-cohort testing identified 2,970 (11.4% anti-HCV prevalence) anti-HCV positive persons without the need to solicit HCV risk information. However, providers need to improve follow up HCV RNA testing and linkage of chronically infected persons to care. Providers implementing birth-cohort testing should develop strategies designed to improve outcomes along the testing-to-care continuum, including same-day HCV RNA testing and assisted linkage strategies.



## ABSTRACT 40

## Assessing Billing Practices for Routine HIV and HCV Tests in Philadelphia's Clinical Settings

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**OBJECTIVE:** To identify facilitating factors and barriers to billing and reimbursement for routine HIV/HCV tests performed in clinical settings.

**METHODS:** The Pennsylvania/MidAtlantic AIDS Education and Training Center's (PA/MA AETC's) site at the Health Federation of Philadelphia assessed 11 clinical settings within eight healthcare organizations implementing routine HIV (n=9) and HCV (n=2) testing programs. Participants included inpatient, emergency department (ED), and ambulatory care settings. PA/MA AETC developed and distributed a questionnaire addressing billing practices, reimbursement models, and general programmatic information. Individualized technical assistance was provided to increase questionnaire completion rates.

**RESULTS:** Participating sites had existing revenue cycle management infrastructures, third-party payer contracts, and clinical billing experience. Billing models differed based on the location of HIV/HCV test completion; both clinical sites and laboratories generated claims and accepted remittance for services completed. Claims consistently included HIV/HCV tests in 100% of inpatient sites, 50% of EDs, and 83% of ambulatory care sites. Facilitating factors to billing included laboratory-based tests, integrated clinical workflow, and electronic health records. Limited billing was associated with rapid/point-of-care (POC) HIV tests and reported by 27% of sites. Barriers included funding restrictions, non-integrated workflow, and unestablished billing processes. Reimbursement discrepancies were attributed to differing third-party payer contract stipulations and location of test completion. Inpatient and ED financial departments received bundled, encounter-based reimbursement from all payers, regardless of clinical settings or laboratories completing HIV/HCV tests. Ambulatory sites primarily received bundled,

encounter-based payment, including rapid/POC test costs; select payers permitted fee-for-service reimbursement, equaling 15% of billed tests in one setting. Ambulatory sites ordering laboratory-based HIV/HCV tests reported 99% reimbursement to laboratories; healthcare settings received bills from laboratories for unpaid tests. All setting types reported fewer denials and less departmental budget expenditures for laboratory-based tests. Conversely, rapid/POC tests alter workflow and require staff time and supplies from departmental budgets.

**CONCLUSIONS:** Laboratory-based testing is economically sound across sites due to clinical integration and third-party payer contract stipulations. Third-party payer "coverage" does not guarantee net revenue by clinical testing sites, but laboratory-based HIV tests limit departmental budgetary expenditures. Sites exclusively utilized laboratory-based HCV tests, but conclusions may be generalizable due to rapid/POC test-affiliated barriers and resource requirements. Patient uptake, payer mix, percentage of uninsured patients, and clinical resources must be considered when selecting testing models. Clinical, administrative, and financial staff should perform internal assessments for programmatic decision making and improvement.

## ABSTRACT 41

## Electronic Medical Record Flags Have a Limited Impact on Hepatitis C Virus Birth Cohort Screening in the Primary Care Setting: Results of a Multifaceted Intervention to Improve Screening

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**OBJECTIVE:** New York is the first state to pass legislation that took effect January 2014 requiring healthcare providers to offer HCV screening for all outpatients born 1945-1965 receiving primary care. Our health system aims are to establish a successful model for birth cohort

screening and link positive persons to care. We describe the impact of an Electronic Medical Record (EMR) flag on HCV screening rates, factors associated with screening and provider barriers to screening.

**METHODS:** An EMR flag was implemented in March 2014 for all eligible outpatient encounters. The results of HCV antibody (Ab) testing for individuals born 1945-1965 with primary care encounters at Icahn School of Medicine Mount Sinai were obtained from November 2013-October 2014 and analyzed. Provider level, practice and patient demographics were collected. Birth cohort screening rates before and after an educational intervention and data feedback were compared. The effect of covariates on HCV screening was analyzed. Qualitative thematic analysis of focused discussions with providers identified common barriers to birth cohort screening.

**RESULTS:** There were 37,223 primary care encounters that met inclusion criteria. Median age was 58.9 years with 34% male and 41% Hispanic. At baseline, 49% of outpatient encounters were screened for HCV. In the month post-EMR flag, HCV screening rates rose to 59% ( $p<0.01$ ) and have remained steady. While HCV screening rates did not improve after didactic sessions ( $p=0.27$ ), there was a significant increase following data feedback to providers ( $p<0.01$ ). Age less than 60 [Odds Ratio (OR) 1.21, 95% Confidence Interval (CI) 1.12-1.30], male gender [OR 1.18, 95% CI 1.09-1.28], Non-Hispanic ethnicity [OR 1.16, 95% CI 1.06-1.27] and attending providers [OR 1.27, 95% CI 1.18-1.38] were associated with HCV screening. The overall HCV Ab positive detection rate pre-EMR flag was 2% compared to 3% post-EMR flag ( $p=0.02$ ). Of patients with a positive HCV Ab, 70% had confirmatory HCV viral load testing and of these, 64% had detectable virus. Of those with a positive HCV Ab, 52% were referred to a specialty liver practice.

**CONCLUSIONS:** An EMR flag provided modest improvements in outpatient HCV screening, however 80% of eligible patients remained unscreened. Practice-level feedback to primary care providers significantly improves HCV screening rates. Our data highlights targets for future interventions to increase screening including directed education for women and Hispanic patients and possibly a system redesign employing other members of the healthcare team.

## ABSTRACT 42

### Inpatient Hepatitis C Virus Birth Cohort Screening in a Large Urban Hospital: From Guidelines to Practice

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**OBJECTIVE:** New York State passed legislation effective January 2014 requiring healthcare providers to offer birth cohort HCV screening and link positive persons to care for patients admitted to the hospital. Our aims are to establish a successful model for birth cohort screening and transition positive persons into care with a multi-faceted systems improvement approach. We describe the impact of our current interventions including electronic medical record (EMR) flags, education and data feedback on HCV screening rates on inpatients.

**METHODS:** The results of HCV antibody (Ab) testing for individuals born 1945-1965 with inpatient encounters at Mount Sinai were obtained from November 2013-October 2014 and analyzed. The type of service, level of provider and demographic information were collected. A birth cohort-selective EMR flag was implemented in January 2014. The flag is part of a nursing admission checklist and orders are routed to the admitting physician. Screening rates before and after various interventions were compared. The effect of covariates on HCV screening was analyzed.

**RESULTS:** There were 16,328 inpatient encounters that met inclusion criteria. The median age was 59.6 years with 57% male and 24% Hispanic. Pre-EMR flag data demonstrated that 34.9% of inpatient encounters were screened for HCV. In the first two months post-EMR flag implementation, the percent of newly screened patients of those eligible rose from 6% to 10% ( $p=0.01$ ), but was not sustained. The overall HCV screening rates remained unchanged at 35% ( $p=0.92$ ) during the study period. The overall screening rate did not improve following didactic sessions to housestaff and nurses ( $p=0.86$ ) or with data feedback to nursing managers ( $p=0.42$ ). Hispanic ethnicity [OR 1.45, 95% CI 1.24-1.70] and admission to primary medicine service [OR 1.87, 95% CI 1.46-2.39] were

associated HCV screening. Positive HCV Ab detection rates pre-EMR flag were 3.1% compared with 8.6% post-EMR flag ( $p < 0.01$ ). Of all patients with a newly positive HCV Ab test, 56% had confirmatory HCV viral load testing and of these, 79% had detectable virus.

**CONCLUSIONS:** Positive HCV Ab rates are high among inpatients within this birth cohort admitted to an urban hospital in New York City. We present the results of an EMR flag, educational intervention and data feedback on birth cohort HCV screening rates for inpatients born between 1945-1965. While EMR flags initially improved screening rates in eligible inpatients, this improvement was not sustained. The incorporation of patient navigators and reflex HCV viral load testing with screening may improve gaps of care in the future.

#### ABSTRACT 43

### Self-Requests for ED-Based HIV Testing Yield Higher Positivity Rates than Risk-Based Targeting

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**OBJECTIVE:** HIV screening in EDs is essential for earlier diagnosis of individuals who would not otherwise seek testing. Use of the ED by those who are actively seeking HIV testing is not well-characterized. Our ED offers screening to patients, but also offers HIV testing on a “walk-in” basis without requiring people to register as ED patients. Whether this expansion of testing beyond the traditional ED population provides any benefits for individual or population health depends on the as yet unknown yield of such a testing program. We compared risk behaviors and positivity rates for ED patients who: 1) are risk-targeted by staff; 2) self-request testing during their ED course, 3) self-request testing through an ED walk-in service.

**METHODS:** Data for this cross-sectional prevalence study were abstracted from the records of our ED-based HIV testing program for 2013. Data were obtained using

structured forms used to guide a risk-reduction counseling session. Testing was conducted with point-of-care rapid assays administered by testing program counselors. Groups were compared using ANOVA, Independent Samples T-tests, or the Chi-Square test, as appropriate.

**RESULTS:** The risk-targeted group had 2,229 tests with 12 positives (0.5%); the ED course self-request group had 189 tests with 9 positives (4.8%); and the walk-in testing group had 103 tests with 5 positives (4.9%). Compared to the risk-targeted group, positivity rates were higher for ED course self-requests (difference 4.2%, 95% CI 1.2-7.3%), and walk-in self-requests (difference 4.3%, 95% CI 0.2-7.3%). The proportion of men who have sex with men was 3% in the risk-targeted group, which was significantly lower than the ED-course group (10%), and the walk-in group (23%). The self-request groups also had fewer youth (age <25 years) than the risk-targeted group. Overall, 76% were black, 56% were male, and 59% were uninsured, and there were no differences between groups for these characteristics.

**CONCLUSIONS:** While risk-based targeting in EDs may help to find positives that might not have been identified elsewhere, accommodating patient and “walk-in” self-request for testing can serve a proportion of at risk patients, and yield greater positivity. The addition of protocols to include these patients in a traditional risk-based screening program may be a simple and effective way to expand testing for high-risk patients.

#### ABSTRACT 44

### Scaling Up HIV Testing in an Academic Emergency Department: An Integrated Testing Model with Both Fourth-Generation Testing and Point-of-Care (POC) Testing

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**OBJECTIVE:** We evaluated two approaches for implementing routine HIV screening in an inner-city, academic emergency department (ED). The components



we modified included staffing and type of HIV testing technology. The programmatic outcomes we assessed included total number of tests performed, prevalence of newly identified HIV positive patients, and percentage of newly diagnosed who were linked to care (LTC).

**METHODS:** We examined specific outcomes for two distinct, successive approaches to implementing HIV screening in an inner-city, academic adult ED, from July 2012 through June 2013 (Program One), and August 2013 through July 2014 (Program Two). Program One used a supplementary staff testing model with point-of-care (POC) oral testing. Program Two utilized a triage-integrated HIV Testing Model with fourth-generation blood and POC testing, and an expedited LTC process.

**RESULTS:** During Program One, 6,832 patients were tested for HIV with a rapid POC oral HIV test. Of all patients tested, 16 (0.23%) were newly diagnosed with HIV, of whom 13 (81%) were successfully linked to care. During Program Two, 8,233 patients were tested for HIV; of those, 3,124 (38%) received a blood test and 5,109 (62%) received a POC test. Of all patients tested in Program Two, there were 29 (0.35%) newly diagnosed cases of HIV, four of which were acute infections, and 27 (93%) of which were successfully linked to HIV specialty care. Comparison of these two programs revealed an increase in total testing volume by more than 1400 tests (21%), an increase in the total number of patients newly diagnosed with HIV by 13 (81%), and an increase (15%) in the percentage of patients who were successfully LTC.

**CONCLUSIONS:** Integrating HIV screening into the standard triage workflow resulted in a greater number of ED patients who were tested for HIV as compared to the supplementary testing staff only model. New rapid fourth-generation testing technology allows for the identification of acute HIV infection, as well as same-visit confirmation of a positive diagnosis.

## ABSTRACT 45

### Expanded Testing for Hepatitis C Virus Infection in a Public Health Department and Linkage to Care in Durham, North Carolina

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**OBJECTIVE:** A key strategy in the national Viral Hepatitis Plan is to strengthen partnerships connecting local health departments, community-based organizations and healthcare providers for viral hepatitis services. We implemented a hepatitis C virus (HCV) testing and linkage to care program at a local public health level, using similar strategies reported for HIV care. We analyzed program data to identify HCV prevalence, factors associated with HCV infection, and linkage to care outcomes.

**METHODS:** HCV antibody testing with reflex RNA was coordinated through the county public health department in Durham, North Carolina. Testing was offered at the STD clinic, county jail, community outreach sites, including a residential substance abuse recovery program, and a homeless clinic. HCV testing was integrated with HIV and STD screening at the majority of the sites. Universal opt-out HCV testing was offered to jail inmates while targeted HCV testing was offered to patients at the other locations based on risk factors, including current and past intravenous drug use (IDU), HIV-infection, and birth year from 1945 through 1965. Persons with chronic HCV infections were linked to care through an HCV “bridge counselor” or patient navigator who provided HCV education, incentives, transportation, and scheduled appointments with HCV specialists at nearby academic centers and on-site clinics.

**RESULTS:** From December 2012 to March 2015, 2989 tests were conducted for HCV among high-risk individuals who presented at the testing sites. Five hundred and ten (17%) had reactive HCV antibody results, of which 386 (78%) had detectable HCV viral load. Among patients

with chronic active HCV infection, 289 (75%) were male, 173 (45%) were Black, and 183 (47%) were born from 1945 through 1965. Two hundred and fifty-four (66%) of persons with chronic active HCV infection disclosed current or past IDU; only 3% had HIV co-infection. Of the 386 individuals with chronic active HCV infection, 314 (81%) received post-test counseling and 195 (51%) were linked to a first appointment with an HCV medical provider. Individuals were not linked for a variety of reasons including incarceration, relocation, inability to be contacted, and refusal of linkage services.

**CONCLUSIONS:** HCV testing and linkage to care can be facilitated at the local public health level by leveraging existing programs and provider networks to deliver a coordinated system of care. Expanded HCV testing through public health programs can identify a significant proportion of patients with chronic active HCV infection; however, additional measures are needed to enhance linkage to care.

#### ABSTRACT 46

### CDC-Funded HIV Testing, HIV Positivity, Linkage, and Referral Services in Correctional Facilities in the United States

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**OBJECTIVE:** Incarcerated persons are often at higher risk for multiple health issues, including HIV. HIV services in correctional facilities provide an opportunity to target a medically underserved population who may not otherwise access health care services but may be undiagnosed or at high risk for HIV infection. Therefore, the purpose of these analyses was to examine CDC-funded HIV testing, HIV positivity, and HIV service delivery in correctional facilities.

**METHODS:** Data were submitted by 61 health department jurisdictions in 2013. CDC-funded HIV testing, HIV positivity, receipt of HIV test results, linkage to HIV medical care, referral to partner services, and referral

to HIV prevention services were described by client characteristics. Additionally, trends on HIV testing, HIV positivity, and linkage to HIV medical care from 2009-2013 were presented.

**RESULTS:** Of all CDC-funded tests in 2013, 254,719 (7.6%) were conducted in correctional facilities, and African Americans accounted for 45.8% of testing events conducted in correctional facilities. In 2013, HIV positivity in correctional settings was 0.9% overall and 1.3% among African Americans. HIV positivity for newly identified persons was 0.3% overall and 0.5% among African Americans. Overall, 67.5%-84.0% of newly identified HIV-positive persons were linked to HIV medical care within any timeframe, 37.9%-88.9% were linked within 90 days, 49.7%-75.3% were referred to partner services, and 45.2%-80.9% were referred to HIV prevention services. Because of incomplete data, ranges are presented for HIV service delivery. Trend analyses for the period of 2009 to 2013 indicated a significant percent increase in HIV testing (2.7%,  $p < .001$ ), overall HIV positivity (4.4%,  $p < .001$ ), and linkage for HIV-positive persons (26.8%,  $p < .001$ ), and linkage for newly identified HIV-positive persons (15.6%,  $p < .001$ ). However, trends have remained stable among newly identified HIV-positive persons from 2009 to 2013, and no significant change was observed ( $p > .05$ ).

**CONCLUSIONS:** Correctional facilities have an opportunity to identify undiagnosed HIV-positive persons. However, improvements are needed in HIV service delivery, specifically linkage to HIV medical care. Previous research has indicated that service provision for incarcerated persons post-release is challenging. Transitional programs beyond case management could be used to facilitate HIV medical care and other prevention services for incarcerated persons post-release. Routine HIV testing and provision of HIV services in correctional facilities have important public health implications and can improve the health of HIV-positive persons and the communities to which they will return.

## ABSTRACT 47

## Characteristics of First-Time HIV Testers in CDC-Funded Health Department Jurisdictions, 2013

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**OBJECTIVE:** Over 1.2 million people are living with HIV in the US. HIV testing and knowledge of status are key first steps to curb the epidemic. Although the number of persons unaware of their HIV status has decreased, 14% of HIV-positive persons had not yet been diagnosed in 2011. The purpose of these analyses was to examine characteristics of first-time testers among CDC-funded HIV tests.

**METHODS:** Data were submitted by 61 health department jurisdictions in 2013. CDC-funded HIV testing, first-time HIV testers, HIV positivity, linkage to HIV medical care, and other HIV-related services in 2013 were analyzed by client characteristics.

**RESULTS:** In 2013, 3,213,187 CDC-funded HIV testing events were conducted among persons aged 18 years and older; 18.4% (589,816) were first-time testers. Of testing events in non-health-care settings, 22.4% were among first-time testers, and 16.7% of testing events in healthcare settings were among first-time testers. First-time testers included 21.6% of persons aged 18-29 years, 20.9% of Hispanics/Latinos, 14.7% of blacks/African Americans, 15.5% of transgendered persons, and 13.3% of MSM. Overall, 0.6% of first-time testers were HIV-positive. HIV positivity was highest among persons aged 30-39 years (0.8%), blacks/African Americans (1.0%), transgendered persons (1.7%), and MSM (4.0%). Overall, 59.1%-84.7% were linked to medical care within any timeframe, 48.2%-85.3% were linked within 90 days, 70.9%-88.9% were referred to partner services, and 56.1%-82.7% were referred to HIV prevention services. Because of incomplete data, ranges are presented for service delivery.

**CONCLUSIONS:** Routine HIV testing among populations at risk is necessary to reduce the time between

HIV infection, diagnosis, and initiation of treatment. Understanding barriers to HIV testing is needed to design more effective health communication strategies to increase testing.

## ABSTRACT 48

## Trained Graduate Student Volunteers – A Supplementary HIV Testing Workforce for an Integrated Testing Model with Both Fourth-Generation Testing and Point-of-Care (POC) Testing

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<sup>1</sup>Johns Hopkins University, Baltimore, Maryland, United States of America

**OBJECTIVE:** To evaluate the outcomes of expanding the routine HIV screening program in an inner-city, academic emergency department (ED) using supplementary trained graduate student volunteers who functioned as testing staff.

**METHODS:** A point-of-care (POC) oral-fluid HIV testing program was instituted in an inner-city ED in 2005. Since August 2013, triage-integrated HIV testing model with fourth-generation blood and POC testing, and an expedited linkage-to-care process has been in place to offer free HIV testing to all consentable 18-65 year-old patients who were not critically ill. Triage nurses offered HIV tests to eligible patients through an electronic prompt. Testing staff were automatically paged to test consented patients who did not get blood drawn as part of their clinical care. Testing staff also offered testing at the bedside to patients who were either not offered a test at triage and/or those who declined testing at triage (i.e. a second offer). Johns Hopkins Students Outreach Resource Center (SOURCE) has been collaborating with Johns Hopkins Hospital Emergency Department to support their HIV testing program with medical, nursing, and public health student volunteers. Students undergo a 3-day training to become certified HIV counselors in Maryland, and a site-specific training. The volunteers completed a standardized shift report at the end of each shift, reporting the numbers of



tests, positive results, and linkage rates for those newly identified as well as those with known HIV but not in care. Shift reports from December 2013 through February 2015 were analyzed.

**RESULTS:** During the study period, student testing staff completed 640 hours of testing. Overall a total of 5934 patients were tested by POC by testing staff, of which 1097 (18%) were tested by student testing staff volunteers. 509 of these were from triage initiated pages, and 588 were by direct approach. Of all patients tested by volunteers, 2 (0.2%) were newly diagnosed with HIV, and both were successfully linked to care. Another 2 known-positive patients were re-linked to care.

**CONCLUSIONS:** Supplementing the routine ED-based HIV screening program using a volunteer-based workforce is a valuable asset, which resulted in greater numbers of patients tested and identification of both newly diagnosed and known HIV-positive patients who were subsequently linked to care. Expanding this program would provide a reduction in both missed opportunities and programmatic costs. Further, this program provides an opportunity for training graduate-level students who will serve as the next generation of HIV care providers and public health advocates.

## ABSTRACT 49

### Emergency Room Integrated Routine HIV Screening: An Innovative Way to Reach the Major Drivers of the Epidemic-The Undiagnosed

*S Ayangeakaa<sup>1</sup> and D Sinclair<sup>1</sup>*

<sup>1</sup>Advocate Trinity Hospital, Chicago, Illinois, United States of America

**OBJECTIVE:** To identify two indicators of a successful linkage to care visit.

To differentiate between linkage to care and retention in care.

To identify a quality assurance measure for missed opportunities to testing.

**METHODS:** Routine HIV screening was provided to consenting individuals 15-65 years of age receiving treatment in the ED at the point of triage. Results were given prior to discharge, and linkage to care appointments were scheduled for individuals found to be reactive within 2 days of the confirmed Western Blot results.

**RESULTS:** Approximately 5,748 people were screened in the ED (an 86% acceptance rate), beginning April 1, 2013. Eleven individuals were confirmed reactive (greater than 0.1% seropositivity rate), and 100% of the confirmed cases were linked to care. About 98% of these individuals had 2 documented visits in the electronic medical records (EMR) within 6 months, and 80% of these individuals had a CD4 count in their EMR within 30 days. Greater than 90% of these individuals had 3 or more visits to the ED within 12 months prior to the integration of the routine screening project. "Impact Stories" were essential for key-stake holders and staff members to clearly define ownership of the project intergration and successfully meet process indicators for quality assurance.

**CONCLUSIONS:** Integrated routine HIV screening in an ED is an innovative way to reach the major drivers of the epidemic—the undiagnosed, and should be replicated in many more ED's.

## ABSTRACT 50

### Challenges to Enhanced Reliance on Third Party Reimbursement for HIV Testing in the District of Columbia

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**OBJECTIVE:** Until recently, the costs of HIV testing have largely been covered by the CDC, departments of health, and local clinics and organizations. This resource climate however is changing due to newly enacted Affordable Care Act provisions through which health care coverage has been expanded and third party payers are now required or incentivized to cover many preventive services including

HIV testing. This study explored how primary care clinics in the District of Columbia are making a transition from categorical support to third party reimbursement (TPR) for HIV testing and associated barriers and facilitators.

**METHODS:** An implementation science framework guided this study's exploration of this transition. An embedded case study design was utilized that incorporates three sub-units of analysis including: DC government representatives, reimbursement stakeholders, and DOH-supported primary care providers. Data was collected through document review and interviews. Purposeful sampling was used to identify key informants and their organizational affiliations. Four primary care clinics were selected based on following criteria: number of clinic patients, availability of dedicated resources for HIV testing, and testing models and their implications for billing and reimbursement.

**RESULTS:** Key informants were knowledgeable and held favorable views about a shifting resource environment, however, when it came to the transition away from categorical support for HIV testing to a stronger reliance on TPR, clinical informants perceived this transition less favorably. This sentiment resulted from challenges they encountered in trying to seek TPR to sustain their testing programs. Barriers to a successful transition to a stronger reliance on TPR included policies and procedures related to TPR, resource constraints, organizational factors, and communication between stakeholders. Third party reimbursement barriers largely had to do with testing strategies that were not compatible with current third party policies and procedures. Specific challenges included current categorical support, staffing models and use of non-credentialed providers, bundled reimbursement rates, and inadequate reimbursement.

**CONCLUSIONS:** Key policy and programmatic recommendations resulting from this study include: 1) Assessment and Expansion of Federally Qualified Health Centers coverage of preventive services; 2) Expansion of coverage for testing by non-credentialed providers; 3) Increased requirements for DC Medicaid Managed Care Organizations; 4) Update for Medicare's national coverage determination for routine testing; 5) Expansion of DOH's support to explore ways to facilitate reimbursement for

rapid HIV testing; and 6) Improved communication between stakeholders.

## ABSTRACT 51

### **Routine HCV Screening and Linkage to Care in a Community-Based Methadone Treatment Facility**

*A Martin<sup>1</sup> and L Smith<sup>2</sup>*

<sup>1</sup>Vice President of Operations, Maywood, Illinois, United States of America, <sup>2</sup>Director of Substance Abuse Operations, Maywood, Illinois, United States of America

**OBJECTIVE:** To screen 100% of methadone clients, successfully confirm and link all those who are chronically infected to HCV treatment with partner medical settings.

**METHODS:** Proviso Leyden Council for Community Action is a community based organization serving Chicago's west side communities and western suburban communities. PLCCA initiated an HCV screening and linkage to care program in two methadone sites with planned expansion to other community based substance abuse treatment centers and other community sites in 2015-2016. HCV screening is conducted using rapid, point-of care HCV tests and RNA confirmatory tests are conducted on-site by a trained phlebotomist. Positive patients are linked to partner hospital settings utilizing patient navigation services at both PLCCA and with partner agencies.

**RESULTS:** The program launched in March 2015. Within the first two weeks 35 patients were screened with 6 ab positives (17% seropositivity). Anticipated number of positives for the program year is 180 positive clients with anticipated linkage to care at 83% for patients with chronic HCV infection.

**CONCLUSIONS:** PLCCA program will demonstrate HCV screening in methadone treatment centers and other community sites is an effective method to diagnose and link substance users due to the unique setting where clients are seen on a daily or weekly basis. Collaborating with partner agencies to stage and retain clients in care is also necessary and can help to achieve success in these settings.

## ABSTRACT 52

## Expansion of HIV Testing – The 2014 European HIV Testing Week

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**OBJECTIVE:** Around one third of the estimated 2.2 million people living with HIV in Europe are unaware of their HIV status and approximately half of those diagnosed are late presenters (CD4 < 350 cells/μl). The purpose of the European HIV testing week (ETW) was to engage with organisations and networks to support dialogue and promote HIV testing throughout the WHO European Region. This project was developed and coordinated by a working group covering a cross-section of European HIV organisations and NGOs.

**METHODS:** ETW took place from 21-28 November 2014. The strategy was to include civil society, healthcare professionals, governmental and other policy organisations. The dedicated website ([www.testingweek.eu](http://www.testingweek.eu)) was the hub for interested organisations to sign up, obtain information and download materials to support planned activities. Materials included a logo, a dossier of evidence for HIV testing strategies, and six toolkits providing practical guidance on implementing and evaluation of activities. The ETW was evaluated by electronic survey in REDCap.

**RESULTS:** By 25 November 2014, 709 organisations from 49 countries had signed up and pledged to undertake some kind of activity during ETW and 24% completed the evaluation survey.

63% of respondents were from an NGO/CSO, 20% were healthcare professionals/hospitals/clinics, 11% were governmental (national/regional) and other policy organisations and 7% 'other'. The most frequently targeted population groups were MSM (61%), general population (58%), youth (34%) and sex workers (34%). HIV testing activities (79%) and awareness-raising (77%) were most frequently carried out. 20% of the organisations performing HIV testing reported a 200% increase or more in HIV testing during ETW compared to an average week (16%: 100-200% and 18%: 50-100%). 40% of organisations performing HIV testing found new HIV cases.

Examples of novel HIV testing activities reported by participants include using Grindr (an MSM social networking site) to increase awareness of testing options, testing inside a sauna, and outreach testing in bars and clubs offering HIV-test results to be sent home. Several informed that they would carry forward these new experiences after the ETW.

**CONCLUSIONS:** The European testing week has gathered momentum with 709 organisations signed up in 2014 compared with 477 in 2013. The ETW provides a unique opportunity for organisations across Europe to unite to share resources and lessons learnt and increase HIV testing and introduce novel ways to test persons most at risk of HIV infection.

## ABSTRACT 53

## Performance of Determine Combo and Other Point-of-Care HIV Tests Among Seattle MSM

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**OBJECTIVE:** The Rapid Test Study was a real-time comparison of point-of-care (POC) HIV tests designed

to determine their relative abilities to detect early HIV infection among Seattle men who have sex with men (MSM).

**METHODS:** HIV-negative MSM and transgender persons were recruited at the Public Health - Seattle & King County STD Clinic, Gay City Health Project, and University of Washington Primary Infection Clinic. Study procedures included one POC test performed on oral fluids (OraQuick, Orasure Technologies) and POC tests performed on fingerstick whole blood specimens: OraQuick, Uni-Gold Recombigen HIV Test (Trinity Biotech), Determine HIV-1/2 Ag/Ab Combo (Determine, Alere Inc.), and INSTI HIV-1/HIV-2 Rapid Antibody Test (bioLytical). Serum specimens from subjects with negative POC results were sent for EIA and pooled NAAT. McNemar's exact tests were used to compare the numbers of HIV-infected subjects detected by the different tests.

**RESULTS:** Between February 2010 and August 2014, 3429 subjects were enrolled. Of 3395 MSM seen at the STD Clinic and Gay City, 106 (3.1%) were newly diagnosed with HIV infection; 81 (76%) had reactive results on all POC tests. Twenty-two subjects from all study sites had discordant POC results with at least one reactive and one non-reactive POC test, including one subject with a reactive Determine p24 antigen and an HIV RNA level of 5.7 million copies/mL. This subject represented 0.07% of the 1522 Determine tests performed and 8% of the 13 cases of acute (RNA+) and early (EIA+) HIV infection diagnosed at the three sites who were screened prospectively by Determine. As previously reported, OraQuick performed on oral fluids identified fewer men with discordant results compared to all fingerstick tests. OraQuick performed on fingerstick also identified significantly fewer men with discordant results compared to the Determine antibody test component ( $p=.05$ ) and the overall Combo ( $p=.03$ ).

There were 21 (1.0%) false-positive test results in 2121 visits among HIV-negative persons screened at the STD Clinic. False-positive results were obtained for three participants tested by OraQuick performed on oral fluids (specificity 99.9%), six participants on the Determine Combo antigen and nine on the antibody (combined specificity 99.0%), and four by EIA (specificity 99.8%).

**CONCLUSIONS:** As reported by others, Determine underperforms compared to laboratory-based testing

for acute HIV infection, but it did detect more persons with early HIV infection compared to one commonly used fingerstick test in our study. The lower specificity of Determine may limit its usefulness in populations with lower HIV incidence.

## ABSTRACT 54

### Advocacy & Policy Action Supporting the Elimination of HCV in the United States

*C Taylor<sup>1</sup>*

<sup>1</sup>National Alliance of State and Territorial AIDS Directors, Washington, District of Columbia, United States of America

**OBJECTIVE:** Public health and hepatitis advocates have been working to increase federal support and funding for hepatitis C for over a decade. As there continue to be advancements in treatment and increasing cure rates - the time for effective advocacy and policy strategies is more important than ever. This presentation will include an overview of current strategies and outline additional needed action to achieve the goal of eliminating HCV in the United States.

**METHODS:** The presentation will include historical information on advocacy efforts, anecdotal information from advocates and policymakers and identified strategies for increasing the federal response to hepatitis C. Attendees will also learn how their experience can be translated into effective advocacy to achieve policies to eliminate HCV in the United States.

**RESULTS:** We have the tools to eliminate hepatitis C from the United States in the next ten years - however the political will has not kept pace with medical advancements in the treatment and cure of HCV. This presentation will outline what policymakers and advocates can do to make eliminating hepatitis C in the United States an achievable goal.

**CONCLUSIONS:** Public health and hepatitis advocates have been working to increase federal support and funding for hepatitis C for over a decade. As there continue to be advancements in treatment and increasing cure rates



- the time for effective advocacy and policy strategies is more important than ever. This presentation will include an overview of current strategies and outline additional needed action to achieve the goal of eliminating HCV in the United States.

## ABSTRACT 55

### Health Department Supported HCV Testing in 2014 - Survey Results and Implications for Policy

*C Taylor<sup>1</sup>*

<sup>1</sup>National Alliance of State and Territorial AIDS Directors, Washington, District of Columbia, United States of America

**OBJECTIVE:** The National Alliance of State & Territorial AIDS Directors (NASTAD) surveyed state health departments on their HCV testing activities in 2011, 2013 and 2014. Despite receiving categorical federal funding to support HCV testing, health departments have leveraged existing state and federal funds to provide limited HCV testing. The data show high positivity rates - indicating that public health departments are effective at targeting testing and are a sound investment of public funding.

**METHODS:** The survey assessed 52 health departments receiving funding from the Centers for Disease Control and Prevention to support a Viral Hepatitis Prevention Coordinator position. The survey asked a variety of questions related to the health department support of HCV testing in each jurisdiction, including number of tests supported by health department, number of positive antibody tests, number of confirmatory tests, how health departments funded these tests, where testing occurred and barriers to offering testing.

**RESULTS:** Despite receiving categorical federal funding to support HCV testing, health departments have leveraged other state and federal funds to support limited HCV testing. In 2011, health departments supported approximately 90,000 HCV tests and in 2013 supported approximately 125,000 tests. Data for 2014 is being collected now.

**CONCLUSIONS:** Data show that health departments are a sound investment of public funding to support HCV testing as the programs know where to target testing and identify a high number of positive results. This data supports efforts to increase federal and state funding to health departments to increase the number of HCV tests in jurisdictions.

## ABSTRACT 56

### Routine HIV Community Testing and Partnerships in High Prevalence Urban Areas

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**OBJECTIVE:** Discuss an innovative partnership for providing routine HIV/HCV testing in high prevalence areas in a nonclinical setting. Attendees will also learn about an emerging linkage and retention to care program that can be used with nonclinical testing.

**METHODS:** AIDS Foundation of Chicago (AFC) created an innovative routine testing partnership with the Department of Human Services (DHS) and two community based organizations entitled the Bridge Project. The underlying rationale for the project is based on the assumption that by bringing routine HIV/HCV testing and prevention services into the community and providing test results quickly, rapid HIV/HCV tests can be used to reach highly vulnerable groups in which HIV infection has been under diagnosed. The partnership implemented a "VIP" linkage to care program. The program provides standing medical appointments and support for patients that are diagnosed with HIV or for DHS clients who have dropped out of care.

**RESULTS:** Over three years the project tested 12,079 clients, 62 positive clients were identified (0.5% seropositivity). Of all positives identified, 42 were males (67.4%), 19 (31%) were females, and one (1%) transgender. Over 90% of positives are African-American. The percentage of positive women identified through AFC's Bridge Project is higher than the 21% reported through



traditional city surveillance. Linkages to care rates have increased from 52% to 73% since the VIP program began. The Bridge Project has also integrated routine HCV testing to assess whether offering both tests at the same time makes clients more likely to accept an HIV test. Since implementing HCV screening, 508 DHS clients were tested and 18 positives identified (3.5% seropositivity).

**CONCLUSIONS:** The Bridge Project found that about 50% of clients who tested in the DHS sites were first time testers, a key indication that this community testing partnership was identifying and testing individuals who may not have otherwise tested. Testing by the Bridge Project has also has identified an increased number of positive diagnoses among young men who have sex with men. The percentage of positive women identified through AFC's Bridge Project is higher than the 21% reported through traditional city surveillance. The Bridge project indicates that offering routine testing in nonclinical sites is an effective method for providing HIV/HCV testing, focusing on increasing linkages with care in high HIV prevalence neighborhoods.

## ABSTRACT 57

### Impact of Integrating EMR HCV Testing Prompts in a Difficult to Navigate EMR System

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**OBJECTIVE:** At least 50% of individuals infected with HCV are unaware of their status. Furthermore, 50% of individuals with a reactive antibody test never receive a confirmatory test. Electronic Health Record (EHR) testing prompts that reflect CDC recommendations for birth cohort testing and the standard HCV screening algorithm have the potential to be a useful tool. We aim to describe the impact of these EMR modifications on primary care provider (PCP) testing practices.

**METHODS:** EHR prompts began July 1 2014. Individuals born between 1945-1965 with no prior HCV testing

had a prompt added that appeared under the patient's name reminding the PCP that the "Patient Needs HCV Screening". Any patient with a reactive antibody test or an ICD-9 code consistent with chronic HCV infection but no confirmatory test had a similar prompt added reminding the PCP that the "Patient needs HCV confirmatory testing". Educational sessions about CDC screening guidelines, testing algorithms and prompts were held at primary care practices to reinforce implementation. To simplify HCV test ordering options EHR technical staff removed orders for non-preferred tests such as older tests and redundant tests. Technical staff limited access to duplicate testing options. Providers were encouraged to use HCV antibody testing with reflex to PCR quantitative testing as the preferred method.

**RESULTS:** Baseline data in May showed that 6.9% of the 1,658 birth cohort patients seen were tested for HCV. Of those tested, 18% were tested using non-preferred testing methods and only 4.4% were tested using the preferred method. June showed that 12% of the 1,609 birth cohort patients seen were tested for HCV; 8.7% were tested using non-preferred tests and 5.9% using the preferred test. After prompts went live in July, 18% of the 1,807 birth cohort patients seen were tested for HCV, only 2% were tested using the non-preferred tests and 42% were tested using the preferred test. In August 19.7% of the 1,628 birth cohort patients seen were tested, only 0.76% were tested using non-preferred tests and 59% were tested using the preferred test.

**CONCLUSIONS:** Prompts implemented in July were effective in increasing routine screening of the baby boomer birth cohort. There was a shift towards ordering tests that support the recommended testing algorithm. EHR prompts and provider education have the potential to increase the number of individuals aware of their HCV status.

## ABSTRACT 58

# Evaluation of the BioPlex® 2200 HIV Ag-Ab Assay\*: A Next Generation Fully Automated Screening Method Providing Discreet Detection of HIV-1 p24 Antigen, HIV-1 Antibody and HIV-2 Antibody

\* Pending FDA approval

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<sup>1</sup>Bio-Rad Laboratories, Benicia, California, United States of America

**OBJECTIVE:** Evaluate the performance of an automated HIV assay with enhanced 4th generation sensitivity that can report HIV-1 antibody and antigen results individually, and differentiate HIV-1 from HIV-2 infection.

**METHODS:** The BioPlex 2200 HIV Ag-Ab assay is a multiplex flow immunoassay intended for the simultaneous qualitative detection and differentiation of the individual analytes HIV-1 p24 antigen, HIV-1 (groups M and O) antibodies, and HIV-2 antibodies in a single reaction vessel using a mixture of four populations of dyed microparticles. Each population is coated with a different HIV antigen or with HIV-1 p24 antibody. It can be used to order either an overall combination result for HIV or detailed results for HIV-1 p24 antigen, HIV-1 antibody, and/or HIV-2 antibody. Specimens reactive for antibody are typed as HIV-1 or HIV-2, or are reported as undifferentiated if typing is unresolved. Studies presented were performed at four external sites and at Bio-Rad Laboratories using three lots of reagents.

**RESULTS:** To assess specificity, 6395 samples from populations at low risk for HIV infection (unknown HIV status) were tested resulting in specificity of 99.86%. The analytical sensitivity for HIV-1 p24 antigen was 0.33 IU/mL when testing the WHO HIV international standard NIBSC 90/636 and 5.2 pg/mL when testing a the AFSSAPS standard. Additionally, 54 cell culture supernatants of varying subtype were tested and HIV-1 p24 was detected in all. To assess clinical sensitivity, 1742 known HIV-1 Ab specimens (including 63 Group O) and 200 HIV-2 Ab specimens were tested and all were reactive.

All HIV-1 samples were correctly identified as HIV-1 and 187 of 200 (93.5%) HIV-2 samples were correctly identified as HIV-2, the remaining 13 were HIV Ab reactive undifferentiated. Sensitivity was also assessed by testing 42 commercially available seroconversion panels. The first reactive bleed occurred earlier with the BioPlex 2200 HIV Ag-Ab in seven of the panels, one panel was detected one bleed earlier by an FDA-approved HIV Ag/Ab assay and both tests gave equivalent results for the remaining 34 of the 42 panels. Specimens from brain dead individuals were tested for specificity, sensitivity and reproducibility and found to be equivalent to normal donors allowing for testing of organ donors.

**CONCLUSIONS:** The BioPlex 2200 HIV Ag-Ab assay is highly sensitive and specific, and can provide detailed HIV screening results earlier that will assist in identifying specimens from acute or primary HIV-1 infection and chronic HIV-2 infection and in guiding the selection of supplemental testing.

## ABSTRACT 59

# Billing and Reimbursement as a Model for Sustainable Emergency Department HIV Screening?: Report from the 2012 National Emergency Department HIV Testing Consortium Meeting

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**OBJECTIVE:** Many believe that emergency department (ED) HIV screening will become sustainable only when EDs successfully bill for screening. Yet, there remains little understanding of how EDs will implement sustainable reimburse practices for HIV screening in actual clinical practice. The National Emergency Department HIV Testing Consortium convened a multidisciplinary, roundtable discussion to address these issues.

**METHODS:** The semi-structured roundtable discussion included representatives spanning multiple disciplines relevant to public health, public policy, health care financing, HIV screening, and emergency services. The authors summarized themes by reviewing the participant-driven notes and the audiotape of the discussion. The authors deliberated and came to a consensus on the major themes and conclusions.

**RESULTS:** Discussion revealed that while ED HIV screening was conceptually 'covered' by third party payers, those on the front lines struggle to integrate HIV screening and billing into practice. Challenges included: 1) lack of direct monetary incentive for providers who are responsible for initiating screening; 2) each third-party payer may have different contractual arrangements with each hospital, making it difficult to disentangle the complicated web of reimbursement strategies; 3) many at-risk patients remain uninsured; and, 4) while direct fee-for-service reimbursement of HIV screening was postulated as a way of incentivizing more testing, movements away from fee-for-service payments – such as capitated payments – may actually reduce these potential monetary reimbursements.

**CONCLUSIONS:** Roundtable participants coalesced around three key action items: 1) concisely define the most efficient and least costly approaches for ED HIV screening from the hospital perspective; 2) develop tools for estimating downstream cost-savings from the hospital perspective, and 3) disseminate methods to effectively communicate that information to key stakeholders.

## ABSTRACT 60

### Should We Alert Emergency Department Patients to the Costs of HIV Screening? Findings From a Working Group of the New York State Department of Health AIDS Institute

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**OBJECTIVE:** A conundrum exists regarding whether and how to notify emergency departments (EDs) patients about the costs of HIV screening. The objective of this study was to delineate the nuanced bioethical issues with both alerting and not alerting patients of the costs of HIV screening, and to find a palatable solution to this conundrum for all parties involved.

**METHODS:** The AIDS Institute of the New York State Department of Health held a multidisciplinary working group to address this issue. Regional and national experts and stakeholders representing law, bioethics, HIV testing research, public policy, and hospital administration convened for a one-day working group. Participants deliberated regarding the issues; discussed potential solutions; and, finally, reached a consensus on solutions. The major points of the discussion were summarized by the primary author and then reviewed and accepted by secondary authors.

**RESULTS:** Alerting patients of the costs of testing might leave patients under informed to decide whether to accept the test. However, it was deemed inappropriate to alert patients of the costs of testing during the offering of the test, as this might dissuade patients from testing. Instead, participants reached a consensus that, if hospitals chose to discuss the costs of testing at all, they should do so when patients are alerted that they will be responsible for all of their ED costs, which is typically done when registering patients.

**CONCLUSIONS:** It was this working group's consensus that alerting patients of the costs of HIV testing should not be done while offering the HIV test. If hospitals feel inclined to alert patients of the costs of testing, they should do so when patients are alerted that they will be responsible for the rest of their ED bill. Public health officials may use these consensus recommendations when giving guidance as to whether or how to alert patients to the costs of HIV testing.

## ABSTRACT 61

### Results of a Rapid Hepatitis C Virus Screening and Diagnostic Testing Program in an Urban Emergency Department

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**OBJECTIVE:** We describe the feasibility and yield of an emergency department (ED) hepatitis C virus (HCV) testing program that integrated birth cohort screening and screening of patients who use injection drugs (IDU), as well as physician diagnostic testing.

**METHODS:** We conducted a retrospective cohort study using data collected as part of clinical care in an urban, academic ED in Oakland, California. The primary outcome was the HCV prevalence among tested patients. We evaluated factors associated with testing positive with logistic regression.

**RESULTS:** Of the 26,639 unique adults  $\geq 18$  years presenting to the ED during the 6-month study, 2,581 (9.7%) completed HCV screening (2,028) or diagnostic testing (553), of whom 267 were antibody positive (10.3% prevalence). Factors associated with testing HCV positive included: IDU (38.4% prevalence; adjusted OR 10.8, 95% CI 7.5-15.5), homeless (25.5% prevalence; adjusted OR 3.1, 95% CI 1.5-6.8), diagnostic testing (14.8% prevalence; adjusted OR 2.6, 95% CI 1.7-3.9), birth cohort (13.7% prevalence; adjusted OR 3.6, 95% CI 2.4-5.3), and male (12.4% prevalence; adjusted OR 1.4, 95% CI 1.0-2.0). Of the 267 HCV antibody positive patients, 137 (51%) had

documentation of result disclosure and 181 (68%) had confirmatory RNA testing performed, of whom 127 (70%) were positive. Follow-up at the HCV clinic could be verified for 58 of the 127 (46%) confirmed positive patients.

**CONCLUSIONS:** This ED screening and diagnostic testing program found high prevalence of HCV antibody positivity across all groups. Challenges encountered with HCV screening included result disclosure, confirmatory testing, and linkage to care. Our results support continuing efforts to develop and evaluate policies for ED-based HCV screening.

## ABSTRACT 62

### Socio-Peer Attitudes about HIV Testing and Patient Perceptions of an Emergency Department-Based HIV Testing Program – A Qualitative Study

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**OBJECTIVE:** To assess socio-peer and personal perception of HIV testing in emergency department (ED) settings as well as history of HIV testing among ED patients.

**METHODS:** We conducted in-depth interviews with patients during their visit to an urban adult ED during November 2013 and June 2014. Patients were enrolled with the aim of sampling a population representative of the ED patient population in terms of age-group, gender and race distribution. HIV positive status was intentionally oversampled, with a goal of 20 HIV positive patients and 60 HIV negative. Patients enrolled were asked about their own feelings on HIV testing as well as their friends' feelings. Interviews were transcribed and themes that capture free responses were identified by two reviewers through discussion and consensus. Two reviewers applied themes to each response.

**RESULTS:** The majority of 86 participants were female (n=51) and African American race (n=69) with a mean age



of 40 years. 22 patients reported HIV positive status and 64 participants self-report as HIV-negative. Among 64 self-reported HIV-negative participants, 50 were tested during the last year, 10 were tested over one year ago, and 4 had never been tested. 38 (59%) patients were offered an HIV test during their current ED visit. 24 (63%) of 38 patients accepted. Of those, 83% reported that they always accept the test. By theme, these reasons for accepting an HIV test included knowledge and concern for ones' health (79%), not minding an HIV test (13%), risk for HIV (8%).

Of the 14 patients who declined the test, none had complaints about the program: 2 patients mentioned that test offer by a triage nurse was appropriate, 3 said that the offer was fine and 9 did not comment.

The majority of 86 participants thought that their friends were likely to accept HIV testing in an ED (81%) or other clinical settings (73%). Patients discussed their friends' feelings on HIV testing: the majority believed their friends had positive feelings about HIV testing (31) or were fairly positive and willing to be tested (35).

**CONCLUSIONS:** Patients were willing to be tested in ED settings and believed that their friends had positive feelings about HIV testing and were likely to accept testing in ED settings. There were few negative comments about the ED testing program and none from patients who declined to test, suggesting that triage-integrated ED-based HIV testing is acceptable to urban patients.

## ABSTRACT 63

### Shifting Focus: Development of Integrated HIV/HCV Outreach, Testing and Linkage (OTL) Training

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**OBJECTIVE:** In 2014, the Hawaii Department of Health (DOH) developed a new statewide training curriculum for certification of HIV/HCV testers. Replacement of the existing counseling, testing and referral curriculum was based on multiple factors:

- AWARE study<sup>1</sup> which deemed individual counseling ineffective
- dwindling resources and funding
- National HIV/AIDS Strategy<sup>2</sup> and Viral Hepatitis Action Plan<sup>3</sup>

The new model focuses on targeted referral, linkage, and retention-in-care services for high risk groups, especially injection drug users and HIV-positive individuals.

**METHODS:** DOH staff from Adult Viral Hepatitis and HIV Prevention assessed current testing curricula used in Hawaii and other jurisdictions. After review, DOH staff identified priority areas for the new curriculum:

- focus on targeted testing, referrals, linkage and retention-in-care
- integration of HIV and HCV testing services
- emphasis on care continuum as context
- inclusion of PrEP information as HIV prevention resource
- emphasis of Partner Services as a referral
- reduction of DOH time and resources

DOH requested Capacity Building Assistance (CBA) to help update curriculum, agenda, and facilitate training. Capacity for Health was selected for CBA which subcontracted Life Foundation (LF). DOH and LF reviewed priority areas and developed new curriculum, agenda, and all necessary materials. The pilot training took place in February 2015 with eight participants of varying HIV/HCV testing knowledge and experience.

**RESULTS:** The pilot training certified eight participants in February, 2015. Evaluation surveys from all participants demonstrated increased capacity to test, refer, and link clients, especially those at high risk.

The post pilot training debrief yielded the following lessons learned:

- limit group size to 12 participants
- increase emphasis on local resources for referrals
- importance of integrated HIV/HCV/STD services

A refresher training for previously certified testers will be scheduled to provide new strategies and tools emphasized in the new curriculum.

**CONCLUSIONS:** With CBA from LF, DOH has developed adaptable, scalable, and replicable curriculum and materials for an integrated two-day training. This training will be conducted semiannually for all new staff at



DOH-supported testing facilities. The training emphasizes streamlined services for clients who are at high risk for HIV/HCV. The new training model is less resource-intensive for DOH and AIDS Service Organizations (ASOs) and more aligned with national strategies. Furthermore, the shift in priorities from counseling to targeted referrals has engendered larger discussions with ASOs about novel strategies for HIV and HCV prevention.

# **Track B:**

# **Prevention Models**

## ABSTRACT 64

## Preferences for HIV Pre-Exposure Prophylaxis (PrEP) Information Among MSM at Community Outreach Settings in Providence, Rhode Island

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**OBJECTIVE:** (1) Assess interest in learning about HIV pre-exposure prophylaxis (PrEP) and preferences for receiving this information among HIV-uninfected MSM in community outreach settings; (2) Investigate the relationships between self-perceived PrEP knowledge, comfort in asking healthcare providers about PrEP, and interest in learning more about PrEP vs. participant demographic characteristics and their sexual history; and (3) Determine how many MSM provided linkage-to-care information presented for evaluation at a local PrEP clinic.

**METHODS:** MSM were recruited at the Rhode Island Pride Festival in June 2014 and at Providence bars and clubs June-September 2014. Participants completed an anonymous self-administered survey about their demographic characteristics, sexual history, self-perceived knowledge and experience with PrEP and interest in learning more about PrEP. Potential PrEP-eligible participants (HIV uninfected and no current or prior PrEP use) were offered contact information for a local PrEP clinic.

**RESULTS:** Of 284 MSM approached, 209 (74%) participated and had a median age of 30 years (IQR 24-45); 72% were white, 10% Hispanic, and 8% Black; 65% were single; 10% did not have healthcare insurance; 36% had anal sex without a condom with an average of 6-7 casual partners in the prior six months; 3 (1.4%) were currently using PrEP, 3 (1.4%) previously used PrEP, and 25 (12%) were HIV infected. Of the 178 potentially PrEP-eligible participants, 71% perceived themselves as having no or little knowledge about PrEP; 47% were interested or very interested in learning about PrEP; 60% were comfortable

or very comfortable in asking their healthcare providers about PrEP; 51% preferred learning about PrEP through a website and 74% preferred being provided local PrEP clinic information through electronic media (email and/or text messages). In logistic regression analyses, self-perceived PrEP knowledge, comfort with asking healthcare providers about PrEP, and interest in learning about PrEP were not associated with participant demographic characteristics or their sexual history. Of the 175 potentially PrEP-eligible participants who received information about the local PrEP clinic via email, text, or brochure, none presented to that clinic within six months of study participation.

**CONCLUSIONS:** Although sexual risk-taking was common among this group of MSM, self-perceived PrEP knowledge was poor and interest in learning about PrEP was moderate. Receiving PrEP clinic information alone did not translate into seeking PrEP healthcare services. The results indicate that in addition to offering electronic media-based information about PrEP, future community outreach efforts should identify effective ways to encourage PrEP-eligible MSM to seek PrEP healthcare services.

## ABSTRACT 65

## The New Orleans Syringe Access Program (NOSAP)

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**OBJECTIVE:** The Metro New Orleans Area has 7,173 persons living with HIV/AIDS as of June 30, 2013. Of those, 547 (11%) have reported exposure of IDU, and an additional 285 (6%) have a reported exposure of MSM & IDU. The New Orleans Syringe Access Program (NOSAP) operated by the NO/AIDS Task Force d.b.a. CrescentCare offers clean syringes, injection supplies, condoms, rapid HIV and Hepatitis C (HCV) testing, referrals to drug rehabilitation and detoxifications program, and linkage to other medical services in order to decrease the incidence and prevalence of HIV, HCV, and other negative health outcomes associated with injection drug use.

**METHODS:** In January 2014, NOSAP instituted a policy that each client complete a demographic and risk intake from annually to provide insight on the populations served. The number of clients seen each week, syringes disposed, and syringes collected are monitored to assess program reach and growth.

**RESULTS:** In 2014, the agency provided services to 570 Injection drug users, 66% of which were male, 33% female and 1% identified as transgender. Clients mostly identified as white, 79%, 8% identified as Black, and 4% were Hispanic/Latino. Clients' ages range from 18 to 66, with an average age of 32. Many clients are unstably housed: 108 listed living on the street, 23 in a hotel/motel, and 11 living in a shelter. The intake form also asks about specific drugs used: 500 clients marked off heroin, 100 noted cocaine/crack, and 94 listed meth/speed. Clients also listed their primary drug of choice. When asked where clients obtain syringes, 155 stated from NOSAP, 75 purchase them at pharmacies, 72 get them from friends/family, and 26 from a drug-dealer. Two percent of clients served said they were known to be HIV positive and 58% self-reported being HCV infected, while 17% stated they did not know their HCV status.

**CONCLUSIONS:** NOSAP has grown greatly from 2013 to 2014, with the average number of weekly clients increasing from 72 to 82. In 2013, the weekly average of disposed syringes was 2,583.5, and the weekly distributed syringes were 2,682.5. In 2014, that increased to a weekly average of 5,733.8 syringes disposed and 5,828.1 distributed. The agency hopes to further expand the reach of the program and continue to integrate other services into NOSAP such as HCV and HIV testing.

## ABSTRACT 66

# 2014 Recommendations for HIV Prevention with Adults and Adolescents with HIV in the US: Recommendations from CDC, HRSA, NIH, and 5 Non-governmental HIV Prevention and Care Organizations

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**OBJECTIVE:** In 2014, the Centers for Disease Control and Prevention (CDC), Health Resources and Services Administration (HRSA), National Institutes of Health, American Academy of HIV Medicine, Association of Nurses in AIDS Care, International Association of Providers of AIDS Care, National Minority AIDS Council, and Urban Coalition for HIV/AIDS Prevention Services issued Recommendations for HIV Prevention with Adults and Adolescents with HIV in the United States (<http://stacks.cdc.gov/view/cdc/26062>). This evidence-based guideline for clinical providers, nonclinical providers, and health departments updates and expands on 2003 federal guidance for clinicians to incorporate HIV prevention into HIV medical care. The guideline aims to advance these National HIV/AIDS Strategy goals: preventing new HIV infections and reducing HIV-related illness, death, and health disparities.

**METHODS:** The new guideline compiles new and longstanding federal recommendations about biomedical, behavioral, and structural interventions to reduce HIV transmission from persons with HIV. The recommendations were based on research, program evaluations, and/or expert opinion. Recommendations address contextual issues; linkage to and retention in HIV care; antiretroviral treatment (ART) and adherence; behavioral risk-reduction interventions; partner services;

sexually transmitted disease (STD) services; reproductive health and pregnancy-related services; other medical and social services that affect HIV transmission; and quality improvement.

**RESULTS:** This guideline's broad audience highlights opportunities for task-sharing and task-shifting across provider types and collaborations across clinical, nonclinical, and public health sectors. The most important new recommendations include: informing all persons with HIV about the benefits of early ART to improve health and longevity and to reduce transmission; helping with insurance enrollment, scheduling appointments, and other proactive linkage-to-care assistance; offering ART to all patients who are ready to adhere to long-term ART, regardless of CD4 count; supporting retention-in-care and ART adherence (through patient monitoring, motivation, and skill building, managing side effects, and minimizing ART costs); offering evidence-based risk-reduction interventions; routinely screening genital and extragenital sites for STDs that facilitate HIV transmission; providing reproductive health counseling, family planning, and special conception methods that lower transmission risk; and ensuring partners are offered screening for HIV, STD, and viral hepatitis, especially when recently exposed to persons with highly infectious, acute HIV infection.

**CONCLUSIONS:** CDC, HRSA and partner organizations are promoting guideline awareness among health professionals and persons with HIV and supporting implementation of recommended interventions through training, decision-support tools, performance measures, and expanded access to services. Ongoing evaluations will assess guideline awareness and the impact of implementing recommended interventions on engagement in HIV care and HIV transmission.

## ABSTRACT 67

### Predictors of Openness to PrEP in an Urban US Population

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**OBJECTIVE:** Specific objectives are: (1) to investigate the association between openness to PrEP and HIV risk as perceived by clients and as estimated by trained professionals; (2) to identify potential predictors of openness to PrEP among demographic characteristics and specific risk behaviors; and (3) to characterize common explanations for acceptance or rejection of PrEP by gender.

**METHODS:** In the routine HIV rapid testing program of the Philadelphia Health Department, individuals undergoing testing are administered an anonymous survey. Survey questions include demographics and risk behavior. Since 2012 survey questions have also included openness to PrEP and reasons for openness to or rejection of PrEP. Clients are asked their perception of their HIV risk, and testers estimate each client's risk. Multivariate logistic regression analysis is conducted to determine associations between openness to PrEP and potential predictors (demographic characteristics and risk behaviors). All analyses were conducted using R version 3.0.1 and the EpiTom package.

**RESULTS:** A total of 5,606 respondents were included in this analysis. Of these, 48.5% were female, and over 90% identified as African American. A logistic regression analysis identified age, race/ethnicity, self-perceived risk, tester's risk assessment, condom use, number of partners, previous HIV testing, and testing site as significant predictors of openness to PrEP. The strongest predictors were client perception of risk as moderate/high (OR 2.55, 95% CI 2.00 - 3.25) and young age (OR >55:18-24 years of 0.36, 95% CI 0.28 - 0.46). Participants with no sex partners in the previous year were less open to PrEP, as were individuals who always used condoms. Other risk behaviors such as same sex contact, cocaine use and sex work showed no association with openness to PrEP. Common reasons for openness to PrEP included fear of HIV, desire for prevention, and recognition of



risk. Reasons for declining PrEP included a lack of risk perception, celibacy, and fear of medications.

**CONCLUSIONS:** In an urban largely African American population, openness to PrEP is most strongly associated with client perception of moderate/high HIV risk, and younger age, but not specific risk behaviors such as cocaine use, same sex contact and sex work. Further research on the reasons for acceptance or rejection of PrEP, and on how PrEP interest translates into PrEP initiation and adherence are urgently needed as we determine implementation strategies for this important prevention method.

## ABSTRACT 68

### Comparison of Behavioral Factors in Men Who Have Sex with Men Who Go on HIV Pre-Exposure Prophylaxis by Partner Status

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**OBJECTIVE:** Men who have sex with men (MSM) who have a single serodiscordant partner have a relatively low risk of HIV transmission if the partner's HIV viral load is suppressed on antiretroviral medications (ARVs) and therefore may derive minimal benefit from pre-exposure prophylaxis (PrEP). The aim of this analysis is to inform PrEP guidance by examine the behavioral risk factors of MSM who started PrEP with a single serodiscordant partnerships compared to other MSM.

**METHODS:** Participants included HIV-uninfected MSM who initiated PrEP as part of a randomized controlled trial to improve drug adherence. Baseline factors were compared between subjects that reported a single serodiscordant partner (one HIV serodiscordant partner for  $\geq 4$  weeks and no other partnerships) with those that did not and in the past 3 months, had either condomless

anal intercourse with  $\geq 3$  male partners with HIV-positive or unknown HIV status OR condomless anal sex with  $\geq 1$  male partner with a sexually transmitted infection (STI) diagnosis. Subjects with serodiscordant partnerships were asked if their partner was on antiviral therapy and if his HIV viral load was undetectable. Groups were compared at baseline for demographics, number of condomless anal sex acts, STI prevalence, sexual compulsivity, and use of methamphetamine and other substances of abuse.

**RESULTS:** Forty-eight of 399 subjects (12%) that started PrEP on study reported having a single serodiscordant partner with 37 (86%) reporting their partner was virologically suppressed on antiretrovirals. Compared to other MSM (who had a median partner number in past three months of 7, IQR 4-12), those with a single serodiscordant partner were more likely to be Hispanic (51.1% vs. 27.2%,  $p=0.002$ ), less likely to have an STI (10.6% vs. 27.9%,  $p=0.01$ ), and had lower sexual compulsivity scores (1.4 vs. 1.7,  $p<0.001$ ). Although not significant, they also had less than half the rate of any reported methamphetamine use (6.3% compared to 17.3%,  $p=0.057$ ) and double the median condomless anal sex acts in past month (median of 2, IQR 0-8.5, versus 1, IQR 0-4,  $p=0.162$ ).

**CONCLUSIONS:** Lower sexual compulsivity scores and STI prevalence as well as trends toward less frequent methamphetamine use among MSM with a single serodiscordant partner compared to other MSM starting PrEP suggest these MSM are at lower risk for HIV acquisition. Further longitudinal data are needed to inform best practices for PrEP on the benefits versus risks for monogamous MSM with serodiscordant partners on ARVs.

## ABSTRACT 69

# Lubricant Use, Douche Practices, and Rectal Sexually Transmitted Infections Among Men Who Have Sex With Men

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**OBJECTIVE:** The objective was to determine if there was an increased risk in HIV acquisition based on anal preparation practices.

**METHODS:** Rectal swabs for *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) were self collected at a walk-in clinic in Washington, DC by asymptomatic MSM adults who had RAI in the past 30 days. Demographic data and self-reported use of lubricant/douching practices were collected by interviewers. The associations of lubricant and douching with rectal STIs were investigated using generalized linear models with repeated measures.

**RESULTS:** From January 2012 to December 2013, 340 qualified MSM clients made 361 visits. The prevalence of rectal CT/GC infection was 23.3% (rectal CT: 16.1%; rectal GC: 11.9%). 86.7% reported lube use and 39.6% reported douche use (Table 1). After adjusted for age, race, male condom use, frequency of lubricant/douche use, water-based douche use compared to no-douche use significantly increased the risk of rectal STIs (PR=1.91[1.14-3.22], p-value=0.014). Silicon-based lubricant and commercial enema inferred an increased risk of 17% and 37%, respectively, however not statistically significant. Water-based lubricant did not infer a significant increased risk.

**CONCLUSIONS:** The use of lubricants and douching among MSM who have RAI to prevent STIs remains unclear. Additional studies with larger samples are needed to answer this question conclusively.

## ABSTRACT 70

# Application of the Information-Motivation Behavioral Skills Model to HIV and HCV Risk and Needle Sharing Behaviors Among Persons Who Inject Drugs

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**OBJECTIVE:** The current study adapts the Information-Motivation-Behavior (IMB) model of health behavior to injection drug using risk behaviors. Briefly, this model postulates that prevention behaviors are directly influenced by an individual's knowledge about a disease, their motivation to avoid the disease and their skills and capacity to engage in prevention behaviors. Additionally, information and motivation themselves directly impact behavioral skills. The current study applies this model to HIV and Hepatitis prevention knowledge, motivation and skills and assesses the direct and indirect effect of each on needle sharing behavior.

**METHODS:** Scales for measurement of IV and HCV information, motivation and behavioral skills (self-efficacy) were developed and included in the New Orleans arm of the National HIV Behavioral Surveillance of Injection Drug Users (NHBS-IDU). Five hundred and four current injection drug users were surveyed and provided a free linked HIV test during late 2012. All participants were recruited using respondent-driven sampling methods. A path analytic model, which describes the direct effects of information and motivation on needle sharing as well as their indirect effects through behavioral skills, was tested using AMOS Structural Equation Modeling software.

**RESULTS:** For a subsample of 118 NHBS-IDU participants results show acceptable model fit given a small sample size. While participants had high levels of information and knowledge about HIV and HCV, information itself was not found to relate to either behavioral skills or needle sharing behaviors. Higher levels of skills ( $\beta=-.25$ ) and motivation ( $\beta=-.23$ ) were directly related to lower levels of needle sharing. Additionally, motivation had an indirect effect

on needle sharing that was mediated through skills. The cumulative total effect of motivation alone and motivation through skill improvement accounted for a full 13% of the variance in needle sharing behaviors.

**CONCLUSIONS:** Many traditional approaches to HIV and HCV prevention focus on increasing awareness and information about HIV and risk behaviors. This model, however, appears to indicate that increasing awareness may not be as effective as interventions or programs that increase motivation or motivation coupled with skills building. While some HIV/STD prevention interventions, such as motivational interviewing do attempt to capitalize on this relationship, more efforts should be made to incorporate this important link into high impact prevention programs.

## ABSTRACT 71

### **Prisoner Health is Community Health, The New Mexico Peer Education Project (NMPEP): Assessing the Impact and Reach of a Peer-Led Health Education Intervention Utilizing Harm Reduction Strategies in an Incarcerated Population**

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**OBJECTIVE:** Prisons are high-risk environments for communicable disease transmission. The majority of incarcerated individual return to their communities, many with untreated disease, creating a need for disease control, prevention and treatment within the prison population. Prisoner Health is Community Health: The New Mexico Peer Education Project (NMPEP) was developed by Project ECHO® (Extension for Community Healthcare Outcomes) to address the epidemic of Hepatitis C transmission in the New Mexico state prison system. NMPEP is a low-cost, peer-led health education intervention aimed to increase knowledge and harm reduction techniques among incarcerated individuals prior to returning to their communities. The model is innovative

by incorporating a variety of teaching modalities, including face-to-face education, group discussions and the Project ECHO® teleconferencing model to enable peer educators in geographically dispersed areas to access experts, receive timely updates and share best practices as a group. The objective of this study is to evaluate the impact of the NMPEP on peer educators and the students they teach.

**METHODS:** Peer educators attend an intensive 40-hour training workshop led by Project ECHO® staff. This training includes disease-specific health information on hepatitis C, HIV and other sexually transmitted infections, tuberculosis, diabetes and addiction. In addition to health information, peer educators engage in a variety of activities to help develop skills on group facilitation and public speaking. Trained peer educators will co-facilitate a 10-hour condensed version of this training primarily focusing on health information and harm reduction strategies to promote disease prevention. Questionnaires collected pre and post intervention for both peer educators and the general population are analyzed using SPSS looking at mean, difference of mean, ANOVA, and Cohen's D effect size.

**RESULTS:** A total of 167 prison-based peer educators and over 1000 of their students completed pre/-post intervention questionnaires to assess knowledge, attitudes, behavior intention and self-efficacy. The peer education population represents a diverse analysis on ethnicity/race (N=167, 43.7% White Hispanic, 26.9% White Non-Hispanic, 13.8% Black Non-Hispanic, 13.2% American Indian, 1.8% Asian and 0.6% Pacific Islander), gender and age. The student population is equally as diverse, with major minority-group representation. Preliminary results suggest increased knowledge and growth in all areas. Data suggests disparities in baseline knowledge based on gender, race, age and level of education.

**CONCLUSIONS:** Prison facilities are ideal settings to reach one of the most underserved, vulnerable populations of our society to increase knowledge and harm reduction techniques to prevent the spread of communicable disease such as hepatitis C and HIV.

## ABSTRACT 72

## Improving Conversations Around HIV with your PCP

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**OBJECTIVE:** Each year about 350 Arkansans are diagnosed with HIV and 200 more with AIDS. Arkansas has one of the highest rates in the country of people living with human immunodeficiency virus (HIV) and AIDS not receiving regular medical care - nearly 70%. This is twice the national average and higher than surrounding states. Primary care has a critical role in every step along the continuum of HIV/AIDS care, especially in rural states like Arkansas. The purpose of this study is to obtain pilot data to determine HIV risk behaviors and perceived barriers to testing among adult patients in a primary care clinic within the University of Arkansas for Medical Sciences healthcare system. We will also test the feasibility of using electronic devices in clinic settings to collect sensitive data.

**METHODS:** This is a nonexperimental descriptive study and data will be analyzed using descriptive, bivariate, and multivariate analysis techniques. All adult patients 18 years and older seen in our primary care clinic will be invited to participate in this study until the sample is filled (N=500). Patients who agree to participate will be given short instructions on how to complete the survey on an iPad (paper surveys will be available on request). Surveys will not be linked to any personal identifiers. Patients who elect to complete the paper survey will be given an envelope and asked to seal their completed survey in the envelope, then place the sealed envelope in a locked drop box in the clinic. Once the patient completes the survey, they will be given a \$5 bill and \$1 parking token.

**RESULTS:** Objectives of this pilot study are as follows: 1) to determine the feasibility and acceptability of using technology (IPads) to collect sensitive data from patients during patient visits; 2) to determine HIV/AIDS risk behaviors of patients seen in clinic; 3) to determine patients' level of knowledge of risks factors for contracting the virus; and 4) to obtain patient input on staff interaction

with patients with regards to questioning about HIV testing and follow-up.

**CONCLUSIONS:** This information will guide development of strategies to improve providers' conversations with patients about HIV in primary care settings. Based on findings we will work with physicians to increase patient awareness of HIV risk behaviors, increase the number of clinic patients tested for HIV, and ensure clinic patients who have HIV are receiving treatment.

## ABSTRACT 73

## Using Games and Game Jams to Prevention HIV

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**OBJECTIVE:** Games have tremendous potential as a vehicle for health communication and education. According to the Entertainment Software Association, games are played by 58% of Americans—by both genders and by a wide age range. Positive health outcomes from the use of computer games have been documented. Game development challenge events known as “Game Jams” are a proven way to bring game developers together to address a specific theme in a competitive, collaborative atmosphere, constrained by location and time frame (i.e., single venue and 48-hour duration) to produce prototype games. This project has three main goals: 1) increase interest in public health careers among people with 21st century skills (game development skills), 2) generate prototypes of health education games that can improve health, and 3) evaluate the impact of those games.

**METHODS:** On September 26th-28th, 2014, CDC held the first HHS Health game jam which focused on HIV: a 48-hour competition to produce game in support of CDC's HIV Prevention Efforts. It was an opportunity for game developers, (designers, artists, and programmers) to work directly with 27 subject matter experts from across HHS (CDC, HRSA and NIMH) during a 48-hour challenge event to develop games that address HHS's HIV priorities. Subject matter experts provided technical information



and served as consultants for the teams. Designers were able to focus their game on Issues relating to the Primary, Secondary Prevention of HIV or both.

**RESULTS:** The attracted over 400 participants with a total of 29 teams. 73.7% of participants were under the age of 25; 88.6% of participants were male; 12% were non-White; 79.4% were currently enrolled in a college or university; 23.4% had ever created a health related game; 16.6% had ever considered a career in public health rising to 50% after the event. 50 games were created during the 48 hour period. the field was narrowed to five winners by evaluating each game for completeness, educational design principles, overall game play and game aesthetics. We are in the process of testing one of the games in an efficacy trial to determine its effect on behavior change.

**CONCLUSIONS:** The results indicate the event was a success and met our three objectives. They that a game jam can increase the interest of game developers in public health. The indicate that Game Jams can be used to develop inexpensive demos of health games.



# **Track C:**

# **Outcomes and Impact Evaluation**

## ABSTRACT 74

## The HIV Workforce in New York State: Does Patient Volume Correlate with Quality

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**OBJECTIVE:** Knowledge of care practices among clinicians who annually treat <20 HIV+ patients with antiretroviral therapy (ART) is insufficient, despite their number and likely increase given shifting healthcare policies. We analyze the practices, distribution and quality of care provided by low-volume prescribers (LVPs) based on available data sources in New York State (NYS).

**METHODS:** We communicated with 66% (1278) of LVPs identified through a statewide claims database to determine the circumstances under which they prescribed ART in FFY2009. We reviewed patient records from 84 LVPs who prescribed ART routinely, and compared their performance with that of experienced clinicians practicing in established HIV programs.

**RESULTS:** 29% (368) of surveyed LVPs provided routine ambulatory care for 2,323 PLWHA, while 910 LVPs cited other reasons for prescribing ART. While the majority of LVPs (73%) practiced in New York City, patients living Upstate were more likely cared for by a LVP [OR, 1.7 (95% CI 1.4-1.9)]. Scores for basic HIV performance measures, including viral suppression, were significantly higher in established HIV programs when compared with those of providers who wrote prescriptions for <20 PLWHA ( $p < 0.01$ ). We estimate that 33% of NYS clinicians who provide ambulatory HIV care are LVPs.

**CONCLUSIONS:** Our findings suggest that the quality of care associated with providers who prescribe ART for <20 patients is lower than that provided by more experienced providers. Access to experienced providers as defined by patient volume is an important determinant of delivering

care of high quality and should guide HIV workforce policy decisions.

## ABSTRACT 75

## Simeprevir and Sofosbuvir with Modified Doses of Ribavirin (RBV) Therapy on Telaprevir Experienced Co Infected (with HIV) Cirrhotics with Chronic Hepatitis C (CHC) A Randomized Open Label Clinical Pilot Study: STOP C

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**OBJECTIVE:** Cirrhotics with CHC still remains a challenge. Co-infected cirrhotics (HIV+CHC) are at a greater risk for rapid decompensation affecting QOL and have a higher transplant risk burden. Interferon based therapy entails a longer duration with an increased susceptibility of infections and marrow suppression warranting use of growth factors and even discontinuation of therapy/treatment failure. Telaprevir; a protease inhibitor (PI) based therapy have proved efficacious in co-infected patients. Newer generation PI coupled with polymerase inhibitors and adjusted doses of RBV have shown favorable outcomes. To evaluate the efficacy of Simeprevir, Sofosbuvir with RBV in prior Telaprevir experienced co-infected cirrhotics.

**METHODS:** Fifty (n=50) co-infected (HIV+CHC, non AIDS) cirrhotics with mean MELD 16, HIV RNA undetectable, mean CD 4 count 439, Hb 10.7, HCV RNA 1.7 million copies, mean platelet count 104, albumin 2.9 and WBC 4600. 18 genotype 1a and 32 genotype 1b.

**EXCLUSION CRITERIA:** HBV, decompensated cirrhosis, hemolytic disease, heart failure, AIDS, Alcohol consumption > 30 gms/day, CrCl <50%, uncontrolled diabetes, portal hypertension, Patients on any herbal medications

Group A: Simeprevir 150 mg + Sofosbuvir 400 mg + RBV for 24 weeks  
 Group B: Simeprevir 150 mg + Sofosbuvir 400 mg + RBV 1000 mg for 16 weeks

	GROUP A (n=22)  Simeprevir 150 mg + Sofosbuvir 400 mg + RBV	GROUP B (n=28)  Simeprevir 150 mg + Sofosbuvir 400 mg + RBV 1000 mg
Duration of therapy	24 weeks	16 weeks
Mean age	57	55
M:F	18:4	22:6
BMI	24.6	
Genotype		
1a	9	6
1b	13	22
q80k polymorphism	6 (G1a 6)	3 (G1a 3)
Prior Telaprevir resistance	6	3

#### RESULTS:

	GROUP A (n=22)	GROUP B (n=28)
48 hours	2/22(9%) 4 log 11/22(50%)	4/28(14%) 4 log 19/28 (68%)
1 week	3/22 (14%) 6 log 8/22 (36%)	7/28 (25%) 6 log 22/28 (78%)
4 weeks	16/22 (73%)	19/28 (68%)
8 weeks	11/22 (77%)	22/28 (78%)
12 weeks	17/22 (77%)	23/28 (82%)
16 weeks	17/22 (77%)	23/28 (82%)
24 weeks	18/22 (83%)	23/28 (82%)
40 weeks	18/22 (83%)	

**CONCLUSIONS:** The combination of Interferon free regimen in special population with prior experienced PI demonstrated no difference of SVR in 16<sup>th</sup> week over 24<sup>th</sup> weeks. Group A- 83% compared to Group B- 82%

responders were noted. This regimen was well tolerated and has a better safety profile than conventional trials.

#### ABSTRACT 76

### Realizing the Goals of Routine HIV Screening Programs: Quantifying and Implementing an Effective HIV Screening System in New York City's (NYC) Public Healthcare System Based on Optimal Volume Analysis

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**OBJECTIVE:** Routine HIV screening has been promoted as an essential component of efforts to reduce incidence, morbidity and mortality. The objectives of this study were (1) to identify the optimal annual volume needed to realize the public health goals of HIV screening in the NYC public hospital system, and (2) establish an implementation process to realize that optimal annual volume.

**METHODS:** Starting in 2005 a program was established to routinize HIV screening within the 11 acute-care hospitals and 6 large-scale community clinics of the NYC public healthcare system. In 2013 seven-years of HIV screening data were reviewed to identify the optimal annual proportions of age-eligible patients screened to realize the public health goals of reducing new diagnoses and ending late-stage diagnosis (tracked as concurrent HIV/AIDS diagnosis). Analysis demonstrated that rates of new diagnoses level off when 20% of age-eligible patients were screened, providing a baseline for routine screening efforts; and concurrent HIV/AIDS diagnoses reached statistical zero at screening rates of 40%. Annual facility-based targets were re-structured to meet these new target volumes. Restructuring efforts focused on right-sizing HIV screening programs to align and transition programs to integrated HIV screening within standard medical care visits.

**RESULTS:** Over 1.5 million unique patients were screened for HIV during the 8 years; 5,417 new HIV diagnoses were

made, and concurrent diagnosis rates went from 32.26% to 25.27%. While screening rates increased by 104.7% over the 8-years, volume analysis demonstrated that rates need to further increase by 10.89% to reach desired 20% baseline and more than double to reach optimal annual screening volume. In 2013 facility targets for HIV screening were increased to reflect volume analysis, and in that first year, 7 of the 17 facilities reached or exceeded new baseline targets.

**CONCLUSIONS:** Quantifying targets against routine HIV screening goals identified optimal annual screening volume and allowed facilities to scale their program size and allocate resources accordingly. The program transitioned from utilizing non-evidence based annual volume increases, to establishing annual targets based on optimal volume analysis. This has allowed efforts to be evaluated on the ability to realize quantified goals related to the public health value of HIV screening.

## ABSTRACT 77

### HIV Community Viral Load Trends in South Carolina

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**OBJECTIVE:** Community Viral Load (CVL) is an aggregate measure of HIV viral load (VL) in a particular geographic location, community, or subgroup. Many studies have confirmed a positive association between CVL and rates of newly HIV-infected individuals in a given community. Evaluating the trends in CVL over time can provide useful insight into public health efforts to curb the HIV epidemic in a community or subgroups within the community. We examined CVL trend in South Carolina (SC) from 2005 through 2012 and identify differences in CVL trends, if any, between selected population subgroups.

**METHODS:** This secondary data analysis was conducted using a state-wide surveillance dataset that maintains electronic records of all HIV VL measurements reported to the state health department. CVL trends were examined

using random mixed effects models, adjusting for race, gender, rural-urban status, CD4 counts, number of new infections, single tablet versus multiple tablet regimens (MTR), and time.

**RESULTS:** The CVL gradually decreased from 2005 to 2012 ( $p < 0.0001$ ). A slower rate of decrease was seen in males ( $p < 0.0001$ ), African Americans (compared to Caucasians  $p = 0.0003$ ; compared to "Other" race  $p < 0.0001$ ), and MTR users ( $p = 0.0003$ ). As the CVL decreased, the number of new infections decreased ( $p < 0.0001$ ).

**CONCLUSIONS:** While statewide the CVL decreased over time, the decrease was not uniform among gender, race, and STR/MTR user subgroups. Slower declines in CVL in males and African Americans suggest possible disparities in care that require further exploration. The association between MTR and slower CVL declines is noteworthy.

## ABSTRACT 78

### Readmissions in HIV-Infected Inpatients: A Large Cohort Analysis

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**OBJECTIVE:** Hospital readmissions represent a high, but possibly preventable, cost for insurers and hospitals alike and impose considerable physical and psychological hardships on patients. The objective of this study was to identify patient characteristics associated with 30-day readmission among persons living with HIV/AIDS (PLWH) using a statewide administrative database and to characterize the movement of patients between facilities.

**METHODS:** Retrospective cohort analysis of 18,071 HIV-infected individuals using a all-payer database that captures all inpatient admissions to each hospital in New York State. Logistic regression was used to identify demographic, behavioral, and clinical risk factors of hospital readmission.

To provide a complementary model of hospital readmission and to examine interactions amongst variables, a recursive-partitioning algorithm was used.

**RESULTS:** Among 26,027 index hospitalizations, 5,559 (21.3%) resulted in readmission. Multivariable predictors of readmission included insurance status, homelessness and housing instability, leaving against medical advice, number of comorbid chronic conditions, substance use, mental illness, and prior inpatient and emergency department visits ( $c = 0.81$ ; 95% confidence interval: 0.79 to 0.83). The number of chronic conditions was found to be the single strongest predictor of readmission. Over 50% of readmissions occurred at a different facility than that of the initial hospitalization.

**CONCLUSIONS:** While several clinical factors were independently associated with hospital readmission, behavioral health problems and socioeconomic factors may be the strongest predictors of readmissions among PLWH. Readmissions, especially those in urban areas, often entail hospitalization at a different facility than that of the initial hospitalization - a potential fragmentation of care that may result in harmful discontinuities of medical treatment.

## ABSTRACT 79

### Geographic Epidemiology of Hepatocellular Carcinoma and Viral Hepatitis in New York City

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**OBJECTIVE:** Hepatocellular carcinoma (HCC) incidence and mortality rates have increased in the past decade in New York City (NYC). The five-year relative survival rate for HCC is low, and the cancer burden is inequitably distributed. HCC risk factors include chronic hepatitis B (HBV) and hepatitis C (HCV) in the setting of cirrhosis, alcohol use, diabetes, and obesity. In NYC, the geographic pattern of HCC and geospatial relationships with known risk factors have not been studied. Variation in HCC incidence across neighborhoods may be related to regional variation in risk factor exposure. We assessed potential

geographic associations between HCC incidence and risk factor prevalence.

**METHODS:** Data were collected from the New York State Cancer Registry, NYC Department of Health and Mental Hygiene Hepatitis Surveillance Registry, and the NYC Community Health Survey, 2008-2012. Age-adjusted HCC incidence during 2009-2011 was spatially mapped by NYC United Hospital Fund (UHF) neighborhood, and geographic patterns were analyzed. We searched for geographic clustering in age-adjusted HCC incidence using the local Moran's I statistic in ArcGIS. We examined the spatial associations between HCC and viral hepatitis, heavy drinking, diabetes, obesity, and poverty (defined as the proportion of residents with income below the federal poverty threshold, per the American Community Survey, 2008 – 2012). Linear regression (OLS) and geographically-weighted regression (GWR) were used to test for significance of association and local variations in the relationships using SAS and GWR4.

**RESULTS:** During 2009-2011, 2,382 HCC cases were reported among NYC residents, with age-adjusted HCC rates by UHF neighborhood ranging from 5.0 to 22.8 per 100,000. HCC rates were not distributed randomly (Moran's  $I=0.1$ ,  $p<.01$ ), and the most significant clustering was detected in the South Bronx. In separate OLS models each controlling for age, HCC was significantly associated ( $p<.05$ ) with viral hepatitis, obesity, and poverty across NYC. In separate GWR models each controlling for age and spatial autocorrelation, the variation in HCC incidence by UHF neighborhoods was best explained by HBV and poverty ( $R^2=0.7$  in both models). From the OLS to the GWR model, the largest increases in  $R^2$  were for HCV (from 0.18 to 0.63) and poverty (from 0.18 to 0.75).

**CONCLUSIONS:** Geographic clustering was observed in the distribution of HCC in NYC. HCC disproportionately affects neighborhoods with high rates of viral hepatitis and poverty. Identifying geographic variation in HCC and its risk factors will allow targeting neighborhood interventions to increase awareness and implement public health programs.



## ABSTRACT 80

## Acute HIV Infection and Sero-Conversion: Why You Should Screen for HIV and Why You Should Keep Doing It

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**OBJECTIVE:** To study the efficacy of 4th generation HIV screening algorithm in detecting acute HIV infection and to evaluate the need for repeated HIV testing among HIV negative patients.

**METHODS:** Harris Health System is the public safety net hospital system in the Houston area. A routine HIV screening program has been running across Harris Health since 2008 in which patients 16 and older receiving blood draw for other reasons may be tested for HIV unless they opt out. In October 2014, a new HIV screening algorithm was implemented. This algorithm relies on a 4th generation screening test, with positive samples then tested with an HIV-1/HIV-2 confirmatory test (Multispot). A positive screen followed by a negative Multispot is adjudicated with an HIV RNA viral load test (VL), which will distinguish between acute HIV infection and a false positive screening test. We evaluated the number of acute HIV infections identified before and after implementation of the new algorithm. We also queried the electronic databases for newly diagnosed patients who had tested negative at least once prior to their diagnosis.

**RESULTS:** During the first five months of the new algorithm 43,465 HIV screening tests were performed, including 673(1.5%) with a positive result. 83(12.3%) of these tests had a discordant Multispot. VL was available for 51(61.4%) of the discordant cases, of which 13 (25.5% of the discordant cases with a VL) were confirmed to be acute infection.

In the 6 years of routine screening prior to the new algorithm, a total of 561,777 screening tests were performed, of which 10,594(1.9%) were positive. 985(9.3%)

of the positive tests had a discordant confirmatory result (negative or indeterminate Western blot). VL was available for 295(29.9%) of the discordant cases, of which 58 (19.6% of the discordant cases with a VL) were confirmed to be acute infection.

Among all new diagnoses made since 2008 (1142 cases), 122(10.7%) were tested negative by us at least once prior to their diagnosis. The median time between the last negative test and diagnosis was 339 days. 7 of the seroconvert patients were diagnosed during their acute infection phase.

**CONCLUSIONS:** The 4th generation HIV screening algorithm made it twice as likely to have a viral load available to adjudicate discordant cases and identified more acute infections than the 3rd generation algorithm. This algorithm can thus improve patient care and public health. Consistent with the USPSTF recommendations, our results indicate annual testing is beneficial in high prevalence settings.

## ABSTRACT 81

## Health Care Costs and Resource Use Associated with Sequelae and Comorbidities on Among Patients with Chronic HCV

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**OBJECTIVE:** Patients with chronic HCV incur substantial health care costs due to sequelae from the virus as well as from conditions other than HCV. Understanding costs and resource use associated with sequelae and comorbidities may help to inform treatment decisions. The purpose of this study was to determine the financial impact of sequelae and comorbidities in patients with chronic HCV.

**METHODS:** A retrospective cohort analysis was conducted using 2 large commercially paid claims databases from 2006-2013. Adults with a diagnosis of chronic HCV (ICD-9 070.44, 070.54) continuously enrolled for 2 years (baseline period) prior to the index date were included.

Index date was set as the last ICD-9 code for an HCV patient with 1 year of continuous enrollment post-index date. Comorbidity costs were captured from the 1 year time period following the first claim for the comorbidity in the baseline period. Patients were evaluated by subgroups for cirrhosis (decompensated/compensated), liver transplant, hepatocellular carcinoma (HCC), prior HCV treatment status, HIV coinfection, diabetes, cardiovascular disease (CVD), psychiatric disorders, and renal disease. Costs were calculated on a per patient per year (PPPY) basis.

**RESULTS:** Results from 2 databases (~70 million members each) found there were 97,935 patients with chronic HCV (n= 46,384 and n=51,551 in each). Baseline characteristics were similar between databases: there were more males than females (57.2% and 58.3%), and the average age was 53.5 and 52.3 years, respectively. CVD was the most common comorbidity, noted in approximately 48% of patients in each database; compensated cirrhosis was the most common sequelae, occurring in 9.6% and 9.7% of patients, respectively. Transplants and HCC were noted in small percentages of patients in each database (2.0% and 0.8% for transplant; 1.4% in each for HCC), but accounted for the highest PPPY costs (\$71,679 and \$105,404 for transplant; \$70,343 and \$73,466 for HCC). Renal disease was the third most expensive condition in each database with costs of \$40,855 and \$43,298, respectively. Hospitalizations were the primary cost driver. Patients with decompensated cirrhosis had high percentages for hospitalization and ER visits, and incurred costs of \$37,521 and \$41,969, respectively. Overall all-cause PPPY costs were approximately \$13,200 in each database. By comparison, HCV patients without comorbidities had costs of \$6,529 and \$6,738, respectively.

**CONCLUSIONS:** Health care costs for patients with chronic HCV are substantial and vary considerably by associated sequelae/comorbidities. Understanding the contributions of these conditions may help inform decision makers.

## ABSTRACT 82

### HEPATIQ: Automated Measure of Liver and Spleen Volumes Correlates With the Manual Method

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**OBJECTIVE:** Simple tests such as spleen volumes per ideal body weight (SV/IBW) as an index of portal hypertension and hepatic volumes have been ignored as non-invasive methods for staging CLD. Hepatic and spleen volumes by MRI or CT in the A2ALL study (Everson, et al 2013 Liver Transplantation 19: 292-304) using edging techniques correlated closely with those calculated by SPECT calculation for HV ( $r^2 = .86$ ) and SV ( $r^2 = .90$ ). The SV/IBW > 2.5 cc/lb IBW (5.5 cc/kg) has 12X higher risk of adverse clinical outcomes than patients with normal SV/IBW (HALT-C 2012;Hepat;55:1019). The SV is a calculation (non-edging technique that is not affected by voxel size) measured by manually drawn regions of interest (ROI) on SPECT images is tedious. HEPATIQ is an automated computer program developed to make quantitative image analysis of SPECT images easier. The automated SV/IBW (SV/IBW-A) was correlated with manual SV/IBW (SV/IBW-M) and automated hepatic volume per IBW (HV/IBW-A) was correlated with manual HV/IBW (HV/IBW-M).

**METHODS:** Sequential SPECT scans in 149 patients were used for comparison. SCAN: Patients were fed prior to IV injection of 5-6 mCi 99Tc sulfur colloid with subsequent SPECT /planar images. HEPATIQ and Manual processed QLSS on summarized transaxial images was made for SV/IBW.

**RESULTS:** SV/IBW-A ( $2.5 \pm 2.35$ ) was strongly correlated with SV/IBW-M ( $2.45 \pm 2.40$ ) ( $r^2 = .98$ ;  $p < .0001$ ). HV/IBW-A ( $10.0 \pm 3.12$ ) was strongly correlated with HV/IBW-M ( $9.97 \pm 3.11$ ) ( $r^2 = .95$ ;  $p < .0001$ ).

**CONCLUSIONS:** 1. SV/IBW-A and HV/IBW-A using HEPATIQ correlates closely with spleen and liver volumes processed manually. 2. SV/IBW-A is an additional

parameter on quantitative liver spleen scan that is useful clinically and is now more available with the advent of HEPATIQ.

## ABSTRACT 83

### HEPATIQ: Automated Measure of Liver Disease Severity That Correlates With Adverse Clinical Outcomes (ACO)

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**OBJECTIVE:** Functional quantitative tests have been largely ignored in the search for non-invasive methods for staging CLD. The perfused hepatic mass (PHM) is a precise measure of liver function correlating with the functional mass of the liver ( $r^2 = .905$ ) (AmJGastro;92:2054). PHM <95 has 15X higher risk of ACO than patients with PHM  $\geq 95$  (HALT-C 2012;Hepat;55:1019). PHM measured by manually drawn regions of interest (ROI) on SPECT images is tedious. HEPATIQ is an automated computer program developed to make quantitative image analysis of SPECT images easier. Validation requires that automated PHM (PHM-A) correlate closely with manual PHM (PHM-M) and with ACO.

**METHODS:** Sequential SPECT scans in 204 patients: normal 9, HBV 31, HCV 67, NASH 24, PBC 7, ACAH 10, ALD 8, abnormal AST/ALT 22, post liver transplant (LT) 5, misc. 13, and unknown 8. Any ACO in the present or past was recorded in 196 patients with available clinical information including 159 never having ACO and 37 patients with current or prior ACO: current ascites 23 (8 refractory), VB 8, HE 11, HCC 7 and death 2. SCAN: Patients were fed prior to IV injection of 5-6 mCi <sup>99</sup>Tc sulfur colloid with subsequent SPECT /planar images. PHM was calculated manually and by HEPATIQ on summarized transaxial images.

**RESULTS:** PHM-A ( $97.3 \pm 11.5$ ) was strongly correlated with PHM-M ( $97.5 \pm 11.8$ ) ( $r^2 = .96$ ;  $p < .0001$ ) (figure).

Since PHM-A and PHM-M were not significantly different in any clinical parameter, only PHM-A clinical correlation is reported. PHM-A in 9 normals ( $103.7 \pm 3.3$ ) and 150 patients never having ACO was  $101.6 \pm 4.1$  with 5% < 95 compared to those with active and prior ACO ( $81.5 \pm 15.2$ ) with 75% < 95 ( $p < .001$ ). PHM-A in patients with prior, but not active ACO included 5 patients with LT  $98.5 \pm 5.5$  and 7 patients with prior ACO that had resolved more than 2 years prior to scan after effective treatment ( $94.8 \pm 3.0$ ) ( $p < .5$ ). In 25 patients with active ACO PHM was  $74.4 \pm 14.1$ ; 23 of these with ascites  $72.7 \pm 13.3$  (100% < 95); and 2 death (36.1, 63). 15 patients with treatable ascites had higher PHM  $73.9 \pm 10.2$  compared to 8 refractory ascites ( $65.5 \pm 14.0$ ) ( $p < .05$ ). PHM was  $71.5 \pm 16$  in 9 patients with HE and  $76.3 \pm 16.7$  in 7 with HCC.

**CONCLUSIONS:** 1. PHM-A using HEPATIQ correlates closely with PHM-M 2. PHM-A using HEPATIQ is a precise measure of CLD severity correlating with clinical outcomes regardless of CLD cause. 3. PHM-A with HEPATIQ is a hepatic function test, valuable for non-invasive staging of CLD.

## ABSTRACT 84

### Evaluation of a Rapid HIV Screening Program in an Urban Academic Adult Emergency Department to Identify Individuals with Undiagnosed HIV Infection

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**OBJECTIVE:** We instituted routine opt-in rapid point-of-care (POC) HIV screening in our urban ED a decade ago. During the early years of our program (2007), a seroprevalence study was conducted to evaluate the program metrics. The study demonstrated a higher prevalence of undiagnosed HIV in patients who were not offered testing, and in those who declined testing versus those who were actually tested, suggesting



missed opportunities. More streamlined programmatic approaches to testing have since been implemented, but the impact of these advances on reducing undiagnosed HIV remains unknown. We sought to assess the impact of streamlined ED rapid HIV testing processes for detection of previously undiagnosed HIV infections using an identity-unlinked seroprevalence methodology.

**METHODS:** In summer of 2007 our screening program used a bed-to-bed supplementary staff (testing facilitators) only approach. Testing facilitators offering testing at bedside, obtained written consent, and collected oral swabs for on-site ED laboratory processing. In summer of 2013, a more streamlined program was in place, which took advantage of verbal consent, an electronic patient tracking system, triage nursing staff offer/consent, and both 4th-generation HIV testing, and bedside POC testing. During that same period, an identity-unlinked seroprevalence study was conducted. We explored overall HIV prevalence and HIV prevalence by 'program status' (i.e. offered, declined or tested) between program periods (2007 versus 2013) analyzing prevalence difference using chi-square or exact test.

**RESULTS:** In 2013, the overall prevalence of HIV infection and that of undiagnosed HIV infections was 5.6% (262/4713) and 0.4% (17/4468), respectively. They were significantly lower than the overall prevalence of 7.8% (265/3417) and undiagnosed prevalence of 2.3% (73/3225) in 2007 [prevalence difference of overall infection: -2.2%, 95% CI: (-3.3%, -1.1%); prevalence difference of undiagnosed infection: -1.9%, 95% CI: (-2.4%, -1.4%)]. The proportion of diagnosed HIV infections in all HIV-infected patients increased from 72.5% in 2007 to 93.5% in 2013 ( $p < 0.001$ ). Of 4468 patients without diagnosed HIV infection, 969 (22%) patients were offered an HIV test, 522/969 (54%) were tested and 1/522 (0.2%) was tested positive. Although there were no significant differences in undiagnosed HIV prevalence based on screening program status, only 4 (24%) of 17 undiagnosed patients were offered an HIV test.

**CONCLUSIONS:** Our finding indicate that the streamlined ED HIV screening program is associated with improvements in identification of undiagnosed infections, but that missed opportunities still exist in for those who were not offered testing.

## ABSTRACT 85

### Viral Hepatitis Infection Among Immigrants from Asia and Sub-Saharan Africa, Baltimore-Washington Metropolitan Areas, 2014

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**OBJECTIVE:** To report the prevalence of hepatitis B virus (HBV) and hepatitis C virus (HCV) infection among foreign-born Americans.

**METHODS:** In 2014, 1293 immigrants from Asia, South America, Central America, and Sub-Saharan Africa, 12 years and older, participated in free community hepatitis screening events in the Baltimore-Washington Metropolitan area. Three quarters of participants were from Asia. They were tested for HBsAg, anti-HBs, and hepatitis C antibodies.

**RESULTS:** Of 1293, 4.7% had chronic HBV infection: 5.7% from Asia and 4.8% from Sub-Saharan Africa. Those from South and Central America reported no HBV infection. In terms of country of birth, Vietnamese (10.7%) had highest rates of HBV infection followed by those from Myanmar (9.1%), Laos (8.8%), and China (8.7%). This prevalence among those from Liberia, Cameroon, and Ethiopia were 18.2%, 7.1%, 5.4%, respectively. Of the 1015 screened for HCV, 2.9% had HCV infection: 5.5% from Sub-Saharan Africa, 2.8% from Asia, and 2.2% US born. In terms of country of birth, those from Cameroon had 21.4% HCV infection followed by those from Nigeria (9.1%). Those from Burma had the highest HCV prevalence among Asians (5.5%). There were significant gender differences in HBV infection (6.1% for males vs. 3.5% for females,  $p < .05$ ). There were different age patterns of infection between those from Asia and Africa: Highest rate of HBV infection was found in those of 41-50 age group (7.3%) and followed by those of 31-40 (6.5%) from Asia and those of 21-30 age group from Africa (13.3%). Those in age group of 31-40 from Asia (5.9%) and those of 61 years and older from Africa had highest HCV infection (16%).

**CONCLUSIONS:** This study indicated that immigrants in endemic areas including Asia and Sub-Saharan Africa were high risk of HBV and HCV infection. Liver cancer education programs are needed to increase liver cancer awareness in this underserved community.

## ABSTRACT 86

### Comparison of Hepatitis C Among Patients with Mono-Infection and HIV Co-Infection

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**OBJECTIVE:** Chronic hepatitis C virus (HCV) infection is a prevalent disease among Veterans especially those who are also co-infected with HIV. At the Washington, DC VA Medical Center, 71% of persons born during 1945-1965 have been screened for HCV infection, and the prevalence of HCV was 13% among those tested. We describe and compare the characteristics of patients who have HCV mono-infection and HIV co-infection

**METHODS:** A retrospective review of the HCV Clinical Case Registry at our VA Medical Center was performed for 2008-2013 comparing patients with hepatitis C mono-infection and HIV co-infection. Summary information was collected for age, gender, race, HCV genotype, fibrosis scores using APRI ( $((AST/ULN\ AST)/Platelet) \times 100$ ), and FIB-4 ( $(Age(in\ years) \times AST/(Platelets \times ALT^{1/2}))$ ), hepatocellular carcinoma diagnosis, and mortality. Data for HCV genotype were calculated based on patients tested. Comparisons were made using Fisher's exact test for categorical data and t-test assuming unequal sample variances for continuous variables.

**RESULTS:** Based on data from 2008 through 2013, numbers of patients (% of total or in each category) are given.

Parameter	HCV only	HCV+HIV
All patients	N=4327	N=402
male	4160 (96%)	398 (99%)
mean age (years)	59	56
African American race	3082 (71%)	326 (81%)
Fibrosis measures	n=4056	n=390
Mean APRI $\pm$ SD	1.36	1.41
Median APRI [IQR]	0.52 [0.32 – 0.98]	0.6 [0.39 – 1.05]
Persons with APRI $\geq$ 1.5	653 (16%)	71 (18%)
Mean FIB4 $\pm$ SD	3.74	4.18
Median FIB4 [IQR]	2.06 [1.49 – 3.37]	2.39 [1.72 – 3.79]
Persons with FIB4 $\geq$ 3.25*	1071 (26%)	121 (31%)
Persons with genotype testing	n=2638	n=262
Genotype 1	2455 (93%)	249 (95%)
Received any HCV treatment	272 (10%)	22 (8%)
HCV suppression	418 (10%)	42 (10%)
Hepatocellular cancer diagnosis	183 (4%)	11 (3%)
Persons with all-cause mortality	597 (14%)	62 (15%)

\* Indicates significance at level of  $P < 0.05$ .

**CONCLUSIONS:** We found similarities for HCV patients with mono-infection and those with HIV co-infection during 2008-2013 for mean APRI and FIB-4 scores and for persons who received treatment, had viral suppression, were diagnosed with hepatocellular carcinoma, and had all-cause mortality. The only significant difference for fibrosis was noted in the greater number of persons with FIB-4 score  $> 3.25$  in the HIV co-infected group. Our low rates of treated patients warrant improvement given the availability of more effective and less toxic direct acting agents.



## ABSTRACT 87

**Overdose Prevention is HIV Prevention***E Katumkeeryil<sup>1</sup>*<sup>1</sup>Prevention Point Philadelphia, Philadelphia, Pennsylvania, United States of America

**OBJECTIVE:** To create a Naloxone administration training program for opiate users and to use this as a springboard for health discussions in people with HIV.

**METHODS:** People with HIV are more at risk for an overdose due to the combined stigma of having HIV and actively using and having compromised immune systems. Co-morbidities, such as Hepatitis C, only increase this population's risk for overdose. In 2012, Philadelphia experienced 497 drug overdose deaths, with over 50% of them being due to opioid overdose. An overdose poses the risk of theft, hospitalization, police-involvement, and death for the average user. For people with HIV, the risks increase due to interruption of drug regimens during hospitalization. There was an increase in opioid deaths with the release of fentanyl into the market in 2013. Twenty opioid overdose deaths were announced in a five-week period in March through April 2014. In response to this, we made several structural changes to revitalize our Overdose Prevention Intervention & Treatment Education (OPIATE) program.

**RESULTS:** Although the program began in 2006, low uptake of education sessions, lack of overdose risk awareness, and only syringe exchange staff offering trainings resulted in only 81 participants being trained in six months. After structural changes were implemented in 2014, however, the number of participants trained increased to 387 in six months.

**CONCLUSIONS:** Effective strategies included training all staff members to offer trainings and conducting outreach to families and partners of those who use opioids. For the purpose of expansion and replication, we hope to share the strategies we used to effectively expand the services we offered to our HIV positive participants via the expansion of the OPIATE project.

## ABSTRACT 88

**New Hepatitis Drugs in a Medicaid Special Needs Population-A Preliminary Report***J Ernst<sup>1</sup>, T Leach<sup>1</sup>, D Wirth<sup>1</sup>, S Rambaran<sup>1</sup>, J Moore<sup>1</sup>, J Cohn<sup>1</sup>, E Leach<sup>1</sup> and N Olivo<sup>1</sup>*<sup>1</sup>Amida Care, New York, New York, United States of America

**OBJECTIVE:** With the advent of DAAs for the treatment of Hepatitis C (HCV), cure rates reported in clinical trials are well over 95% as measured by sustained virologic responses at 12 weeks (SVR12). Amida Care, a NYC Medicaid Special Needs Plan for people with HIV, has been approving regimens containing these agents since December 2013. Amida Care's membership consists of HIV infected people with a high prevalence of comorbidities including mental illness, active or former drug and/or alcohol use and poverty. This interim report describes our experiences with DAAs in this population.

**METHODS:** We performed a retrospective record review of HIV/HCV patients receiving treatment for HCV from December 2013 thru September 2014. Only patients who completed treatment and had an end of treatment VL report or who did not complete treatment are included in this report. HIV RNA, CD4 Cell counts HCV RNA, HCV genotypes and fibrosis scores (when available) were collected at baseline in patients who qualified for HCV treatment according to current guidelines. Pharmacy staff monitored baseline characteristics, lab results and adherence from the time HCV treatment was requested, through 12 weeks post treatment.

**RESULTS:** Of the 106 patients treated for HCV, 50 patients received HCV treatment with regimens containing sofosbuvir or simeprevir and had data available for this analysis. 16 patients did not complete therapy and results are not included in this analysis, but reasons for not completing will be reported. Of those 50 patients, 24 (48%) were treatment experienced and 26 (52%) were treatment naïve. 26 of the 50 patients (52 %) had CD4 counts at the start of treatment above 500 cells/mm<sup>3</sup>. 24 (48%) had CD4 counts below 500 cells/mm<sup>3</sup>. 34 patients had a liver fibrosis score available. Of those 34 patients, 12 (35%) had a fibrosis grade ≤ F3 and 22 (65%) had a fibrosis grade

≥F3. 49 of the 50 patients had undetectable HCV RNA at the end of treatment. Further data will be presented as it becomes available.

**CONCLUSIONS:** Preliminary results in a Medicaid HIV/HCV co-infected population show impressive end of treatment HCV suppression rates. This study is ongoing and final results including SVR 12s will be presented at a later time.

## ABSTRACT 89

### Hepatic Decompensation and SAEs in HCV Infected Patients on Sofosbuvir-and/or Simeprevir-Based Therapies

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**OBJECTIVE:** New therapies for hepatitis C virus (HCV) were well-tolerated in registration trials, but results in practice can be different. We aimed to characterize patients experiencing hepatic decompensation and serious adverse events (SAEs) in a real-world setting and to identify potential risk factors.

**METHODS:** Records for HCV infected patients on combination regimens that included sofosbuvir (SOF) and/or simeprevir (SMV) were reviewed. The Cases experienced at least one of the following: hepatic decompensation, indicated by new or increased jaundice, ascites, encephalopathy, or sepsis, or another SAE. The study group was divided into patients who had not undergone liver transplantation (LT) (Cohort 1), and patients who had undergone LT (Cohort 2). The incidence of decompensation/SAE was calculated for each Cohort by Kaplan-Meier analysis. A matched Case-Control study was performed to identify risk factors for decompensation/SAE in Cohort 1. Up to five Controls were selected for

each Case based on treatment regimen and duration. For Cohort 2, all Cases were compared to Controls. Within each Cohort, Cases and Controls were compared using matched conditional exact analysis.

**RESULTS:** A total of 544 patients met the inclusion criteria: 499 in Cohort 1 (non-LT) and 45 in Cohort 2 (LT). There were 16 non-LT Cases and 9 LT Cases. The incidence of decompensation/SAE was 4.5% in the non-LT Cohort and 28.4% in the LT Cohort. In Cohort (non-LT), 86 patients were on PEG/RBV-free regimens; three decompensated/experienced an SAE. All patients in Cohort 2 were treated with SOF/RBV. Treatment was discontinued in 7/16 (44%) of non-LT Cases and in 2/9 (22%) of LT Cases. Liver decompensation/SAE led to treatment discontinuation in 1.4% (7/466) of Cohort 1 and in 4.4% (2/45) of Cohort 2 (similar to registration trials). Among non-LT patients, risk factors for decompensation/SAE included low baseline albumin and high total bilirubin. For LT patients, low baseline hemoglobin was a risk factor for decompensation/SAE.

**CONCLUSIONS:** 4.5% of patients in Cohort 1 and 28.4% of patients in Cohort 2 experienced liver decompensation or an SAE during treatment or within one month of ending treatment, suggesting that a subgroup may exist who could benefit from more intensive monitoring or some type of intervention. Low hepatic reserve may have contributed to risk of decompensation/SAE in Cohort 1. The underlying mechanisms leading to life-threatening adverse events or decompensation from SOF- and/or SMV-containing regimens need to be investigated further.

## ABSTRACT 90

### Patient Misunderstanding of HIV and HCV Testing in an Urban Emergency Department with an Integrated Screening Program

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**OBJECTIVE:** We implemented a triage nurse-initiated emergency department (ED) rapid human

immunodeficiency virus (HIV) and hepatitis C virus (HCV) screening program, in parallel with physician-initiated diagnostic testing. The study objective was to determine the proportion of patients who correctly reported whether or not testing was performed during their ED visit.

**METHODS:** This 2-month cross-sectional survey study enrolled a convenience sample of patients at the conclusion of their ED visit during specified study hours. Patients responded to a piloted survey regarding their experience with screening, specifically whether or not they were tested. Nurses and physicians were trained regarding the specifics of the HIV and HCV screening program, which emphasized positive result disclosure. Negative result disclosure was encouraged, but not required. Descriptive statistics were used to determine if patients were able to correctly report whether they were tested or not for HIV and/or HCV, as established by discordance of the lab result with the surveyed recall.

**RESULTS:** A total of 492 patients participated in the study. Among 73 patients who reported being tested for HIV, 22 (30.1%; 95% CI: 20.0%-42.0%) were not actually tested, and of the 419 patients who reported not being tested for HIV, 47 (11.2%; 95% CI: 8.4%-14.6%) were tested unknowingly. Among 50 patients who reported being tested for HCV, 20 (40.0%; 95% CI: 26.4%-54.8%) were not actually tested, and of the 442 patients who reported not being tested for HCV, 26 (5.9%; 95% CI: 3.9%-8.5%) were tested unknowingly.

**CONCLUSIONS:** Although most ED patients correctly reported whether testing was performed or not, there were many who did not. Such misunderstanding may pose medico-legal risks, lead to false reassurances, promote high-risk behaviors, and influence future test acceptance. While EDs serve as an important venue for integrated HIV and HCV screening, strategies to improve communication require attention.

## ABSTRACT 91

### Utilizing Longitudinal State Disease Registry Matching to Determine HCV Diagnosis Rates Among Persons Living With HIV in Louisiana

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**OBJECTIVE:** HIV and hepatitis C (HCV) share at least one common route of transmission. While both represent a serious health concern especially among persons who inject drugs (PWID), HIV/HCV co-infection introduces additional complication in the treatment and disease progression of both conditions. It's estimated that 80% of PWID in the US who have HIV also have HCV. For these reasons, the CDC recommends HCV testing among all people living with HIV (PLWH). In recent years, Louisiana has seen a surge in the HCV diagnosis rate and little change in the HIV diagnosis rate; between 2002 and 2011, the diagnosis rate of HCV among persons living in the state of Louisiana increased 140%, while the HIV diagnosis rate has remained steady.. The current study explores HCV diagnosis patterns specifically among PLWH in Louisiana during 2002 to 2012.

**METHODS:** Registry matches were conducted between the Louisiana Electronic HIV/AIDS Reporting System and the Louisiana Hepatitis Registry. Probability and deterministic methods were used to link individuals in both databases. Linking variables used to identify matches included name, date of birth, address, sex, race and death date.

**RESULTS:** Co-infection with HCV was found among 5.83% of the (18,714) persons living with PLWH while 5.41% of the 33,954 HCV infected individuals were found to also have HIV. The HCV diagnosis rate among PLWH decreased 76% from 2003 to 2012 (from 18.2 HCV diagnosis per 1000 PLWH in 2003 to 4.3 in 2012). All HIV transmission risk groups, including PWID, experienced a decrease in HCV diagnosis rate during the study period.

Furthermore, in 2002 the rate of HCV diagnosis among PLWH and reporting injection drug use was 2.8 times the HCV diagnosis rate among those not reporting injection drug use; in 2011, the HCV diagnosis rates for both groups was comparable.

**CONCLUSIONS:** HCV among PLWH decreased dramatically between 2005 and 2007 regardless of transmission risk. This result was unexpected as injection drug use is a major risk factor for both HIV and HCV and the general HCV diagnosis rate in Louisiana had been steadily increasing during the study period while the HIV diagnosis rate was stable. This trend may reflect disruption in HCV screening and surveillance data following Hurricane Katrina or reporting discrepancies between both registries. Strategies for HCV testing among PLWH as well as Implications for the treatment of HCV/HIV coinfecting individuals are discussed.

## ABSTRACT 92

### A 25-Year Perspective on the HIV Epidemic from The Johns Hopkins Emergency Department

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**OBJECTIVE:** The Johns Hopkins Hospital Emergency Department (JHH-ED) has served as a window on the HIV-epidemic for over 25 years, and as a pioneer in ED-based testing and linkage-to-care (LTC) programs. We document the changing nature of the epidemic in inner-city Baltimore.

**METHODS:** We analyzed 7 identity-unlinked serosurveys conducted on 18,144 adult JHH-ED patients between 1987-2013 for trends in HIV prevalence, cross-sectional incidence estimates, undiagnosed HIV, LTC, antiretroviral drug (ARVs) treatment, and viral suppression.

**RESULTS:** HIV prevalence in 1987 was 5.2%, peaked at >11% from 1992-2003 and declined to 5.6% in 2013. Seroprevalence was highest for black males (initial 8.0%, peak 20.0%, last 9.9%) and lowest for white females. Among HIV+ individuals, proportion of undiagnosed infection was 77% in 1987, 28% in 1992, and 7% by 2013 ( $p<0.001$ ). Cross-sectional HIV incidence estimates declined from 2.28% in 2001 to 0.16% in 2013. Thirty-day LTC improved from 32% (2007) to 72% (2013). In 2013, 80% of HIV+ individuals had ARVs detected in sera, a marked increase from 2007 (27%) ( $p<0.001$ ). Concordant with ARV use, the proportion of HIV+ individuals with viral suppression (<400 copies/ml) increased from 23% (2001) to 59% (2013) ( $p<0.001$ ).

**CONCLUSIONS:** Over 25 years, JHH ED-based HIV-testing evolved from describing the local epidemic to a strategic interventional role, serving as a model for early HIV detection and LTC. While causation remains uncertain, our contribution to community-based HIV-testing and LTC program parallels declines in undiagnosed HIV infection and incidence, and increases in ARV use with associated viral suppression in the community.

## ABSTRACT 93

### Routine HIV Screening, Acute Infection Diagnosis, and Partner Engagement: The Experience of a Safety Net Provider in Chicago

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**OBJECTIVE:** The Centers for Disease Control and Prevention in June 2014 recommended a testing algorithm for diagnosis of acute HIV infection (AHI). We review how this algorithm was used to identify patients with AHI, their linkage to care outcomes, and success in engaging their partners.

**METHODS:** Patients were routinely screened at Sinai Health System, a safety net provider, in Chicago, Illinois. Sinai operates a multi-complex laboratory and uses the AHI algorithm (P-24 antigen/HIV antibody test followed



by HIV-1/HIV-2 antibody supplemental tests and an HIV-1 RNA to detect AHI). Patients who screen reactive for HIV are post-test counseled by a physician and navigated to care by a patient navigator. Medical records were reviewed to determine CD4 and viral load, treatment initiation, attendance at infectious disease clinics, and partner elicitation. In December 2014, Sinai initiated a protocol to engage the social and sexual networks of the patients with AHI.

**RESULTS:** Of 13,380 patients screened at Sinai, 60 patients were newly diagnosed with chronic HIV infection and 8 patients were diagnosed with AHI from December 2012 to December 2014 (when 4th generation testing was available). Patients were Latino (n=1), black (n=5), and white (n=2); ranged from 19 years to 56 years old; and were male (n=5), female (n=2), and male to female transgender (n=1). The mean CD4 count was 467. Initial viral loads ranged from 84,403 to over 5,000,000 copies per ml. Patients with AHI were diagnosed in the Emergency Department and 100% were linked to care (2 appointments within 90 days). Viral suppression within 6 months of their diagnosis was <400 copies per ml (n=4) and <2,000 copies per ml (n=4), and 87.5% initiated treatment (one will be prescribed at the next appointment). Patients were heterosexual 62.5% (n=5) and men who had sex with men 37.5% (n=3). Regarding sexual partners: those who were unaware of their HIV status and for whom the partner could reach were tested for HIV (n=5), initiated Pre-Exposure Prophylaxis (n=2), were living with HIV infection but the AHI was unaware (n=1), and reinitiated antiretroviral therapy when HIV infection was known (n=1).

**CONCLUSIONS:** Patients with AHI achieved high rates of viral suppression shortly after treatment initiation. Equal focus should be placed on diagnosing patients with AHI, accelerating linkage to care, and conducting follow-up of patient's social and sexual networks.

## ABSTRACT 94

### Oregon's First State Viral Hepatitis Epidemiologic Profile

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**OBJECTIVE:** The purpose of Oregon's viral hepatitis epidemiologic profile is to document the burden of disease associated with viral hepatitis in Oregon, focusing on chronic infection with hepatitis C virus (HCV). The goal is to increase awareness of screening recommendations for HCV; provide useful data to local health departments, other state agencies, and healthcare systems for planning purposes; and inform policies for viral hepatitis prevention and care.

**METHODS:** We relied primarily on surveillance data from cases of acute and chronic HCV infection reported to the Acute and Communicable Disease Program of the Oregon Public Health Division, focusing on the time period 2009-2013. We matched chronic cases of HCV to the Oregon State Cancer Registry to identify cases of liver cancer associated with HCV infection, analyzed inpatient hospitalization discharge to identify hospitalizations associated with HCV, and reviewed death certificates to estimate HCV-associated mortality.

**RESULTS:** Rates of acute infection with HCV during 2009-2013 were stable over time, averaging 25 cases per year and largely attributable to injection drug use (64%). The average rate of acute HCV in Oregon was 50% higher than the national rate. In that same time period 25,437 cases of chronic HCV infection were reported; both American Indians/Alaska Natives and Blacks had rates of positive HCV laboratory reports that were twice as high as in Whites. We identified 763 persons with liver cancer and HCV during the time period 2005-2012 (accounting for 20% of cases of liver cancer). The proportion of liver cancer cases with HCV rose steadily, reaching 47% of liver cancer cases by 2012. Nearly 800 hospitalizations due to HCV occurred in Oregon each year. Seventy percent occurred in persons aged 50-64, and 62% occurred in persons whose insurance payer was either Medicare or Medicaid. Deaths from HCV rose steadily between 2009 and 2013, averaging



more than 400 deaths annually; 80% occurred in persons aged 45-64 years. The average rate of HCV mortality was six times higher than Oregon's HIV mortality rate in 2009-13, and was 1.8 times higher than US HCV mortality rate in 2011.

**CONCLUSIONS:** We combined routine surveillance data with other public health data sources to compile data that paint a sobering picture of the burden of disease of HCV in Oregon, and uncovered significant racial disparities. Our findings highlight the need to promote culturally competent HCV screening and improved linkage to care for persons diagnosed with HCV.

## ABSTRACT 95

### Utilizing Electronic Laboratory Reporting Data to Assess the Burden of Hepatitis C in Arizona

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**OBJECTIVE:** Although hepatitis C virus (HCV) infection is a reportable disease in Arizona, the Arizona Department of Health Services (ADHS) has not had the capacity to conduct complete hepatitis C surveillance since 2007 and thus monitoring HCV trends is difficult. Cases are reported via mail, fax, phone, or electronic laboratory reporting (ELR). A number of commercial laboratories began reporting HCV laboratory results through ELR in 2009. We assessed the use of ELR data to estimate the current disease burden of HCV in Arizona.

**METHODS:** HCV laboratory results reported through ELR from August 9, 2009 through March 5, 2014 were de-duplicated at the patient level. Cases were classified according to the CSTE/ADHS laboratory case definition. Descriptive statistics were calculated using SAS version 9.3.

**RESULTS:** There were a total of 105,919 HCV ELR records for 42,838 patients. Of these, 37,893 patients met the ADHS laboratory case definition for HCV infection. Sixty-four percent were male. Thirty-five percent of cases were in

the 50-59 years old age group. 17,254 (46%) patients had only antibody tests results. Only 20,639 (54%) patients were confirmed by nucleic acid test (NAT). There were 25,404 positive quantitative PCR results among 16,585 patients. The maximum viral load per patient ranged from 5 IU/mL to over 100,000,000 IU/mL. The median and mean maximum viral loads were 1,170,000 IU/mL and 70,946 IU/mL, respectively. Fifty-eight percent of those with a positive quantitative PCR result had a high maximum viral load (i.e.  $\geq 800,000$  IU/mL).

**CONCLUSIONS:** Analysis of HCV ELR data indicates a large burden of HCV amongst Arizonans. ELR data alone reflect at least 11,611 HCV incident and prevalent cases reported in 2013, suggesting that HCV is one of the most commonly reported infectious diseases in the state. In addition, a quarter of the HCV patients reported through ELR had a high viral load. The data indicate the need to educate patients and providers about the importance of confirmatory PCR testing and to link infected persons to care. Analysis of ELR data provides an alternative source of data to estimate the burden of HCV in Arizona.

## ABSTRACT 96

### Distribution of Hepatitis C Testing in Philadelphia, 2012 - 2014

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**OBJECTIVE:** Typically, only positive hepatitis C virus (HCV) test results are reportable to Health Departments; therefore, it has been difficult to create an accurate picture of who is being tested. This study utilizes positive HCV antibody (Ab) results from the Philadelphia Department of Public Health (PDPH) hepatitis registry along with negative results obtained from two reference laboratories that run 85% of the city's hepatitis tests. The aims of this study are 1) to assess differences in HCV positivity rates by patient demographics, neighborhood poverty, and ordering facility type, and 2) to measure the impact of the

CDC's September 2012 recommendation that all adults born between 1945 – 1965 (ie. 'baby boomers') receive screening for HCV.

**METHODS:** Negative HCV Ab testing data from January 1st, 2012 – December 31st, 2014 was obtained from Quest and Labcorp, and merged with HCV positive test results that were reported to PDPH during the same time period. Positivity rates, in total and stratified by demographics (age and gender), facility type, and neighborhood, were calculated using SAS. Rates by census tract were mapped using ArcGIS, and overlaid with 2012 American Community Survey data on race, ethnicity, income, and poverty rate.

**RESULTS:** During the study period, 132,738 individuals received an HCV Ab test, of whom 16,891(13%) tested positive. The number of tests reported per month increased from ~3200 before to ~3850 after the CDC baby boomer testing recommendation. HCV Ab positive were more often  $\geq 50$  years of age (58%) and male (63%) than persons testing HCV Ab negative (32% and 35%, respectively). Individuals testing HCV Ab positive were also more likely to have been screened in a city health center than individuals who tested negative. Interestingly, regions of the city with the lowest poverty rates tended to have the highest rates of HCV positivity.

**CONCLUSIONS:** These results indicate that the CDC's new baby boomer recommendation is helping to promote HCV screening in Philadelphia. Findings also show that particular populations are at greater risk of testing HCV positive, including males, individuals  $\geq 50$  years of age, and people screened in a city health center. The negative association between poverty and HCV positivity may be related to the uptick in baby boomer testing and requires further investigation. Together, these data will inform patient outreach efforts and help PDPH to focus HCV testing resources in regions of Philadelphia that may require additional attention.

## ABSTRACT 97

### The Impact of 4th Generation HIV Testing in Tennessee: Identification and Linkage to Care of Individuals with Acute HIV Infection

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**OBJECTIVE:** Accurate and early diagnosis of HIV infection allow infected persons to know their status, access care, and reduce transmission. The Tennessee Department of Health laboratories implemented the CDC and APLH recommended 3-step algorithm to accelerate early diagnosis, referred to as 4th Generation HIV Testing. We report the results from TDH's first 21 months of 4th generation HIV testing, including the follow-up of individuals diagnosed as acutely infected.

**METHODS:** In April 2013, TDH laboratories implemented 4th Generation HIV Testing. Step One utilizes antigen/antibody immunoassay to detect HIV-1. If positive, Step Two is conducted using an HIV-1 / HIV-1 antibody differentiation assay. If Step Two is negative or indeterminate, Step Three is conducted using HIV-1 RNA NAT which, if positive, identifies acute HIV-1 infection. Steps One and Two are conducted by TDH laboratories. Specimens requiring Step Three were originally conducted by a contracted lab and brought in-house beginning September, 2015. For all individuals diagnosed with acute HIV-1 infection, subsequent HIV-1 RNA results (qualitative and quantitative) were obtained from the statewide Enhanced HIV/AIDS Reporting System (EHARS).

**RESULTS:** Between April 6, 2013 and December 31, 2015, 140,245 individuals underwent 4th Generation HIV Testing. 1,518 (1.1%) were positive for Step One, of which 1,375 (90.6%) were positive for Step Two (1,373 for HIV-1, 2 for HIV-2). 141 specimens (10.3%) required Step Three, of which 16 (11.3%) had detectable HIV-1 RNA, indicating acute HIV-1 infection. 14 of 16 (87.5%) have been linked to medical care, of whom 2 (14.3%) were subsequently determined to be HIV negative.

**CONCLUSIONS:** 4th Generation HIV Testing can accelerate HIV diagnosis and earlier access to care. Individuals identified as acutely HIV infected using this algorithm should be aggressively linked to care, both to confirm acute infection and ensure early access to care. Quantitative HIV-1 RNA testing may have utility as a 4th step in the algorithm to confirm suspected acute HIV infection.

## ABSTRACT 97LB

### Evaluation of the Xpert® HIV-1 Qual Assay and Xpert® HIV-1 Viral Load Assay

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**OBJECTIVE:** Evaluate the Xpert® HIV-1 Qual and Xpert® HIV-1 Viral Load Assays compared to their predicate devices using clinical specimens.

**METHODS:** Xpert® HIV-1 QUAL assay was compared to Roche CAP/CTM HIV-1 Qual 2.0 assay, and Xpert® HIV-1 VL assay was compared to Abbott RealTime HIV-1 quant assay. Both Xpert HIV-1 assays were designed to target a highly stable, single HIV-1 gene - 3' end of 5' LTR. QUAL study sites included NHLS in S. Africa, and NHS/EGPAF in Lesotho, while VL study sites included UCSF & GWU in the US, Lothian NHS in Scotland and Rouen University Hospital in France. For QUAL study, 505 specimens (399 DBS & 106 WB) were tested for HIV-1. For VL study, 724 plasma samples were included in the final analysis.

**RESULTS:** Two QUAL comparisons were made: 1) Xpert QUAL HIV-1 results using DBS compared to Roche HIV-1 Qual 2.0 results using DBS and demonstrated 97% (387/399) agreement, and 2) Xpert HIV-1 QUAL results using WB were compared to Roche Qual 2.0 results using DBS and showed 98.1% (104/106) agreement. Xpert HIV-1 VL assay contains 2 internal controls and can test both fresh and frozen plasma collected in EDTA or ACD tubes.

Plasma VL comparison demonstrated an overall agreement of 87.2% (631/724) between Xpert and Abbott VL assays. Analyzing all specimens within the quantitative range of both assays (n=390) resulted in R<sup>2</sup>=0.9696. LOD and LOQ for Xpert HIV-1 VL assay were determined to be 40 copies/ml for both subtype B and non B HIV-1 subtypes. Testing HIV-1 negative blood donor specimens (514 DBS and 503 WB for QUAL assay, and 109 plasma specimens for VL assay) demonstrated 100% specificity for both QUAL (1017/1017) and VL (109/109) assays.

**CONCLUSIONS:** Evaluations demonstrated: 1) excellent overall performance for Xpert HIV-1 QUAL compared to Roche Qual 2.0 assay, and 2) comparable results between Xpert HIV-1 VL assay and Abbott's RealTime assay with 90.1% (208/230) of all positive specimens being detected by Xpert and 77.8% (179/230) detected by Abbott, with slightly more of those detected positive specimens being quantified by the Abbott (10.4%; 24/230) compared to the Xpert (0.9%; 2/230). In summary, the same GeneXpert instrument currently used in resource limited settings for rapid MTB/RIF testing could be used to produce HIV-1 test results in <2 hours for both EID and VL monitoring.

# **Track D: Access, Linkage and Retention in Care**



## ABSTRACT 98

## "In Care" Persons Living with HIV Encountered Through an Urban HIV Navigation Program: Retention Does Not Equal Suppression

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**OBJECTIVE:** Linkage to care navigation for persons living with HIV (PLWH) is a promising practice to foster engagement in HIV care (Cheever, 2007; Mugavero, Amico, Horn, & Thompson, 2013). An urban HIV outreach program currently provides navigation for PLWH who are newly diagnosed or not in care from multiple clinical and community entry points. This program also encounters PLWH who are determined to be "in care." National data illustrate that less than 25% of PLWH are virally suppressed. HIV treatment with antiretroviral therapy (ART) is associated with reduced morbidity and mortality as well as secondary prevention of HIV. A better understanding of the "in care" population encountered through outreach is needed to maximize the opportunity to serve PLWH and achieve more widespread viral suppression.

**METHODS:** An analysis of "in care" PLWH encountered between January 1, 2013 – February 28, 2014 was undertaken to determine the portion of patients who were virally suppressed at the time of encounter. Encounters took place in the inpatient setting, emergency department (ED) and community-based sites. "In care" was defined by attendance of at least one HIV medical appointment in the six months prior to the outreach encounter. Data from electronic medical records for all patients encountered during the specified time period who were confirmed to be in care in one of the University of Maryland's HIV Clinics (n=148). Four (4) patients were disqualified due to insufficient data. Data were de-identified once abstracted.

**RESULTS:** Of the 144 patients included in the analysis, 123 were encountered in the inpatient setting, 11 were encountered in the ED, and 10 through community-based sites. Among the sample of 144 patients, 25% (36) were

virally suppressed at the time of encounter. The average CD4 count of the sample was 261. Forty-eight percent (48%) of the patients had a CD4 count of less than 200 at the time of encounter.

**CONCLUSIONS:** There are multiple gaps in the continuum of care for HIV. Linkage and retention does not necessarily mean "viral suppression." Evidence indicates that PLWH face multiple psychosocial comorbidities including homelessness, substance abuse and mental health diagnoses that may prevent optimal engagement in care. Ryan White programming has given us a unique opportunity to implement creative outreach programs that meet patients "where they are." Navigation programs may be used to assess and refer "in care" PLWH to relevant supportive services to increase their chances to achieve viral suppression.

## ABSTRACT 99

## A Participatory Learning and Action (PLA) Approach to Enhancing Linkage to HIV Care Among Youth

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**OBJECTIVE:** To describe the use of a Participatory Learning Action (PLA) approach in order to to engage community stakeholders in identifying barriers to HIV linkage to care and creating an action plan to address these barriers among youth and young adults.

**METHODS:** Community stakeholders representing various organizations addressing aspects of HIV care participated in a series of interactive meetings to identify HIV linkage to care barriers and possible solutions.

**RESULTS:** Multiple barriers to HIV care were identified through the PLA process. Identified barriers were related to the health care system, lack of community collaborations, social factors such as stigma, and characteristics of risk populations. One of the solutions identified to address individual barriers was the creation of an application (app) for smart phones that includes resources and how to access

care. This app is a way to reach youth on a platform that they are familiar with using. Resources can be searched for HIV/STD testing and care, directions to nearby services, and the ability to call linkage workers at various sites.

**CONCLUSIONS:** Early linkage to HIV care is critical for viral suppression and to prevent transmission. However, people with HIV, and especially adolescents, delay linkage to care. Engaging community stakeholders through a PLA approach can be effective in improving engagement in care of people with HIV. The development of an app will allow the testing of an innovative, scalable approach to engaging individuals in care by making services more accessible.

## ABSTRACT 100

### Creating a Hepatitis C Navigation and Linkage-to-Care Program

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**OBJECTIVE:** The NO/AIDS Task Force, a 30 year-old AIDS Service Organization, recently underwent a transformation to becoming a Federally Qualified Health Center allowing for services to expand beyond providing care for those HIV-infected. At about the same time, treatment options for Hepatitis C, as well as HCV point-of-care testing became accessible to the agency. While the need for HCV testing has always existed, the agency lacked the capacity and resources to provide testing or link those infected to care. As testing and services have become available, the agency has adapted to the needs of clients and created an HCV linkage program.

**METHODS:** The organization offers free, rapid HIV and HCV testing to at-risk populations through a program housed at the municipal courthouse and Louisiana's only syringe access program, operated by the agency. Those infected with HCV are referred to a Navigation and Support Services Specialist who guides clients through the next steps in accessing care/treatment. This staff person schedules and attends the client's first appointment, offering incentives and travel assistance. At the FQHC, clients enroll in primary care, obtain coverage through

the Marketplace, are able to receive RNA tests through an appointment with an infectious diseases specialist, and explore treatment options. Staff assist clients in navigating medication assistance programs to obtain needed resources for treatment.

**RESULTS:** Before September 2014, HCV linkage-to-care was unknown and presumably 0%. From September 2014 through February 2015, 147 HCV tests were performed with 66 (44%) received positive results—17% of whom successfully accessed primary care: 31 of the 66 HCV-positive clients accepted a referral for follow-up, 12 scheduled follow-up appointments, and 10 enrolled in care to access treatment.

**CONCLUSIONS:** Using lessons learned from a successful HIV Linkage model already established within the agency (roughly a 92% successful linkage rate), cultural competency for at-risk populations, incentives, and cross-departmental collaboration, CrescentCare has begun the process of reaching similar successes with HCV linkage-to-care. Essentially, the agency directs a population burdened with the limitations of few-to-no resources toward the best possible outcomes for HCV infection.

## ABSTRACT 101

### Implementation of an HCV Linkage to Cure Program at an Urban Safety Net Hospital

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**OBJECTIVE:** To ensure that patients who screen reactive for HCV antibodies in the hospital have proper follow-up testing, disease staging, and are linked to outpatient providers for consideration and receipt of HCV treatment.

**METHODS:** Sinai Health System, a safety-net provider in Chicago, initiated an HCV linkage to care pilot. HCV screening and RNA confirmatory test results obtained from the electronic medical record (EMR) were used to identify patients with acute or chronic HCV. In-hospital patient navigation was provided with patient and provider

education, disease staging using Fibroscan at a partner agency, and follow-up clinic visits to connect individuals with HCV for evaluation and treatment. Former patients, who screened reactive for HCV, were also contacted for follow-up testing and linkage to HCV care.

**RESULTS:** From mid October 2014 to January 2015, 593 individuals were screened for Hepatitis C with an 8.8% (N=52) anti-HCV sero-prevalence rate. Fifty-eight percent (30/52) of individuals reactive for Hepatitis C antibodies were screened in the hospital of which 78% (23/30) were medically eligible and accepted navigation services. Eighty-three percent (19/23) of navigated patients were given HCV RNA confirmatory tests and 79% (15/19) were confirmed with chronic Hepatitis C. Eighty-three percent (19/23) received HCV and liver health education within a harm reduction framework, 32% (6/19) received Fibroscan for liver staging, and 44% (10/23) received medical evaluations for Hepatitis C treatment. HCV screening and notification of results has increased, along with referrals for patient navigation, Fibroscan, and subspecialty HCV care. In December 2014 Sinai began reflexing the HCV RNA confirmatory test for anti-HCV positive results. Thirty-four percent (15/44) of previously screened patients with HCV who had been discharged from the hospital were successfully reengaged. Since the start of the pilot, Sinai has extended patient navigation services to its Infectious Disease clinic patients. One patient has initiated HCV treatment and two patients have treatment requests pending.

**CONCLUSIONS:** Sinai's model has shown that in-hospital patient navigation services are an effective way to link and retain individuals who screen for HCV in-hospital and in outpatient HCV medical care. Utilization of EMR systems with patient navigation can identify HCV screening results while patients are in the hospital and ensure proper lab follow-up. Working with a partner agency to obtain Fibroscans can increase capacity for disease staging and treatment preparation. Scale up of HCV screening, with successful linkage of patients to outpatient HCV care, is feasible in this setting.

## ABSTRACT 102

### Acceptability of Extended-Release Naltrexone as a Conduit to Care for HIV+ Criminal Justice Populations

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**OBJECTIVE:** Syndemic in the criminal justice system (CJS) are high rates of HIV and substance use disorders. Upon release from the CJS, many relapse to substance use. Consequences of relapse include poor adherence to ART and higher HIV viral load. Extended-release naltrexone (XR-NTX) is FDA-approved for the treatment of alcohol and opioid dependency. We are conducting two NIH-funded randomized placebo controlled trials of XR-NTX for PLH who are transitioning to the community from prison and jail with alcohol (INSPIRE) and opioid use disorders (NEW HOPE) respectively, to evaluate it's role at reducing relapse as a means to improve adherence to ART and HIV viral suppression. Acceptability of an opioid antagonist given by injection among HIV+ CJS populations has been of a concern, however.

**METHODS:** Participants for both studies are recruited while incarcerated where they complete baseline interviews and a review of their medical records. One to two weeks prior to release, those enrolled in the study receive their initial injection of either XR-NTX or placebo, followed by 5 injections in the community, totaling 6 injections with an additional 6 months of follow up. Eligibility criteria include: 1) documented HIV infection; 2) returning to the New Haven and Hartford CT areas (and Springfield, MA for NEW HOPE); 3) meet criteria for hazardous drinking or alcohol dependency (INSPIRE) or opioid dependency (NEW HOPE); 4) able to provide consent; 5) speak English or Spanish; and 6) 18 years or older.

**RESULTS:** 232 participants have completed baseline interviews and of those, 167 were found eligible. 86.8% (145) of the eligible participants accepted the initial injection and of those, 59.3% (86) received their 2nd injection post-release. Despite these studies being placebo-controlled trials, there was a high rate of acceptability for XR-NTX. Primary reasons for not receiving the initial

injection included: released prior to the expected release date, or having a contraindication to the medication. Primary reasons for not receiving the 2nd injection were being incarcerated. Due to the on-going trials nature, primary outcomes of HIV viral suppression have not yet been analyzed.

**CONCLUSIONS:** XR-NTX has a high acceptance rate in PLH transitioning to the community from CJS settings, with similar historical acceptance as other FDA-approved medication assisted therapies (MAT). These ongoing studies demonstrate the potential ability of XR-NTX to be a conduit to HIV care in the community.

## ABSTRACT 103

### The South Carolina Rural-Urban HIV Cascade of Care

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**OBJECTIVE:** In recent years, the HIV cascade of care describing the spectrum of engagement in HIV care from diagnosis to virologic suppression has been widely used in determining the progress and success in public health efforts to control the HIV epidemic. South Carolina (SC) has consistently ranked among the top 10 states in the nation with the highest AIDS case rates suggesting late diagnoses and issues with retention in care. The primary objective of this study was to develop an HIV cascade of care for the state which may help identify opportunities for future interventions.

**METHODS:** The SC enhanced HIV/AIDS Reporting System (eHARS) database was used to develop the HIV cascade of care indicating the percentages of people living with HIV (PLWHIV) who were linked to care, received any care, retained in care, and achieved virologic suppression using standardized metrics recommended by the Centers for Disease Control and Prevention. The sample included all individuals in SC who were diagnosed with HIV by December 31, 2011 and who were alive at the end of 2012. Each person was assigned a rural or urban

status using the Office of Management and Budget (OMB) rural-urban definition. OMB defines a county as urban if it contains a metropolitan statistical area with an urban core of  $\geq 50,000$  persons. Rural-urban status was determined for each individual based on their residence at diagnosis. PLWHIV with at least one CD4 count or viral load (VL) measurement during 2012 were counted as being linked to care. Those with 2 or more CD4 count and/or VL measurements taken at least 3 months apart in 2012 were considered to be retained in care. Virologic suppression was defined as a VL of  $<200$  copies/ml.

**RESULTS:** Of the 14,523 South Carolinians living with HIV at the end of 2012, 64% had received any HIV care, 53% were retained in care and 48% were virologically suppressed during 2012. There was no significant difference in any step in the cascade of care between rural and urban residents.

**CONCLUSIONS:** This is the first HIV cascade of care model for South Carolina. Efforts are needed to improve public health efforts to link, engage, and retain persons with HIV in care. Although previous studies have shown that rural residents with HIV/AIDS living in SC were more likely to progress to AIDS within a year of diagnosis, when examining the cascade of care there was no difference between rural and urban residents.

## ABSTRACT 104

### Barriers and Strategies for Linking Inmates to Care Receiving Treatment for Hepatitis C Virus (HCV) upon Release from Prison

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**OBJECTIVE:** The purposes of this initiative were to increase linkage to care rates among inmates enrolled in the New York State (NYS) HCV Continuity Program that are leaving NYS correctional facilities on HCV treatment; and to better understand the barriers to linking inmates to care post-release.



**METHODS:** The NYS HCV Continuity Program ensures an appointment with an HCV community-based provider is made within two weeks of release for each inmate released on HCV treatment. Since 2006, 58% of inmates enrolled in the program have kept their first appointment. As part of the HCV Continuity Program Linkage to Care Initiative, a dedicated Linkage Specialist (LS) conducts a conference call with each inmate prior to release to establish a relationship and identify post-release needs, such as transportation, housing and clothing. Within 48 hours of the scheduled first appointment a reminder call is made to the inmate confirming time and place of the appointment. On the day of the appointment, the LS confirms the status of the appointment. If the appointment was not kept, LS attempts to re-engage and assist with overcoming obstacles. If contact unsuccessful, LS contacts parole officer to assist with location effort. If unable to connect within two working days of missed appointment, LS refers to community-based reentry program or HIV/STD field services staff to seek and find the inmate.

**RESULTS:** During the first year of the initiative, a total of 14 inmates were enrolled in the HCV Continuity Program. Seven (50%) of the inmates made it to the initial HCV care appointment. After interventions by the LS, an additional four inmates were linked to HCV care. In the end, 11 (78.6%) of inmates were successfully linked to HCV care. Common barriers to linkage to care included: Medicaid related issues, lack of transportation and unstable housing.

**CONCLUSIONS:** A dedicated LS performing case management activities may be an effective strategy to ensure linkage to care for inmates released from prison on HCV treatment. Effective LS interventions included: establishing a rapport with inmate prior to release, working collaboratively with parole, ensuring timely activation of Medicaid, arranging for transportation to/from appointments, coordinating with service providers and advocating on behalf of the inmate.

## ABSTRACT 105

### Hepatitis C Virus (HCV) Treatment Outcomes in the Primary Care Setting

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**OBJECTIVE:** The purpose of this study was to determine hepatitis C virus (HCV) treatment outcomes for patients being treated by a primary care provider (PCP) in a primary care setting in New York State.

**METHODS:** The New York State Department of Health (NYSDOH) provides funding to 13 primary care settings to integrate HCV care and treatment. The primary care settings include community health centers, hospital based clinics and drug treatment programs. The PCPs within each of these settings provide comprehensive primary care in addition to HCV care and treatment. Each of the PCPs have an agreement with a liver specialist for consultation. The 13 HCV Care and Treatment Programs submitted data to the NYSDOH on a randomly selected sample of clients enrolled in their programs from October 2012 through September 2013, to determine sustained virologic response (SVR) rates. Clients selected for review were deemed medically eligible for HCV treatment and were treated during the review period. Data were collected in SurveyMonkey® and analyzed using IBM SPSS Statistics version 22.0.

**RESULTS:** During the review period, data for 315 clients treated for HCV were received. The overall SVR rate was 76.6%, 76.8% among monoinfected and 76.3% among HIV/HCV coinfecting patients. Those most likely to reach an SVR were male (67.3%); Genotype 1 (79.5%); with minimal or no fibrosis (35.2%). There were no differences noted by race/ethnicity. The majority were being treated with a Telaprevir or Boceprevir containing regimen (70%).

**CONCLUSIONS:** Highly effective HCV treatments allow more people living with HCV to be cured. However, limited capacity within specialty clinics is a barrier to accessing the treatments. The newer treatments are less complex and have fewer side effects, enabling PCPs with the knowledge

and skills to successfully treat HCV in primary care settings. These results demonstrate that PCPs are able to effectively care for and treat persons infected with HCV, thus increasing access to HCV treatment beyond specialty clinics.

## ABSTRACT 106

### Engaging High-Risk Persons with Hepatitis C in Care and Treatment Through Community-Based Care Coordination: Check Hep C Year 2

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**OBJECTIVE:** An estimated 146,000 persons or 2.4% of the New York City (NYC) population have hepatitis C (HCV) infection, and half may be unaware of their diagnosis. Despite recent advances in HCV treatment, many HCV-infected persons have not been treated for the disease. HCV disproportionately affects marginalized populations including intravenous drug users (IDU), the homeless, and the incarcerated. In 2012, the NYC Department of Health and Mental Hygiene (DOHMH) implemented Check Hep C, a community-based program to provide HCV screening, diagnosis, and linkage to care. Lessons learned from the demonstration year of Check Hep C were used to design year 2, by focusing services away from testing towards clinical care and engaging patients into HCV care and treatment through care coordination services.

**METHODS:** In March 2014, the NYC DOHMH began enrolling 400 patients at four community-based organizations (CBOs) into Check Hep C year 2. Selected CBOs were located in neighborhoods with a high burden of HCV infection. Program components included a comprehensive assessment, health promotion, an HCV medical evaluation, treatment readiness and adherence support, pharmacy coordination, and navigation to HCV medical services. Participant demographic information, service utilization, and treatment outcomes were collected and reported monthly to NYC DOHMH.

**RESULTS:** From March 2014 through January 2015, 398 participants were enrolled in Check Hep C. Two-hundred thirty-eight (59.8%) participants were members of the “Baby Boomer” population (born during 1945–1965). Preliminary demographic and risk history data were available for 386 participants, of whom 250 (64.8%) were Hispanic, and 102 (26.4%) were black, non-Hispanic. One-hundred fourteen (29.5%) participants had a history of IDU, and 210 (54.4%) had a diagnosed mental illness. A comprehensive HCV medical evaluation was completed for 255 (64.1%) participants, of whom 177 (69.4%) were determined to be treatment candidates. Of the eligible treatment candidates, 88 (49.7%) initiated treatment and, of those, 58 (65.9%) completed treatment. As of February 2015, 46 (79.3%) participants who completed treatment achieved a sustained virological response (SVR).

**CONCLUSIONS:** Check Hep C year 2 has been successful in engaging HCV-infected persons in HCV care, and a high proportion of those eligible have initiated treatment. As the program continues, many more participants are expected to undergo medical evaluation, initiate, and complete treatment. This program provides services that fill vital gaps that are currently not covered by traditional payers. Therefore, the NYC DOHMH is exploring a variety of ways to expand and sustain these services.

## ABSTRACT 107

### Development of an HIV Continuous Quality Improvement Tool to Monitor HIV Testing, Results and Linkage to Care within a Large Medical Center

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**OBJECTIVE:** Montefiore Medical Center (MMC) in the Bronx has built an integrated service delivery system informed by innovative information technology (IT) tools. Since 2010, when New York State mandated the offer of HIV testing, MMC has employed multiple strategies to

ensure patients ages 13-64 are offered HIV testing when they visit any of its inpatient, outpatient or emergency sites. Prior to this initiative, there was no easy way to systematically track HIV testing, results and linkage to care (LTC) of HIV+ patients across MMC, as different sectors have different data systems. To improve HIV monitoring and evaluation efforts, a continuous quality improvement (CQI) tool drawing from existing MMC laboratory data was sought.

**METHODS:** Montefiore's Adolescent AIDS Program provided HIV data parameters and Montefiore's Care Management Organization IT team designed the CQI tool to provide historic and ongoing data. In 2011 a tool was developed to track HIV testing and positive diagnoses, and in 2014 it was expanded and refined to track LTC and identify newly diagnosed versus previously diagnosed HIV patients—an innovation that revealed almost half of MMC's HIV+ results were among those previously diagnosed but not engaged in care. Each indicator was validated by chart reviews and triangulated with existing data sources. Refreshed monthly, the tool draws from MMC laboratory evidence of testing and results as well as CD4 and/or HIV Viral Load test results within three months of diagnosis as a proxy for linkage to care. The tool thus identified both newly diagnosed and HIV+ patients who had fallen out of care but were relinked to care through routine testing efforts.

**RESULTS:** Using the tool MMC observed the following results: in 2011 61,755 patients were tested, of whom 359 were HIV+ (.30% prevalence in the ED, 1.44% inpatient, .55% outpatient) and 91% were linked to care at MMC; in 2014 78,946 patients were tested, 296 of whom were HIV+ (.38% ED, .71% inpatient, .33% outpatient) and 79% were linked to care at MMC.

**CONCLUSIONS:** Large, complex medical centers like MMC that operate multiple inpatient, outpatient and emergency sites serviced by different data systems can struggle to create effective monitoring and evaluation tools. As HIV testing becomes more routine in all sectors of MMC, tools like the one described here provide crucial institution-wide HIV testing, diagnosis, and linkage and retention in care data that help strengthen all steps of the HIV treatment cascade.

## ABSTRACT 108

### Hepatitis C Treatment Experience in the New Mexico State Prison System

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**OBJECTIVE:** Hepatitis C virus (HCV) infection is a worldwide public health issue and a significant cause of morbidity and mortality. This infection is highly prevalent in incarcerated populations and although effective treatment exists, barriers in access to medical care and specialty care services remains a constant challenge within incarcerated populations. In order to address some of these challenges, the Extension for Community Healthcare Outcomes (ECHO) model was developed by the University of New Mexico Health Sciences Center for both outcomes research and delivery of services. One of the goals of Project ECHO was to provide access to specialty care for the state of New Mexico through tele-ECHO clinics and increase access to HCV treatment to underserved populations, which included the state prison population. This review aims to describe the HCV treatment experience in the state prison population of New Mexico using the ECHO model.

**METHODS:** A retrospective review was performed of 196 charts from adult prisoners who were incarcerated and treated for HCV within the prison system of New Mexico during 2007-2012. All 196 inmates were treated with pegylated interferon and ribavirin with 14 inmates receiving triple therapy which included either telaprevir or boceprevir.

**RESULTS:** Baseline patient characteristics included an average age of 38.7, 92.9% were male, 32.7% were part of the birth cohort, and 42.3% had self-reported current/former injection drug user as suspected route of transmission. The majority at 54.6% did not report a chronic general medical condition, however a total of 169 patients had an Axis I Psychiatric diagnosis and polysubstance dependence accounted for 68% of all patients with a psychiatric diagnosis. All had a reported drug use history with 74.7% reporting use of three or more drugs. In regards to baseline lab data, genotype 1 was 61.7%, the majority

had fibrosis or cirrhosis based on calculated aspartate aminotransferase:platelet ratio index, and overall sustained virologic response (SVR) was 56.6%. For genotype 1 where treatment included either telaprevir/boceprevir, SVR was 42.9%, and excluding protease inhibitor use SVR was 48.6%. For non-genotype 1, SVR rates were the following: genotype 2- 66.7%, genotype 3- 72.7% and genotype 4- 60.0%.

**CONCLUSIONS:** The ECHO model is an effective way to treat HCV in the New Mexico state prison system. Our results also highlighted the prevalence of substance use/abuse/dependence and psychiatric conditions within the prison population which can be an opportunity to incorporate risk reduction education into treatment strategies.

## ABSTRACT 109

### Improving the HCV Care Cascade: Year 1 Results from a Dynamic, Integrated Linkage to Care Navigation Model

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**OBJECTIVE:** The HCV navigation, testing, and treatment paradigm is rapidly shifting with the emergence of dramatically improved treatment options. Identifying gaps along the HCV care cascade will improve identification and linkage to care, and reduce health disparities and HCV-induced morbidity and mortality. Persons who have fallen out of care may be more difficult to engage back into care. A dynamic, multidisciplinary HCV care model, and establishment of best practices, is needed to ensure eradication.

**METHODS:** In January 2014, the HepC Linkage to Care Navigation program at MedStar Washington Hospital Center (MWHC) was established, with funding from Gilead FOCUS, to engage HCV patients who were not

in care for over one year, as well as create a best practices model. Patients are linked via MWHC internal and external referrals. Social workers and a patient navigator are utilized from intake through the end of treatment to identify barriers from linkage to retention in HCV care. . Program metrics were as follows: 95% of patients identified are linked with an appointment, 85% retained for 60 days, 80% at 90 days and 75% at 180 days after their first appointment. A descriptive analysis is presented.

**RESULTS:** At the conclusion of year one, 250 eligible patients were identified, 192 (77%) were linked to care. Of those, 167 (87%) were seen at a first appointment; mean age was 58.4 + 8.7 years; 93% were black, 57% were men, 81% had public insurance, 51% reported prior IVUD. Rates reflect that 160 patients (96%) were retained in care through 60d, 147 (88%) through 90d, and 107 (64%) through 180d. Of those seen, 143 (86%) underwent liver staging, 151 (90%) hepatocellular cancer screenings were ordered, 105 (69%) were completed. Prior to the first appointment, social workers performed intake assessments and addressed major barriers, resulting in targeted interventions. These barriers are reassessed throughout time in care.

**CONCLUSIONS:** Improving the HCV Care Cascade is necessary to identifying and engaging infected populations. This program successfully navigated, retained, and staged HCV persons previously out of care. Gaps still appear, and providers must initiate linkage, especially for those lost secondary to prior interferon based treatment failure which had toxic side effects, or treatment ineligibility. By utilizing a dynamic approach to care coordination, drop-offs can be mitigated, care integrated and treatment initiated.



## ABSTRACT 110

## Low HCV Testing Uptake of the Current Birth Cohort Testing Guidelines

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**OBJECTIVE:** CMS recently supported the CDC and USPSTF grade B recommendation, and now covers a single HCV screening test if ordered by a primary care provider (PCP) to screen all persons born 1945-1965 (Birth Cohort) given a 3.25% prevalence rate. Previously published HCV rates of 2.5% in all persons in Washington, DC, and other urban areas, will likely increase with expanded testing. The following presents results from a testing and linkage program at a large, urban primary clinic.

**METHODS:** In December 2012, we established a HCV testing program in the Primary Care Clinic at MedStar Washington Hospital Center, with CDC grant funding, to enhance testing for HCV infections among the Birth Cohort and not previously aware of their infection, link to care, and provide counseling, treatment and preventative services. Eligibility includes: born 1945-1965, without predetermined risk factors listed in the medical record, and not previously HCV tested or positive. HCV antibody positive (Ab+) patients are linked to care with Infectious Disease or Gastroenterology regardless of RNA status. Results reflect enrollment data from both the original grant and additional CDC grant for expanded testing.

**RESULTS:** As of September 23, 2014, 7.8% of the 1875 tested were HCV Ab+, 54% HCV RNA+, and this was no different from the first grant. Mean age of HCV Ab+ was 59.9 + 5.6 years; 53.1% were men, and 76% had public insurance (Medicare or Medicaid); 85% of those tested, and 93% of those HCV Ab+ were black (13% b/AA men, 6% b/AA women). Those HCV Ab+ were more likely to be men (OR 1.9 [CI95 1.1-3.4]) and have public insurance (OR 2.8 [CI95 1.9-4.1]) than HCV Ab-. Unique primary care clinic appointments for those eligible (1st documented

visit identified in the EMR) were 4016: 1248(31%) were tested, 974(24%) were missed (not tested but completed appointment), and 1794(45%) either canceled or no-showed.

**CONCLUSIONS:** The HCV Ab+ prevalence rate of 7.8% remained consistent over the two years and is significantly higher than the CDC Birth Cohort rate of 3.25% and the Washington DC rate of 2.5%, although the latter reports all ages. Overall testing uptake, however, remains low at 24%. Given these high prevalence rates, new CMS recommendations, and improved therapeutic options available, testing initiatives in Primary Care settings need to be more rigorously upheld, and internal champions are needed to advocate for increased screening to ensure linkage to care and engagement within the HCV care cascade.

## ABSTRACT 111

## Challenges in Continuing HCV Care in a Rural High-Risk Region of Indiana

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**OBJECTIVE:** The Indiana State Department of Health (ISDH) collaborated with a mental health center including substance abuse services, ASPIRE Indiana, and a local health department to increase Hepatitis C Virus (HCV) testing of high risk individuals and attempt to link them to care and services among a rural region in eastern Indiana. This project is a one time, opportunity that is still in progress.

**METHODS:** Rapid tests were provided to ASPIRE Indiana to test individuals which were at high risk for HCV based on risk behaviors and/or their age cohort for baby boomers. Individuals tested also received a confirmatory test for HCV, through ASPIRE Indiana. Individuals from select counties within the region that had a rapid test reactive result and/or a positive confirmatory test result were referred to a local health department, and linked to care. Linkage to care resulted in seeing a physician regarding

their testing results, disease education and further referral to a local specialist, if appropriate. All individuals tested received general disease education and education regarding disease prevention. Individuals that tested reactive/positive received a de-identified letter from ASPIRE Indiana which included their test results and provided the address of the local health department where they could go to see a physician. The letter was to be given to the physician to ensure proper and appropriate education and referral. The local health department maintained the letter in the individuals' medical record.

**RESULTS:** Establishing linkage to care channels for individuals with HCV was fraught with challenges and was labor and time intensive; thus currently only one complete channel has been established. More linkages to care are the future goals of this project. The project began in October 2014 and is still continuing, likely through June 2015. Currently (Oct-Jan) the project has tested 219 individuals. 29 percent of those individuals have tested rapid reactive. Fourteen individuals were referred to the local health department physician for further care. Unfortunately, to date, no one tested has sought the care of the local health department physician despite the established referral channel.

**CONCLUSIONS:** Despite an established linkage to care channel and knowledge thereof, individuals with HCV infections still hesitate to seek care. More linkage to care channels should be established to promote and encourage individuals to seek care for their HCV infections. Further study should be conducted in this area to better understand the challenges and barriers in the continuum of care for HCV patients.

## ABSTRACT 112

### Fighting Oppression to Achieve Suppression: Attacking Unsuppressed Viral Loads Head On

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**OBJECTIVE:** To identify methods used to maximize health outcomes, particularly viral load suppression and retention, for persons currently enrolled in care.

**METHODS:** In 2012 Mission Neighborhood Health Center (MNHC) began working on a new contract called Prevention with Positives (PWP). The work with PWP required MNHC to track clients who had high viral loads, low CD4 counts, or poor retention with objectives including improved adherence counseling, retention in care, and viral load suppression.

As part of the initiative to track clients, MNHC utilized its population management software to retrieve data on PWP identified clients. Once able to collect data, a plan was initiated to meet the PWP objectives.

A PWP case manager (CM) was assigned to start work immediately with support from the Recruitment and Retention Coordinator (RRC). The PWP-CM and the RRC run a report each month to look at eligible clients. Following, the PWP-CM reviews each client with the client's assigned CM to determine why the client is eligible for PWP. After noting barriers, the PWP CM requires the client's assigned CM to follow up with the client regarding areas of concern. The CM also is required insure that the client has an upcoming appointment with his or her medical provider (one medical visit per month if unsuppressed) and is well engaged with the adherence counselor. To further insure that no information goes unheard, the PWP clients are reviewed monthly with the all HIV service staff, allowing additional input from all service areas to determine a judgment-free plan or intervention tailored to meet the client where the client is at.

**RESULTS:** MNHC has achieved increased objective outcomes based on the work initiated with PWP implementation. Initial goals set by the PWP contract

were to have 90% of eligible participants counseled in adherence, 50% engaged in medical care, and 35% virally suppressed. In 2013, after one year of work with PWP, 99% of participants received adherence counseling, 68% were engaged in medical care and 58% were virally suppressed. These numbers increased in 2014 to 100%, 81%, and 78% respectively.

**CONCLUSIONS:** Utilizing a plan, coordinated by a lead team member that involves support from the entire multidisciplinary team, has proven to be a successful model that achieves increased viral suppression rates. Its efficiency and effectiveness make this model adaptable in a variety of clinical settings. Furthermore, with the success of this model, we hope to see lower transmission rates among the MNHC population.

## ABSTRACT 113

### How to Embed a Hepatitis C Treatment Program into an Existing Urban Community Clinic

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**OBJECTIVE:** To share an implementation model for an HCV treatment program that provides individuals access to treatment and care regardless of mental health and substance use barriers.

**METHODS:** Mission Neighborhood Health Center (MNHC) launched a pilot in April 2014 to offer primary care to up to 30 HCV infected patients utilizing their successful multi-disciplinary model previously reserved for persons living with HIV. In addition to specialized medical care, this model provided outreach coordination, health education, case management, substance abuse counseling and treatment access and adherence support.

Initial data collection included patient demographics, HCV risk factors and HCV treatment history. Participants were then tracked on their participation in HCV education, initial laboratory and ultrasound work-up, initial HCV medical evaluation, and psychosocial assessment. Time

to treatment readiness and initiation from initial HCV medical visit was also measured. Once treatment was initiated, self-reported treatment adherence was monitored on a weekly basis. Early treatment response (EVR) 4 weeks after treatment initiation, end of treatment response (ETR), and sustained virologic response (SVR) 12 weeks after treatment completion were also measured to assess treatment efficacy.

**RESULTS:** As of the end February 2015, 30 participants had been enrolled in the program by the Outreach Coordinator. All participants received formal HCV education and 24 received psychosocial assessment. Twenty-five participants had received initial HCV medical evaluation; 27 had completed initial HCV laboratory workup; 11 had received HCV treatment with a self-report of >95% treatment adherence (7 patients awaiting treatment prior authorization); and 6 had successfully completed HCV treatment with an efficacious ETR. Three participants, the only eligible as of the end February 2015 for a 12 week blood draw, have all achieved SVR. Remaining SVR data is still pending as participants continue to initiate and complete treatment.

**CONCLUSIONS:** Offering HCV treatment in a multidisciplinary, primary care setting has proved to be an effective means of treating HCV in the community served by MNHC. The provision of HCV education provides patients with motivation towards treatment readiness, while the case management evaluation and support addresses psychosocial barriers to treatment. Treatment access and adherence support has proven essential to accessing medications due to the burdensome prior authorization process and for ensuring adherence to a costly treatment regimen that holds the risk of treatment failure.

The cost-effectiveness and financial sustainability of this integrated model of providing HCV treatment are still to be determined.

## ABSTRACT 114

## Collaborating Across States to Achieve the End of AIDS - HIV Cross-Part Care Continuum Collaborative (H4C)

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**OBJECTIVE:** A federally funded learning collaborative was established in early 2014 to reduce gaps along the HIV Continuum of Care through the implementation of evidence-based quality improvement projects in five participating states. In alignment with national priorities, Ryan White HIV/AIDS Program (RWHAP) grantees established efforts to increase statewide viral load suppression rates and to close disparities in performance among key demographic groups.

**METHODS:** The HIV Cross-Part Care Continuum Collaborative (H4C) has engaged RWHAP grantees in Arkansas, Mississippi, Missouri, New Jersey, and Ohio, impacting 33,905 people living with HIV (PLWH). Each state established a leadership team to implement H4C activities and received coaching to accelerate implementation. Performance data on key HIV measures, HIV Care Continuum, and viral load suppression (VLS) cohort data are routinely collected and shared. Improvement strategies are collected and discussed at face-to-face learning sessions. To ensure longevity of the initiative beyond 2015, sustainability plans are being drafted that include data and improvement strategy collection, regional trainings, and virtual learning sessions.

**RESULTS:** Learning collaboratives are an effective way to accelerate improvements along the HIV Continuum of Care. Aggregated across the five states, there have been improvements in ARV prescription (+2.4%, n=33,502) and VLS (+2.9%, n=33,493). By the mid-point of the initiative, one state has already met its VLS cohort goal (88%, n=602 additional PLWH achieving VLS). Overall, H4C has already met key national aims (i.e., all states have quality management infrastructures in place) and facilitated

communication and sharing across federally funded HIV providers. Gaps in performance between demographic groups have been steadily narrowing over time, with the hope of elimination by the transition of the collaborative to local leadership.

**CONCLUSIONS:** Learning collaboratives are effective methods to address gaps in the HIV Care Continuum and to create the statewide momentum for advancing HIV care. For future collaboratives, participants' readiness will be emphasized to work out state-specific data quality and communication issues ahead of the initiative. This start-up period will also involve an intensive coaching period to rapidly enhance the necessary statewide infrastructure development for the collaborative to be a success.

## ABSTRACT 115

## Opportunities to Expand the Effectiveness of New Hepatitis C Regimens Under the Affordable Care Act

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**OBJECTIVE:** To identify the public health and medical barriers facing patients with chronic HCV and to recommend solutions to maximize the benefit from health reform and recent pharmacological innovations.

**METHODS:** An analytic review of disease prevalence, comorbidities, treatment barriers and public health surveillance and infrastructure impediments to disease control will be offered. The information is derived from an analytic essay recently published by the authors in the American Journal of Public Health: <http://ajph.aphapublications.org/doi/full/10.2105/AJPH.2014.302327>.

**RESULTS:** Low rates of HCV screening and treatment have been attributed to and compounded by social disadvantage, patient complexities, the asymmetry between substance abuse treatment and medical services,



and a lack of a public health surveillance system. ACA insurance and community health center expansions, behavioral health treatment parity mandates, rapid HCV testing and new treatment regimens could considerably reduce disease prevalence.

**CONCLUSIONS:** 1) As recommended by the IOM, develop and maintain a national surveillance system. A national surveillance system is needed including collaborative agreements by CDC with States and territories to support core HCV surveillance.

2) Enhance primary care providers' capacity to screen and treat HCV. CMS should adopt guidelines for HCV screening and assure that infected patients receive appropriate medical management, as recommended by the Institute of Medicine. The Health Resources and Services Administration (HRSA) must provide adequate resources to Federally Qualified Health Centers in high prevalence areas for comprehensive viral-hepatitis services.

3) Develop and test best practices for integrated behavioral and medical care HCV treatment. Federal funding should be made available to adapt and scale the Collaborative Care Model, Chronic Care Model and other paradigms.

4) Improve primary care and substance abuse treatment integration. Greater buprenorphine-naloxone and methadone maintenance treatment availability in primary care, co-location of substance abuse treatment and stronger referral practices are needed to curb new HCV infections.

5) Expand local and national primary and secondary HCV prevention efforts with a focus on opioid treatment and correction programs.

With increased surveillance and dedicated resources, advanced HCV pharmacological regimens could be delivered across integrated medical and behavioral health care settings, to reduce under-diagnosis, under-treatment, and to minimize opportunities for reinfection and subsequent antiviral resistance.

## ABSTRACT 116

### Empiric Treatment of Suspected Acute HIV Infections in the Emergency Department

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**OBJECTIVE:** Implementation of fourth generation laboratory-based emergency department HIV testing provides an opportunity to identify and possibly intervene earlier in acute HIV infections, potentially decreasing the size of latent HIV reservoirs. At Los Angeles County plus the University of Southern California Emergency Department (ED) we began a routine screening program in March 2011 implementing 4th generation testing in June 2013. To date, we have screened over 50,000 patients identifying 633 HIV positive patients including 18 acutely infected. In December 2014 we made a decision to begin empiric antiretroviral therapy in the ED for 4th gen Ag/Ab positive patients suspected of acute HIV. However, emergency room treatment may be undermined by concerns of: false positive tests resulting in unnecessary antiretroviral side-effects exposure, and concerns about inducing viral resistance. We describe the rationale driving our decision and the criteria developed for empiric treatment of suspected acute HIV infections.

**METHODS:** An HIV specialty team considered the risks and benefits of empiric treatment including: the historical safety of ART for PEP in HIV negative patients, short courses of cART are well tolerated with minimal side effects which can be monitored and rarely develop resistance, the improved access to care for patients, patients can be called to stop medicines for negative confirmatory results, and the potential to decrease further HIV transmission. A consensus decision was reached with the following eligibility criteria.

1. Clinical history c/w acute HIV infection
2. Negative HIV test < 6 months
3. No co morbid conditions with risks that outweigh the benefits
4. 4th gen + test w/pending Multispot and VL by PCR

5. Stable baseline CBC and chemistry panel
6. Genotype and CD4 ordered in ED
7. Patient understands/agrees
  - a. confirmatory tests pending
  - b. willing to take meds
  - c. abstinence & 100% condoms use if fails abstinence
  - d. partner notification
  - e. follow up
  - f. phone, text, email contact available

**RESULTS:** Since beginning empiric treatment on December 10, 2014, 5 patients were identified as acutely HIV infected, 3 have met criteria for empiric ART, 2/3 have been treated long enough to link to care, one is hospitalized. 1/3 failed initial linkage to care, reminders made but ultimately patient linked to care so he wouldn't run out of medications.

**CONCLUSIONS:** ED 4th generation testing allows a unique opportunity to intervene early in acute HIV infection. We identified rationale and criteria for empiric ART in appropriate candidates in an effort to minimize HIV-associated morbidity.

## ABSTRACT 117

### Incorporating a Co-Located Infectious Disease Clinic in Syringe Access Services

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**OBJECTIVE:** To identify the challenges to co-locating an infectious disease clinic within a syringe exchange program and to then creatively overcome those challenges.

**METHODS:** Self-reports and data from the testing program show that 20% of newly identified HIV positive participants from Prevention Point Philadelphia (PPP) never make it to care in the first year. Reasons for being out of care include active addiction, lack of transportation or stable housing, incarceration, and fear of being "outed." PPP, a syringe exchange program, in conjunction with Philadelphia FIGHT, a comprehensive AIDS service

organization, established an HIV clinic called Clinica Bienestar. Until this, there were no culturally sensitive HIV clinics for active users. In incorporating an infectious disease clinic within a syringe exchange program, we faced several challenges, including maintain confidentiality, continuing to provide harm reduction education, and attracting a population that has resisted care for various reasons.

**RESULTS:** These services have resulted in 45 patients being referred to the clinic and 39 being enrolled. Of these, 28 have attended at least 3 appointments, 19 are on ARVS, and 10 have undetectable viral loads.

**CONCLUSIONS:** An effective harm reduction HIV provider needs to supplement treatment with a comprehensive package of specialty medical care, case management, and outreach services. Additional factors that increase retention rates include providing patient-determined care and collaborating on innovative strategies for medication adherence. We present the challenges we faced in establishing a harm reduction HIV clinic and the strategies we employed to overcome these challenges for the purposes of expansion and replication.

## ABSTRACT 118

### Reasons New York City Patients are Not Prescribed Hepatitis C Treatment

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**OBJECTIVE:** Recent advances in hepatitis C virus (HCV) medications changed the landscape of HCV treatment. Interferon-free regimens, first released in late 2013, are simpler, safer, and highly effective. Access to treatment, however, remains limited. The New York City (NYC) Department of Health and Mental Hygiene conducted an enhanced surveillance project to better understand the reasons patients are not treated.

**METHODS:** In June 2014, we randomly sampled 300 subjects out of 31,179 adults ages 31 to 70 reported through

routine surveillance with a positive HCV RNA result at least one year earlier, any HCV result since June 2012, and no known negative RNA result. We collected information on demographics, treatment, and barriers to treatment from both providers and patients by telephone, fax, mail, or medical record review.

**RESULTS:** Of 300 patients sampled, 28 were excluded because of residence outside NYC (n=6), being deceased (n=13), or inability to reach patient or provider (n=9). We collected data from providers for the remaining 272 (91%) patients, and interviewed 111 (37%) patients. Of the 272, 79% were born between 1945 and 1965, and 64% were male. Sixty-one (20%) did not require treatment, i.e., they had a recent negative RNA test (n=13), were on treatment (n=24), recently finished treatment (n=10), or were cured (n=14).

Among the remaining 211 patients, 90 were interviewed. Patients reported concern over side effects (30%) as the most common reason for not taking HCV medications, followed by waiting for a better treatment regimen (17%), other medical conditions (16%), and worries about insurance coverage or medication cost (13%). For 179 of the 211 patients, providers reported obstacles to initiating treatment. Of these, 28% cited lack of patient follow-up with a specialist referral, 23% said they do not prescribe HCV medications, 21% cited comorbid conditions, and 19% mentioned mental health issues.

**CONCLUSIONS:** This project describes barriers to HCV treatment and can inform strategies to increase treatment initiation. Patients were most concerned about side effects, highlighting the need for education about the improved side effect profiles for new regimens. High costs were another potential barrier for patients. Patient assistance programs can help patients obtain insurance pre-approvals or support from pharmaceutical companies. Clinicians identified lack of patient follow-up with specialist referrals as a treatment obstacle. This can be addressed through patient navigation and linkage to care interventions. Educating clinicians that mental health issues and other comorbidities are no longer contraindications with new medications can further reduce barriers to HCV treatment.

## ABSTRACT 119

### Policy Implications of the Implementation of a Health Insurance Premium Payment Program for People Living with HIV in California

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**OBJECTIVE:** California's Office of AIDS created the Health Insurance Premium Payment (OA-HIPP) program to offset the costs of insurance premiums for moderate-income people living with HIV (PLHIV). The program has become crucial to eligible Californians' access to healthcare coverage. In light of this role, we examined the barriers and facilitators to an optimally-functioning OA-HIPP program in collaboration with our community partners, Project Inform and the San Francisco AIDS Foundation.

**METHODS:** We conducted 22 semi-structured interviews between March and June, 2014, with enrollment workers, public health department workers, and a national advocate. Interviews covered perceived strengths and weaknesses of the program, and recommendations. Interviews were recorded, transcribed, and cleaned to remove identifying information. We developed a codebook organizing qualitative data into discrete themes, compared the data across participant types, viewed the frequencies of code application and co-occurrence, and extracted excerpts for deeper analysis using Dedoose, an online analytic software program. All participants provided verbal consent and the Committee on Human Research reviewed and approved the protocol.

**RESULTS:** The program has expanded access to affordable coverage. However, at the time of data collection, OA-HIPP was hampered by administrative challenges at the State and insurer level that led to insufficient communication, a lack of user-friendly infrastructure and resources, and payment generation and crediting delays. These issues required

that participating consumers be health insurance literate, committed to monitoring their insurance closely, and able to actively pursue resolution of issues. Many consumers experienced negative financial, coverage, and behavioral health impacts, including coverage disruptions. The increasing demands of financial benefits counseling limited enrollment workers' capacity to support lower-functioning consumers' participation to the degree needed to help them successfully maintain coverage.

**CONCLUSIONS:** The OA-HIPP program needs improvements to function optimally in a modern and complex coverage landscape, but it has allowed many consumers to access affordable coverage, and it should be maintained. Further collaboration between stakeholders is needed to reduce the program's administrative burden and standardize third-party payment processes. To best meet consumers' needs, the program should both educate and empower consumers as stewards of their coverage, and provide greater opportunity for enrollment workers to support lower-functioning consumers' coverage maintenance. Program policies, procedures, and staffing should reflect the growing demands of financial benefits counseling. In the event of disruptions in coverage that occur as such programs are refined, the safety net provided by Ryan White clinics is still crucial to maintaining care and treatment for PLHIV.

## ABSTRACT 120

### Direct Acting Antiviral (DAA) Therapies in a New York City HIV/AIDS Special Needs Plan: Uptake and Barriers

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**OBJECTIVE:** It is believed that most patients co-infected with hepatitis C virus (HCV) and HIV benefit from receipt of potent direct acting antiviral (DAA) therapies (e.g., sofosbuvir (SOF) and simeprevir (SIM)). Our objectives are to: (a) assess the uptake of DAAs among HIV/HCV co-infected persons in an HIV/AIDS Special Needs Plan and (b) to compare patients receiving DAAs to those who are not and to identify potential barriers and enablers to DAA uptake. We used data from Amida Care, a not-for-profit Medicaid health plan designed for persons living with HIV/AIDS in New York City. Amida Care began approving claims for potent DAAs in December 2013.

**METHODS:** We examined the Amida Care claims database for demographic, clinical and pharmacy information among persons with claims consistent with chronic HCV infection (CPT-4, ICD-9, or ICD-10) during December 1st, 2013 to September 30th, 2014, and entered into the database through March 1st, 2015. T-tests and chi-square tests were used for statistical comparisons.

**RESULTS:** N=1,756 individuals were active Amida Care participants during the study time period with a diagnosis of chronic HCV infection. Of these participants, 6% (n=109) received SOF and/or SIM during the study time period. As compared to those who did not receive SOF and/or SIM, patients treated with a potent DAA were older (age 54 vs. 52; p=0.007) and were less likely to have



a history of AIDS (11% vs. 26%;  $p=0.0004$ ). CD4+ T-cell levels for patients who received potent DAA therapy were higher [median: 499; interquartile range (IQR): 360-715] than for patients who did not [median: 420; IQR: 232-649]. Other characteristics such as sex, race/ethnicity and receipt of opiate medications did not differ significantly by receipt of potent DAAs.

**CONCLUSIONS:** At the current rate of treatment and assuming 90% of DAA-treated patients achieve a sustained virologic response (SVR), >30% of Amida Care patients with current HIV/HCV infection will achieve an HCV cure within 5 years. Current guidelines call for treatment to be offered only to co-infected patients with suppressed HIV viral loads. Patients with a history of AIDS, low CD4+ T-cell levels or those who are ineligible for therapy because of detectable HIV RNA may however benefit from targeted interventions to remove barriers to DAA readiness.

## ABSTRACT 121

### Enhancing Access to Care for African and Caribbean Immigrants with HIV Infection

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**OBJECTIVE:** The objective of this study is to enhance the early identification and linkage to care of African and Caribbean immigrants in Philadelphia with HIV infection.

**METHODS:** The African Diaspora Health Initiative (ADHI) is a community-based participatory HIV testing project. Through a series of Clinics Without Walls (CWW) held at previously scheduled gatherings of the target populations, individuals are screened for HIV, hypertension and diabetes. A survey is administered to each participant. Survey questions include demographics, country of birth, length of stay in the US, and HIV risk behaviors. Each participant returning an abnormal test result is linked to care at the city health centers of the Philadelphia Department of Public Health. All data are entered into a Microsoft Access database and analyzed

using SAS 9.2. Descriptive data and screening outcomes data are presented by gender, along with best practices for engaging African and Caribbean populations in HIV testing and care.

**RESULTS:** Between March 2011 and February 2015, 4269 African and Caribbean persons participated in 352 CWW, 4152 of whom were included in this analysis. Half were female, and 67% African. Median age was 43 years, and median length of stay in the US was 10 years.. HIV seroprevalence was highest among Caribbean men at 8.4%, and lowest for Caribbean women (0.4%). African women had a higher seroprevalence (1.9%) than did their male counterparts (1.3%). The high prevalence of HIV for Caribbean men was largely driven by men who have sex with men, among whom the prevalence was 33%, compared to 1.2% for men reporting heterosexual risk. Best practices include engaging community leaders from African and Caribbean communities as project advisors in every stage of project development, implementation and evaluation, and bundling HIV testing with hypertension and diabetes screening.

**CONCLUSIONS:** Immigrant populations from regions of the world with higher HIV prevalence than the US are an important and growing segment of the domestic HIV epidemic. In our implementation of the National HIV/AIDS Strategy, we must address all groups with relatively high rates of HIV, and increasingly this includes certain immigrant groups. With the 2010 lifting of the HIV entry ban, alternative venues and strategies for HIV testing for these populations are urgently needed. The African Diaspora Health Initiative is a program that has proven successful in engaging African and Caribbean communities in HIV testing and care. It may be used as a template to engage immigrant groups in HIV testing and care.

## ABSTRACT 122

## The HIV Care Collaborative: Implementing Health System Navigation as a Linkage and Retention Strategy in Public Health Settings

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**OBJECTIVE:** The HIV Care Collaborative is a project designed to improve linkage to and retention in HIV primary care for individuals in health department settings. It is a privately funded program implemented in Fulton County, GA, Harris County, TX, and Philadelphia, PA. This abstract addresses the project in Philadelphia.

**METHODS:** In a multi-site public HIV care program with 1,058 active patients, four categories of patients were identified and assigned to Health System Navigators (HSN): the lost-to-care, the newly diagnosed, the patients newly entering the system, and the loosely engaged. The HSN intervention was assisting patients to navigate the city health center system and other systems to which they were referred. Data on specific activities and outcomes were integrated into the existing CAREWare system and analyzed on a quarterly basis. The project was a collaborative effort between the city health centers, an AIDS service organization, and the HIV surveillance entity for the city.

**RESULTS:** Between March 2013 and September 2013, 304 patients were identified for referral, 135 were deemed eligible and referred to the HSN, and 77 were enrolled. Patients were identified through CAREWare reports. The identified ineligible patients were found through a surveillance database search to have expired, to be incarcerated, or to be engaged in care elsewhere. Of the newly diagnosed, 90.9% attended an initial medical visit within 90 days of diagnosis; for the other categories, 74% had a medical visit within 30 days of enrollment, and 84.9% within 90 days. Mean CD4 cell count for the enrolled was 419 cells/ml in March 2013 and 472 cells/ml in September 2013. For clients receiving services between March and September 2013, viral suppression increased from 33.3%

12 months before navigation, to 68.5% 12 months after navigation ( $p < 0.0001$ ). Retention in care for this group also increased from 13.3% 12 months before navigation to 95.5% 12 months after navigation ( $p < 0.0001$ ). Lessons learned included role delineation, definitions of eligibility, and the need to develop a smooth transition between Navigators due to turnover.

**CONCLUSIONS:** Health system navigation to facilitate linkage to care and as a time-limited intervention to enhance retention in care for HIV-positive patients can be successful in the public setting. Virologic and immunologic outcomes can be improved significantly in this way for patients facing multiple life challenges. Utilizing surveillance databases to refine potentially eligible patient lists generated from CAREWare is a useful strategy to improve efficiency.

## ABSTRACT 123

## The New York City Public Health Approach to Hepatitis C

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**OBJECTIVE:** Of the estimated 146,000 persons with hepatitis C (HCV) infection in New York City (NYC), many remain undiagnosed, and few have been treated. Gaps in RNA confirmation and provider capacity for treatment create barriers to care. In 2013, the NYC Department of Health and Mental Hygiene (DOHMH) published a strategic plan for HCV control and established a Viral Hepatitis Program (VHP). DOHMH Six-Step HCV Control Strategy includes: (1) increase provider knowledge and capacity; (2) monitor and report disease patterns; (3) increase screening and linkage to care; (4) promote primary prevention; (5) enhance public awareness; and (6) advance health policy.

**METHODS:** To achieve these goals, VHP leadership is visiting NYC hospitals to encourage systemic investment in the DOHMH HCV public health strategy and build a citywide Clinical Network to improve provider knowledge

and practices using peer training, telemedicine and provider feedback. VHP is also enhancing hepatitis surveillance and using data for monitoring and linkage to care. Federal and private funding support testing, linkage to care and comprehensive care coordination. The Hep C Task Force comprised of patients, advocates, and community providers, and a policy workgroup increase public awareness and advance health policy.

**RESULTS:** DOHMH has visited 12 of 51 NYC hospitals, raising awareness and fostering collaboration around HCV services across hospital divisions. Many providers are interested in joining the Clinical Network, which will have close collaboration with the Empire Liver Foundation, an association of hepatologists. Quality indicators have been developed and enhanced surveillance data, including newly reportable negative RNA results, are used to monitor gaps in confirmation of HCV infection and to provide feedback to clinicians. Partner programs tested 8,117 people, identified 1193 (14.7%) with HCV infection and linked 841 (70.5%) of those to care. In 2014, the Hep C Task Force held 8 meetings and trained over 400 providers. VHP is developing a social media campaign targeted to young persons at risk for HCV infection. The HCV Policy Workgroup organized a legislative educational event for NYC elected officials in February 2015 that was attended by over 100 people.

**CONCLUSIONS:** DOHMH was successful in raising federal and private funds to expand HCV control interventions and its multi-pronged approach is demonstrating success. Other health departments can consider a similar outreach approach to experts, providers and their community, form partnerships with private funders, seek funding from various sources and capitalize on local resources through partnerships.

## ABSTRACT 124

### How a Medicaid HIV Special Needs Managed Care Plan in NYC Achieved Cost Savings and Successful Clinical Outcomes

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**OBJECTIVE:** Little is known about the impact of an integrated team approach to managing hepatitis C (HCV) in HIV/HCV co-infected patients. Previous treatment regimens for HCV infections were lengthy, difficult to tolerate, and resulted in suboptimal outcomes. Newer therapies are costly and challenge payers to balance the costs of treatment versus the risk of poor adherence. Our aims were to utilize an integrated care team approach to: (1) verify that this approach assured that appropriate patients received successful drug regimen; and (2) determine the effect on cost.

**METHODS:** We performed a retrospective MR review of HIV/HCV patients enrolled in a Special Needs Plan who qualified for DAA treatment according to guidelines. As part of the Plan's multidisciplinary approach for monitoring/managing members with HCV, a pharmacy staff member (the "Coordinator") monitored dispensing, prescriber management, costs, lab results and adherence outcomes from treatment request through 12 weeks post treatment. Working with an integrated care team (ICT) including providers, care coordinators, pharmacists, behavior specialists, housing coordinators, case managers, outreach and treatment adherence workers), the Coordinator monitored each patient for evidence of effective antiviral therapy (HCV suppression), adherence to drug regimens using pharmacy claims data and worked with the team to insure that barriers were resolved.

**RESULTS:** HCV drug treatment was approved for 131(90%) of 146 HCV/HIV patients with sustained HIV RNA < 500, regardless of liver disease severity (Jan-Oct 2014). Inappropriate treatment initiation was prevented in 15 (10%) members resulting in drug cost avoidance of \$2,267,000. ICT tracking prevented additional drugs from

being dispensed to 15 members who stopped therapy due to drug intolerance (2), unexpected treatment interruption (7), death (1), and provider discontinuation of therapy (5), a \$956,000 savings. The ICT accomplished a total cost savings of \$3,223,000, 15% of the projected HCV drug costs of \$21,782,000. There was significant viral load suppression at end of therapy. (SVRs to be presented later).

**CONCLUSIONS:** An integrated, multidisciplinary team approach and continuous follow-up was effective in HCV treatment, maximized outcomes and minimized costs.

## ABSTRACT 125

### Opportunities for Screening, Care and Treatment for HCV in a Community Health Clinic Through Primary Care

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**BACKGROUND:** According to estimates from NHANES, there may be nearly 4 million people infected with the Hepatitis C virus, of which over 3 million are likely to be chronically infected. Given the sheer volume of those requiring care and treatment, as well as management and monitoring of those who are asymptomatic or acutely infected, specialty care through hepatologists is out of the reach of many in resource poor, underserved communities.

Central Care Community Health Center, Houston's oldest federally qualified health center serving the city's most medically underserved communities across 5 sites, implemented HCV birth cohort screening in February 2014

**OBJECTIVES:** Provide care, management and treatment of patients with chronic HCV infection through primary care services and providers (physician assistant and nurse practitioners) at a federally qualified health center. Through a partnership with Project ECHO and St. Luke's Liver Center, provide case management of primary care patients and enroll them in treatment protocols for chronic HCV.

**METHODS:** Through a partnership with Project ECHO and St. Luke's, Central Care Community Health Center, primary care patients are screened (both the birth cohort and as part of routine STD panel) for HCV. All patients receive RNA confirmatory testing and those testing RNA+ are provided follow-up diagnostic testing (genotype, ultrasound, and biopsy when required) through St. Luke's. Patients are then enrolled in treatment protocol and monitored through primary care services for the duration of their treatment, and CCCHC providers meet weekly via teleconference with specialists at St. Luke's for case meetings on individual patient progress.

**RESULTS:** To date, CCCHC has screened approximately 450 patients for HCV. Of these, 52 tested anti-body positive and of those, 47 have tested RNA positive, indicating chronic HCV infection. Currently, 11 patients are enrolled in treatment and being monitored for viral load and progress. Of the in care, 4 patients have achieved sustained virologic response (SVR).

**CONCLUSIONS:** The urban primary care setting is an important venue for providing care and treatment for those with HCV, particularly for those who do not have access to to specialists or specialized medical settings. With increasingly simplified treatment regimens, primary care providers, especially physician assistants and nurse practitioners, can provide care, treatment and management of chronic HCV for those patients without complicated, advanced disease. Therefore, primary care settings should be considered a site of opportunity in treating chronic HCV given the growing numbers of those being screened and requiring care.



## ABSTRACT 126

## Barriers to Engagement in HCV Treatment after Community-Based Screening in Oakland, CA

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**OBJECTIVE:** To describe the results of a community-based HCV screening program and identify barriers to engagement in treatment among people with active HCV infection.

**METHODS:** A “cascade of care” for HCV can be identified that begins with screening and diagnosis, moves to linkage to care, and ultimately results in successful treatment. We examine this progression among people recruited by a community-based harm reduction agency in Oakland, CA. HCV antibody testing and RNA testing (for HCV Ab+ persons) were provided at community locations, including a drop-in center, a mobile testing van, syringe exchange program sites and methadone programs between July 1, 2012 - June 30, 2013.

**RESULTS:** 1,215 individuals were screened for HCV antibody, 760 of whom had a history of injection drug use. HCV antibody prevalence was 32% (391 Ab+ cases). Of these 391, 60% (233/391) received RNA testing. Thirty-five percent (82/233) had active HCV infection. Assertive follow-up by agency staff, combined with provision of transportation and a cash incentive, led to 85% of those with HCV infection (70/82) attending an intake appointment at a public HCV clinic. However, only three HCV infected individuals became engaged in treatment. Major barriers to treatment were the presence of co-morbid health conditions and lack of current MediCal coverage. Many participants reported being disappointed that they were unable to get HCV treatment once linked to the clinic. Another barrier was poor attendance at follow-up appointments, which were not facilitated by harm reduction agency staff.

**CONCLUSIONS:** Screening for HCV antibody was successfully accomplished by a community-based harm reduction agency in many venues, and ultimately led to

the identification of 82 cases of active HCV infection. Additional efforts are needed to (1) ascertain all HCV Ab+ individuals receive RNA testing; (2) educate patients about the complexities of HCV treatment decisions; (3) facilitate enrollment in MediCal for treatment candidates; (4) provide continuing practical and emotional support throughout the treatment process, not just at the point of linkage.

## ABSTRACT 127

## Increasing Access to HIV Care Through Institutional Policy in the Acute Care Setting

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**OBJECTIVE:** In 2013, an urban academic medical center implemented a routine HIV testing pilot program in the inpatient setting. The following year, an institutional policy revision was adopted for routine HIV testing and linkage to care including routine testing guidelines, inclusion criteria and a standardized process for identifying and linking persons living with HIV (PLWH) to outpatient care. PLWH are admitted to the hospital at a rate 44% higher than the general population (Mascolini, 2012). Approximately 30% of PLWH who accessed the medical center were not engaged in HIV care. The goal of the policy revision is to increase access to HIV care and reduce HIV-related health disparities in line with the National HIV/AIDS Strategy (NHAS).

**METHODS:** The policy revision was created and implemented by an interdisciplinary leadership team with executive support. It was disseminated through an interdisciplinary workflow, staff education and mentorship by designated champions. All PLWH were referred to a Linkage to Care Navigator (LCN) to be assessed and navigated into HIV care and supportive services. Engagement in HIV care was determined by at

least one visit with an HIV medical appointment in a six month period prior to encounter. Linkage to HIV care was determined by attending two or more HIV medical appointments.

**RESULTS:** In 2013 and 2014, over 600 PLWH were encountered. More than 200 were not engaged in HIV care and 37 were newly diagnosed. Over 90% of newly diagnosed and 50% of previously diagnosed PLWH were linked to HIV care. Readmission rates for the 2013 cohort were calculated. Among newly diagnosed, 87% were readmitted to the hospital within a year of diagnosis, 73% of whom were readmitted once within 30 days from the encounter when they were diagnosed. Among PLWH who were out of care, 90% were readmitted to the hospital within a year of their index visit, 40% of whom were readmitted once within 30 days of discharge from their index visit.

**CONCLUSIONS:** The acute care setting is an ideal entry point for diagnosis and linkage to HIV care in high prevalence areas. Institutional policy, with accompanying education and workflow interventions, allow the health care team to identify and refer PLWH to a designated LCN. Unfortunately, many are not optimally engaged in HIV care as evidenced by frequent readmissions and low rates of re-engagement. In order to achieve NHAS goals, evidence-based strategies are needed to link and re-engage PLWH who utilize the acute care setting.

## ABSTRACT 128

### Improvements in Linkage-To-Care – A Switch to Rapid/Rapid Testing Algorithms

*A King<sup>1</sup> and J Olsen<sup>1</sup>*

<sup>1</sup>CrescentCare, NO/AIDS Task Force Division, New Orleans, Louisiana, United States of America

**OBJECTIVE:** The presentation will look at NO/AIDS Task Force's previous use of a conventional testing model to link clients to care vs. the use of our recent transition to a rapid/rapid-testing algorithm; we will discuss the positive effect that delivering an immediate "confirmatory" result has on linkage-to-care and retention-in-care for HIV

positive individuals. Even though our conventional testing model was yielding linkage-to-care rates of 88% (above the goal of 85% set in the National HIV/AIDS Strategy) we continuously look for components of our testing model that can be improved in an effort to increase our overall linkage-to-care rates even further.

**METHODS:** Prior to March of 2014, our agency implemented a rapid/conventional-testing model for delivering HIV positive results. If an initial rapid test came back reactive a second client specimen sample was collected and sent off for a western-blot test. This model took up to two weeks for the client to receive their confirmatory result and begin the process of linking-to-care. Now clients receive a 20-minute oral rapid test as the initial test and a 60 second rapid finger stick test as the new "confirmatory" test. Both results are given in the same session and the clients are able to begin the process of linkage-to-care immediately.

**RESULTS:** The agency's linkage-to-care rate has increased by 4%; from 88% (N=110 positive clients between March 2013 – February 2014) to 92% (N=84 positive clients between March 2014 – February 2015) since switching to the rapid/rapid testing model. We are continuing to track the results that this switch has produced on retention-in-care.

**CONCLUSIONS:** Eliminating confirmatory/western blot tests that require clients to wait extended periods of time have increased our already high linkage-to-care rates. Clients that received confirmatory results the same day as their first positive result had a higher linkage-to-care rate than those who waited days/weeks for their confirmatory results. Using a rapid/rapid model has proven beneficial in identifying and enrolling newly diagnosed clients into care.

## ABSTRACT 129

## Restructuring Linkage-To-Care: Finding a Model that Works for You and Your Clients

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**OBJECTIVE:** The presentation will look at linkage-to-care strategies used by NO/AIDS Task Force that have proven successful in linking clients from their first positive rapid HIV test into their first primary care appointments. Attendees will be given action steps on how to create a successful linkage program even without the funding for a Patient Navigator. Further discussion will include the improvements made possible by hiring a Patient Navigator who is responsible for the linkage process. Finally we will explore the benefits of using a Patient Navigator to link clients to medical care from HIV Testing services: increased linkage-to-care rate, streamlined client experience, improved communication among staff, and enhanced program monitoring and evaluation.

**METHODS:** Before 2012, our agency successfully linked newly diagnosed HIV positive clients to medical services through a CDC-funded CRCS Coordinator and a state-funded HIV Counseling & Testing Coordinator. This team successfully linked 53% of newly diagnosed clients to medical care within 90 days. In August 2012 a Patient Navigator was hired and by December 31st the linkage rate for newly diagnosed clients within 90 days of their first test increased to average 73.1% for the 2012 calendar year. For 2013 the linkage-to-care rate rose to 89%, (N=98 confirmed positive clients). Streamlining the linkage to care process through one person created a simpler and more reliable approach for HIV counselors, case managers, providers, and clients. Other tools for success included a cell phone with texting capability, transferring the database to Microsoft Excel, maintaining working relationships with the local Health Department, and a bilingual (English-Spanish) Patient Navigator trained in HIV counseling and testing to be available during HIV testing hours.

**RESULTS:** As a result of the change from a team to individual approach, our agency increased its rate of

linkage to care in 90 days among newly diagnosed clients from 50% to 89%. Program improvements include clear protocols for linking newly diagnosed clients to care and re-engaging out-of-care clients in medical services, increased knowledge among case management and prevention staff of the linkage-to-care process, improved access to Partner Services and the State Office of Public Health's DIS program, and improved program monitoring and evaluation.

**CONCLUSIONS:** Hiring a Patient Navigator can increase linkage to care rates, but it is also possible to achieve good linkage to care if funding is unavailable. Linkage to care is important and there are multiple models that can achieve good results even with limited resources.

## ABSTRACT 130

## Markers of Care and Viral Suppression Among HIV+ Women Prior to Referral for Re-Engagement Services

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**OBJECTIVE:** People living with HIV (PLWH) need lifelong medical care but many experience difficulties that may negatively impact retention in care. This is noted to be a particular challenge for women. Re-engagement services were provided by a public health service team (State Bridge Counselors, SBCs) to women identified as out of care (OOC) by HIV medical clinics, i.e., without both recent (>6-9 months) and future medical appointments. To examine markers of HIV care prior to the referral for re-engagement services, we analyzed client data collected in the 12 months before referral.

**METHODS:** Referral, intervention and clinical data were analyzed from a CAREWare database for Ryan White Part B clients in North Carolina from the period of July 2013 to

June 2014. Markers of care were defined as 1 cd4 or 1 viral (VL) and were obtained from eHARS.

**RESULTS:** There were 495 clients identified in CAREWare during the study period, of which 29% were female (n=146) and 71% male; 76% were African-Americans (n=377). Most of the clients were heterosexual (n=234, 47%) and 35% were MSM (n=176). At the time of SBC contact, the HIV-positive women were reported as transitioning care (relocating or new provider, (n=30, 23%); continuing care at same location (no reported transition, n=63, 43%); could not be located (n=22, 15%) or had incomplete records (n=31, 21%). The proportion with viral load suppression (VLs) was low among women referred for re-engagement services (20/146, 14%, missing = VL not suppressed) as well as among women with a marker of care in the last year (20/75, 27%, missing = excluded). Women transitioning care vs. women continuing care had a similar frequency of care markers (transitioning=53%, continuity=57%; RR: 0.94 95%CI: 0.62, 1.39) and VLs (25% vs. 28%; RR: 0.90 95%CI: 0.33, 2.44). Similar numbers of women (51%) and men (49%) had evidence of care in the 12 months prior to the referral. However, women had lower levels of VLs even after restriction to only those with a care marker (27% vs. 40%, RR=0.67 95%CI: 0.44, 1.02).

**CONCLUSIONS:** Women who were referred for re-engagement services from HIV medical clinics had low levels of care and VL suppression during the prior year. Frequency of care markers was similar to men but the proportion of women with VL suppression was a third lower than men. Women who were referred for re-engagement services have a significant need for re-engagement in HIV care.

## ABSTRACT 131

### Laboratory Markers Overestimate Retention in HIV Care

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**OBJECTIVE:** Patients who are retained in HIV care have a higher likelihood of viral suppression and increased survival. In some studies, laboratory markers have been used as surrogate markers for clinical visits. The purpose of this study is to determine the accuracy of these markers at predicting retention in care in an urban HIV clinic.

**METHODS:** A retrospective cohort study was conducted using the medical records of patients who were newly diagnosed with HIV in the emergency department. Retention in care, congruent with the HRSA (Health Resources and Services Administration) definition, was defined as 2 clinical visits to an HIV provider separated by 3 months within a 1 year period. Retention by lab markers was 2 documented labs, either a CD4 count or an HIV viral load, separated by 3 months within the same 1 year period.

**RESULTS:** Ninety-nine patients were newly diagnosed with HIV in the emergency department. By the HRSA definition 36 patients (36%) were retained at 1 year and 40 patients (40%) using the lab marker definition. The sensitivity and specificity of using lab markers to predict retention was 100% and 93.7% respectively. The positive predictive value (PPV) and negative predictive value (NPV) was 90% and 100% respectively. Lab markers predicted retention in 4 patients who did not meet HRSA definition of retention, but all patients who met the HRSA definition of retention were also retained by the lab criteria. Among the 99 patients, 56 were linked to the HIV clinic associated with our hospital, of which 63% (36) were retained at year 1 using the HRSA definition and 70% (39) using the lab marker definition. Using laboratory markers to predict retention among linked patients resulted in a sensitivity of 100% and a specificity of 85%. The PPV and NPV were 92% and 100% respectively.

**CONCLUSIONS:** Lab markers over estimate currently accepted definitions of retention, but the absence of lab



markers was highly predictive for not being in care. Since multiple providers can measure these labs, the use of lab markers may be more representative of a patient's overall contact with the medical system. It is not unexpected that all retained patients met the lab definition since HIV providers measure CD4 counts and viral loads in routine disease monitoring.

## ABSTRACT 132

### Retained and Poorly Retained Patients with HIV had Similar Total Costs in the First Two Years of Diagnosis

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**OBJECTIVE:** Multiple studies have shown that patients with HIV that are retained in care have improved clinical outcomes and survival; however, improved retention may result in increased costs for physician visits and diagnostic tests. The purpose of this study is to compare the differences in costs among patients who are retained in care versus those who are poorly retained in care.

**METHODS:** A retrospective cohort study was conducted using the medical records of patients who had a positive rapid HIV test in the emergency department in 2008 and were linked to care. Inpatient, outpatient, and emergency costs as well as number of visits were collected for the first two years after initial HIV diagnosis. The Kruskal-Wallis test (SPSS) was used for analysis. Retained in care was defined as two visits with an HIV provider divided by 90 days each year for two years.

**RESULTS:** Fifty six patients met the inclusion criteria; they were predominantly uninsured (73%) and African-American (89%). The median total costs per patient for the retained patients over two years was \$45,723 (range \$14,349 to \$305,380) and for poorly retained patients \$24,491 (range \$2,685 to \$137,489)( $p=.11$ ), driven predominantly by outpatient costs, median \$26,600 for retained patients and \$8,478 for poorly retained

patients( $p<.00$ ). Inpatient and emergency department costs for retained versus poorly retained patients were similar, \$8,100 versus \$10,311( $p=.59$ ) and \$1,945 versus \$2484( $p=.29$ ), respectively. The median number of outpatient visits over the first two years was 30 for retained patients and 7 for poorly retained patients; inpatient days 2 versus 3; emergency room visits 2 versus 2.

**CONCLUSIONS:** Patients with HIV have high healthcare costs, but retained patients, who are known to have better health outcomes and decreased mortality, did not statistically cost more than patients who were poorly retained, with the exception of outpatient costs, which was expected.

## ABSTRACT 133

### Increasing Hepatitis C Virus (HCV) Screening and Confirmatory Testing in a Large Integrated Health System

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**OBJECTIVE:** To describe trends in screening and confirmatory testing in Kaiser Permanente Mid-Atlantic States (KPMAS) relative to the 2013 release of the U.S. Preventative Services Task Force "birth cohort" (born 1945-1965) screening recommendations.

**METHODS:** Cohort study among patients in KPMAS with  $\geq 8$  months of enrollment from 1/1/2003-12/31/2014 and  $\geq 1$  clinical visit. Birth cohort, IDU, MSM, sex, race, clinic location, income, elevated ALT (2 consecutive ALT  $>60$  U/L), HIV and HBV status were characteristics of interest. We estimated the annual screening rate as the number antibody (Ab) tested per persons enrolled each year. We used survival methods to describe factors associated with time to Ab testing. We used stratification, interactions with time and robust standard errors to address non-proportional hazards. Among Ab+, we describe the cumulative probability and predictors of confirmatory RNA or genotype testing.

**RESULTS:** We observed 665,345 patients over an 11 year period. The annual screening rate increased steadily from 23.6 to 70.8 per 1,000 person-years from 2004 to 2014; with the sharpest increase after 2013. A total of 123,572 (18.6%) KPMAS members were screened for HCV. Screening among the birth cohort was lower than among non-cohort members. However, the gap shrank in later years of study (132 months). Similar trends were evident by clinic location. We stratified analysis by location and included interactions between time and birth cohort status. Across all locations, significant positive predictors of screening included drug use, HBV and HIV status, and elevated ALT. Screening was lower among men.

**CONCLUSIONS:** We report higher HCV screening and confirmatory testing rates than those reported by similar cohorts. However, we are far from universal in our screening of the birth cohort, which has lagged behind traditional risk-based screening. Moreover, >16% Ab+ were not confirmed: particularly MSM and those with elevated ALT. Such information can be used to identify populations at risk as part of a process to improve the continuum of HCV care.

## ABSTRACT 134

### Successful Model for Providing Hepatitis C Virus Screening and Treatment at a Federally Qualified Health Center in New Orleans

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**OBJECTIVE:** Federally qualified health centers (FQHC) are fertile ground in which to build effective models for transitioning hepatitis C virus (HCV) treatment from specialty to primary care. EXCELth is a PCMH certified level 3 FQHC that serves primary care needs for those in three medically underserved communities in New Orleans. As a result of the unexpectedly high number of antibody positive patients identified through screening, EXCELth created an HCV treatment program model based on a modified Project ECHO approach to improving

community-delivered healthcare. We examined outcomes from the first 23 months of the program.

**METHODS:** EXCELth implemented the birth cohort HCV screening program in February 2013. For those who were confirmed as having HCV infection, we used a navigator to help patients get insurance, a primary care team to do HCV disease staging and patient education, and a hepatologist for treatment decisions and consultation. The hepatologist, whose main practice was at the largest HMO hospital in the state, spent 2 hours every other week seeing patients at EXCELth's facility. The program also used 340B rebates, reimbursement funding, and health outcome-based incentives to provide care to uninsured and underinsured patients.

**RESULTS:** EXCELth screened 2,593 patients for HCV and had 108 (4.17%) patients with confirmed infection. Among those with HCV infection, 44 (40.7%) were insured and 64 (59.26%) were uninsured at the time of their diagnosis. There have been 37 (34.26%) patients who started HCV treatment - 16 (43.24%) insured and 21 (56.76%) uninsured. At the end of January 2015, there were 22 patients pending treatment. Among those who have begun treatment, 26 (70.27%) have completed it and have been cured of HCV infection - 11 (42.31%) insured and 15 (57.69%) uninsured. Overall, this is 24.07 % of patients diagnosed with HCV having been cured.

**CONCLUSIONS:** The EXCELth model has removed a substantial barrier to patients achieving an HCV cure - initial engagement with an HCV treatment team. This was due to better integration of HCV care into other primary care services for the patient, including navigation of health insurance and other reimbursement option for those who were uninsured or underinsured. This model should be considered by other community clinics.

## ABSTRACT 135

## Patient Experience and Satisfaction with the Use of HIV Telemedicine Services Among HIV+ Individuals Living Throughout Rural Alabama

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**OBJECTIVE:** There is a shortage of HIV primary care specialists in rural area throughout the South. This negatively impacts HIV treatment access and adherence. This qualitative study examines patient's experiences and satisfaction with receiving HIV telemedicine services developed to increase HIV care access.

**METHODS:** From September through November 2013, we interviewed 17 HIV+ patients (12 males and 5 females) receiving telemedicine primary care. The semi-structured interviews assessed experiences of transitioning from face to face patient care to telemedicine; impact on patient/provider relationship; positive and negative aspects of telemedicine care; overall satisfaction, and experiences with HIV related stigma. Interviews were audiotaped, transcribed, coded, and systematically analyzed to identify key themes.

**RESULTS:** Most patients found the transition to telemedicine non-disruptive and not significantly different than traditional care. Concerns about telemedicine care were minimal and the majority found seeing their doctor "through the TV" as a positive experience. Patient did not view telemedicine as negatively impacting the patient-provider relationship nor their comfort with disclosure of medical information. Some recommended that an initial face to face patient/provider contact could help facilitate the transition to telemedicine care. 90% of patient reported being extremely satisfied with telemedicine care. Experiences with HIV related stigma varied depending on degree of HIV disclosure.

**CONCLUSIONS:** HIV telemedicine clinics are well received as an alternative to face to face patient care with satisfaction levels high. HIV telemedicine may be a

viable and efficient approach to increase HIV care access, and ultimately health outcomes, for patients living in underserved rural areas.

## ABSTRACT 136

## The Patient Centered Medical Home (PCMH): A Model for Improving Access and Engagement in Care for HIV and HCV Patients

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**OBJECTIVE:** To describe advanced models of care delivery that are patient-centered, integrated, and coordinated across disciplines and settings; alternative payment models, recognition programs and grant funding that support these models; and practical steps to implementing the PCMH for HIV and HCV patients.

**METHODS:** An environmental scan and systematic literature review were conducted to examine the current state of PCMHs, including payment models and the PCMH evidence-base, with a focus on advanced care models for HIV patients. Steps to implementing a PCMH were drawn from an evaluation of the MA Patient Centered Medical Home Initiative, a 3-year multi-payer statewide demonstration with 46 participating practices. Evaluation methods included key informant interviews, staff and patient experience surveys, and collection/analysis of clinical quality and cost/utilization data.

**RESULTS:** Implementation of the PCMH model is spreading nationally, due in part to the Affordable Care Act. Forty-four states have Medicaid/Children's Health Insurance Program PCMH initiatives. As of June 2014, 45% of Federally Qualified Health Centers have received PCMH recognition. Thirty-six Ryan White Care Act (RWCA) funded HIV clinics were recognized as PCMHs and 26 had applications pending as of 2012. Seventeen states have implemented Medicaid Health Homes, including 4 states with HIV Health Homes. PCMH evaluations have documented cost and utilization reductions, and improved clinical quality

and patient/provider experiences. Resources to support implementation include alternative payment models, HRSA and CDC grant funding, and technical assistance (TA). Lessons learned in PCMH implementation include importance of: leadership engagement and staff buy-in, appropriate sequencing of PCMH core competency adoption, electronic health record proficiency, active use of TA and peer learning, and inclusion of behavioral health integration in each component of the PCMH model.

**CONCLUSIONS:** Advanced models of care delivery that are patient centered, integrated across disciplines and coordinated, may improve access to and retention in care, improve health outcomes and reduce costs. With their experience as RWCA grantees and with new payment and funding opportunities, HIV providers are well-poised to become recognized as PCMHs.

## ABSTRACT 137

### **Efficient, Centralized Portal Access to HIV Medication Significantly Improves Biologic Outcomes for the Uninsured**

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**OBJECTIVE:** To improve care rates of uninsured HIV positive patients living in the U.S., leading to increased viral suppression and decreased transmission rates. This is accomplished through eliminating barriers and creating efficient access to free medications.

**METHODS:** Through partnering with clinics in the U.S., HarborPath is able to provide the full regimen of HIV medications to the uninsured through use of a streamlined, online portal process. Donated medications are applied for online on behalf of the patient, and after a brief approval process, are mailed in approximately 48 hours. This significantly shortens the patient's wait-time to obtain treatment, and due to ease of the qualification and online application process, may increase adherence.

**RESULTS:** A total of 594 patients were approved for the HarborPath program at partnering academic institution University of Alabama at Birmingham from January 2013-January 2015, with a mean age of 39 years, 78% Male, 71% Black/African American, and 8% IDUs. Median time from application to program approval was 1.5 days, and time from application to medication distribution was 4.0 days. Of the 488 patients for whom both baseline and follow up viral load were available:

- 60% (two-thirds) had suppressed Viral Load at enrollment, using closest lab value prior to HarborPath program approval.
- 81% had suppressed viral load after at least 4 weeks of enrollment ( $p < .001$ , up to 1 year follow-up). Viral load suppression increased significantly from baseline.

**CONCLUSIONS:** Improved efficiency in access to HIV medication therapy provides clinically significant outcome results for uninsured patients. The HarborPath model provides a solution for reducing HIV transmission rates and improving patient outcome by effectively eliminating barriers to treatment and providing ease of therapy access for the uninsured.

## ABSTRACT 138

### **Implementing Hepatitis C Treatment Programs in Comprehensive HIV Clinics: The Health Resources and Services Administration (HRSA) Special Projects of National Significance (SPNS) Hepatitis C Treatment Expansion Initiative**

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**OBJECTIVE:** Mortality and morbidity from underlying liver disease in HIV/HCV coinfecting patients remains high. Successful linkage to and retention in HCV treatment



for HIV/HCV coinfecting patients has been historically poor, with correspondingly low HCV treatment success rates. In an attempt to address both clinical, training, and workforce related issues regarding this problem, The Hepatitis C Treatment Expansion Initiative was funded by the Health Resources and Services Administration - Special Projects of National Significance branch from 2010-2014.

**METHODS:** Twenty-nine demonstration site comprehensive HIV clinics were funded for two years to implement one of four clinic-selected models of HCV care, including: integrated HCV care, designated HCV clinic sessions, HCV care delivery by a primary provider with expert back-up, and referral to an outside specialist for care. An Evaluation and Technical Assistance Center (ETAC) assisted all sites with project implementation, patient-level medical consultation as-needed, monthly didactic and case-based teleconferences, and in-person annual site visits and grantee meetings. Quantitative outcomes measured included number of patients linked to and retained in treatment and the number of treated patients achieving a sustained virologic response (SVR) for each clinic. Qualitative data about model designs were also analyzed.

**RESULTS:** 239 patients entered HCV treatment across all clinic sites over the course of the project. The treatment outcome for 201 (84.1%) was available - 100 (41.8%) achieved an SVR. No statistically significant difference in treatment success was identified based on the model of care delivery selected. Qualitative analysis of clinic models through structured interviews and surveys revealed a benefit for clinics that identified a dedicated patient tracker to ensure linkage to and retention in care. Additionally, surveys of demonstration clinic staff including clinical and program personnel revealed increased confidence in initiating care based on the availability of ongoing clinical technical assistance.

**CONCLUSIONS:** A dedicated interdisciplinary effort to implement an HCV treatment program within an HIV clinic can improve treatment implementation and completion rates compared to historical rates in similar populations.

## ABSTRACT 139

### Leveraging Resources to Create a Comprehensive HCV Program

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**OBJECTIVE:** Increasing attention has been given to Hepatitis C as testing technologies and therapies have and become more accessible. NO/AIDS Task Force d.b.a. CrescentCare, an AIDS Service Organization with over 30 years' experience in providing comprehensive HIV prevention, education, care and treatment, has recently become a Federally Qualified Health Center and can now offer services beyond HIV, including HCV testing and treatment.

**METHODS:** Using a variety of funding sources, the agency has worked to create a continuum of care for HCV, mirroring that of HIV through Program Collaboration and Service Integration (PCSI) to remain relevant in the changing public health landscape. For instance, education, prevention and HIV testing are funded primarily through the Office of Public Health, the CDC, and Gilead. HCV testing is funded through a Community FOCUS grant from Gilead, which will also work with the IDU cycle of the National HIV Behavioral Surveillance program to provide rapid HCV. Many of the HCV clients are tested through the New Orleans Syringe Access Program (NOSAP) which is funded through a handful of small community grants from the MAC AIDS Fund, the Elton John AIDS Foundation, and the Comer Family Foundation as well as agency donations. A patient navigator works with any HIV positive or co-infected clients to link them to Ryan White medical services when applicable and is funded by HRSA. Navigation and Support Services (NSS) are a tenet of High-Impact Prevention funded by the CDC, so the individual tasked with assisting higher-need clients to services works with all HVC identified clients for follow-up and linkage.

**RESULTS:** While still in its infancy, the model for linkage-to-care for HCV infected clients is evolving to mimic the comprehensive program for HIV positive individuals. The current HIV linkage-to-care rate averages 92% (with over 100 positives identified annually). Since HCV testing

began at NOSAP in September 2014, linkage for positives was only at 17%.

**CONCLUSIONS:** Challenges exist in creating a comprehensive care system without the resources of Ryan White Funding. Using PCSI, working across departments, managing electronic medical records and sharing data will allow for program monitoring and feedback on successes and areas for improvement. As HCV treatment outcomes continue to improve and more medications become available, it is likely that linkage to care will follow suit.

## ABSTRACT 140

### Visualizing Geographic Patterns in the HIV Care Continuum in Five Major US Cities

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**OBJECTIVE:** Online tools are robust for mapping illness data, and allow for insights that are not possible with aggregate or static figures. These resources can be instrumental in targeting areas that need more/better healthcare and public health resources. Mapping HIV cases at multiple geographic levels in the US has been done for a number of years, but until now no interactive maps have ever been created for HIV care outcomes.

**METHODS:** In February 2015, HIVContinuum.org began a free online resource for visualizing HIV care continuum outcomes in 5 US cities heavily impacted by HIV - Atlanta, Chicago, New Orleans, Philadelphia, and Washington, DC. HIVContinuum uses disease surveillance data from public health agencies to map HIV diagnoses, late diagnoses, linkage to care, engagement in care and viral suppression. For patients diagnosed from 2007-2011, we used laboratory surveillance data on CD4 count and HIV viral load to determine care outcomes using standard definitions. HIVContinuum users can view maps by race/ethnicity, sex and age. We also have map overlays of the most current information from CDC and HRSA on HIV testing locations and Ryan White Care Act clinics.

The website will be updated at least annually as new data become available.

**RESULTS:** HIVContinuum.org allows visualization of care outcomes with geographic and sub-population details. What HIVContinuum shows is even within our most heavily impacted cities, micro-epidemics exist where some areas experience more new HIV diagnoses than others - something that has been previously noted by local public health agencies, but not at our level of detail for sub-populations. HIVContinuum is particularly novel providing the ability to now visualize similar geographic variations in care continuum outcomes. There are places in each city where outcomes such as engagement in care or viral suppression are better/worse, but the patterns somewhat differ from those of HIV diagnoses. Mapping of testing and treatment locations may help us understand how care outcomes compare to the distribution of these resources in the city.

**CONCLUSIONS:** HIV care providers, public health agencies and policy makers should consider how mapping of HIV care continuum outcomes should be used in our collective response to the epidemic. Further exploration of how care outcomes differ for sub-populations in different areas of these cities may help us resolve some of the pervasive disparities in HIV care outcomes. HIVContinuum.org will also become a useful resource to monitor the impact our efforts are having within the most heavily affected cities.

## ABSTRACT 140LB

### Examining HCV Treatment Access

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**OBJECTIVE:** To understand the findings of a recently released report, Examining Hepatitis C Virus Treatment Access: A Review of Select State Medicaid Fee-For-Service and Managed Care Programs, prepared by the Center for Health Law and Policy Innovation of Harvard Law School.

**METHODS:** We randomly selected and evaluated Medicaid reimbursement criteria for sofosbuvir in the Medicaid fee-for-service programs of ten states and the Medicaid managed care programs of five of those states. Criteria for coverage review included the following categories: 1) liver disease stage; 2) abstinence from alcohol and/or drugs; 3) prescriber type; and 4) HIV co-infection.

**RESULTS:** The arrival of new, highly effective treatment for hepatitis C virus (HCV) has led to new treatment guidelines that call for expanded access to treatment. The American Association for the Study of Liver Disease and the Infectious Disease Society of America have issued new guidelines which state “evidence clearly supports treatment in all HCV-infected persons, except those with limited life expectancy (less than 12 months) due to non-liver-related comorbid conditions.” However, cost-conscious Medicaid programs have responded to the high price of new HCV treatment coverage by implementing various restrictions on who may actually receive treatment. While it is important to understand that the study’s state profiles represent a snapshot in time, the ten-state study found that common Medicaid exclusions include requiring advanced liver disease, requiring periods of abstinence from substance use, limiting which medical specialties can prescribe sofosbuvir, and restricting access based on HIV coinfection. The study also found that while exclusions are widespread, restrictions vary from state to state, between Medicaid fee-for-service and managed care programs within a state, and even between different plans within a state’s managed care program.

**CONCLUSIONS:** HCV treatment access restrictions are not based on current treatment guidelines or grounded in clinical evidence, and instead appear to be driven by financial concerns in an effort to ration treatment to ensure cost containment. While it is appreciated that the price of new therapies creates a financial challenge for state Medicaid budgets, access to appropriate treatment for HCV is crucial to reducing morbidity and mortality levels from this disease. States have discretion to establish certain limitations on the provision of drugs, but should examine their medication benefits to ensure that limitations do not excessively or unreasonably restrict coverage of effective treatments for patients with HCV.

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