Understanding the Impact of the Affordable Care Act for AIDS Drug Assistance Program Patients on HIV Virologic Outcomes in Nebraska

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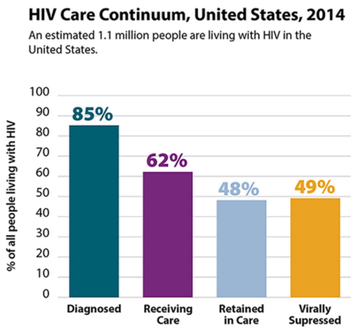
Introduction



Data from 2014 show that Ryan White Programs have better success along the HIV Care Continuum compared to national figures, with 81.4% of program participants achieving viral suppression, compared to 49% nationally.

- New estimates suggest that 43.1% of new infections in 2014 resulted from patients who were aware of their HIV status, but were not retained in medical care (i.e. failed to achieve care adherence).
- The HIV Health Association recommended in 2009 to shift the focus with patients from HIV drug adherence to HIV care adherence due to positive outcomes related to adherence to HIV treatment: suppressed viral load, improved immune function, and increased survival.
- Lack of health insurance coverage attributed to financial barriers to care adherence.
- Ryan White HIV/AIDS Programs fund AIDS Drug Assistance Programs (ADAPs), which help provide anti-HIV medications and health insurance coverage through the ACA to uninsured individuals with HIV.

Objectives

1. Identify demographic features associated with health insurance program enrollment among people living with HIV in the state of Nebraska.
2. Analyze patient characteristics associated with improved virologic outcome among ADAP patients who demonstrated consistent engagement in care between 2014 and 2015.

Methods

Case-control study analyzed with SAS 9.3 using basic descriptive statistics and bivariate and multivariate logistic regression.
Inclusion factors: Participants with HIV with ADAP support either through direct provision of medications or an ADAP-funded Qualified Health Plan (QHP); 18-64 years old on 01/01/14
Exclusion factors: Missing age, gender, race/ethnicity, income, HIV/AIDS diagnosis, or previous ADAP plan data; access to other insurance, such as Medicaid or employer-based insurance
Nested cohort B: Patients who demonstrated consistent engagement in care (at least one HIV viral load in 2014 and at least one HIV VL between 07/01/15 and 12/31/15
Outcomes of interest: Virologic outcome (<200 HIV RNA copies/mL); 2015 ADAP coverage plan
Variables of interest: Age, gender, race/ethnicity, financial status, HIV/AIDS diagnosis, rurality, previous 2014 ADAP plan, transmission risk factor group, SSN status, 2014 CD4 count

Results

Older adults, aged 55-64 had a **34X higher odds ratio** (95% CI: 6.6-174.4) of being enrolled in an ADAP QHP compared to their younger counterparts, aged 18-24

83.5% of patients who receive direct provision of medications had an **undetectable VL in 2015**, compared to 93.9% of patients enrolled in a QHP

In Cohort B, 91% of patients had an **undetectable viral load in 2014**; 92% in 2015

Select factors associated with undetectable viral load in 2015

Variable	OR (95% CI)	p-value < 0.1
Previous 2014 ADAP coverage		0.0092
Direct provision of medications	1.0 (reference)	
Any ADAP QHP	10.0 (1.7,33.3)	
2015 ADAP coverage		0.0685
Direct provision of medications	1.0 (reference)	
Any ADAP QHP	2.5 (0.9,5.0)	
Age as of January 1, 2014		0.2298
18-24	1.0 (reference)	
25-34	2.7 (0.4,16.7)	
35-44	3.3 (0.5,20.0)	
45-54	7.6 (1.0,54.4)	
55-64	10.7 (0.8,137.1)	
Race/ethnicity		0.9600
White	1.6 (0.5,5.1)	
Black	1.1 (0.3,3.6)	
Hispanic	1.0 (reference)	

Results

	Direct Provision of Medications	Any 2015 ADAP-Funded QHP	All (n=392)
Variable	Count (%)		
Age as of January 1, 2014			
18-24	12 (6.2%)	12 (6.2%)	15 (3.8%)
25-34	68 (35.1%)	68 (35.1%)	105 (26.8%)
35-44	62 (32.0%)	62 (32.0%)	117 (29.9%)
45-54	48 (24.7%)	48 (24.7%)	116 (29.6%)
55-64	4 (2.1%)	4 (2.1%)	39 (9.9%)
Gender			
Male	144 (74.2%)	141 (74.6%)	**292 (74.5%)**
Female	50 (25.8%)	47 (24.9%)	99 (25.3%)
Transgender	0 (0.0%)	1 (0.5%)	1 (0.3%)
Race/ethnicity			
White	77 (39.7%)	91 (48.1%)	**174 (44.4%)**
Black	72 (37.1%)	47 (24.9%)	120 (30.6%)
Asian	2 (1.0%)	1 (0.5%)	4 (1.0%)
American Indian, Alaska Native, Native Hawaiian	1 (0.5%)	3 (1.6%)	4 (1.0%)
Hispanic	41 (21.1%)	47 (24.9%)	89 (22.7%)
Federal Poverty Level			
<100% FPL	**119 (61.3%)**	**69 (36.7%)**	192 (49.1%)
101-138% FPL	22 (11.3%)	34 (18.1%)	57 (14.6%)
139-250% FPL	40 (20.6%)	75 (39.9%)	118 (30.2%)
251-300% FPL	12 (6.2%)	10 (5.3%)	23 (5.9%)
Transmission risk factor			
MSM	82 (42.3%)	100 (52.9%)	**187 (47.7%)**
IDU	12 (6.3%)	8 (4.2%)	20 (5.1%)
Heterosexual sex	100 (51.6%)	74 (39.4%)	**178 (45.5%)**
Perinatal	0 (0.0%)	3 (1.6%)	3 (0.8%)
Blood products	0 (0.0%)	3 (1.6%)	3 (0.8%)
Other	0 (0.0%)	1 (0.5%)	1 (0.3%)
Unknown/undetermined	0 (0.0%)	4 (2.1%)	4 (1.0%)
Previous 2014 ADAP QHP coverage program			
Direct provision of medications	191 (98.5%)	61 (32.3%)	252 (64.3%)
Any 2014 ADAP-funded QHP	3 (1.6%)	**128 (67.7%)**	140 (35.7%)
2014 CD4 count, mean (range)	538.1 (6.0-2062.0)	615.1 (49.0-1841.0)	**579.8 (6.0-2062.0)**
2014 VL (VL1)			
Detectable	46 (25.1%)	11 (6.2%)	57 (15.5%)
Undetectable (<200)	137 (74.9%)	166 (93.8%)	312 (84.6%)
2015 VL (VL2)			
Detectable	21 (16.5%)	11 (6.1%)	32 (10.2%)
Undetectable (<200)	106 (83.5%)	170 (93.9%)	283 (89.8%)

Conclusions

- Longer engagement in care with health insurance coverage is associated with improved virologic outcomes.
- Younger ADAP patients were less likely to be enrolled in an ADAP QHP compared to older ADAP patients.
- Enrollment in an ADAP QHP is associated with improved virologic outcomes compared to ADAP patients receiving only direct provision of medications.