Medication Affordability and Self-Advocacy Among Racial/Ethnic Minorities in a Nationwide Cohort

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INTRODUCTION

In the USA, it is estimated that 30–50% of medications are not taken as prescribed, accounting for approximately 10% of hospitalizations, $100 billion in expenditures, and 125,000 preventable deaths annually.[1] Though medication adherence is related to multiple factors, one of the most important hurdles patients must overcome is affordability.[1,2] Further, racial/ethnic disparities in medication adherence are largely driven by cost concerns.[2] In this study, we evaluate variation by race and ethnicity in asking doctors for lower-cost options in those who have difficulty affording prescription medication.

METHODS

We obtained data from the NIH *All of Us* (AoU) Research Program, a large nationwide database.[3] Participants provided written informed consent during enrollment. Data used were de-identified and considered non-human subjects research by the University of California San Diego IRB. Racial/ethnic categories studied include non-Hispanic (NH) White, NH Black, NH Asian, and Hispanics of all races. A total of 115,742 individuals over age 18 completed the Health Care Access and Utilization Survey between June 2016 and March 2021. Observations with missing values for covariates used in our analysis were excluded, yielding 81,942 individuals. Only those who answered yes to the question "during the past 12 months, was there any time when you could not afford prescription medicines" (12%) were included in the final dataset (N=9860).

We used logistic regression to generate odds ratios (ORs) and 95% confidence intervals (CIs) to characterize responses for the question "during the past 12 months, was there any time when you asked your doctor for a lower cost medication to save money" between different race/ethnicities, with NH White persons as the reference group. We calculated univariable and multivariable models adjusting for age, gender, insurance status, education, and income. Statistical tests were two-sided, and p-values<0.05 were considered statistically significant. Analyses were conducted on the AoU Researcher Workbench using R version 4.1.0. We followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline for observational studies.

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RESULTS

Of the 9860 individuals in our study population, 68.3% were NH White, 15.2% were NH Black, 2.4% were NH Asian, and 14.1% were Hispanic (any race). Overall, 56.2% asked for lower cost medication to save money in the past 12 months (Table 1). In univariable models, NH Black (OR: 0.64; 95% CI: 0.57–0.72), NH Asian (OR: 0.75; 95% CI: 0.58–0.98), and Hispanic (any race) (OR: 0.63; 95% CI: 0.56–0.71) persons were significantly less likely than NH White individuals to ask for lower cost medications. In multivariable models adjusting for age, gender, insurance status, education, and income, NH Black (OR: 0.72; 95% CI: 0.64–0.81) and Hispanic (any race) (OR: 0.73; 95% CI: 0.64–0.82) respondents were significantly less likely than NH White respondents to ask for lower cost medications, while NH Asian respondents were not less likely to ask for lower cost medication (OR: 0.80; 95% CI: 0.61–1.05).

DISCUSSION

In this large nationwide study, we found that NH Black and Hispanic (any race) individuals who have trouble affording medication were less likely to ask their doctors for lower cost medications than NH White individuals, even after adjusting for socioeconomic factors. This is important since medication costs are not routinely discussed during patient encounters, and more affordable alternatives are often underutilized.[4] While the source survey referred only to "doctors" rather than a broader group of clinicians and was also limited by the potential exclusion of individuals who could not afford a doctor's visit to ask for lower cost medication, the findings suggest an important health disparity that Black and Hispanic individuals may be less likely to engage with their doctors to discuss these problems than NH White individuals.

There is evidence that racial/ethnic minority populations are less likely to advocate for themselves in healthcare settings.[5]

Table 1 Distribution of Selected Characteristics for Patients with Glaucoma Who Report Difficulty Affording Medications in the NIH *All of Us* Research Program by Race/Ethnicity[a]

Characteristics	NH White individuals	NH Black individuals	NH Asian individuals	Hispanic (any race) Individuals
Total, No. (%)	6732 (68.3)	1501 (15.2)	232 (2.4)	1395 (14.1)
Median age (IQR)	54 (40–66)	51 (40–60)	40 (31–55)	44 (33–56)
Age category, No. (%)				
<40	1588 (23.6)	371 (24.7)	108 (46.6)	559 (40.1)
40–64	3273 (48.6)	907 (60.4)	95 (40.9)	689 (49.4)
65–74	1333 (19.8)	178 (11.9)	<20	132 (9.5)
75-84	502 (7.5)	42 (2.8)	<20	<20
≥85	36 (0.5)	<20	<20	<20
Gender, No. (%)				
Female	4900 (72.8)	1175 (78.3)	134 (57.8)	1032 (74.0)
Male	1638 (24.3)	313 (20.9)	88 (37.9)	312 (22.4)
Other/skipped	194 (2.9)	<20	<20	51 (3.7)
Income, No. (%)				
0–25k	1886 (28.0)	802 (53.4)	58 (25.0)	578 (41.4)
25k–50k	1842 (27.4)	393 (26.2)	42 (18.1)	420 (30.1)
50k–100k	1795 (26.7)	233 (15.5)	58 (25.0)	284 (20.4)
100k–200k	995 (14.8)	65 (4.3)	56 (24.1)	96 (6.9)
>200k	214 (3.2)	<20	<20	<20
Health insurance, No. (%)				
Medicaid	1351 (20.1)	548 (36.5)	37 (15.9)	486 (34.8)
Other insured	5360 (79.6)	934 (62.2)	192 (82.8)	895 (64.2)
None	21 (0.3)	<20	<20	<20
Education, No. (%)				
No HS diploma	138 (2.0)	97 (6.5)	<20	144 (10.3)
HS diploma/GED	806 (12.0)	305 (20.3)	<20	239 (17.1)
Some college	2412 (35.8)	626 (41.7)	35 (15.1)	525 (37.6)
College and above	3376 (50.1)	473 (31.5)	186 (80.2)	487 (34.9)
Asked for lower cost medication, No. (%)				
Yes	4017 (59.7)	732 (48.8)	122 (52.6)	674 (48.3)
No	2715 (40.3)	769 (51.2)	110 (47.4)	721 (51.7)

[a]*Per the All of Us Research Program data sharing policies, cells with less than 20 respondents are suppressed*

Reasons are multifactorial, including differences in role expectations, disengagement due to feeling stereotyped, and lack of opportunities to participate—which may devolve from doctors' conscious or unconscious biases.[5,6] It is essential therefore that doctors are proactive and initiate discussions about costs themselves. This may be accomplished with relatively simple interventions. One study of a 60-min training session for primary care doctors significantly increased medication cost discussions with patients.[4] Open discussion of medication costs with all patients may ultimately promote health equity in the USA.

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Declarations:

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