Nonadherence Due to Prescription Drug Costs among U.S. Adults with HIV, 2015-2016

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BACKGROUND

- The United States spends more per capita on prescription drugs than other countries, and one-fifth of this cost is paid out-of-pocket by patients
- Cost-saving strategies, including nonadherence to medications due to cost concerns, have been documented among U.S. adults, which can affect morbidity and, in the case of persons living with HIV, transmission of HIV infection
- Population-based data on prescription cost-saving strategies among persons with HIV are lacking

METHODS

- The Medical Monitoring Project (MMP) is a national surveillance system that produces annual, cross-sectional estimates of behavioral and clinical characteristics among adults with diagnosed HIV
  - 2-stage sample design: 1) states ➡ 2) adults with diagnosed HIV
- Analyzed interview and medical record abstraction data from 3,560 persons taking prescription drugs
  - Collected 6/2015–5/2016
  - Response rates: states 100%; adults with diagnosed HIV, range 40%-44%
- Estimated prevalence of 6 strategies used to reduce prescription drug costs
  - You asked your doctor for a lower-cost medication to save money
  - You bought prescription drugs from another country to save money
  - You used alternative therapies to save money
  - You skipped medication doses to save money
  - You took less medicine to save money
  - You delayed filling a prescription to save money
- Estimated prevalence of cost-saving related nonadherence, defined as using any of the 3 strategies underlined above
- Compared the prevalence of cost-saving related nonadherence by sociodemographic groups, and clinical outcomes among those who did and did not report cost-saving related nonadherence
  - Used prevalence ratios with predicted marginal means to evaluate significant (P<0.01) differences between groups
- Data weighted based on known probabilities of selection and adjusted for facility and patient non-response and all analyses accounted for the complex sample design and weights

Among all person with diagnosed HIV in the United States who take prescription medications

13% reported at least one cost-saving strategy

8% reported any cost-saving related nonadherence

- 8% asked a doctor for lower cost medicine
- 1% bought drugs from another country
- 2% used alternative medicine
- 4% skipped doses
- 4% took less medicine
- 6% delayed a prescription

Cost saving-related nonadherence was associated with disability, insurance status, and clinical outcomes

	Prevalence of cost-saving related nonadherence				Clinical outcomes by cost-saving related nonadherence				
					Yes		No		
	n	Row % (95% CI)	Prevalence ratio (95% CI)		n	Column % (95% CI)	n	Column % (95% CI)	Prevalence ratio (95% CI)
No disability	104	5 (4-7)	Referent	Viral suppression at last test	165	61 (53-69)	2,552	74 (71-76)	0.83 (0.72-0.95)*
Had disability	144	10 (8-12)	1.91 (1.54-2.37)*	Viral suppression at all tests	142	54 (46-61)	2,255	66 (63-69)	0.81 (0.71-0.94)*
No private insurance	113	6 (5-7)	Referent	Engaged in HIV care	194	73 (65-81)	2,850	83 (81-86)	0.88 (0.79-0.98)*
Had private insurance	106	10 (8-12)	1.76 (1.35-2.29)*	No Hospitalizations	193	78 (72-83)	2,762	85 (83-86)	0.92 (0.85-0.99)*
No Medicaid	139	10 (8-12)	1.78 (1.37-2.32)*	1 hospitalization	20	9 (5-13)	318	9 (8-11)	0.96 (0.61-1.53)
Had Medicaid	84	5 (4-7)	Referent	2+ hospitalizations	36	13 (9-18)	220	6 (5-8)	2.15 (1.48-3.13)*
Received ADAP	113	7 (5-10)	1.12 (0.76-1.64)	No ER visits	132	52 (44-60)	2,135	65 (61-68)	0.80 (0.68-0.95)*
Unmet need for ADAP	24	26 (15-36)	3.88 (2.37-6.35)*	1 ER visit	49	23 (17-29)	583	17 (15-19)	1.33 (1.00-1.76)
No need for or receipt of ADAP	105	7 (5-8)	Referent	2+ER visits	68	25 (17-33)	580	18 (16-20)	1.39 (1.00-1.94)
Total	249	8 (7-9)		Total	249	100	3,308	100	

CI, confidence interval; ADAP, AIDS Drug Assistance Program; ER, emergency room; all percentages are weighted; all variables measured by interview self-report except viral suppression and care engagement, which were abstracted from medical records; all variables measured in the past 12 months; cost-saving related nonadherence defined as skipping doses, taking less medicine, or delaying filling a prescription; disability defined as problems with hearing, vision, cognition, mobility, self-care, or independent living; viral suppression defined as viral load documented as undetectable or <=200 copies/mL; care engagement defined as receipt of at least two element of outpatient HIV care (i.e., encounter with an HIV care provider, viral load test result, CD4 test result, HIV resistance test or tropism assay, ART prescription, PCP prophylaxis, or MAC prophylaxis) at least 90 days apart;
* P-values <0.01.

KEY RESULTS

- Cost-saving related nonadherence was not associated with age, gender, race/ethnicity, poverty, or homelessness
- Cost-saving related nonadherence was
  - significantly higher among persons with a disability, private insurance, and unmet need for medications from the Ryan White AIDS Drug Assistance Program (ADAP)
  - significantly lower among persons with Medicaid
- Persons reporting cost-saving related nonadherence were
  - less likely to be virally suppressed and engaged in care
  - more likely to have visited an emergency room or been hospitalized more than once.

LIMITATIONS

- Behavioral characteristics were self-reported and may be subject to measurement error

CONCLUSIONS

- Persons with diagnosed HIV in the United States used various strategies to reduce prescription drug costs
- Cost-saving related nonadherence was relatively low, but was associated with poorer clinical outcomes
- Increasing access to ADAP and Medicaid coverage may help to decrease nonadherence due to cost concerns among persons with diagnosed HIV.

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For more information about MMP, please see: http://www.cdc.gov/hiv/statistics/systems/mmp/

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