Encouraging Trends in HIV Diagnoses, Care and Viral Suppression in 5 US Cities, 2009-2013: Surveillance-based data from HPTN065 (TLC-Plus)

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Monitoring trends in HIV in the US using National Surveillance Data

USING NATIONAL HIV SURVEILLANCE DATA

National HIV Surveillance data can monitor trends in new diagnoses, linkage to care and viral suppression of PLWH in the United States. We examined these trends to assess the changes in these critical indicators since the release of the National HIV/AIDS Strategy Plan in 2010 and DHHS recommendations of expanded antiretroviral treatment (ART) in 2010 and 2012.

THE HPTN 065 TLC-PLUS STUDY

The goals of the HPTN 065 study incorporated interventions for multiple components of the HIV care continuum: HIV testing, linkage to care, viral suppression and prevention for positives. HIV surveillance data were used to monitor new diagnoses (2009-2013), linkage to care within 3 months of diagnosis and viral suppression (2010-2013) in diagnosed PLWH in each of 5 cities: Bronx, NY; Chicago, IL; Houston, TX; Philadelphia, PA and Washington DC.

ANALYSIS

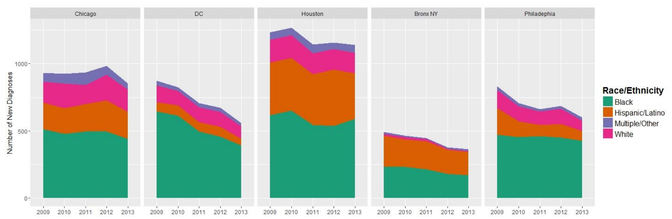
Common definitions were developed and coded for the HPTN 065 study endpoints using laboratory-based definitions uniformly coded within the surveillance data system. Monitoring of laboratory data capture occurred throughout the period. Trends over time were assessed by linear regression models using aggregate quarterly data from the National HIV Surveillance system. A selection of statistically significant results are presented.

New diagnoses

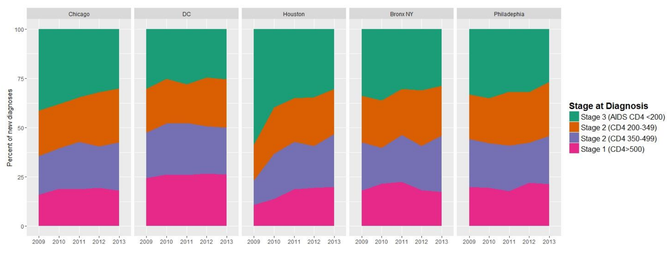
DEFINITION AND COVARIATES

Newly diagnosed HIV infections are reported to the HIV surveillance system from providers and HIV testing laboratories. Covariates routinely collected from persons with HIV include age at diagnosis, sex, race/ethnicity, transmission risk. HIV stage at diagnosis is determined by CD4 count, if available.

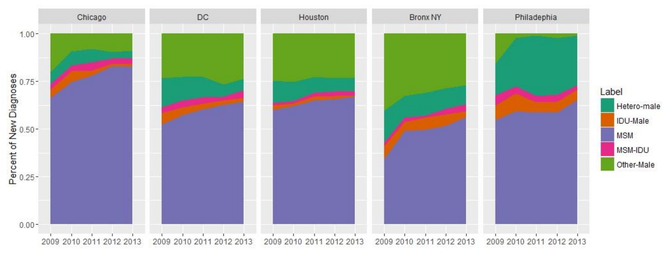
Number of Newly Diagnosed Infections: Decreasing, except Chicago



Stage at Diagnoses: Decrease in late stage in some cities



Proportion of new diagnoses in men: Increase in MSM



TRENDS IN ANNUAL DIAGNOSES

- The number of new diagnoses significantly decreased from 2009-2013, in each city except Chicago.
- For infections staged at diagnoses, the proportion at late stage significantly decreased in Chicago, Houston and Philadelphia.
- In men, while the overall number of diagnoses is decreasing the proportion of new diagnoses with MSM acquisition risk increased in all cities.

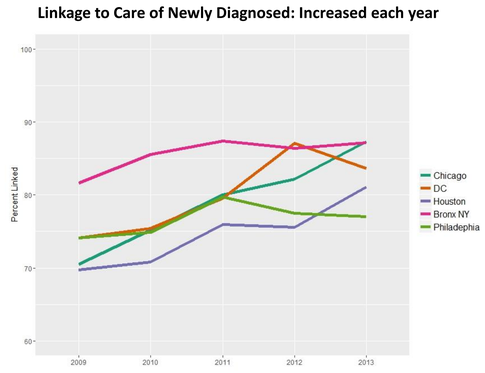
Linkage to care

DEFINITIONS AND COVARIATES

Linkage to care within three months of an HIV diagnosis was defined by a lab test (either CD4 or VL) in the HIV surveillance system within 3 months of the diagnosis.

In these 5 jurisdictions, almost all HIV related laboratory test results are currently reported electronically to the Department of Health and linked to existing cases by name-based reporting

Linkage to Care of Newly Diagnosed: Increased each year



Linkage to Care of Newly Diagnosed: Differences by City and Age

TRENDS IN LINKAGE TO CARE

- The proportion of persons with HIV linked to care within 3 months increased by 2.4% (95%CI 1.6%-3.1%) per year between 2009 and 2013.
- Increases in proportion linked to care were not uniformly realized by age at diagnosis.
  - Bronx had the highest and most consistent linkage success in all ages except over 55 years old.
  - In the youngest age group (13-24 years old) snificant increases occurred in all cities, except Bronx which remained high in all years.
- While improving, high linkage to care is needed to reach the UNAIDS goal of 90% of diagnosed persons on ART

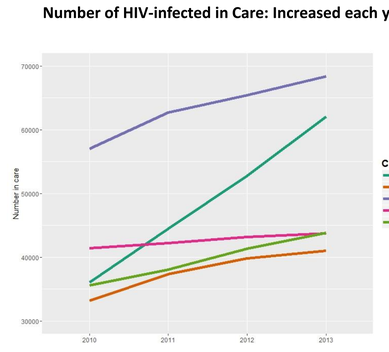
Viral Suppression

DEFINITIONS AND COVARIATES

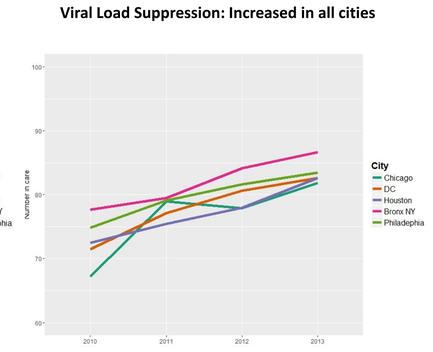
HIV viral suppression was assessed in HIV infected patients currently in care. Patients were considered currently in care if there were HIV related lab tests (VL and/or CD4 counts) in the surveillance system in 2 of the past 5 calendar quarters.

Patients were considered virally suppressed if they had a viral load assessed in the last 6 months with the most recent VL < 400 copies/mL

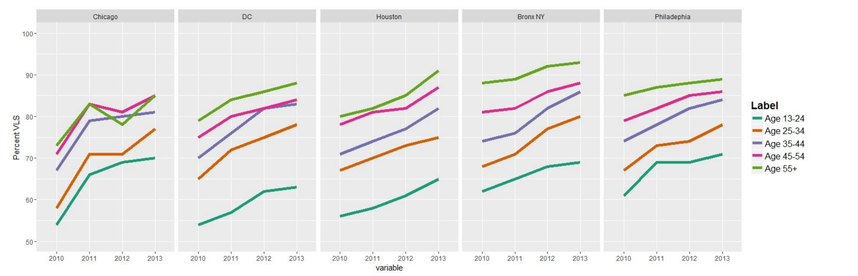
Number of HIV-infected in Care: Increased each year



Viral Load Suppression: Increased in all cities



Viral Load Suppression: Lower in younger age groups in all cities



TRENDS IN NUMBER IN CARE AND VIRAL SUPPRESSION

- The number of persons in care increased steadily every year during a period when new diagnoses were decreasing.
- Among HIV-infected persons in care, the proportion virally suppressed increased on average by 2.9% (95%CI 2.56-3.22).
- Gains in viral suppression were realized in all age groups, but the proportions were markedly lower in younger age groups in all cities.
- Viral load suppression in persons in care is now approaching 90%, likely as a result of implementation of the 2012 recommendation for universal treatment.

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The findings and conclusions in this study are those of the authors and do not necessarily represent the views of the Centers for Disease Control and Prevention