

Conclusion. HIV stigma is still a distressing social force to HIV infected patients in the heart of Illinois. Though medical management of HIV has advanced significantly in recent years, the stigma that accompanies a diagnosis of HIV infection remains to be effectively addressed in a comprehensive and conscientious manner. Our study points to the need for tailored interventions in outpatient medical settings, as well as throughout the general community in central Illinois.

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1360. Predictors of Viral Load Suppression in HIV-infected Patient in Rural Eastern North Carolina.

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Background. Virologic suppression (VLS) has been shown to improve clinical outcomes and prevent disease transmission in Human Immunodeficiency Virus (HIV) infected patients. However, only 30% of those living with HIV in the United States (US) are currently VLS. HIV incidence and prevalence are increasing rapidly in the rural Southeastern region of the US and models to predict VLS in this population are needed.

Methods. We conducted a retrospective chart review of patients 18 years or older, who were newly diagnosed with HIV and receiving care at our Ryan White funded clinic between September 2014 and September 2016. We collected demographic information, comorbid conditions, clinic appointment data, and laboratory values. VLS suppression was defined as an HIV viral load <200 copies/mL at 3 months. Pearson Chi square analysis was done using SPSS to evaluate the association between these variables and VLS.

Results. A total of 183 patients were included in the study, 42 (23%) females, 39 (21%) white, 41 (22%) less than 25 years of age, 65 (36%) uninsured and 102 (56%) men who have sex with men. The majority 139 (76%) of patients lived below the 150% federal poverty limit. During 3 months follow up 113/183 (61%) were VLS. There were no statistically significant associations between age, gender, ethnicity, presence of mental health and substance abuse disorders, housing stability, education or poverty level and VLS. 60/104 (56%) of those who were insured achieved VLS compared with 48/65 (73%) of those who were uninsured ($P = 0.033$)

Conclusion. VLS was achieved in 61% of the HIV infected patients in eastern North Carolina. Patients without insurance had a statistically significantly higher rate of VLS as compared with those with insurance. It is noteworthy that patients who were uninsured received ambulatory medical and support services as well as medication assistance through Ryan White funding. Future prospective studies are needed to further evaluate the association between insurance status and VLS in federally funded clinics.

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1361. Factors Associated with Elevated HIV RNA Levels in HIV-Infected Individuals

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Background. Virologic suppression is necessary to reduce the risk of complications from HIV infection and to prevent transmission to other individuals. Understanding factors associated with elevated HIV RNA levels in HIV-infected individuals could lead to interventions to improve engagement in care.

Methods. This retrospective, observational study assessed HIV-infected individuals engaged in care in an urban HIV clinic between April 1, 2015 and March 31, 2016. The electronic medical record was reviewed for demographic and HIV-related factors for all individuals with elevated HIV RNA PCR ≥ 200 copies/mL (EVL) during the study period. Demographic data were compared with individuals with decreased HIV RNA PCR (DVL) <200 copies/mL. Patients with recent HIV diagnosis within 6 months of EVL were excluded due to the possibility of insufficient time to achieve viral suppression after engagement in care. Statistical analysis including Student T-test and Chi Square test was conducted in SPSS, version 24.

Results. There were 519 individuals with EVL with 72 (13.9%) excluded due to recent HIV infection. Of 1,789 patients included in this analysis, 447 (25.0%) had an EVL. The median HIV RNA PCR was 7,240 copies/mL (range 200 to 6,720,990) and median CD4 count was 411 cells/mm³ (range 1 to 1,510) in the EVL group. Individuals with EVL were more likely to be younger (mean EVL group age 43.4 years \pm S.D. 11.7, range 22–77 vs. 47.5 years \pm S.D. 12.4, range 19–84 in DVL group) ($P < 0.0001$). Individuals with EVL were more likely to be Black (82.1%) (with White 9.2% and Hispanic 8.7%) compared with those with DVL (74.8% Black, 12.4% White, 11.6% Hispanic, 1.6% other) ($P = 0.004$). The EVL group was 59.3% male, 39.8% female and 0.9% transgender vs. 64.8% male, 34.3% female, and 1.0% transgender in the DVL group. The main risk factors for HIV acquisition were heterosexual sex (46.3% of EVL vs. 43.4% DVL), men who have sex with men (31.8% vs. 36.4%) and injection drug use (14.3% vs. 14.6%). There were no significant differences in gender or risk factors for HIV acquisition between the two groups.

Conclusion. Decreased levels of HIV viremia is a major focus of quality HIV care. Younger age and Black race were associated with elevated HIV RNA levels in individuals engaged in care in a large urban HIV clinic.

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1362. Travel time to Clinic but not Neighborhood Crime Rate is associated with Retention in Care among HIV-positive Patients

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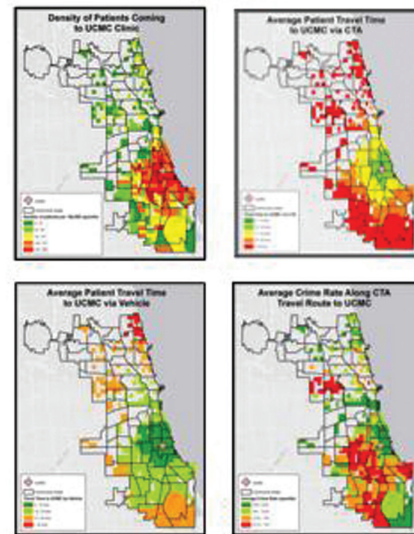
Background. Retention in HIV care can be impacted by structural factors such as crime, poverty, and clinic accessibility. We aimed to determine whether crime rate, travel time, or travel distance to clinic were associated with retention in care or viral suppression (VS) among people living with HIV (PLWH) at the largest provider of HIV care on the South Side of Chicago.

Methods. Using publicly available data in the Chicago Open Data Portal, we geocoded patient home addresses and clinic location. We measured distance from patient home to clinic, and travel time from patient home to clinic using car and Chicago Transit Authority (CTA) public transportation. We further measured crime rate within a two block radius of the public transportation route to clinic. Retention was defined as >2 visits, 90 days apart within 12 months, and patients were classified into 3 groups: continuously retained (CR), intermittently retained (IR), or lost to follow-up (LTFU), i.e., no visit in the last 12-months. Kruskal-Wallis rank-sum with Dunns pairwise test was used to determine whether travel time, travel distance, and crime rate were associated with retention or viral suppression.

Results. 780 patients were included in the study. Of these 273 (35%) were CR, 392 (50%) were IR, and 115 (15%) were LTFU. Figure 1 shows maps with geocoded data. Median distance from clinic was 3.6 [2.1–5.6] miles among those CR, 3.9 [2.5–6.0] miles among the IR, and 3.9 [2.6–6.2] miles among those LTFU. Median travel time by CTA was 37.2 [31.8–53.0] mins for CR, 42.9 [33–53] mins for IR, and 42.9 [33–59.1] mins for LTFU; by car was 15.9 [9.6–33] mins for CR, 17.1 [11.8–24.6] mins for IR, and 17.5 [12.2–24.1] mins for LTFU. Crime rate was similar across all retention groups. Though no associations were statistically significant at $P < 0.05$, there was a trend toward shorter distance ($P = 0.07$) and shorter car travel time ($P = 0.06$) among CR vs. IR. There was also a trend toward lower neighborhood crime rates among those VS vs. those not VS ($P = 0.07$).

Conclusion. Retention in care was not impacted by residing in high crime neighborhoods in Chicago. PLWHA who lived farther from HIV clinic and had longer travel time showed a trend toward being more likely to be IR in care vs. CR, but there was no such association for VS. Travel time may impact patient likelihood to attend HIV care appointments, but not necessarily adherence to ART.

Figure 1



Abbreviations: UCMC, University of Chicago Medical Center; CTA, Chicago Transit Authority

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1363. Electronic data sharing between public health department and clinical providers improves accuracy of HIV retention data

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Background. Retention in care is critical for treatment and prevention of HIV. Many HIV care clinics measure retention rate, but data are often incomplete for patients who are classified as lost to follow-up but may be actually in care elsewhere, moved, or died. The Data to Care (D2C) initiative supports data sharing between health departments and HIV providers to confirm patient care status and facilitate reengagement efforts for out of care HIV patients.

Methods. The University of Chicago Medicine (UCM) provided an electronic list to the Chicago Department of Public Health (CDPH) of adult HIV-positive patients whose retention status was not certain. Retention in care was defined as at least 2 visits >90 days apart within the prior 12 months. CDPH matched this list of patients with data from the Chicago electronic HIV surveillance database. Matches were based on patient name, including alternative spellings and phonetics, and birth date. CDPH also cross-checked patient names with the CDC's national enhanced HIV-AIDS Reporting System (eHARS) database. CDPH provided UCM with patient current care status, i.e., patient was in care elsewhere (as verified by lab data), moved out of state, or deceased.

Results. 780 HIV-positive patients received care in the UCM adult HIV clinic from January 1, 2013 to March 31, 2017. Of these, 360 were retained in care as of March 2017. We shared data with CDPH for 492 patients. Of these, 294 (59.8%) were matched, and 168 (34.1%) had a date of last medical care provided. See Table 1 for patient dispositions, before and after data sharing. 24 (13.4%) of patients believed to be lost to follow up according to UCM records were confirmed either transferred care or deceased according to health department data.

Conclusion. Data sharing between the health department and HIV providers can improve data accuracy regarding retention in care among people living with HIV.

Table 1. HIV Patient disposition data before and after data sharing with health department

Patient disposition	Before data sharing, n (%)	After data sharing, n (%)
Currently in care at UCM	360 (46.2%)	360 (46.2%)
Transferred	139 (17.8%)	143 (18.3%)
Deceased	63 (8.1%)	83 (10.6%)
Incarcerated	1 (0.1%)	1 (0.1%)
Moved out of jurisdiction	39 (5.0%)	39 (5.0%)
Lost to follow up	178 (22.8%)	154 (19.7%)

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1364. How Acceptable Is A Wireless Pill Bottle That Monitors and Texts In Response To Missed Doses: Focus Groups With Young African American MSM Living With HIV

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Background. African American MSM (AAMSM) living with HIV are less likely to have viral suppression than other racial groups. Wisepill, a wireless pill bottle, transmits a cellular signal to a server when opened and is designed to measure antiretroviral therapy (ART) adherence. The objective of this study was to explore the acceptability of a proposed intervention in these young AAMSM using the Wisepill device opening data to trigger a real-time text alert that ART may not have been taken during a planned time to either the user, a trusted social contact, or a healthcare worker, depending on the duration of consecutively missed doses (1 dose, 3 doses, 7 doses, respectively).

Methods. From December 2016 – May 2017, AAMSM living with HIV age 18–34 years ($N = 25$) participated in a study that included five focus groups ($n = 23$) and one on one interviews ($n = 2$). We performed theory-based discussion grounded in the Technology Acceptance Model. Specifically, we explored usefulness, convenience, concerns, and intention to use.

Results. Fifty-two percent missed at least one dose in the 4 days prior to the focus group meeting. Almost all participants (94%) favored the idea of a wireless pill bottle monitor and linked text message notification that ART may have been missed. The device was considered convenient for use at home or in a backpack, but too large for a pocket. Stigma and privacy were common concerns. For example, participants did not want to carry the device with them if the pills would “sound like a walking pharmacy” and did not want a text message that said, “You missed your HIV meds.” They preferred text message notifications that ranged from emoji icons to cryptic short texts and wanted to receive an email as a backup plan. Most believed that the device appearance would not gain unwanted attention. Thirty percent of the participants identified a partner as a social contact to whom the 3-day missed dose reminders would be sent whereas others designated their mother, aunt, brother, friend, pastor, and case-manager.

Conclusion. An adherence intervention using a wireless pill bottle monitoring device linked to text notifications was acceptable to most of the young AAMSM in this study. Acceptability may be enhanced by personalization of the responsive text messages and a backup email option.

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1365. Improving Appointment Adherence among Young Adults with HIV in Peru with an mHealth Intervention: a Feasibility Study

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Background. Mobile Health (mHealth) interventions, including short message services (SMS) reminders and motivational messages, are associated with improved HIV appointment adherence, though feasibility is context-dependent. We assessed the feasibility of an mHealth intervention to improve appointment adherence among young adults with HIV in Lima, Peru.

Methods. Between November 2016 and April 2017, we implemented a one-way mHealth pilot intervention in an outpatient hospital without electronic medical records. We enrolled young adults (age 18–29) entering HIV care in a 3-component intervention: (i) reminder SMS prior to scheduled appointments (provider, laboratory, pharmacy); (ii) motivational SMS after each visit; and (iii) phone call following a missed visit. Feasibility evaluation included enrollment acceptance, visit tracking (information captured in the study database within 3 days of attendance), and proportion of intervention delivery (threshold >90%). We performed a qualitative assessment to identify implementation challenges reviewing staff field notes and meeting minutes.

Results. We enrolled 80/94 (85.1%) eligible participants. The median age was 25 years and 83% were male. The median time of follow-up after enrollment was 115 [interquartile range (IQR): 84–141] days, and participants had a median of 10 (IQR: 8–14) visits during the study period. Among 850 total participant visits, study personnel tracked 751 (88.4%); most (80.8%) untracked visits were pharmacy pickups. Of all tracked visits, most (78.7%) were scheduled appointments and 160 (21.3%) were unscheduled walk-ins. Intervention delivery reached 556/591 (94.1%) for reminder SMS; 733/751 (97.6%) for motivational messages, and 169/170 (99.4%) phone calls for missed visits, 127 (75.1%) of which were answered. Qualitative assessment revealed 2 major themes: real-time appointment tracking in a paper-based system consumed most staff time and resources, and meticulous in-person coordination between the implementation and hospital staff was essential for tracking.

Conclusion. An mHealth intervention to improve appointment adherence among young adults with HIV in Peru appears feasible with dedicated staff and a reliable appointment tracking system. Digitalized appointment systems may be needed to address challenges for scale-up.

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1366. Patient-level Factors Associated with HIV Suppression at Admission Across a Large Integrated Healthcare System

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Background. Linkage to care is a critical step for achieving HIV viral suppression and improving outcomes in newly diagnosed individuals. An unexpectedly high number of patients who have undiagnosed HIV or ineffective viral suppression are identified upon admission to acute care. This study aims to understand factors that may be associated with lack of viral suppression for patients who are newly diagnosed at admission.

Methods. Patients with HIV, admitted to one of our eight acute care facilities were identified ($n = 1,632$) from medical records. Of these, 94 were newly diagnosed and 1,538 had a prior diagnosis of HIV. Factors that may impact the viral suppression status (<200 copies/mL) prior to admission were examined. Median income and percentage of individuals living below poverty were inferred from the American Community Survey (U.S. Census) data based on a patient's zipcode. All other factors were extracted from the medical record at the time of admission. Chi square tests and t-tests were used to compare patients who were virally suppressed to those who were not.

Results. The average age was 48 years old and 60% were male and 82% black race. Patients who presented and were not virally suppressed were more likely to be between the ages of 40–60 and of black race. Distributions of age groups and race were significantly different between those virally suppressed and those who were not suppressed at admission ($P < 0.05$ for both). Blacks and whites between 40 and 60 years were more likely than other race and age groups to present at admission without viral suppression. Patients from geographic areas associated with high poverty and lower median income were less likely to be virally suppressed at admission (23.2% vs. 25.2%; $P < 0.05$ for poverty and \$41,183 vs. \$43,757; $P < 0.05$) for income.

Conclusion. These results indicate that age, race and geographically inferred income and poverty are significantly different between patients who are virally suppressed at admission and those who have a detectable viral load. Further investigation is needed to better understand how these patient-level factors, including socioeconomics, impact linkage to care as well as how best to allocate resources to better engage and retain patients in HIV care to improve their long-term outcomes.

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