

Demographic, Chronic Disease, and Health Care Utilization Characteristics of Patients Self-Reporting Economic Insecurity in a Large Midwest Health System

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BACKGROUND

- Social Determinants of Health (SDoH) are a set of derived social and economic categories that are known to impact health outcomes. These categories represent life factors that range from environmental quality to racism to access to financial resources and the stress of monetary hardship.¹
- Socioeconomic status (SES) may account for nearly 50 percent of the variation in health outcomes,² though most studies have used area-based indicators that may not consistently correlate with individual-level SES.^{3,4}
- Individual-level SDoH information and linkage to clinical detail has been limited to-date though Federal policies and reporting requirements are driving more systematic documentation⁵ including capture in the EHR.

OBJECTIVE

- We used self-reported SES information captured in the EHR to investigate the hypothesis that economic insecurity is associated with higher health care utilization and chronic disease prevalence.

METHODS

- The population assessed included patients from a large Midwest health system in the OMNY Health real-world data platform who were asked “How hard is it to pay for the very basics like food, housing, medical care, and heating?” in a 2022 SDoH survey administered as part of routine care services.
- Patients were classified as ‘Economically Insecure’ (responses: “somewhat hard”, “hard”, or “very hard”) or ‘Economically Secure’ (responses: “not hard at all” or “not very hard”) based on their first response to the question. Patients responding “refused” and/or left the answer blank on all surveys were excluded.
- Using clinical data from 2022 and 2023, we tabulated the following by the patient’s economic status:
 - Demographic characteristics (age, gender, race, employment)
 - Frequency of 7 common chronic conditions
 - Average and total number of encounters by type

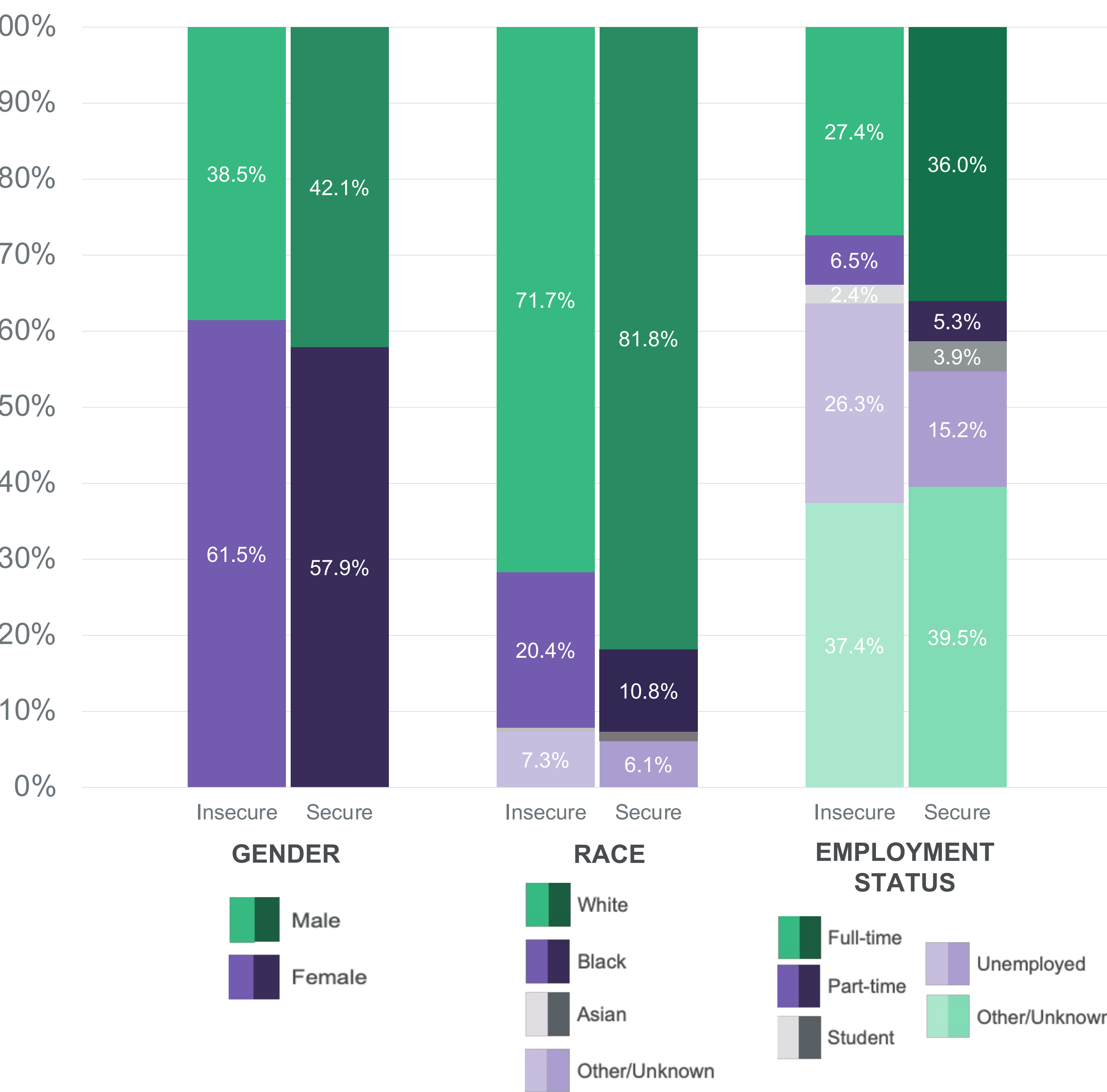
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RESULTS

- 372,479 (13.6%) of the 2,732,676 patients treated in the health system in 2022 were exposed to the survey question at least one time. 9,533 (2.6%) of patients refused to respond. 362,946 patients were included in the final analyses.
- 5.1% of patients self-reported being 'Economically Insecure' (n=18,333) in 2022. 94.9% of patients were 'Economically Secure' (n=344,613).
- There were no meaningful differences in age between the two groups [Avg. (SD): Insecure, 51.5 years (21.3); Secure, 49.1 years (18.4)].
- Economically Insecure patients were more likely to be Black (20.4% vs. 10.8%) and unemployed (26.3% vs. 15.2%) [Figure 1].

Figure 1: Demographic Characteristics of Study Population by Self-Reported Socioeconomic Status in 2022



Note: Demographics were missing for 0.02% of Economically Secure and 0.18% of Economically Insecure patients.

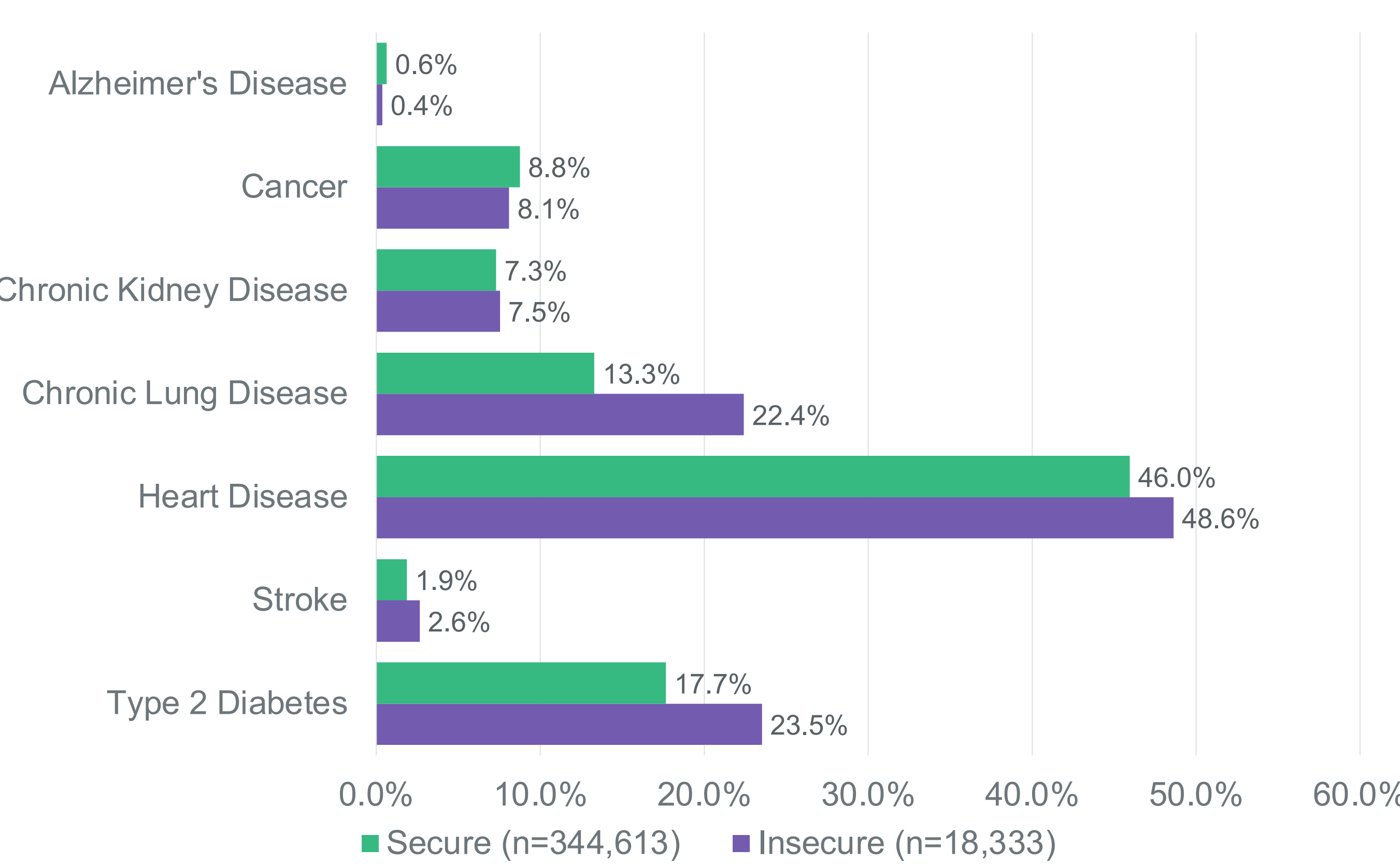
- Economically Insecure patients had greater healthcare utilization over the two-year period overall and by setting:
- Average number of overall visits: 8.64 vs. 2.51
- Average number of visits by setting: Inpatient, 0.47 vs. 0.22; Outpatient, 6.77 vs. 5.23; Emergency room, 1.42 vs. 0.67) [Table 1].

Table 1: Average Visits per Patient Overall and by Setting in 2022-2023, by Self-Reported Socioeconomic Status

Setting Type	Insecure (n=18,333)	Secure (n=344,613)	Difference
Across All Settings	8.64	6.13	2.51
Inpatient	0.47	0.22	0.24
Outpatient	6.77	5.23	1.54
Emergency	1.42	0.67	0.74

- Economically Insecure patients had higher rates of type 2 diabetes (23.5% vs. 17.7%) and chronic lung disease (22.4% vs. 13.3%).
- Economically Insecure patients were also more likely to experience multimorbidity as defined by having two or more encounters for two or more of these seven conditions (34.5% vs. 27.4%).

Figure 2: Chronic Disease Diagnosis in 2022-2023 by Self-Reported Socioeconomic Status



Note: Diagnosis required having a minimum of two separate encounters with condition-specific ICD-10 codes during the two-year period as follows: Alzheimer's Disease, G30*; Cancer, C00* to D49*; Chronic Kidney Disease, N18*; Chronic Lung Disease, J40* to J47*; Heart Disease, I05* to I52*; Stroke, I60* to I69*; Type 2 Diabetes, E11*.

DISCUSSION AND CONCLUSIONS

- Self-reported economic insecurity was associated with a higher prevalence of chronic diseases and increased healthcare utilization.
- Self-reported SDoH data collected at the point of care will enable research in this area to continue to expand and may expose more patient-centric approaches to interventional efforts.

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