The Economic Burden of Generalized Anxiety Disorder in the US General Adult Population: Insights From the Patient and Payer Perspectives

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Introduction

Generalized anxiety disorder (GAD) is one of the most prevalent anxiety disorders in the US and global populations[1] and is characterized by excessive and pervasive worry. Earlier research reported an association between diagnosed GAD and considerable health and economic burden,[1] including interference with performing daily activities, lower role functioning and social functioning, and higher rates of comorbid disorders.[2,3]

Despite high prevalence, GAD is under-diagnosed, often leading to under-treatment.[4] Contemporary data are needed to understand the burden of GAD, including the impact on performance of work and non-work activities. Payer perceptions around GAD and their effect on health policy decision-making may also contribute to under-treatment and are critical to understand.

This study quantified the burden of GAD in terms of healthcare resource utilization (HCRU) and work productivity and impairment among adults in the US general population. A subsequent study evaluated GAD perceptions and attitudes among payer pharmacy and medical directors.

Methods

Data Source

This cross-sectional, retrospective study analyzed data from the **2022 US National Health and Wellness Survey (NHWS)** (n=75,261), a nationally representative, online-based, self-report survey.

- Recruitment is designed to represent the general US adult population in terms of age, race/ethnicity, and gender distributions

- As part of the NHWS survey, respondents reported on (1) demographics, health characteristics, and comorbidities; (2) GAD diagnosis and treatment; and completed the Generalized Anxiety Disorder 7-item (GAD-7) screening tool

Study Groups

Adults (aged ≥18) were categorized by GAD diagnosis.

Diagnosed GAD (n=5,526) was defined as reporting either (1) experiencing anxiety symptoms and currently diagnosed with GAD, (2) screened positive with GAD (GAD-7 score ≥10), or (3) previously diagnosed with GAD and using treatment/therapy for GAD.

Undiagnosed GAD (n=15,389) was defined as those with no GAD diagnosis and a positive screen (GAD-7 ≥10).

Outcome measures included scores on Work Productivity and Activity Impairment (WPAI) questionnaire[5] and HCRU. WPAI was assessed via absenteeism, presenteeism, and overall work impairment, and was only applicable to those indicating they were currently working for pay. Absenteeism was not calculated for those who worked 0 hours and missed 0 hours in the past 7 days, and presenteeism was only asked among those who worked greater than 0 hours in the past 7 days. HCRU was assessed via hospitalizations, visits to HCPs and visits to ERs within the past 6 months.

Statistical Analysis: The distributions of demographics, health characteristics, HCRU, and WPAI were summarized for undiagnosed GAD vs diagnosed GAD as means and standard deviations (SDs) for continuous variables and counts and percentages for categorical variables. HCRU and WPAI were compared between undiagnosed GAD and diagnosed GAD using 2-sample, 2-tailed, t-tests for continuous outcomes and chi-square tests for categorical outcomes.

Payer Survey

Payer perceptions, attitudes, plans, and opinions regarding GAD treatment and screening were collected from a proprietary payer panel consisting of pharmacy and medical directors utilizing a Rapid Response survey fielded from December 1 to 7, 2023.

The survey was distributed to a group of payers (n=20) comprised of large national payers (n=7), pharmacy benefit managers (PBM) (n=5), and regional payers (n=8) covering 130.3 million lives.

The survey collected (1) payer perceptions surrounding the clinical and economic burden of GAD, (2) diagnosis status of lives covered with GAD, (3) use of depression screening via the Patient Health Questionnaire-9 (PHQ-9), (4) plans to implement new screening guidelines recommended by the United States Preventive Services Taskforce (USPSTF) for GAD, and (5) perceptions surrounding the increasing number of individuals with GAD.

Values less than 5% are not displayed.

Results: Patient Perspective

Table 1: Study Population Demographics and Health Characteristics

Participant Characteristics N =	Undiagnosed GAD 15,389	Diagnosed GAD 5,526
Age (years), mean ± SD	36.6 ± 11.5	43.1 ± 17.0
Male, n (%)	8,843 (57.5)	1,185 (21.4)
Race/ethnicity, n (%)		
Hispanic	4,603 (29.9)	775 (14.0)
Non-Hispanic Black	1,694 (11.0)	525 (9.5)
Non-Hispanic White	8,117 (52.8)	3,652 (66.1)
Other	975 (6.3)	574 (10.4)
Marital status, n (%)		
Married/living with partner	11,078 (72.0)	2,441 (44.2)
Single/not living with partner	3,302 (21.5)	2,033 (36.8)
Divorced/separated/widowed	969 (6.3)	1,031 (18.7)
Decline to answer	40 (0.26)	21 (0.38)
Employed (FT/PT/SE), n (%)	12,315 (80.0)	2,814 (50.9)
Current smoker, n (%)	5,936 (38.6)	1,203 (21.8)
Alcohol drinker, n (%)	11,545 (75.0)	3,661 (66.3)
Comorbidities, n (%)		
Arthritis	2,853 (18.5)	1,862 (33.7)
Atrial fibrillation	209 (1.4)	163 (3.0)
Congestive heart failure	223 (1.5)	122 (2.2)
Depression	2,311 (15.0)	4,340 (78.5)
Diabetes	894 (5.8)	733 (13.3)
High cholesterol	1,142 (7.4)	1,669 (30.2)
Pain	1,480 (9.6)	2,445 (44.3)
Stroke	114 (0.7)	121 (2.2)

- In the past 6 months, undiagnosed GAD participants were more likely than diagnosed GAD participants to have ≥1 ER visits (45.8% vs 24.7%) and hospitalizations (43.1% vs 13.0%) but were less likely to have ≥1 HCP visits (67.9% vs 91.4%; all group comparisons, p<0.001) (Figure 1)

- Similarly, undiagnosed GAD participants had a greater mean number of ER visits (1.3 vs 0.5) and hospitalizations (1.2 vs 0.3) but fewer HCP visits (3.0 vs 8.7; all, p<0.001) in the past 6 months than diagnosed GAD participants (Figure 1)

- WPAI results demonstrated undiagnosed GAD participants had rates of absenteeism, presenteeism, overall work productivity impairment, and activity impairment that were 3.1, 1.9, 1.9, and 1.6 times higher, respectively, than diagnosed GAD participants (all group comparison, p<0.001) (Figure 2)

Figure 1: HCRU Among Undiagnosed and Diagnosed GAD Participants
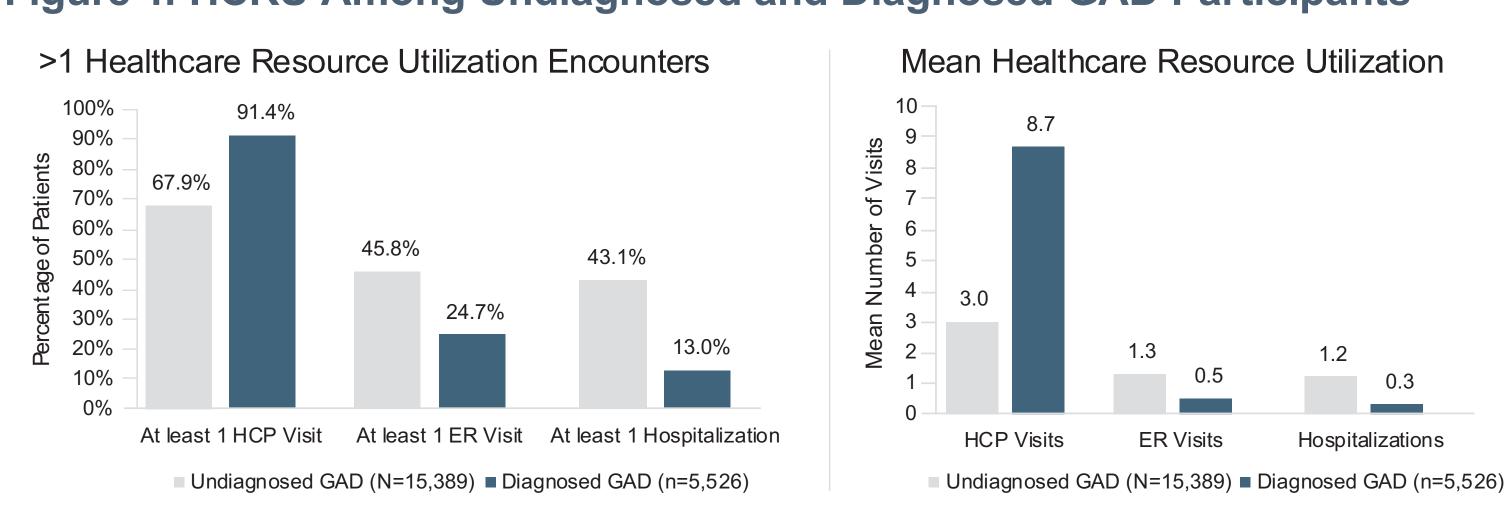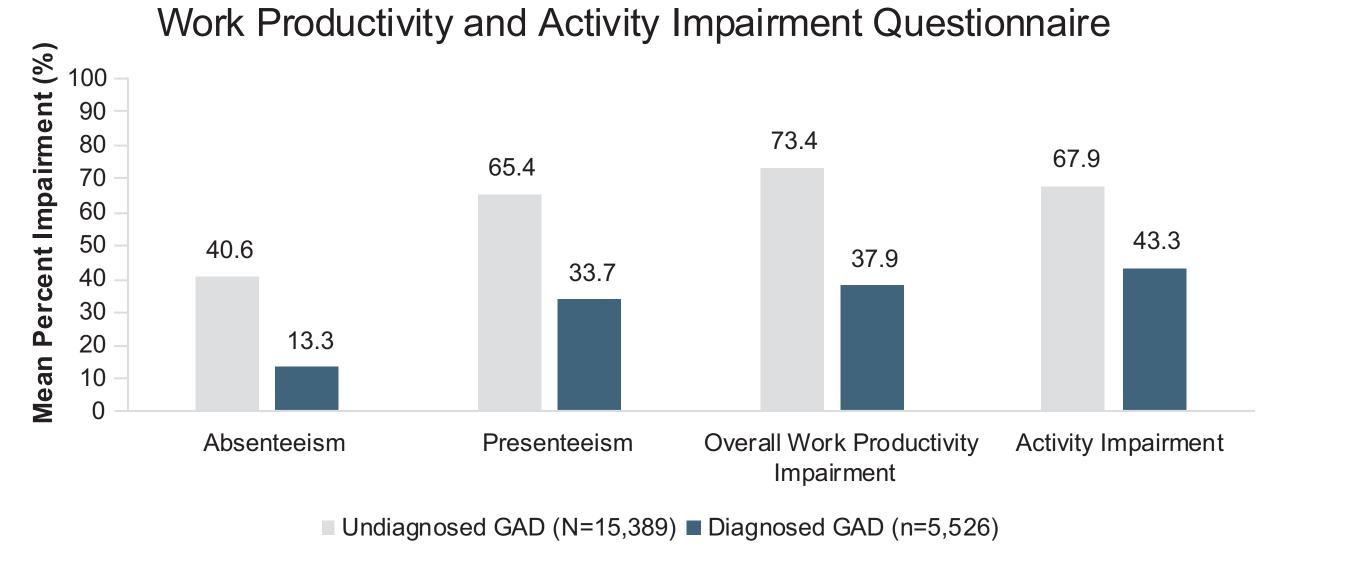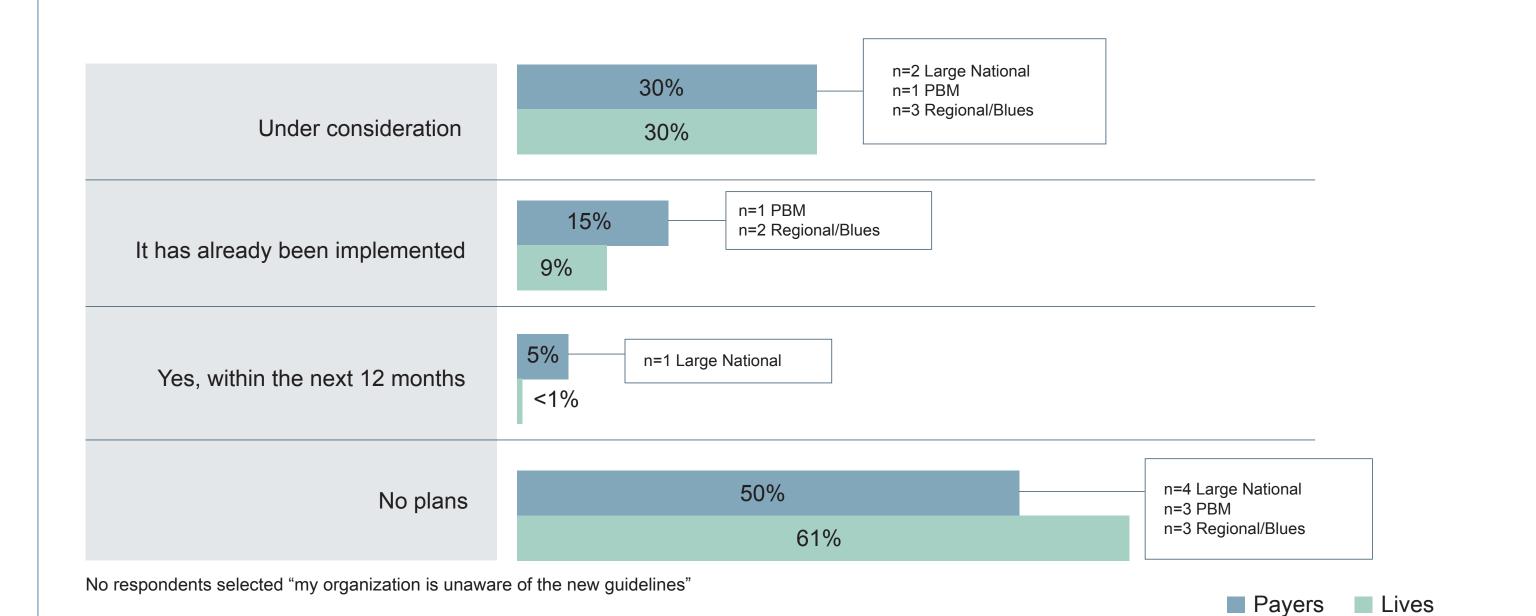

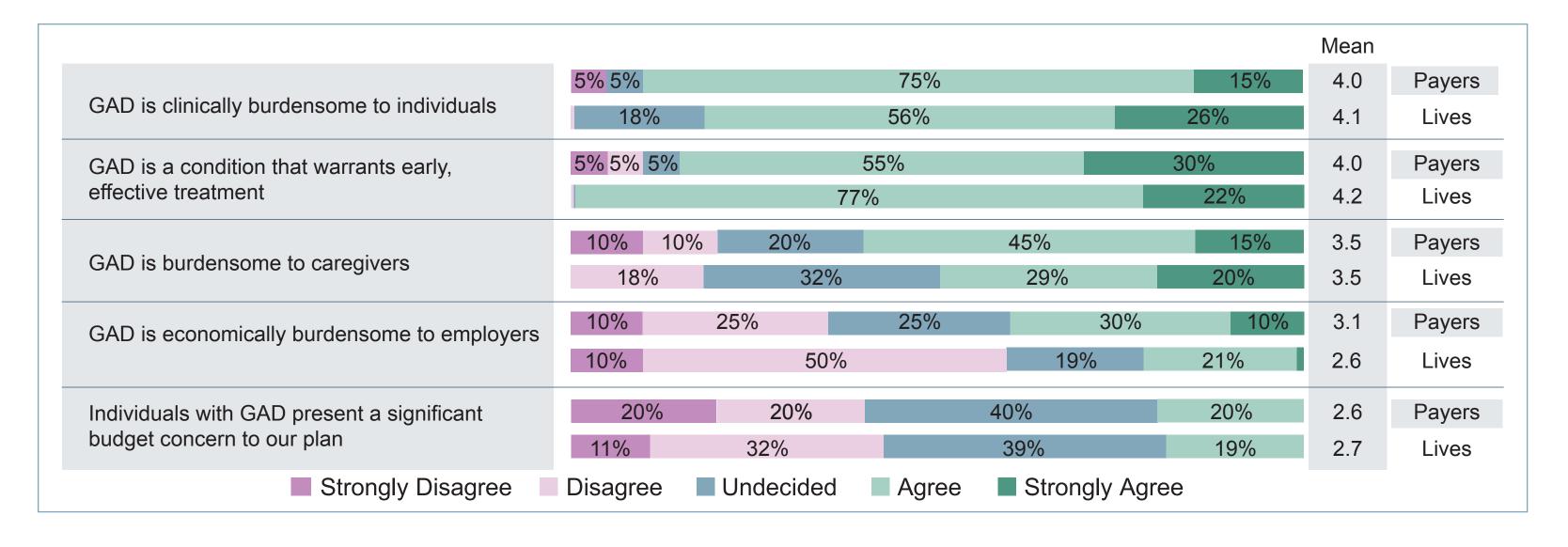### Figure 2: Work Productivity and Activity Impairment Among Undiagnosed and Diagnosed GAD Participants

Results: Payer Perspective

- 90% of payers showed broad agreement that GAD is burdensome to individuals, and 85% believed that GAD is a condition that warrants early and effective treatment (Figure 3)

- 60% disagreed that GAD is burdensome to employers, and 40% believed that GAD did not present a significant budgetary concern to their payer plan (Figure 3)

- 80% of payers cited that GAD was commonly diagnosed with delay 1-2 years after meeting the DSM-5 criteria (Figure 4)

- 55% of payers stated that undiagnosed GAD or misdiagnosed GAD is the most frequent diagnosis status in their population, affecting 80% and 31% of their covered lives respectively (Figure 4)

- 60% of payers do not require physicians to administer depression screening via the PHQ-9 (Figure 5)

Figure 3: Payers' Agreement to GAD-Related Issues

Figure 4: Payers' Most Frequently Described GAD Diagnosis Status of Individuals With GAD

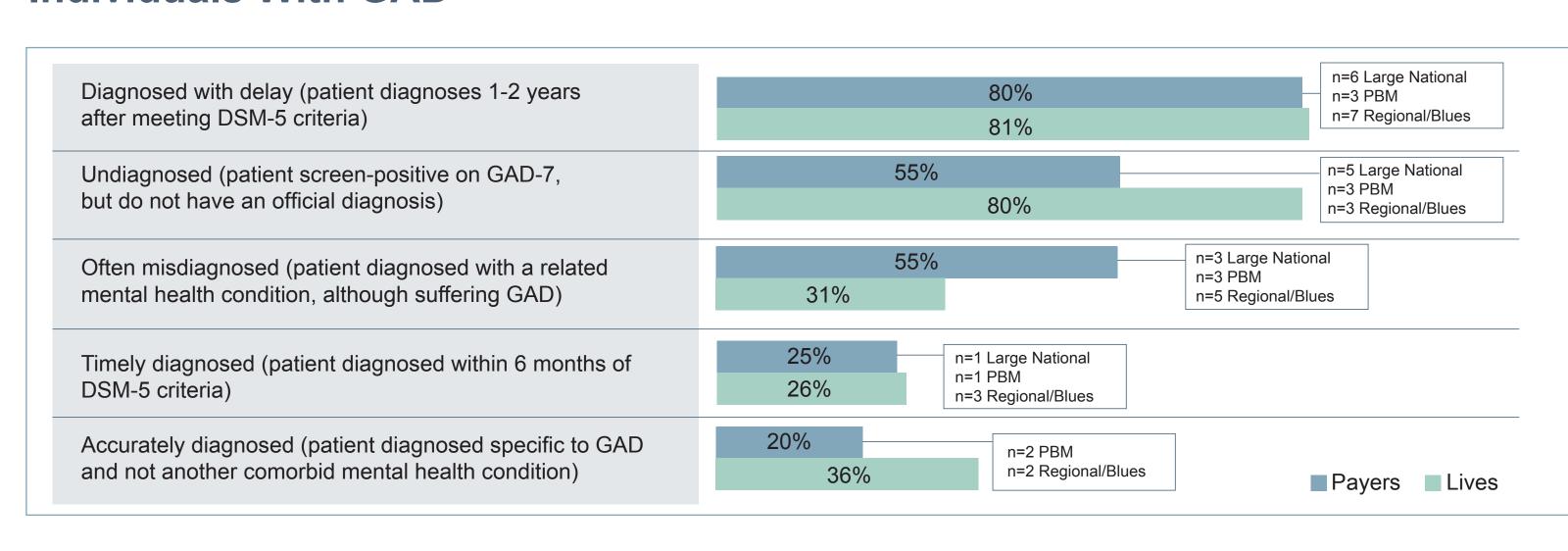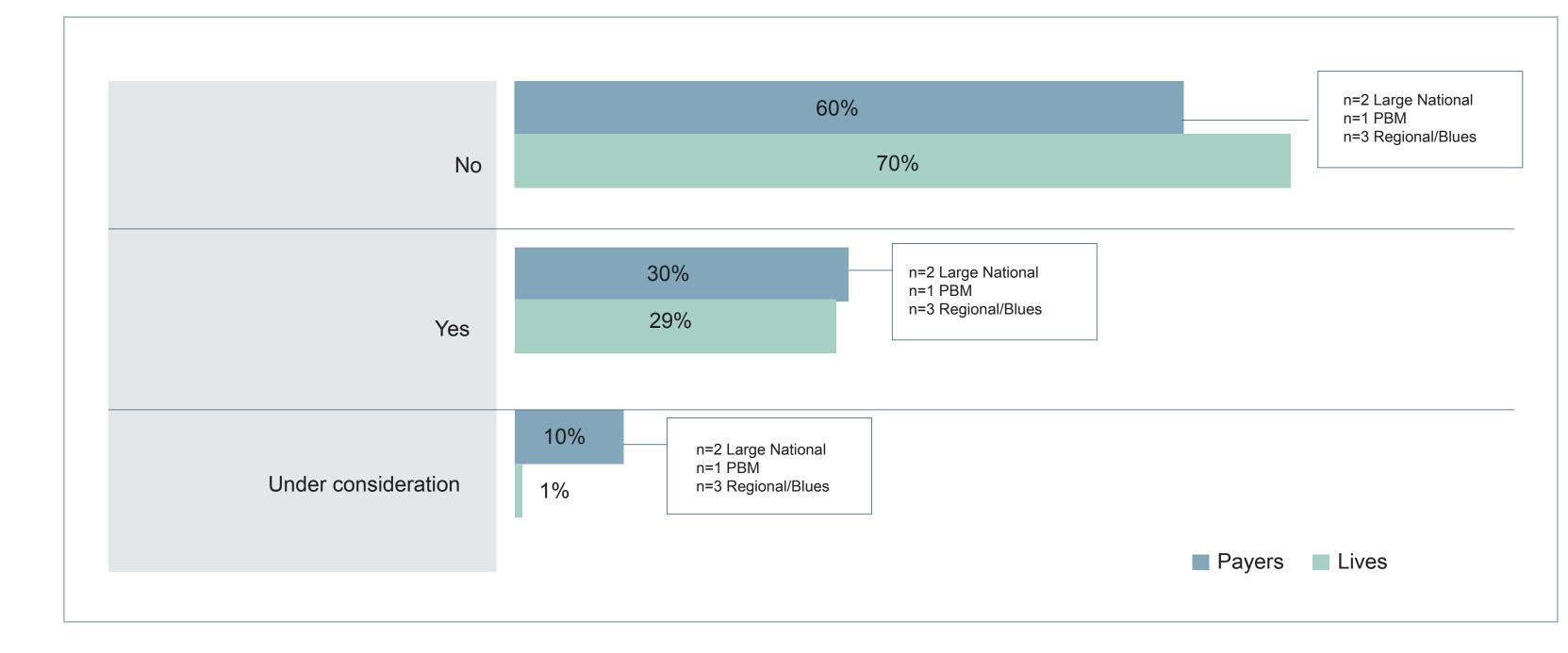### Figure 5: Payer-Reported Requirement for Physicians to Undertake Depression Screening via the PHQ-9

- 15% of payers have already implemented new GAD screening guidelines, and 5% are planning to implement guidelines within the next 12 months (Figure 6)

- 50% of payers currently have no plans to implement new GAD screening guidelines, representing 61% of covered lives (Figure 6)

- 70% of payers believe the number of diagnosed individuals with GAD seeking reimbursement for treatment will increase in the next 3 years (Figure 7)

Figure 6: Payer-Reported Plans to Implement GAD Screening Guidelines Based on United States Preventive Services Taskforce Recommendations
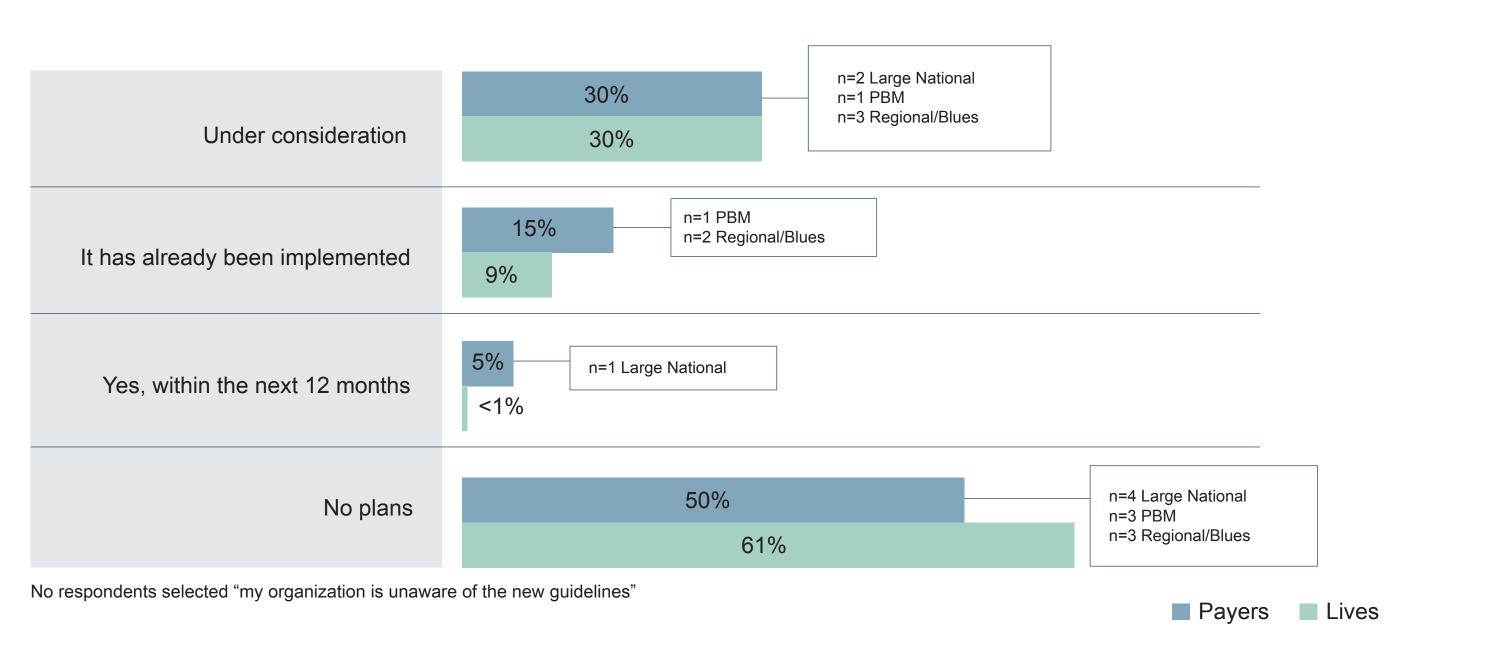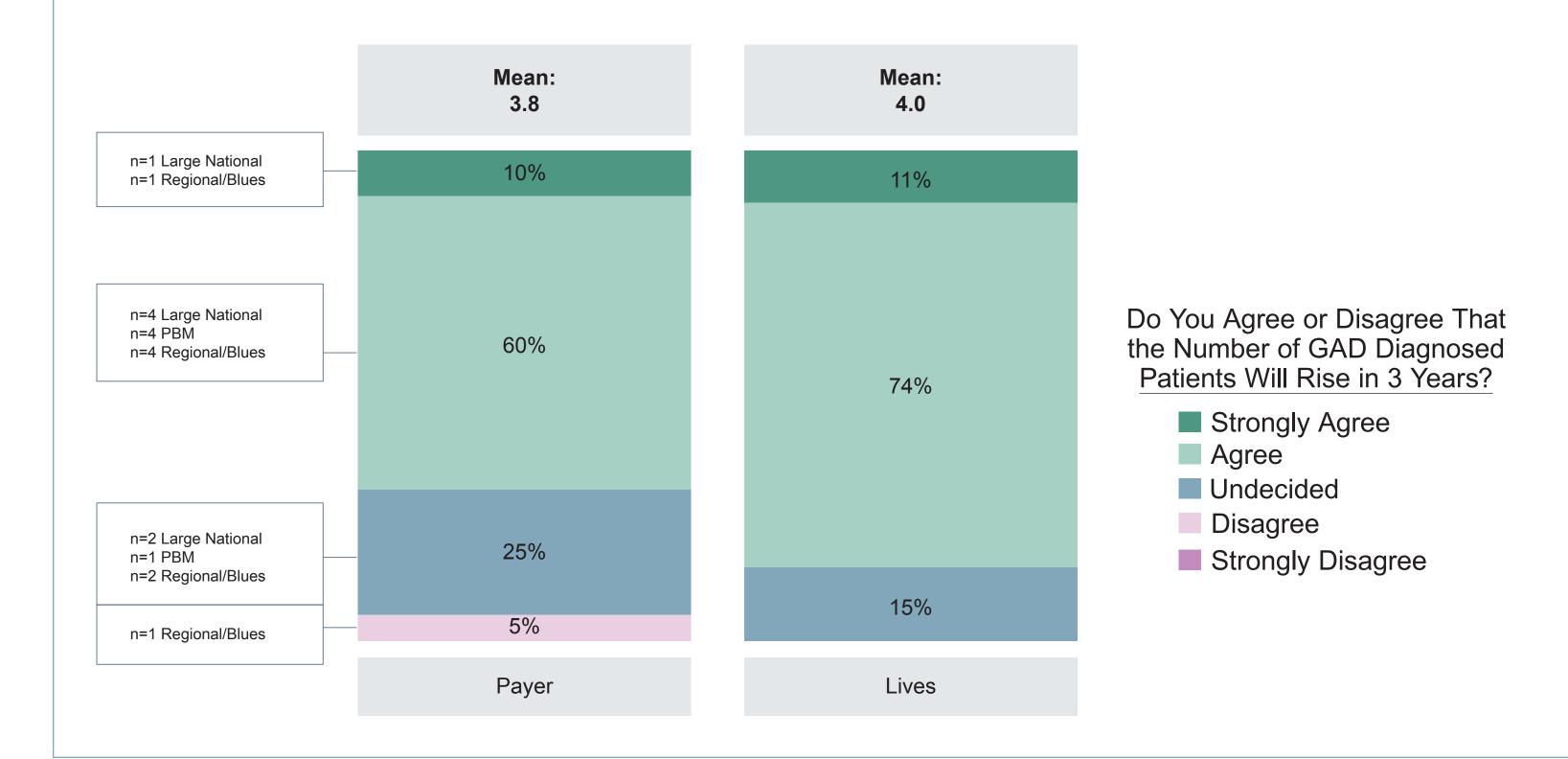

Figure 7: Payer Perception on the Likelihood of an Increase in the Number of Individuals With GAD Seeking Treatment Reimbursement in the Next 3 Years

Limitations

- Our study is cross-sectional and thus cannot provide evidence of causality for the associations between status of GAD diagnosis and burden outcomes

- All data collected in the survey were self-reported, and survey responses may potentially be affected by recall error or other response biases

- GAD-7 has low specificity in identifying the GAD population. Thus, the undiagnosed GAD group may not be the true underdiagnosed population

- Our unadjusted results of the associations between status of GAD diagnosis and burden outcomes could be confounded by other risk factors

Strengths

- This study evaluates the economic burden of GAD from both patients' and payers' perspectives in the US by describing its characteristics among diagnosed and undiagnosed GAD participants and highlighting the associated considerable burden

- The large representative sample allows for greater generalizability of the findings

- Validated scales were used to evaluate productivity loss in a real-world setting

- To define our study cohorts, we used the GAD-7 scale, which has demonstrated good validity and reliability[6,7] in the general population, to screen for GAD

Conclusions

Overall, GAD was associated with greater HCRU and impairment to work productivity and daily activities.

- Undiagnosed GAD participants were more likely to be hospitalized and have a visit to the ER compared to diagnosed GAD participants

- Undiagnosed GAD participants experience greater levels of absenteeism, presenteeism, overall work productivity impairment, and activity impairment compared to diagnosed counterparts

- Future research is needed to understand how GAD symptom management may translate into reduced HCRU and better patient functioning in work productivity and daily activities

Overall, payers recognize the clinical burden of GAD, but they fail to recognize the economic burden or the need for regular screening.

- Payers recognize the clinical burden of GAD, the need for treatment, and the rising number of patients diagnosed with GAD but may not recognize the economic burden

- Among the lives covered by the payers in this survey, GAD is often diagnosed with delay, misdiagnosed, or undiagnosed

- Screening for GAD is minimally supported by payers, with many not having plans of implementing USPSTF guideline-recommended screening efforts in the future

GAD was associated with higher burden across multiple domains. This burden is recognized by payers from a clinical sense, but not from an economic perspective. Our findings support efforts to effectively diagnose GAD and treat symptoms to potentially mitigate this multifaceted burden among the GAD population.

References
1. Revicki DA, et al. J Affect Disord. 2012;140(2):103-112. 2. Wittchen HU, et al. Arch Gen Psychiatry. 1994;51(5):355-364. 3. Massion AO, Warshaw MG, Keller MB. Am J Psychiatry. 1993;150(4):600-607. 4. Kessler S. Int J Psychiatry Clin Pract. 2006;10(suppl 1):3-9. 5. Reilly MC, Zbrozek AS, Dukes EM. PharmacoEconomics. 1993;4:353-365. 6. Löwe O, et al. Med Care. 2008;46:266-274. 7. Spitzer RL, et al. Arch Intern Med. 2006;166(10):1092-1097.