

KEY POINTS

Schizophrenia poses higher economic burden on the US healthcare system as compared to their counterparts

BACKGROUND

- Schizophrenia is a chronic, debilitating disease affecting around 20 million people worldwide and 1% of the US population, with annual healthcare costs exceeding \$155 billion
- Several factors, including age, gender, insurance status, and comorbid conditions, have been identified to be associated with high costs of schizophrenia
- Limited national data is available on recent healthcare resource utilization and medical expenditures for patients with schizophrenia vs. those without schizophrenia

OBJECTIVES

This study evaluated incremental healthcare expenditure among schizophrenia patients vs. those without schizophrenia in the United States (US)

METHODS

Study Design and Data Source:

Retrospective cross-sectional study using 2012-2019 Medical Expenditure Panel Survey (MEPS) Full-Year Consolidated Data files.

Study Population:

Adult patients with Schizophrenia diagnosis were identified using the following conditions:

Inclusion Criteria:

- Non-institutionalized US civilians who are in scope during the study period between 2012-2019
- Patients with Schizophrenia diagnosis (using ICD-9-CM codes: 295.xx and 298.xx, and ICD-10-CM code: F20.xx).
- Patients aged 18 years or above

Exclusion Criteria:

- Patients with negative person weights

Outcome Measures:

Annual healthcare expenditure and HCRU: Using Inverse Probability of Treatment Weighting (IPTW) -based estimates

Statistical Analysis:

Generalized Linear Model (GLM) with gamma distribution, log link was employed to compare the annual healthcare expenditures among the patients with and without schizophrenia.

RESULTS

Demographic characteristics:

The study identified 463 patients, representing 0.47 million schizophrenia patients in the US, with an overall prevalence of 1.82%.

Adjusted annual mean costs:

- The total annualized expenditure among the schizophrenia cohort was estimated to be \$9.23 billion in 2021 USD.
- The adjusted annual mean total costs among patients with schizophrenia (\$19,539 [SE=\$1,592]) were significantly higher than those without schizophrenia (\$9,925 [SE=\$ 179])
- Prescribed medicines were the largest drivers of the total annual expenditures among patients with schizophrenia (Mean: \$6,580 [SE=\$551]) compared to non- schizophrenia patients (Mean: \$2,816 [SE=\$76]).

Figure 1: Adjusted annual mean costs

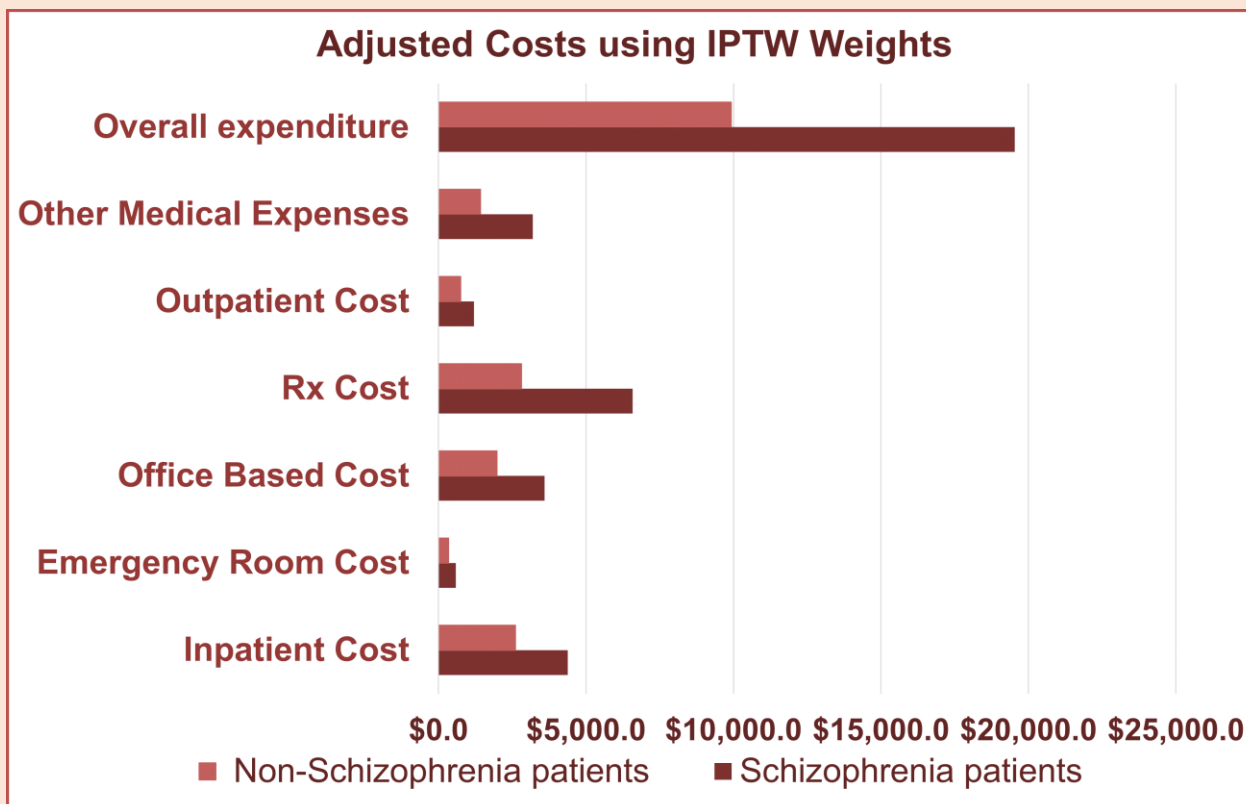
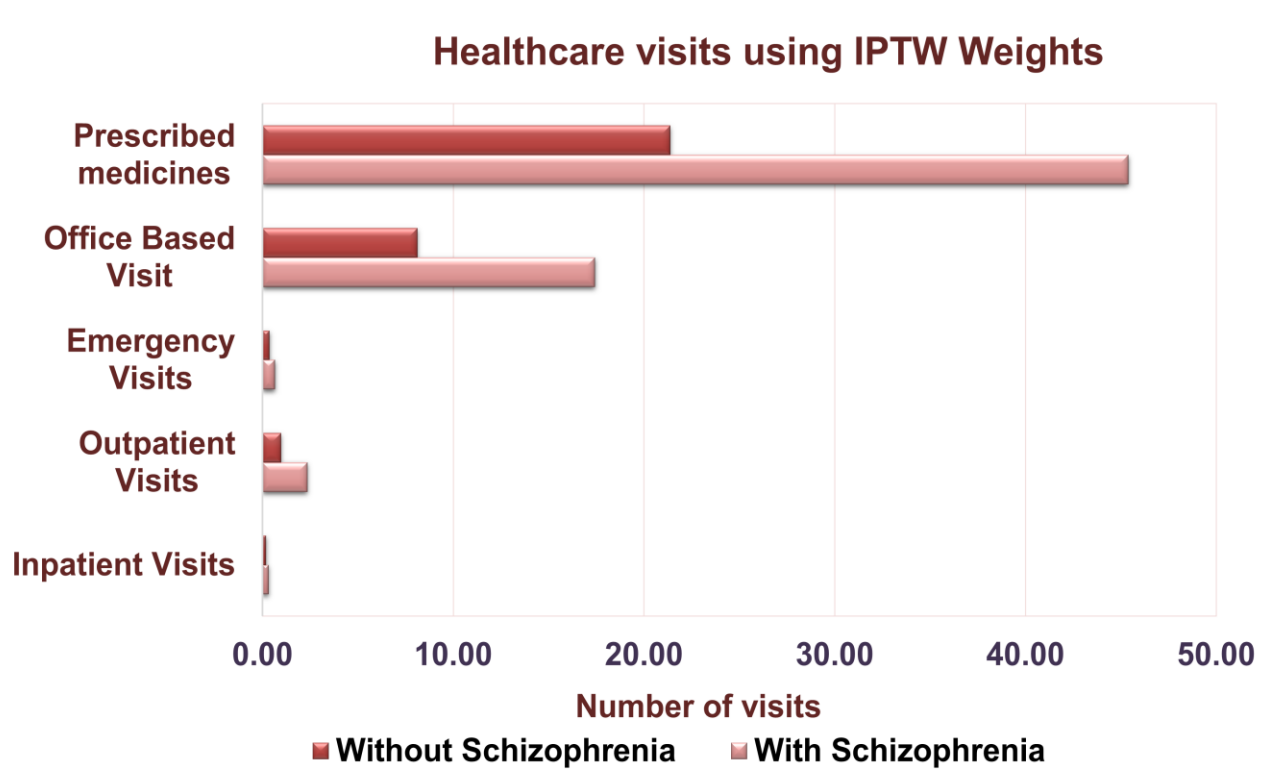


Figure 2: Adjusted annual mean visits



Adjusted annual mean visits:

- Pharmacy visits were the largest drivers of the Healthcare resource utilization (HCRU) among patients with schizophrenia (Mean: 45.39 [SE= 2.89]) compared to non- schizophrenia patients (Mean: 21.37 [SE= 0.29]).
- The schizophrenia cohort had higher annual all-cause per-patient health care utilization relative to comparators.
- Relative to non-Schizophrenia patients, schizophrenia patients had a higher direct medical cost (Incidence rate ratio (IRR) of 1.97 (95% CI:(1.68,2.31))).

CONCLUSIONS

- This study highlighted a considerable economic burden among patients with schizophrenia, especially prescription costs.
- Given the high prescription burden, future therapeutic approaches are needed to address the economic burden of schizophrenia

REFERENCES

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Table 1: IPTW-adjusted Cohort Characteristics

Characteristics	Schizophrenia patients (N=463)		Non- Schizophrenia patients (N= 246,926,871)	
	%	SE	%	SE
Age (years)				
Mean (SE)	50.37 ± (1.06)		50.02 ± (0.20)	
Gender				
Male	59.5	1.9	58.8	1.1
Female	40.5	2.0	41.2	0.8
Race/Ethnicity				
Non-Hispanic White	66.2	2.4	66.4	1.3
Non-Hispanic Black	24.3	1.3	24.3	0.6
Hispanic	1.2	0.3	1.1	0.1
Others And Unknown	8.4	1.1	8.2	0.2
Geographic region				
Northeast	20.1	1.8	23.8	0.5
Midwest	25.6	1.9	25.4	0.5
South	35.6	1.6	30.6	0.8
West	18.7	1.7	20.2	0.5
Smoking Status				
Yes	31.4	1.7	34.6	0.7
No	60.6	1.9	57.8	1.1
Unknown	8.1	0.8	7.6	0.2
CCI				
0	58.9	1.8	58.9	1.1
1	20.4	1.3	20.4	0.4
>=2	20.7	1.4	20.8	0.4
Poverty Status				
Poor	31.3	1.6	34.9	0.6
Near poor	10.4	0.8	9.8	0.2
Low income	22.2	1.5	22.2	0.4
Middle income	21.4	1.5	19.8	0.4
High income	14.6	1.3	13.3	0.3

CCI: Charlson Comorbidity Index; SE: Standard Error

LIMITATIONS

- The study includes prevalent non-institutionalized patients with schizophrenia who respond to the survey during measurement year, which may be a threat to external validity.
- Patients were identified using ICD-10 codes only, and given the stigma related to the disease, physicians are known to give non-schizophrenia related diagnoses until the disease is confirmed. Additionally, conditions in MEPS are self-reported by the patients leading to potential underreporting of schizophrenia patients
- MEPS is survey data, which comes with inherent biases such as under-reporting, missing data, and recall bias
- Due to the low prevalence of schizophrenia, 4 years of MEPS data were pooled to generate sufficient sample size and reliable estimates. Some of the patients surveyed may be present in more than 1 year of the data leading to non-independent observations used in the regression model

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