



VIRTUAL
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RYAN WHITE
CONFERENCE ON**
HIV CARE & TREATMENT

The Effect of Addiction Services on Viral Load Suppression in People With HIV with Substance Use Disorder

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Project Acknowledgements



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- John Baxter, M.D., Infectious Diseases Specialist, Medical Director
- Rachel Haroz, M.D. Toxicologist, Addiction Medicine Specialist
- Christopher Milburn, M.D., Psychiatrist, Addiction Medicine Specialist
- Carley Schaffer, M.S., Licensed Clinical Alcohol and Drug Counselor
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Abstract Description



The Cooper EIP Expanded Care Center (CEEC) in Camden, NJ has integrated comprehensive HIV medical care with addiction services and medication protocols for Substance Use Disorder (SUD) as part of a treatment model for People With HIV (PWH). A cohort of PWH diagnosed with SUD displayed significantly increased rates of Viral Load Suppression (VLS) and Retention In Care (RIC) after enrolment in CEEC's medical and addiction support services.

Presentation Objectives



- Become familiar with an integrated medical care and support services approach for addiction treatment services within a HIV clinic program.
- Identify methods for data abstraction from electronic health records to track and monitor health care outcomes for viral load suppression for PWH diagnosed with substance use disorder.
- List treatment modalities for addiction treatment services in an HIV program.

Historical HIV and IDU Demographic Data National vs. Camden County NJ



US Data 2018 Centers for Disease Control (CDC)

- Estimate 1,173,900 PWH
- Race and Ethnicity New Infections
 - Black/African American 42%
 - Hispanic/Latino 27%
 - White 25%
 - Asian 2%
 - Other 4%
- IDU Risk Factor (RF) New Infections
 - **IDU 7%**
 - IDU + Male to Male Sexual Contact RF 3%

<https://www.cdc.gov/hiv/basics/statistics.html>

Camden County 2018 Data: State of New Jersey Department of Health (NJDOH)

- Estimate: 3544 PWH
- Race and Ethnicity New Infections
 - Black/African American 45%
 - Hispanic/Latino 27%
 - White 28%
 - Asian <1%
 - Other <1%
- IDU RF New Infections
 - **IDU 25%**
 - IDU + Male to Male Sexual Contact RF 0.03%

<https://www.nj.gov/health/hivstdtb/documents/stats/hiv/county/camden.pdf>

CEEC Newly Identified PWH 2017 vs. 2019: A Demographic Shift



CEEC Newly Identified PWH 2017

- Newly Diagnosed: N=35
- Race and Ethnicity
 - Black/African American 46%
 - Hispanic/Latino 38%
 - White 15%
 - Asian <1%
 - Other <1 %
- IDU RF by Race
 - Black/African American 21%
 - Hispanic/Latino 25%
 - White 60%
 - Asian <1%
 - Other <1 %

CEEC Newly Identified PWH 2019

- Newly Diagnosed: N=47
- Race and Ethnicity
 - Black/African American 49%
 - Hispanic/Latino 17%↓
 - White 27%↑
 - Asian 2%
 - Other 5 %
- IDU RF by Race
 - Black/African American 13%↓
 - Hispanic/Latino 12%↓
 - White 77%↑
 - Asian <1%
 - Other <1 %

Changing Racial/Ethnic Demographics Among Newly Identified PWH at CEEC 2017 to 2019 Data Sets

- Newly Identified HIV+ Black/African American population remained consistent between 2017 and 2019, 46% to 49%.
- Newly Identified HIV+ Hispanic/Latino population decreased between 2017 and 2019, 38% to 17%.
- Newly Identified HIV+ White population increased between 2017 and 2019, 15% to 27%.
- Newly Identified HIV+ White population with an IDU RF increased between 2017 and 2019, 60% to 77%.

January to March 2019 State of New Jersey HIV Outbreak



- HIV outbreak detected by the NJDOH in Southern New Jersey.
- Risk factors: IDU prominently implicated as driving the outbreak.
- In 2018, CEEC newly identified 69 patients as HIV+. Of the 69 new diagnoses, 16 reported IDU as a RF or 23%.
- In the first 4 months of 2019, CEEC newly identified 33 patients as HIV+. Of the 33 new diagnoses, 13 reported IDU as a RF or 39%.
- 2019 outbreak demonstrates the need for tracking new HIV infections and the transmission risks.

COVID-19 Effects on Opioid Use Disorder (OUD) and HIV



Local observations:

- Increase Depression
 - Increase in OUD overdoses
 - Increase rates of death
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- Source: Personal communication from Dr. Rachel Haroz, CUH Emergency Department physician certified in toxicology and addiction medicine therapy. Dr. Haroz has also provided Addiction Medicine (AM) services in CEEC.

Medical Care for PWH and OUD

– It's complicated



OUD is frequently associated with polysubstance use and co-morbid conditions such as:

- Mental health disorders
- Hepatitis C Virus
- Sexually transmitted Infections
- Skin Abscesses
- Endocarditis

Associated comorbidities observed and noted by CUH Addiction Medicine and Infectious Disease specialists.

What is Medication for Opioid Use Disorder (MOUD)?



- Methadone – Opioid replacement therapy. Pill dispersed in liquid. Taken orally, daily.
- Buprenorphine/Naloxone (Suboxone[®]) – Blocks receptors from binding to other opioids. Administered as a sublingual film or sublingual tablet. Also extended release injectable formulation (Sublocade[®]) for persons with moderate to severe OUD.
- Naltrexone (Vivitrol[®]) – Opioid antagonist. Used for alcohol abuse and OUD treatment. Administered orally or as an injectable (every 4 weeks).
- Naloxone (Narcan[®]) – Opioid antagonist. Utilized to reverse opioid overdose. Administered intranasal or as an injectable in emergency situations.

Sources: [Http://online.lexicom](http://online.lexicom) and <https://www.ncbi.nlm.nih.gov/books/NBK535268/>

Data Collection, Transfer, Reporting and Analysis: Collection



Patient medical, service and demographic data collected and stored in two systems:

- Medical information is stored in the EPIC hyperspace EHR. EPIC is used by Cooper University Hospital (CUH).
- Ryan White funded services and patient medical data are warehoused in the Health Resources and Services Administration's (HRSA) proprietary software program CAREWare.

National databases utilized for collection of data:

- CDC
- HRSA
- HIV.org

HIV+ population distribution and demographic data available for collection:

- National databases (CDC, HRSA etc.)
- NJDOH databases
- Camden County databases

Data Transfer from CUH EHR to HRSA Database CAREWare

Data reports from EPIC:

- All data entered in EPIC is stored in a data warehouse. Utilizing SAP business objects (database management system) to build reports, data is extracted for analysis or for upload into CAREWare.

Data exporting and interface between EPIC and CAREWare:

- Data from EPIC hyperspace is prepared for import into CAREWare through a Data Transfer Module (DTM).
- DTM translates .csv formatted data exported from EPIC (incompatible with CAREWare) and converts it to an Access database compatible with CAREWare's Patient Data Import (PDI) function .
- CEEC extracts, converts and uploads patient laboratory results and other patient medical data from EPIC into CAREWare on a regular schedule.

Data Collection, Transfer, Reporting and Analysis: Reporting



HIV AIDS Bureau and Philadelphia based Aids Activities Coordinating Office (AACO) Performance Measure (PM) reports from CAREWare are utilized. Standardized reporting metrics for VLS, RIC, Lost to Care (Gap), Prescription of ART etc. are used to report performance to grantors.

(AACO is the Part A administrator for the Philadelphia, PA Eligible Metropolitan Area (EMA))

Custom Data Reporting for Analysis: Specific data reports are constructed in CAREWare utilizing the Custom Report building tool. Tool allows the Data Analyst to craft fields and filters providing customized information output. Although Administrative PMs cannot be altered, they can be copied and modified for internal reporting.

HRSA Administrative PM for VLS (CORE01) and a custom modified version of this PM incorporating filters for patients with a reported IDU RF were used evaluate CEEC's comprehensive treatment model effectiveness on VLS.

VLS (CORE01):

PWH active as patients at CEEC with a last VL<200

- Numerator: PWH active as patients at CEEC with a last VL<200
- Denominator: PWH active as patients at CEEC

VLS PWH with an IDU RF (Custom Report/Modified CORE01):

PWH with an IDU RF with a last VL <200

- Numerator: PWH with an IDU RF active as patients at CEEC with a last VL<200
- Denominator: PWH with an IDU RF active as patients at CEEC

Data Collection, Transfer, Reporting and Analysis: Reporting



AACO administrative PM for RIC (PHL05) and a modified version of this PM incorporating filters for patients with a reported IDU RF were used to evaluate the effectiveness of the comprehensive treatment model at CEEC.

NB: AACO is the Part A administrator for the Philadelphia, PA Extended Metropolitan Area (EMA)

RIC (PHL05):

PWH active clinic patients who have not gone >6 months without an HIV primary care medical visit.

- Numerator: PWH active as patients at CEEC who have not gone >6 months without an HIV primary care visit.
- Denominator: PWH who have established HIV care at least once at CEEC.

RIC with IDU (Custom Report/Modified PHL05):

PWH with an IDU RF active clinic patients who have not gone >6 months without an HIV primary care medical visit.

- Numerator: PWH with an IDU RF who have not gone >6 months without an HIV primary care visit.
- Denominator: PWH with an IDU RF who have established HIV care at least once at CEEC.

Quality Management Process



Quality Management (QM) Program, QM plan, QM committee, Performance evaluation through consumer feedback and healthcare outcomes.

Quality Assurance Supervisor - Manages quality program including data collection, needs assessment, and abstract preparation.

Data Analyst – Information technology management across multiple software platforms.

Clinical Data Coordinator – Drill down of performance measurement data driving quality improvement initiatives.

Data Specialist – Data collection and entry for medical care services and consumer surveys.

CEEC Integrated Care Model: Analysis of a Patient Cohort with SUD 2017-2019



- Over a 3 year period (2017 to 2019), CEEC enrolled an increasing number of PWH with SUD in AM services. By year's end 2019, 83 patients were enrolled and 19 patients declined AM services.

Year	2017	2018	2019	Total
PWH w/SUD Enrolled AM	6	31	46	83
PWH w/SUD Declining SUD care	3	8	8	19
Total	9	39	54	102

VLS: Analysis of a Patient Cohort with SUD 2017-2019



Viral Load Suppression: HRSA CORE01 performance measure of viral load suppression (VLS) is defined as a patient having a viral load of <200 on their most recent VL test.

Year	2017	2018	2019	Total
Suppressed	8	24	39	71
Not Suppressed	1	15	15	31
Total	9	39	54	102

VLS in the SUD diagnosed cohort increased from 61.5% (24/39) in 2018 to 72.2% (39/54) in 2019.

RIC: Analysis of a Patient Cohort with SUD 2017-2019



RIC: AACO PHL05 RIC performance measure defined as patients who have not gone >6 months since their last HIV Primary Care medical visit.

Year	2017	2018	2019	Total
Retained	3	15	43	71
Not Retained	6	24	11	31
Total	9	39	54	102

RIC in the SUD patient cohort increased from 33% (3/9) in 2017 to 38.4% (15/39) in 2018 to 80% (43/54) in 2019.

Impact of Addiction Services on an HIV/ODU Patient Cohort Before and After Addiction Services



- At year's end 2019, CEEC had 54 PWH with a diagnosis of Opioid Use Disorder (OUD) enrolled in AM services utilizing MOUD, addiction counseling/education and psychological support. Forty (40) of these patients had been receiving HIV Primary Medical Care at CEEC prior to the introduction of Addiction Services in 2017.
- Of these 40 patients, 77.5% were virally suppressed at the end of 2019.
 - 42.5% (17) of these virally suppressed patients maintained a suppressed status from 2017 to 2019.
 - 35.0% (14) had moved from a non-suppressed status to being virally suppressed.
 - Return from a suppressed status to non-VLS status was 5% (2/40).
 - 17.5% (7) had no change in non-VLS status before and after Addiction Services.

Case Study



- W. F. is a 35 year old white male.
- History of polysubstance use and co-occurring mental health disorders.
- Accidental overdose x 2 in 2018 – and Jan 2019 (seen in CUH ED).
- Screened and newly identified as HIV+ at CUH ED July, 2019.
- ED referred to CEEC and linked to care on the same day.
- Initial HIV Viral Load 23,000 and CD4 cell count 740.
- Prescribed Biktarvy at first visit.

Case Study: First Visit



Intake Assessment with Clinical Navigator:

- Emotional status: Distraught, desire to engage with psychotherapy.
- RF: IDU and unprotected heterosexual contact.
- Navigated at CEEC: Seen by clinical psychologist and Licensed Clinical Alcohol and Drug Counselor (LCADC) same visit
- Refused Addiction Medicine outpatient services on intake.
- Patient opted for an inpatient addiction treatment program. Navigator connected patient to inpatient care for SUD.

Case Study: Follow Up



- Completed 3 months inpatient treatment.
- Re-engaged to CEEC HIV care after inpatient treatment program.
- Agreed to Addiction Medicine and Behavioral Health services at CEEC.
- First appointment with Certified Addiction Medicine Physician patient was prescribed buprenorphine/naloxone.
- Started individual psychotherapy and substance use counseling.
- Labs: Positive for buprenorphine, HIV viral load <20 copies.

Case Study: Outcome



EIP Comprehensive Care “Touches”

- Navigation
- Behavioral Health
 - Psychotherapy
- Addiction Medicine
 - MOUD
 - Counseling
- HIV Primary Care
 - ART
 - VLS
 - RIC
- Case Management

Current patient status:

- Engaged with CEEC HIV primary care, addiction medicine and behavioral health services.
- Obtained employment.
- Purchased a home.
- In a relationship and expecting first child.
- HIV VLS <20 and CD4 1,236

Addiction Medicine Care Team



- Physicians, Addiction Medicine Board Certified providing weekly to biweekly medical care appointments
- Licensed Certified Alcohol and Drug Counselor providing individual counseling daily and group therapy sessions weekly
- Behavioral Health Clinical Psychologists available daily for assessments and psychotherapy
- Medical Case Management, Medical Care Coordinator providing case management services daily and also supporting group therapy sessions

CEEC Partnerships



- Internal and external partnerships such as the county jail, health departments and community based organizations.
- Health System wide routine HIV and HCV screening.
- Emergency Department physicians: HIV testing, prescribe Suboxone[®], bridge connection to HIV and SUD care in the outpatient setting.
- Hospitalists working collaboratively with Addiction Medicine Consult service and Infectious Diseases Consult Service assuring outpatient care upon discharge.
- Provider education to prescribe medication for OUD
- Primary care providers obtaining Suboxone[®] waiver and routinely screening for HIV and HCV.

Program Model Successes



Well established HIV program and an integrated Chronic Care Model approach to care and treatment.

CEEC clinic renovated in 2017. New provider office design groups physicians, service providers, psychologists and counsellors side by side facilitating multidisciplinary team medical care and treatment:

- Certified Addiction Medicine specialists working collaboratively with Primary Care providers and ID specialists.
- Certified Alcohol and Drug Counselor, Clinical Psychologists and Clinical Pharmacists working in tandem with the clinical support team (nurses and phlebotomist).

Program Model Successes



Wrap around services from reception to clinical care to supportive care all focusing on the patient:

- Medical and Non-medical case management services
- Outreach and Nurse Navigation
- Psychosocial support services such as SUD support group and CDSM Pain Management Workshops
- Consumer Advisory Board meetings supported by program staff and resources

Program Challenges



- Addressing disruptive patient occurrences
- Integrating trauma informed care
- Development Addiction medicine policies and procedures, and education of staff on policies and procedures.
- Assuring key personnel are hired and trained appropriately

Summary:



- Identification of PWH with SUD and linkage to appropriate care is essential to improve healthcare outcomes (i.e., VLS)
- Assure appropriate resources and staffing for data collection and analysis
- Routinely evaluate healthcare outcomes through data
- Addiction Medicine Care team that includes counseling and care coordination for HIV and MOUD is necessary to sustain healthcare outcomes and retention in care
- Providing all medical care services in unison has been the most successful approach for treatment and support services at CEEC

Thank you!



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