

BRIEF COMMUNICATION

Trends in Financial Access to Prescription Drugs Among Cancer Survivors

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Abstract

Little is known about the competing effects of increasing prescription drug costs and expansions in insurance coverage on prescription drug access and whether trends vary for adults with and without a cancer history. Using the 2010–2015 National Health Interview Survey, we examined trends in limited prescription drug access, operationalized as forgoing needed prescription drugs because of cost. The percentages of adults age 18 to 64 years with limited prescription drug access decreased over time: predicted margins from multivariable logistic regression models were 13.8% in 2010 vs 8.6% in 2015 for cancer survivors and 11.0% vs 6.8% for adults without a cancer history (adjusted odds ratio [aOR] for trend = 0.89, 95% confidence interval [CI] = 0.88 to 0.90). Access changed little for adults age 65 years and older. Among adults age 18 to 64 years, cancer survivors were more likely than those without a cancer history to report limited access to any prescription drug in all years (aOR from multivariable logistic regression model = 1.45, 95% CI = 1.31 to 1.61). However, trends did not differ by cancer history. Our findings suggest that expansions in health insurance coverage mitigated the effects of growing prescription drug costs to some extent for many individuals with and without a history of cancer.

Growth in prescription drug spending in the United States has increased in recent years (1,2). Spending on biologics and specialty drugs often used to treat cancer is a major driver of increased prescription drug spending (2): many have annual price tags of \$100 000 or more (3). Consequently, cancer survivors are particularly vulnerable to high prescription drug costs. They are more likely to experience financial hardship (4), including higher out-of-pocket spending (5–8), worry about medical bills (9), and bankruptcy (10,11) than individuals without a cancer history. Additionally, limited prescription drug access because of cost among cancer survivors can negatively impact quality of life (12,13), treatment adherence (14–19), health care resource utilization (20), and survival (21).

Rising prescription drug costs are of increasing concern to patients, payers, and policy-makers (22,23). Access to prescription drugs may have improved with recent expansions in health insurance, including broadened Medicaid eligibility in some states, elimination of preexisting condition restrictions, establishment of private insurance marketplaces, premium tax

credits, and closing of the Medicare Part D prescription drug coverage gap (24). Little is known about the competing effects of increasing prescription drug costs and expanded insurance coverage on financial access to prescription drugs and whether these trends differ for cancer survivors and adults without a cancer history. Using the six most recent years (2010–2015) of the National Health Interview Survey (NHIS), we examined trends in access among adults with and without a cancer history.

The NHIS is a nationally representative household survey that serves as the primary source of information on the health of the US population. Limited access to prescription medication was measured by responses to the question “During the past 12 months, was there any time when you needed prescription medication but did not get it because you couldn’t afford it?” This measure reflects behavioral aspects of financial hardship (8). Cancer survivors were identified from a question about ever receiving a cancer diagnosis.

All analyses were stratified by age group (18–64 years and ≥65 years). Descriptive statistics were calculated for all

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Table 1. Sample characteristics, by age and cancer history*

Characteristics	18–64 y		65 y and older	
	History of cancer (n = 6177) Weighted %	No history of cancer (n = 147 195) Weighted %	History of cancer (n = 7744) Weighted %	No history of cancer (n = 34 364) Weighted %
Age group, y				
18–25	3.0	18.4	–	–
26–34	7.4	20.1	–	–
35–44	14.0	21.0	–	–
45–54	27.1	22.2	–	–
55–64	48.5	18.3	–	–
65–74	–	–	48.9	59.5
75–84	–	–	36.2	29.6
85+	–	–	14.9	10.9
Sex				
Male	34.4	49.8	48.0	42.5
Female	65.6	50.2	52.0	57.5
Race/ethnicity				
Non-Hispanic white	78.6	62.7	84.9	75.9
Non-Hispanic black	8.5	12.6	7.3	9.4
Hispanic	8.1	17.0	4.5	8.8
Non-Hispanic other	3.8	7.7	3.3	5.9
Educational level				
Less than high school	10.9	13.1	16.1	21.4
High school graduate or equivalent	26.7	25.1	31.1	30.4
Some college or more	62.4	61.8	52.8	48.2
% FPL				
0%–149% FPL	27.3	30.1	23.8	28.2
200%–399% FPL	30.2	31.9	38.3	35.6
400%+ FPL	36.9	31.9	26.6	23.1
Missing	5.6	6.2	11.3	13.2
Marital status				
Married	59.4	52.1	56.5	54.9
Other	40.6	47.9	43.5	45.1
Region				
Northeast	17.4	17.4	18.8	19.7
Midwest	24.2	22.9	23.8	22.2
South	37.7	36.3	37.2	36.8
West	21.7	23.5	20.2	21.3
No. of chronic conditions				
0	32.8	59.4	12.1	18.3
1	30.9	25.6	26.8	28.5
2	36.4	15.0	66.1	58.2
Health insurance				
Private	66.0	65.4	–	–
Public	22.7	15.0	–	–
Uninsured	11.2	19.0	–	–
Unknown	0.1	0.6	–	–
Medicare and private	–	–	51.7	45.8
Medicare and public	–	–	13.4	12.9
Medicare only	–	–	31.5	35.1
Other	–	–	3.4	6.2
Time since cancer diagnosis, y				
≤2	15.9	–	13.7	–
>2	84.1	–	86.3	–
Limited access to prescription drugs				
No	84.8	91.3	96.3	96.1
Yes	15.2	8.7	3.7	3.9
Total	100.0	100.0	100.0	100.0

*FPL = federal poverty limit.

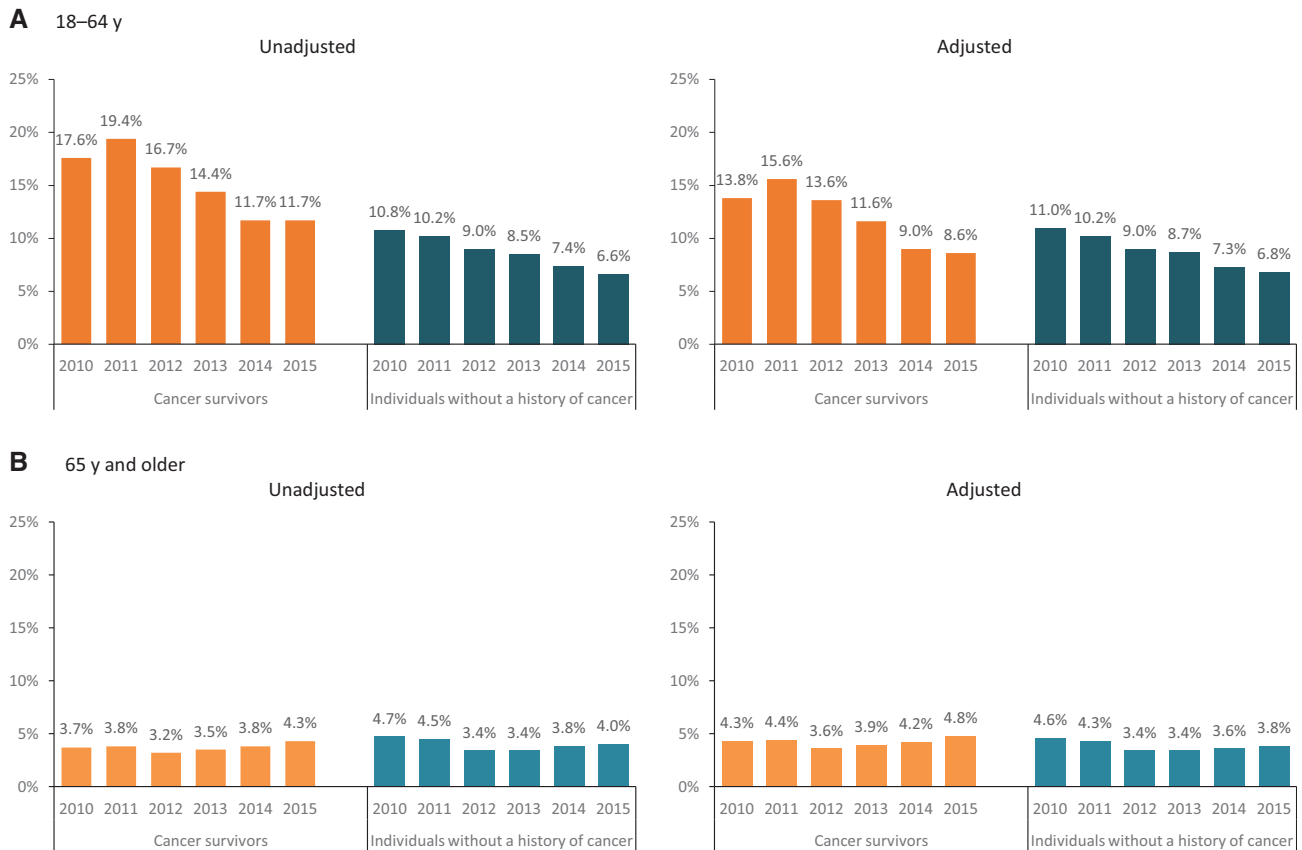


Figure 1. Unadjusted and adjusted percentages of adults reporting financial limitations in prescription drug access, by age and cancer history. Results are presented by age for (A) 18–64 years and (B) 65 years and older. Estimates are adjusted for the effects of age group, sex, race/ethnicity, educational attainment, marital status, family income as a percentage of the federal poverty line, number of chronic conditions, and geographic region in multivariable analyses.

measures. Trends in limited prescription drug access were evaluated using unadjusted and adjusted multivariable logistic regression models that controlled for the effects of age group (18–25y, 26–34y, 35–44y, 45–54y, 55–64y, 65–74y, 75–84y, 85+y), sex, race/ethnicity, educational attainment, marital status, family income as a percentage of the federal poverty line, number of chronic conditions, and geographic region. We report adjusted odds ratios (aOR) and predicted margins, which are interpreted as percentages of adults reporting limited access in a year, after adjusting for other characteristics (25). Interaction terms were used to assess differences in trends by cancer history. All analyses incorporated complex survey design and sample weights to provide nationally representative estimates. All tests of statistical significance used a two-sided alpha of .05. We did not adjust for multiple comparisons. Analytic files were created using SAS 9.4, and regressions used STATA 14.

The sample was comprised of 153 372 adults age 18 to 64 years (6177 of whom had a history of cancer) and 42 108 adults age 65 years and older (7744 of whom had a history of cancer). Cancer survivors were more likely to be older, non-Hispanic white, and have more chronic conditions than individuals without a cancer history (Table 1). The majority of cancer survivors were longer-term survivors (two or more years after diagnosis). Among adults age 18 to 64 years, cancer survivors were more likely to report limited access to any prescription drugs than those without a cancer history, in all years (Figure 1; Supplementary Table 1, available online). In adjusted analyses, the percentages of adults with and without a history of cancer

forgoing needed prescription drugs because of cost decreased between 2010 and 2015 (cancer survivors: 13.8% in 2010 vs 8.6% in 2015; adults without a cancer history: 11.0% vs 6.8%; $aOR_{trend} = 0.89$, 95% CI = 0.88 to 0.90). Limitations in access declined for individuals with low and high health insurance deductibles (Supplementary Figure 1, available online). Limitations in access to prescription drugs changed little for adults age 65 years and older with (4.3% vs 4.8%) and without (4.6% vs 3.8%) a history of cancer ($aOR_{trend} = 0.96$, 95% CI = 0.93 to 1.01). No statistically significant differences in trends by cancer history were observed for either age group ($P_{interaction} > .05$). Among those age 18 to 64 years, the adjusted odds of limited access to any prescription drugs due to cost were statistically significantly higher among cancer survivors than individuals without a cancer history ($aOR = 1.45$, 95% CI = 1.31 to 1.61) during 2010 to 2015.

In the five years after health insurance coverage options were expanded in the United States, a statistically significant decrease in the percentage of adults age 18 to 64 years with and without a history of cancer forgoing needed prescription drugs because of cost was observed. Trends were similar for individuals with and without a cancer history, but cancer survivors were more likely to report limited access in all years. Between 2003 and 2014, median monthly out-of-pocket spending for privately insured users of nonspecialty drugs has declined, even though patient out-of-pocket spending for specialty drugs has increased (26). Because a relatively small proportion of individuals use specialty drugs (27) and the majority of cancer survivors in the United States are longer-term survivors (28), these findings

are consistent with overall improvements in patient access to prescription drugs, despite increasing prescription drug spending. Additional longitudinal research evaluating changes in insurance coverage and financial access to prescription drugs and medical financial hardship in newly diagnosed cancer patients is warranted.

The nationally representative data presented here are the most recent available NHIS data for individuals with all types of health insurance, including the uninsured, but a few limitations of this study warrant mention. All data about cancer history, prescription drug access, and other characteristics were self-reported. Trends presented are based on cross-sectional rather than longitudinal data, and trends in access cannot be evaluated among individuals over time. Our measure of access did not address other elements of adherence to prescription drugs because of cost used elsewhere, including skipping doses, taking less medicine, or delaying filling prescriptions (29). These questions were not asked consistently by the NHIS during our study period. Last, the NHIS does not provide any information on access to or use of specialty drugs or receipt of cancer treatment in the past year.

Gains in health insurance for the uninsured have been shown to be associated with more prescriptions filled and lower out-of-pocket spending per prescription (30). The trends we observed suggest that expansions in health insurance coverage mitigated the effects of growing prescription drug costs to some extent for many individuals with and without a history of cancer.

Note

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the National Cancer Institute or the Department of Health and Human Services.

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