

Assessing viral suppression amongst HIV patients accessing care in six cities using US HIV surveillance data for the TLC-Plus (HPTN 065) study

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BACKGROUND

Recent successes in clinical trials for HIV prevention have demonstrated the effectiveness of antiretroviral therapy both as treatment for an HIV infected person and as prevention for an HIV uninfected sexual partner

A significant challenge for achieving real world benefits from a strategy of antiretrovirals as treatment and prevention is achieving consistent adherence to daily medication.

To test a novel strategy of financial incentives for maintaining viral suppression, the HPTN 065 study is utilizing HIC surveillance systems to monitor change in viral load suppression in communities in the US most affected by HIV.

HIV SURVEILLANCE SYSTEMS

NATIONAL SURVEILLANCE

All states have implemented name based reporting of new HIV diagnoses to local Departments of Health since 2008.

MONITORING HIV CARE THROUGH LABORATORY RESULTS

Many Health jurisdictions require reporting for all CD4 counts and viral load test directly from the commercial testing laboratories.

- Both New York and Washington DC have largely electronic reporting of laboratory results
- Results are linked to known HIV cases in the jurisdiction by name and electronic soundex
- State and City jurisdictions exchange and reconcile data
- Quality and completeness assessed and maintained through
 - Monitoring laboratory volume
 - Field cases worker investigation
 - Periodic audits of medical records

HPTN065 STUDY (TLC PLUS)

FEASIBILITY OF ENHANCED TREATMENT CASCADE IN THE US

Five component study to study feasibility of test and link to care

- Enhance uptake of HIV testing, especially in emergency rooms and inpatients.
- Enhance linkage to care
- Enhance viral suppression through adherence to antiretroviral therapy
- Enhance prevention with known HIV positives
- Study attitudes to treatment of patients and providers

VIRAL LOAD SUPPRESSION COMPONENT

Testing the use of financial incentives to increase viral load suppression Intervention in Bronx, NY and Washington DC, randomized by facility

- Comparison city jurisdictions:
 - Chicago, Houston, Miami, Philadelphia
 - High burden of HIV
 - Additional resources for surveillance systems awarded by CDC
 - HPTN065 resources for data reporting

OBJECTIVES

The HPTN 065 study uses surveillance data to assess viral load suppression amongst patients in care, and will assess the impact of a financial incentive intervention using this viral load suppression as the study endpoint. This project was a baseline assessment of using the national surveillance systems for assessing viral load suppression for 2010.

BASELINE ASSESSMENT OF VIRAL LOAD SUPPRESSION

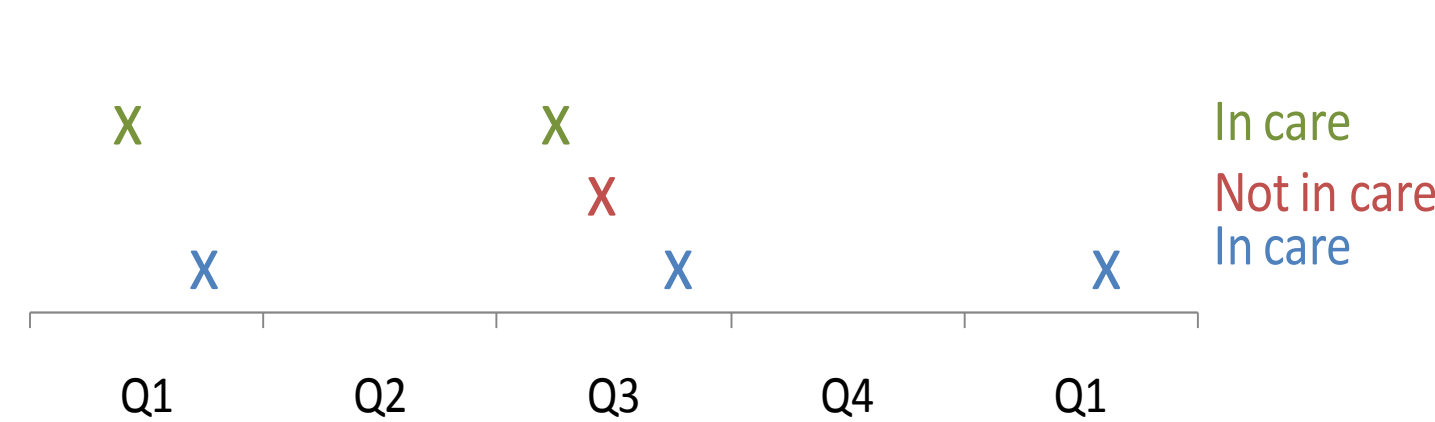
- Use lab-based national surveillance data from six jurisdictions to assess viral suppression amongst those in care
- Assess change in population in care over time
- Assess data reliability

DEFINITIONS

THE POPULATION IN CARE IN EACH CALENDAR QUARTER

Evaluations are assessed over the population in care in a calendar quarter. HIV infected patients are considered to be in care in the city jurisdiction if:

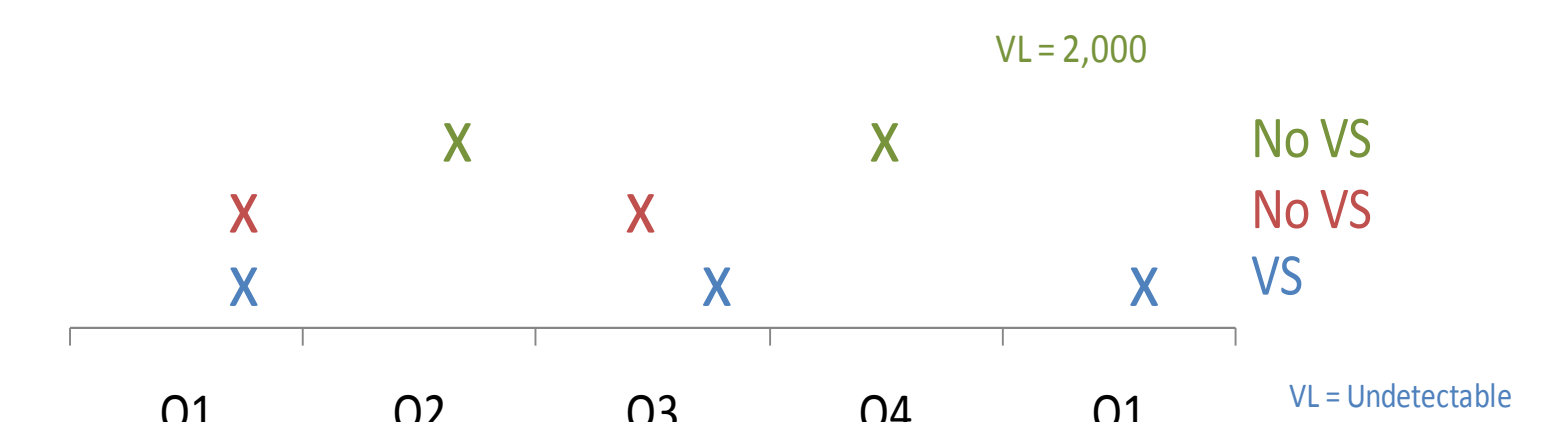
- They are a known HIV case in the HIV surveillance system
- They are accessing care at a city facility, as evidenced by DC4 count or viral load evaluations
- They have had two viral load or CD4 count evaluations within the city in two of the last 5 quarters



PATIENTS WITH VIRAL LOAD EVALUATIONS

Assessment for viral load suppression is conducted in the population in care in the calendar quarter. For the HPTN 065 study endpoint, an HIV patient in care is virally suppressed if:

- They had a viral load assessed in the current quarter or the previous quarter
 - If no assessment in the last two quarters they are imputed to be non virally suppressed
- Their most recent viral load < 400 copies/mL



RESULTS

CONSTANCY OF POPULATION IN CARE IN 2010

Figure 1: The number a people living with AIDS who meet the definition of in care

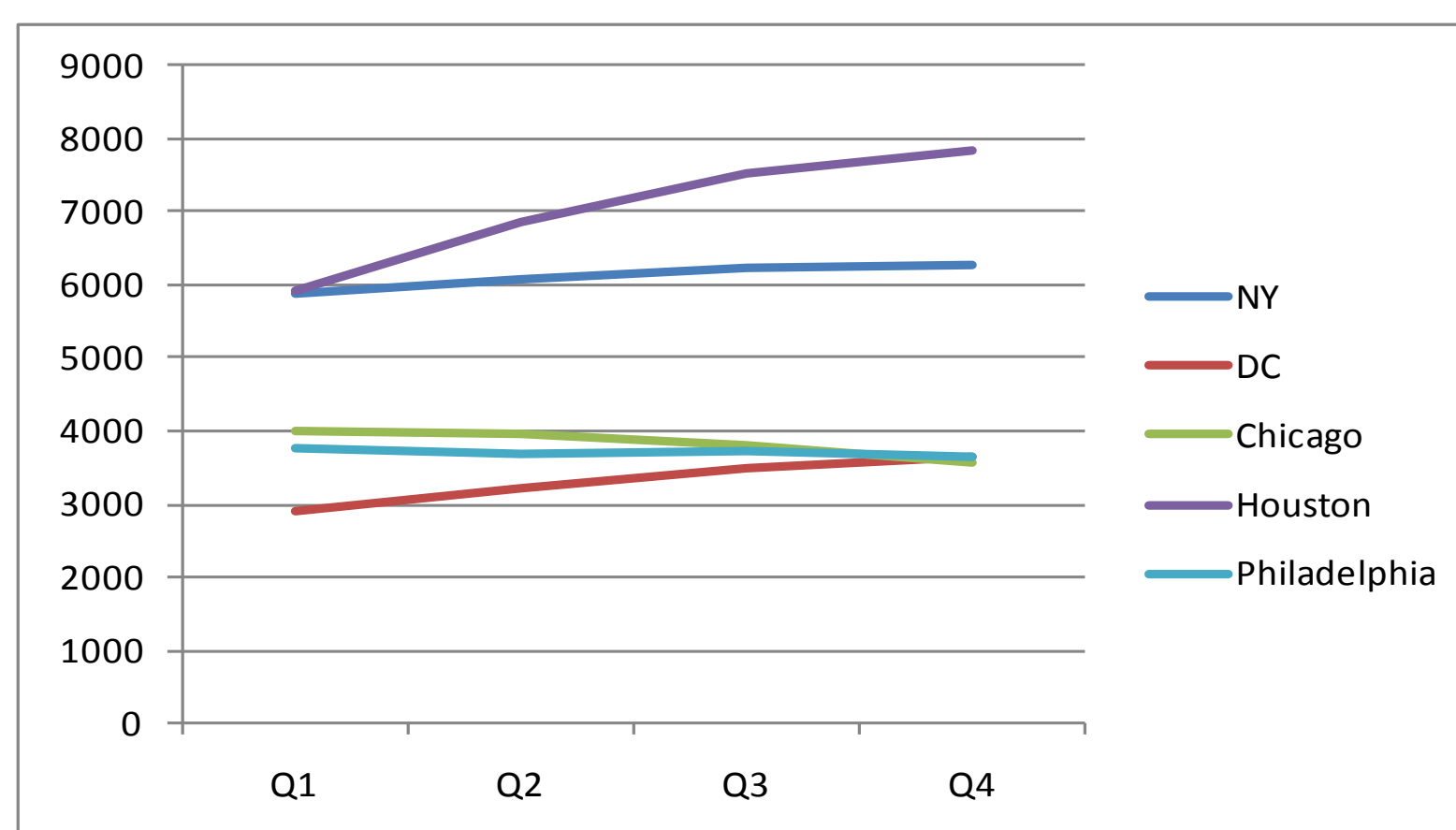


Table 1: The percentage of the people in each quarter retained in care the following quarter

	Bronx, NY	Washington, DC	Chicago, IL	Houston, TX	Philadelphia, PA
Q1 to Q2	97%	85%	89%	92%	87%
Q2 to Q3	97%	96%	87%	94%	90%
Q3 to Q4	97%	94%	85%	93%	88%

VIRAL LOAD SUPPRESSION

Table 2: Viral suppression assessments by calendar quarter amongst people in care.

	Bronx, NY	Washington, DC	Chicago, IL	Houston, TX	Philadelphia, PA
Patient quarters assessed	24,448	13,285	15,340	28,145	14,816
Viral load assessments in last 6 months					
% of in care	85%	87%	70%	85%	69%
Viral load suppressed when assessed					
% of assessed	67%	68%	80%	72%	58%
Viral assessment and suppression					
% of in care	57%	59%	56%	62%	40%

The primary endpoint for HPTN065 is persons whose viral load is both assessed and suppressed.

This will be evaluated only amongst HIV participants in care, defined as patients who have been assessed for viral load or CD4 counts twice in the past year.

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SUMMARY

- Amongst patients in care in 5 cities with large HIV-infected population in US
 - 70-87% were regularly assessed for viral load and DC4 count
 - Amongst those with a viral load assessment, 58-80% were virally suppressed
 - 40-62% were both regularly assessed and virally suppressed:
- There was high consistency of in care population: 85-97% were in care in consecutive quarters
- Surveillance systems are increasingly able to support monitoring of progress in linkage to treatment and viral suppression

CONCLUSIONS

- For HIV-infected patients consistently accessing care in 2010, while the majority were regularly assessed for viral load, less than two-thirds were virally suppressed.
- Viral suppression rates were likely not sufficient to prevent transmissions.
- HIV surveillance can monitor whether viral suppression will increase as a results of new treatment guidelines.

