A Longitudinal Approach to Retention in Care and Viral Suppression Across the HIV Care Continuum

Abstract #1068

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Background

- The HIV care continuum, described in 2011, is increasingly used for monitoring quality of HIV care.
- To date, care continua depict primarily cross sectional data over 12 – 15 months, with few extending to 24 months.
- The goal of HIV care is maintenance of viral suppression, therefore a longitudinal care continuum may more accurately describe outcomes of HIV care.
- The IDP clinic is an urban Ryan White funded clinic serving nearly 6,000 advanced stage HIV-infected patients, 98% of whom have incomes below the federal poverty limit.

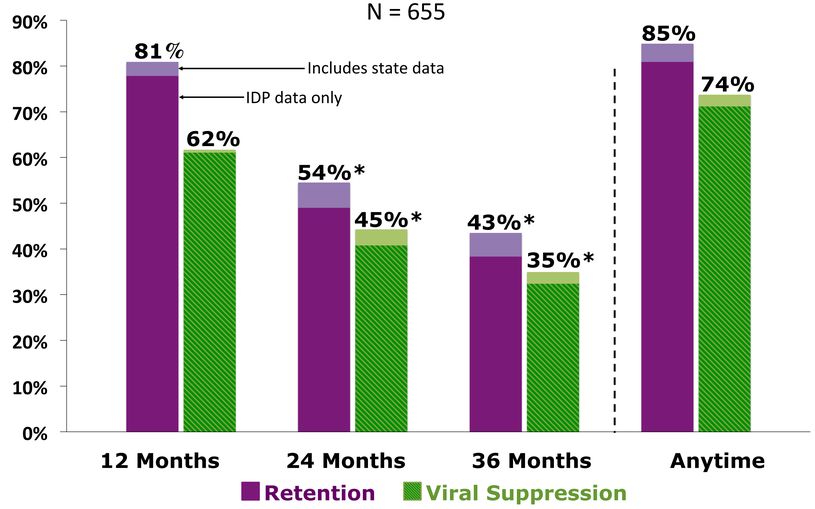
Methods

- Retrospective cohort study: 36 month follow up from date of clinic enrollment
- Patient Population: HIV positive; ≥ 16 years of age; enrolled at IDP in 2010
- Definitions:
  - **Retention**: attendance at a minimum of 2 provider visits separated by ≥ 90 days in each 12 month interval (IOM definition).
  - **Viral suppression (VS):** the last VL of the 12 month period < 200 copies/mL
- Data on retention and viral suppression was corroborated with State of GA DPH.
- For a patient to be considered retained or VS at 24 months he/she had to meet the respective definitions at 12 and 24 months. For 36 month retention and VS, the respective definitions must have been met at 12, 24, and 36 months.
- Statistical analysis: Chi-square
  - Evaluated difference in rates of short-term and long-term retention and VS

Results: Retention and Viral Suppression

The proportion of patients maintaining retention or VS at 24 and 36 months is significantly less than those retained or VS during any 12 month cross section

N = 655



VS is not dependent on retention

*Compared with any 12 month cross section, P < 0.001

Schematic depicting patterns for retention and viral suppression

Patient	Patient Year 1				Patient Year 2				Patient Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
A	✪ ✗		✪ ✓		✪		✪ ✓		✪ ✓			✪
B	✪ ✗		✪ ✓		✪	✓				✓		
C	✪ ✓					✪ ✓		✪		✪		✪
D	✪		✪ ✗				✪			✪ ✓		✪

Each box depicts a 90 day time frame;
✪ Attended clinic visit, ✓ Viral Suppression, ✗ VL > 200 copies/mL

A. Longitudinally, retained and VS at 12, 24 & 36 months.

B. Longitudinally, retained at 12 months and VS at 12, 24 & 36 months.

C. Longitudinally, never retained but VS at 12 & 24 months; by cross section would be retained in years 2 and 3 with VS in years 1 and 2.

D. Longitudinally, retained at 12 months but never VS; by cross section would be retained in years 1 and 3 and VS in year 3.

Characteristics of the Cohort

Characteristics	Number	Percent
All	655	100
Age, y		
Median (IQR)	38 (30-47)	
< 24	66	10
25 – 44	382	58
≥ 45	207	32
Race / Ethnicity*		
Black	545	83
White	70	11
Hispanic / Latino	27	4
Gender¥		
Male	508	78
HIV Risk Category§		
MSM	356	54
Heterosexual	265	41
IDU	28	3

Characteristics	Number	Percent
Payer Source at Enrollment¶		
Ryan White	508	78
Medicaid	87	13
Medicare	39	6
Private	5	1
Social		
History of cocaine / crack use	129	20
Active cocaine / crack use$	52	8
Unstably housed	166	25
Recent incarceration€	51	8
Biomedical		
Median CD4 T-cell count (IQR)	113 (36 – 227)	
Median HIV-1 RNA log10	4.55 (3.59 – 5.17)	
ART naïve at enrollment	240	36

- The cohort is primarily a young, black, MSM, Ryan White funded population.
- A significant portion of patients in this cohort have a history of crack/ cocaine use and/or are unstably housed.

* Race and ethnicity were combined. Persons reported as Hispanic/Latino were recorded as such regardless of race. 13 patients were other races/ethnicities; ¥ 3 patients were transgender; § 3 cases were perinatal transmission, 1 hemophilia, 2 not reported; ¶ 5 cases were not reported; $ reported use within 90 days before enrollment; € released from jail/prison within 6 months before enrollment.

Conclusions

Despite the fact that TasP requires continuous viral suppression to successfully decrease transmission and impact incidence, **our population did not achieve maintenance of viral suppression.**

- Most patients in our cohort met retention and viral suppression definitions during a single 12 month cross section but only a minority maintained retention and viral suppression over 36 months of follow up.
- **These data underscore the potential danger of false optimism when relying on cross sectional HIV care continua as indicators of quality for HIV care.**

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