



The Economics of pre-exposure prophylaxis for HIV prevention care: Implications for service delivery

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Key Findings

- HIV prevention using the daily oral pre-exposure prophylaxis (PrEP) tablet in HIV-uninfected individuals can significantly reduce the number of new HIV infections and related healthcare costs in the US.
When considering programs to expand the availability of PrEP care services to individuals at risk for acquiring HIV, legislators should consider an individual's willingness to pay for and the actual cost of PrEP care, and their relation to PrEP use.
We found that willingness to pay out-of-pocket for PrEP care (i.e., laboratories, office visit, and medications) was \$35 per month, which is between the average copayment for primary (\$24) and specialty (\$38) care services.
Individual willingness to pay was 37% lower than their actual cost (or \$0.37 less than every \$1.00 of the actual cost) for an initial PrEP care appointment.
Individuals who had an out-of-pocket cost over \$35 for the initial appointment were 1.6 times less likely to continue using PrEP.
Policymakers can use these study findings to help establish reasonable out-of-pocket pricing schedules for PrEP care services for high risk individuals in order to achieve the desired improvements in health and cost savings from reducing the number of new HIV infections.

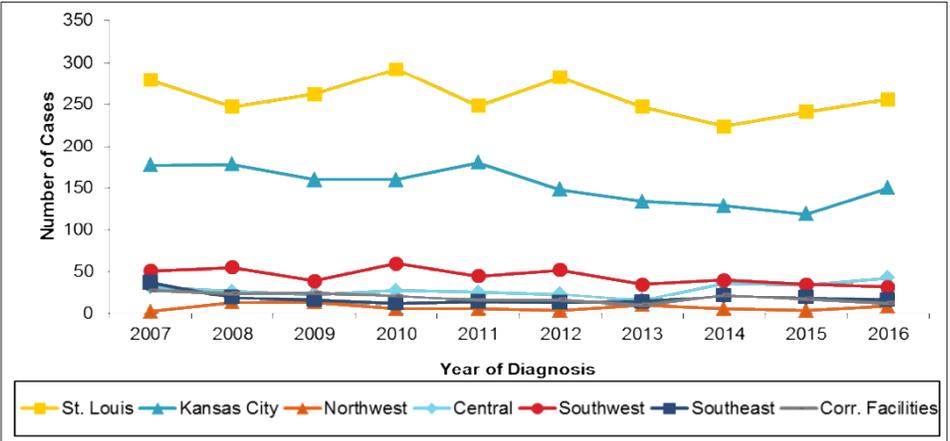
Scope of Issue

Human immunodeficiency virus (HIV) is an incurable disease. There were more than 500 new HIV infections in Missouri last year (Figure 1).3

In Missouri, more than \$201 million was spent on HIV treatment costs in 2009.4 Preventing one new HIV infection can save over \$250,000 in costs to the US healthcare system.5 HIV pre-exposure prophylaxis (PrEP) is

a daily oral tablet that reduces the risk of HIV infection by more than 90%.6-8 Statewide implementation of access to PrEP care services, which includes the medication, can curb the HIV epidemic and related healthcare costs.9,10 In order to fully realize these reductions in disease and cost savings, an individual's willingness to pay for PrEP care services needs to be considered when determining the out-of-pocket pricing schedules associated with the services.

Figure 1. New HIV Disease Cases by HIV Care Region, Missouri, 2007-20163



Study Methods

Survey and financial data were gathered for individuals who received an initial PrEP office visit at the Washington University in St. Louis Infectious Diseases Clinic between June 2014 and August 2017. Willingness to pay was assessed using the question, “How much are you willing to pay for PrEP care (i.e., laboratories, office visit, and medications) per month (\$)?” Individuals reported their willingness to pay for PrEP care prior to knowing their actual cost of care. Actual cost of PrEP care was the out-of-pocket cost for the initial office appointment, which was the amount (\$) an individual was responsible for after insurance (if any) covered their portion. In order to assess the effect of the actual cost of the initial appointment on their continued use of PrEP care, individuals in the study were followed until their three-month appointment.

Surveys asked, “How much are you willing to pay for PrEP care (i.e., laboratories, office visit, and medications) per month (\$)?”

Results

Of 251 individuals, the median willingness to pay out-of-pocket for PrEP care was \$35 per month. Individual characteristics included a median age of 29 years, 53% were White, 33% were African American, 67% had graduated college, and the median annual income was \$29,000. Eight percent were uninsured, 12% were publicly insured, and 80% were privately insured. Willingness to pay differed by race and insurance (Table 1).

The median out-of-pocket cost for the initial PrEP care appointment was \$35. When comparing individual willingness to pay as a percent of their actual cost for PrEP care, people’s willingness to pay was 37% lower than their actual cost or \$0.37 less than every \$1.00 of the actual cost.

Those who had an out-of-pocket cost over \$35 (versus less than \$35) for the initial appointment were 1.6 times less likely to continue using PrEP beyond three months.

Policy Recommendations

This study identified that out-of-pocket costs for PrEP care of over \$35/month created a barrier to continuing PrEP among individuals at risk of contracting HIV. Variability in an individual’s willingness to pay and the actual cost of PrEP care among populations with different insurance coverage, incomes and races should be considered when planning PrEP scale up. These efforts will ensure the accessibility and affordability of PrEP care services for all individuals in order to reduce the number of new HIV infections and related healthcare costs in the US.

References

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Individual Characteristics	N = 251 (%)	Median Willingness to Pay (\$)
Age (years)		
18 – 24	67 (27)	30
25 – 34	114 (45)	40
≥ 35	70 (28)	45
Race		
White	134 (53)	40
Non-White	117 (47)	30
Insurance		
None	20 (8)	45
Public	31 (12)	20
Private	200 (80)	40
Income (\$)		
< 11,800	52 (23)	28
11,800 – 50,200	143 (63)	35
> 50,200	31 (14)	50
Education		
No college	81 (33)	25
College	167 (67)	40
Employment		
Unemployed	75 (30)	30
Employed	171 (70)	40

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