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Psychiatric Diagnoses among Older Recipients of Publicly Funded Mental Health Services

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Abstract

Objectives—To compare the prevalence of psychiatric diagnoses among older recipients of publicly funded mental health services (county safety-net base services and Medicaid) to psychiatric diagnoses in an insured population of older adults from the same county.

Design—Secondary analysis of county human services claims data and claims from an insured population in the same county.

Setting—Inpatient and outpatient clinics in Allegheny County, PA.

Participants—Adults aged 65 and older in the county who received treatment for a psychiatric diagnosis in 2012 (county base services, n=1,457; Medicaid, n=641; Health plan insurance, n=5,595).

Measurements—Psychiatric diagnoses were classified using the International Classification of Diseases, 9th revision (ICD-9)

Results—Episodic mood disorders and schizophrenia were more common among county-funded and Medicaid recipients (50–54% vs. 34%). Neurotic conditions were more common among older adults with health plan insurance (18% vs. 8%). Nearly a quarter of older adults receiving county base services were classified as having “ill-defined and unknown causes of morbidity and mortality,” compared <1% among insured and 6% among Medicaid recipients.

Conclusions—The prevalence of psychiatric conditions among older adults varies by insurance coverage, suggesting a role for social and economic factors associated with safety net coverage as well as system-level differences in delivery of mental health services. Comparing the prevalence of psychiatric diagnoses across insurance types offers insight on social determinants of risk for mental disorders in late life.

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Conflicts of Interest: Drs. Stahl, Whyte, and Albert report no competing interests.

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Keywords

older adults; psychiatric illness; prevalence; mental health; Medicare; Medicaid

For older adults with psychiatric illness who do not have private health insurance, publicly funded mental health services are the only option for managing mental health care. It is widely assumed that older adults who use publicly funded mental health services have low educational attainment, low incomes, more disease burden, and more cognitive, intellectual, and physical impairments than adults with private health insurance. (1–3) The clinical assessment of psychiatric illness is challenging and time consuming in this population because elders typically have chronic physical conditions and co-occurring substance abuse disorders (2, 3). Community mental health services must be designed to meet the needs of this vulnerable population of older adults. (4) However, limited data are available to describe the prevalence of psychiatric illness among older recipients of publicly funded mental health services, especially severe psychiatric illnesses such as psychotic and bipolar disorders. These data are needed to increase awareness of need and improve behavioral health treatments and supports for this population.

In this brief report we describe a population-level record of psychiatric diagnoses, determined by claims that were rendered for county-funded mental health consumers, in Allegheny County, PA, in 2012. The claims represent older adults who did not have private health insurance or who maintained Medicaid status at the time they received mental health care. The demand for specialized mental and behavioral health services may differ for underserved older adults compared to older adults with private insurance. (5, 6) Therefore, we also obtained similar data from a commercial insurance provider and examined the prevalence of psychiatric illness by insurance status (county-funded base services, Medicaid, and private insurance) to shed light on differences in the mental health needs of aging adults. Importantly, all three groups have Medicare coverage.

METHODS

Data Sources and Sample

The county base services and Medicaid sample includes all people aged 65 years and older who had at least one mental health service claim in the county human services data warehouse for 2012, This sample (n=1,457 base services, n=641 Medicaid) was 54% white and 19% Black (27% not reported) and primarily female (67%). County base services provide funding for emergency mental health care. Patients include older adults who are homeless or referred from adult protective services, people whose heat has been shut off for nonpayment and who are identified by police, people receiving mobile mental health services, and people referred after receiving EMS care.

Patients were evaluated by trained clinicians that are part of the Allegheny County's network of community mental health providers. Patients were seen in a variety of settings, including outpatient, inpatient, partial hospital, family-based mental health sites, and mobile mental health services. To measure the effect of insurance coverage on type of psychiatric illness at

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the county level, we compared this sample to an insured population aged 65+ who lived in the county and had psychiatric diagnoses in the same year (n=5,595).

Psychiatric diagnoses were classified using the *International Classification of Diseases, Ninth Revision*, principal diagnosis. We grouped psychiatric disorders into 11 main disease categories: ill-defined and unknown causes of morbidity and mortality, mental disorders diagnosed in childhood, mental retardation, neurotic disorders, organic psychotic conditions, other adult onset conditions, other psychoses, other psychosocial circumstances, personality disorders, psychoactive substance, and psychosexual disorders. We also explored subcategories of each diagnosis category.

Data were extracted from the Allegheny County, PA Department of Human Services Data Warehouse. (7) Psychiatric diagnoses for the insured population were provided by one of the two primary private health insurance plans in the county. We compared prevalence of psychiatric diagnoses by insurance status. Differences were examined using the χ^2 test for categorical variables. Analyses were performed using SPSS, version 24.0.

RESULTS

Table 1 shows the 12-month prevalence of ICD-9 defined psychiatric illnesses in adults aged 65+ in the county who used publicly funded mental health services (county base services and Medicaid). The most common psychiatric illnesses were psychoses (50 – 54%). The prevalence of "ill-defined and unknown causes of morbidity and mortality" was 27% among older adults covered by county base services and 6% among Medicaid recipients. Most (75%) of the claims filed by Medicaid recipients were for either outpatient or medication services. County base services recipients were more likely to use housing support services, intensive care management, social rehabilitation, emergency services, and mental health crisis intervention (data not shown).

Several differences emerged between the Medicaid and county funded group. The Medicaid group included more racial/ethnic minorities and was significantly younger than the county-funded group. Medicaid recipients had significantly more organic psychotic conditions (delirium, χ^2 (1, N=2098) = 15.43, p<.001), adult onset conditions (depressive disorders, χ^2 (1, N=2098) = 7.14, p<.01; adjustment reactions χ^2 (1, N=2098) = 4.12, p<.5), and psychoactive substance disorders (χ^2 (1, N=2098) = 37.78, p<.001) than the county-funded recipients. The county-funded recipients had significantly more disorders that were ill-defined or unknown χ^2 (1, N=2098) = 119.63, p<.001).

Table 1 also compares psychiatric diagnoses among older adults using publicly funded mental health services to older adults with private insurance. The prevalence of psychiatric conditions varied by insurance status. Diagnoses of neurotic conditions (18% vs. 8%; χ^2 (1, N=7692) = 124.50, p<.001) and dementias (3% vs. 1–2%; χ^2 (1, N=7692) = 12.15, p<.001) were more common among older adults with health plan insurance. Episodic mood disorders (37–35% vs. 23%; χ^2 (1, N=7692) = 31.61, p<.001) and schizophrenia (18–21% vs. 3%; χ^2 (1, N=7692) = 610.19, p<.001) were more common among county-funded and Medicaid recipients. The proportion of people with private insurance classified as having "ill-defined

and unknown causes of morbidity and mortality" was <1% (χ^2 (1, N=7692) = 1103.26, p<.001).

DISCUSSION

Among people with psychiatric diagnoses in a well-defined geographic area, the distribution of psychiatric diagnoses over 1 year varied by insurance coverage. Episodic mood disorders and schizophrenia were more common among county-funded and Medicaid recipients than among people with private insurance. The likelihood of a diagnosis of "ill-defined and unknown causes of morbidity and mortality" was much higher in patients receiving county base services.

Because patients in all three groups for the most part use the same county hospitals and mental health services providers, these differences in psychiatric diagnosis likely reflect different population risk factors, as well as different incentives or opportunities for providing mental health care across the three systems. County base services identify poorer older adults with sudden onset of severe psychiatric disorders. This signifies the importance of investigating access to mental health care and clinical outcomes among older adults with psychosis, particularly those who are underinsured. Our findings also indicate that a large number of elders using safety-net base county services have an unknown or unspecified psychiatric illness. It is possible that these adults have cognitive impairment as well as absence of social supports.

It is important to note that older adults using county base services are covered by Medicare (and possibly eligible for Medicaid). In fact, when presented with this analysis, the county Department of Human Services was surprised by the number of older adults using base services. Why do older adults use county base services for mental health care? First, while Medicaid provides access to many mental health services, the vast majority of elders do not meet Medicaid income requirements. Those who are slightly above the income requirement may receive other services funded by Medicaid, but mental health services are usually not included. Many older adults avoid the process of gathering the required paperwork to establish a sliding scale fee. If the application is not a simple and straightforward process, older adults may not be interested in applying. Second, older adults that use county-funded services may have some type of commercial insurance, but many avoid treatment because of the high co-pay costs. Third, community mental health providers receive a higher reimbursement rate from Medicaid than Medicare. As a result, providers sometimes are reluctant to accept those with lower paying insurance products. Finally, and perhaps most notable, mental health providers may be reluctant to accept older patients simply because they are not the typical mental health client. Providers may have the false impression that psychiatric illness is a normative part of aging or that older adults will not benefit from mental health treatment. Increased training in gerontology and geriatric psychiatry is critical to overcome this service barrier.

Our study had several limitations. First, generalizability of our findings could be a concern. While we examined all diagnoses from the county Department of Human Services and similar diagnoses in a major commercial insurer, we were limited to a single county. We did

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not have access to demographic data from insurers and were unable to adjust for such factors when comparing diagnoses by insurance provider. Thus, it is not possible in this research to separate differences in the populations covered (i.e., socioeconomic factors) from system-level factors (such as differences in incentives and opportunities to deliver psychiatric diagnoses) in explaining observed differences in the distribution of psychiatric diagnoses. We encourage other cities with data warehouses to keep detailed information for comparison. Second, we were limited in outcome measures and do not have information on the context of care, types of treatments that were prescribed, or patient progress across insurers. Finally, we did not have information on the frequency of contacts by insurer; it is unknown whether patients had a history of contact with mental health services or if this was their first time initiating contact with mental health service providers. Future research should examine the possibility of differential incentives to deliver psychiatric diagnoses by insurer type.

Despite these limitations, this report underscores the recommendations of the Institute of Medicine's (IOM) consensus report ("In Whose Hands?") for better coordination of mental health services for older adults. (5) We question where the responsibility for better coordination at the local level should fall. For example, should county health or human services departments be more engaged in systemic outreach to seniors? Our data suggest that screening and monitoring programs to improve recognition of psychiatric illnesses – especially psychosis – is important. These efforts may be accomplished best by highly trained case managers who could provide care in a location that is easily accessible to older adults, such as a senior center or their home. If county service providers were more engaged in mental health services to seniors, it may be possible to reduce adverse health events (e.g., emergency room visits and/or medical hospitalizations) that tend to co-occur with psychiatric illness. (8)

This report also highlights the IOM's recommendation for increased workforce training in geriatric mental health. (5) County agencies may need to modify their standards and credentialing procedures to require professional proficiency and continued training in geriatric mental health. County health and human services departments could consider partnering with universities that offer education for those who work with older adults.

Conclusions

We used county human services claims data to gather information on older adults who use publicly funded mental health services to manage their care. These data show that the prevalence of psychiatric conditions varies by insurance coverage, suggesting the relevance of low income and other social determinants for type of psychiatric disorder, as well as system-level factors. Future research is needed to identify how poverty or socioeconomic conditions increases the risk for psychiatric illness in later life. The prevalence of episodic mood disorders and schizophrenia were more common among county-funded and Medicaid recipients than adults with health plan insurance. Future research is needed to understand why Medicare-eligible adults use county-funded services to manage their mental health care.

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Table 1

Prevalence of Psychiatric Disorders by Insurance Type among Adults 60+ with a Psychiatric Diagnosis in Allegheny County, Pittsburgh PA, 2012

Psychiatric Diagnosis	Insured[a] (5594)	County funded (1457)	Medicaid[b] (641)	p-value[c]
ICD-9 Category Code, %				
Ill-defined and unknown causes of morbidity and mortality	0.43	26.8	5.90	<.001
Mental disorders diagnosed in childhood	1.25	0.80	1.90	0.58
Mental retardation	0.32	0.10	0.30	0.34
Neurotic disorders	18.18	7.80	8.10	<.001
Organic psychotic conditions	20.93	3.00	11.5	<.001
Alcoholic psychoses	0.39	0.00	0.31	<.05
Dementias	2.61	1.10	1.72	<.001
Drug psychoses	0.36	0.00	0.00	<.01
Other organic psychotic conditions (delirium)	12.37	1.17	3.74	<.001
Transient organic psychotic conditions	5.20	0.75	5.77	<.001
Other (primarily adult onset)	22.98	8.90	14.2	<.001
Acute reaction to stress	0.20	0.00	0.00	<.05
Adjustment reaction	6.95	2.68	4.37	<.001
Depressive disorder, not elsewhere classified	14.6	6.11	9.36	<.001
Special symptoms or syndromes, not elsewhere classified	0.97	0.07	0.47	<.001
Specific nonpsychotic mental disorders following organic brain damage	0.27	0.07	0.00	0.06
Other psychoses	33.55	50.2	54.10	<.001
Schizophrenic disorders	3.15	21.00	17.94	<.001
Episodic mood disorders	23.09	27.32	33.85	<.001
Paranoid states	0.13	0.21	0.31	0.26
Other nonorganic psychoses	7.18	1.30	1.87	<.001
Psychoactive substance	2.18	0.30	3.70	<.05

Notes. The prevalence of Other psychosocial circumstances (n=1), Personality disorders (n=7), and Psychosexual disorders (n=3) was low across all insurance groups.

[a]Insurance coverage was through the UPMC Health Plan

[b]Under PA's Medicaid expansion, HealthChoices coverage is extended to all adults with incomes up to 138 percent of the federal poverty level. Older adults covered through HealthChoices receive the full range of mental health services, including outpatient mental health, crisis services, inpatient mental health, behavioral health rehabilitation services, residential treatment facility care, and extended acute care services.

[c]Insured vs. Underinsured (County funded and Medicaid)