Demographic Characteristics, Health Care Cost, and Treatment Patterns Among Patients With Major Depressive Disorder (MDD) and Suicidal Ideation (SI) or Suicide Attempt (SA) Who Received Treatment at a Hospital

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BACKGROUND

- Major depressive disorder (MDD) is the most prevalent mental health condition and the psychiatric diagnosis most commonly associated with suicide^{1,2}
- An estimated 60% of patients with MDD experience suicidal ideation (SI), and 10% to 20% attempt suicide at least once during their lifetime³
- Patients with MDD with SI and intent or suicide attempt (SA) who require immediate intervention are often evaluated in the emergency room (ER) and then hospitalized, but little is known about the burden of this co-occurrence or the treatment patterns before and after hospitalization

OBJECTIVE

• To examine the characteristics, health care costs, and treatment patterns of patients with MDD with SI/SA in a real-world setting

METHODS

Study Design

- This retrospective cohort study used claims data from the IBM MarketScan Commercial Claims and Encounters Database (Figure 1)
- **Study period**: 04/01/2015 to 10/01/2018
- Intake period: 10/01/2015 to 10/01/2017

Index MDD Date (earliest cohort-defining date): Diagnosed study cohorts:

- MDD: ≥2 outpatient diagnoses or ≥1 inpatient/ER diagnosis, or ≥1 antidepressant fill with ≥1 diagnosis within 90 days of the fill
- MDD with SI/SA (MDD+SI): ≥1 hospital encounter with MDD and SI/SA diagnoses and ≥1 antidepressant fill
- Baseline period: 6 months prior to the Index MDD Date
- Follow-up period: ≥12 months after the Index MDD Date or until disenrollment or the end of the study period

Inclusion and Exclusion Criteria

- 18 to 64 years of age as of the Index MDD Date
- ≥6 months of continuous enrollment prior to the Index MDD Date
- ≥12 months of continuous enrollment after the Index MDD Date
- Patients were excluded if they had a diagnosis for any of the following conditions at any time during the study period:
- MDD with psychotic features, schizophrenia, bipolar disorder, personality disorders (borderline and antisocial),
 obsessive-compulsive disorder, psychotic disorders, moderate or severe substance use disorder (except nicotine and caffeine),
 autism, dementia, and intellectual disability

Outcome Measures

- Demographic and clinical characteristics of patients, and intake site of the index MDD+SI event
- Treatment adherence:
- Proportion of days covered (PDC)
- Frequencies and proportions of patients achieving PDC >80%
- All-cause and mental health-related health care costs of study patients in the 6-month pre- and postindex periods
- Treatment patterns among inpatient MDD+SI patients during the 6 months postindex MDD+SI event

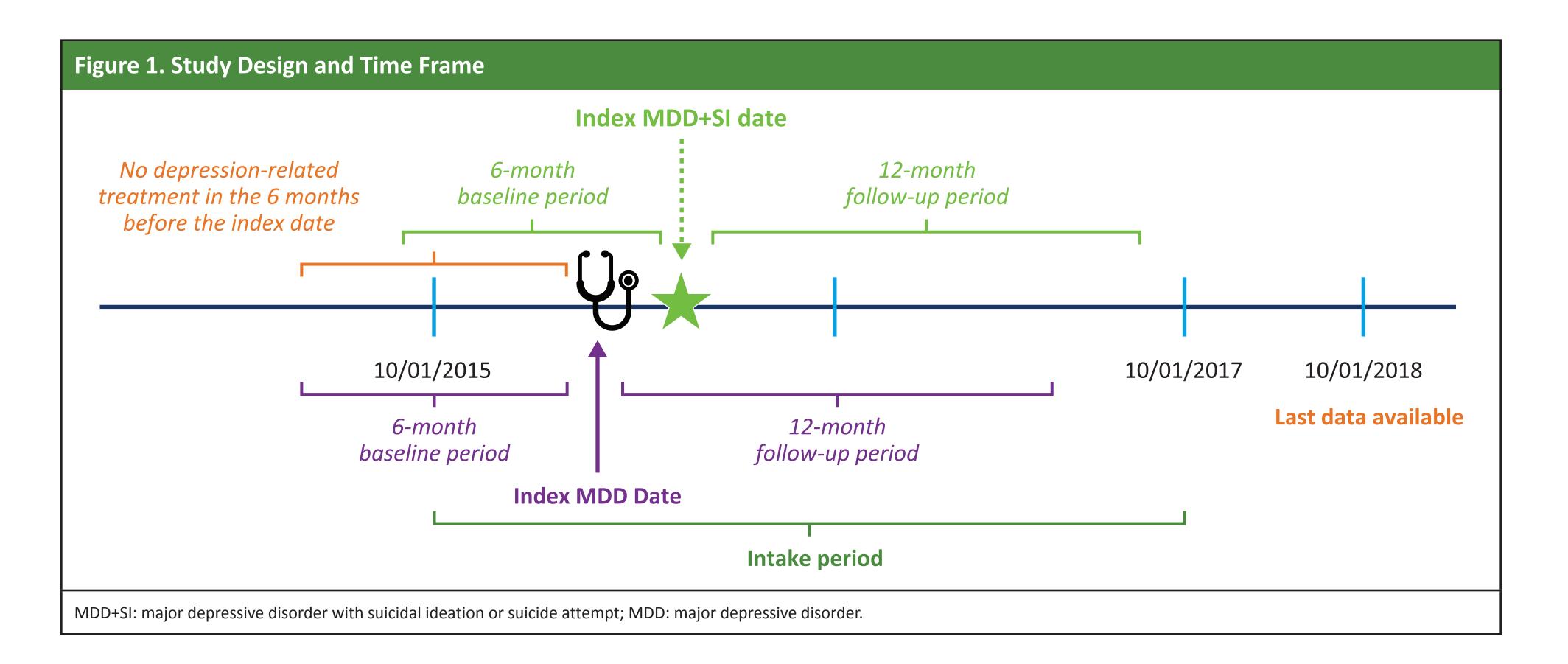
RESULTS

- Of 722,802 patients with MDD, 2,626 (0.4%) had MDD+SI. Of these, 67.5% were female and the mean (standard deviation [SD]) age was 35.5 (14.9) years (**Table 1**)
- Most MDD+SI patients (93%) were hospitalized; 64.4% were admitted directly and 28.6% were admitted following an ER visit.
 The mean (SD, median, range) hospital length of stay was 9.0 (12.3, 6.0, 1-227) days (Figure 2)
- In the 6-month postindex period, mean (SD) all-cause costs were \$35,950 (\$91,418) for the MDD+SI cohort and \$14,402 (\$39,019) for the MDD cohort (**Table 2**)
- within 6 months of discharge, 29.3% had a psychiatric visit, which occurred within a mean (SD, median, range) of 12.0 (18.6, 6.0, 1-179) days (**Figure 3**)

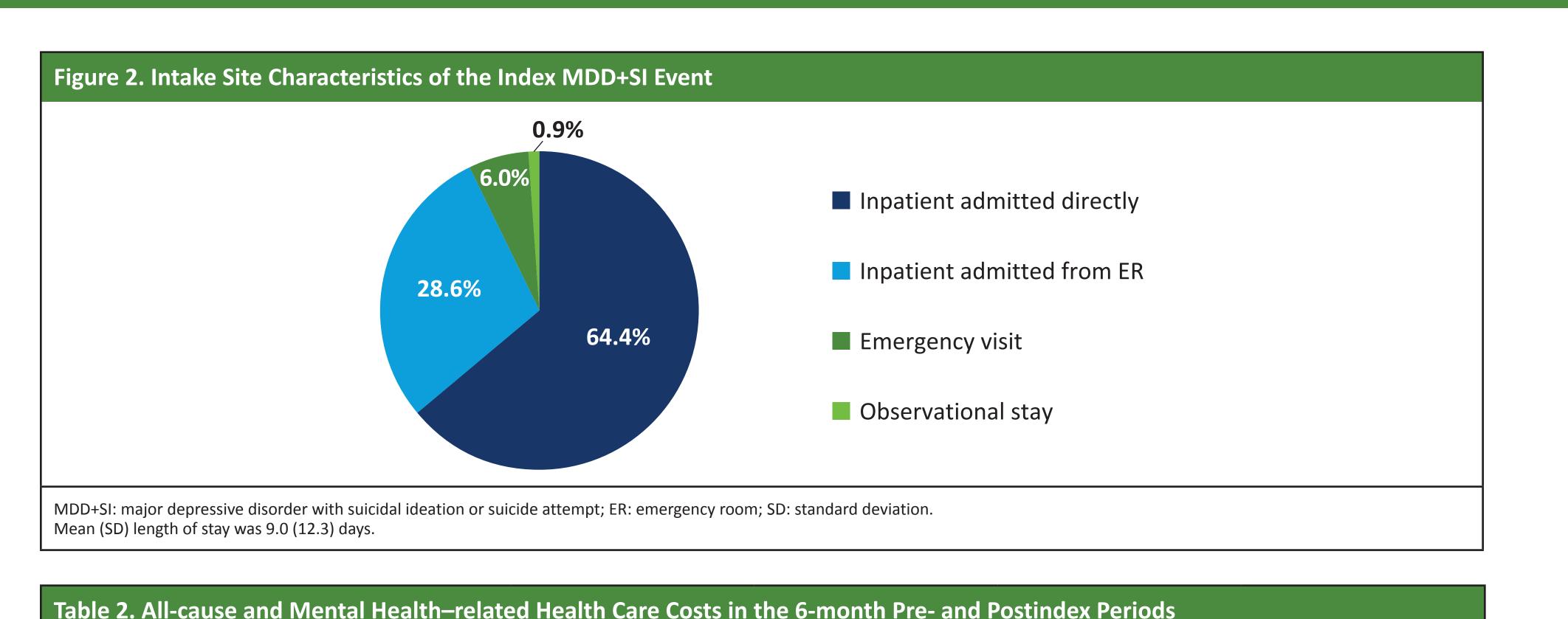
 In the MDD+SI cohort during the 6 months postindex MDD+SI, 94.2% of natients were treated with an antidepressant/antipsychotic

• Of the 2,625 MDD+SI patients discharged, 18.5%, 23.2%, and 26.4% were readmitted within 30, 60, or 90 days of discharge, respectively;

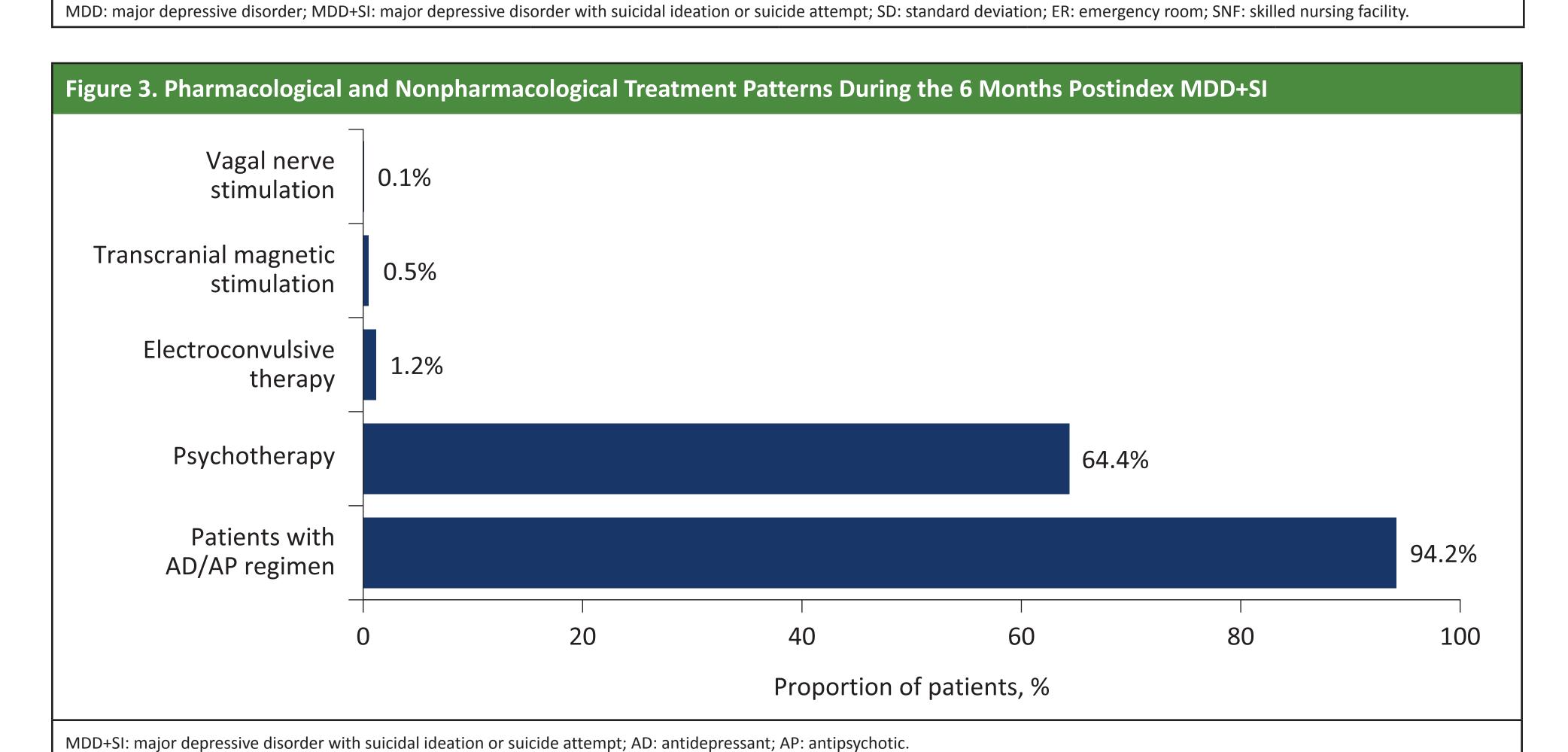
- In the MDD+SI cohort during the 6 months postindex MDD+SI, 94.2% of patients were treated with an antidepressant/antipsychotic regimen (Figure 3), and 40% of patients had ≥80% treatment adherence
- The likelihood of not having a reimbursed psychiatric visit during the 6 months following discharge was greater than 50% (Figure 4)

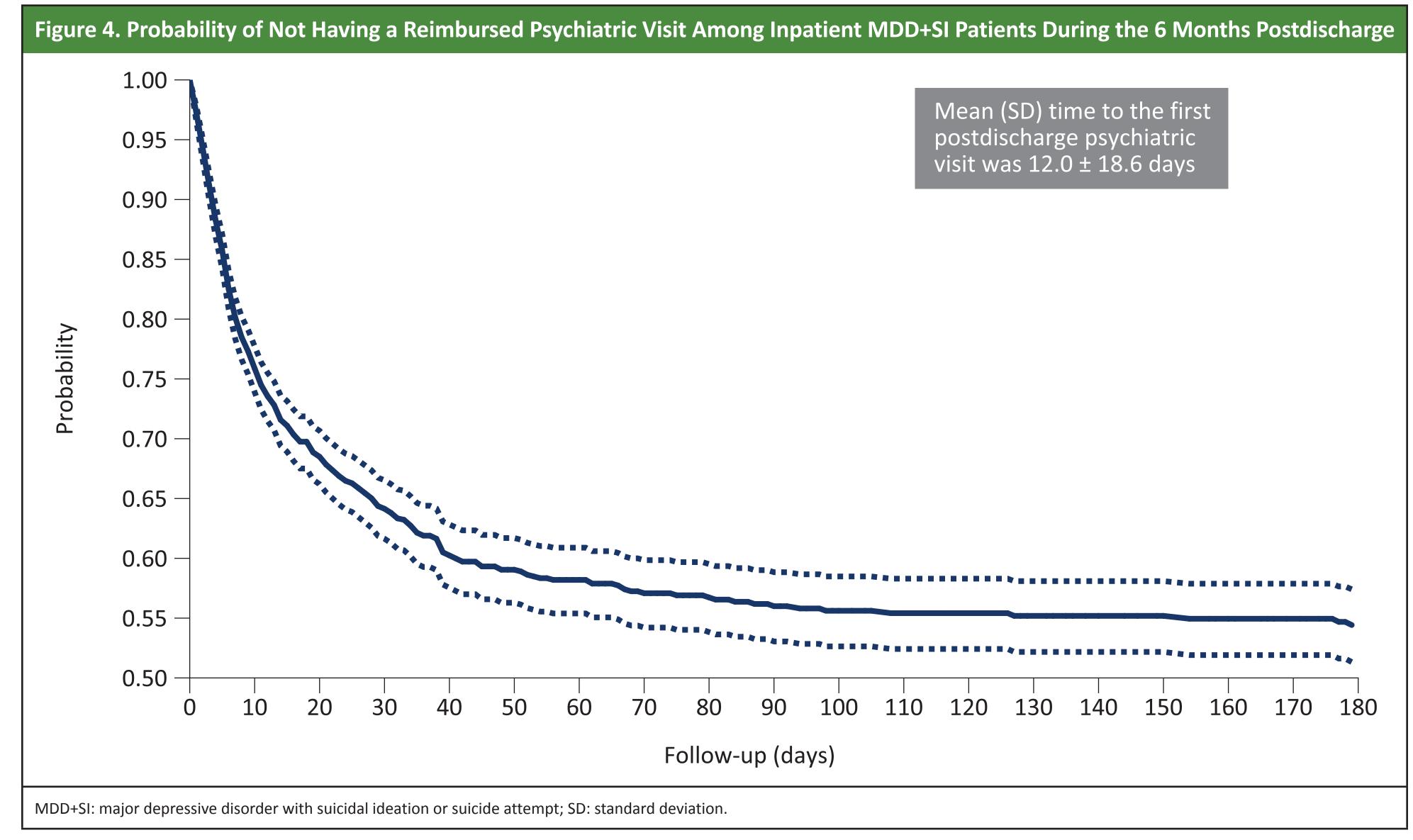


Measures Age as of index date, years, mean (SD) Quan-Charlson Comorbidity Index score, mean (SD) Female, n (%) Geographic region, n (%) Northeast West Midwest South	N=2,626 35.5 (14.9) 0.30 (0.91) 1,773 (67.5) 333 (12.7) 731 (27.8) 1,245 (47.4)
Quan-Charlson Comorbidity Index score, mean (SD) Female, n (%) Geographic region, n (%) Northeast West Midwest	0.30 (0.91) 1,773 (67.5) 333 (12.7) 731 (27.8)
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Northeast West Midwest	731 (27.8)
West Midwest	731 (27.8)
Midwest	
	1.243 (4.4)
South	314 (12.0)
Unknown	3 (0.1)
Benefit design type, n (%)	3 (0.1)
HMO	270 (10.3)
PPO	1,420 (54.1)
CDHP/HDHP	575 (21.9)
Others ^a	361 (13.7)
General comorbid conditions, n (%)	301 (13.7)
Hypertension	453 (17.3)
Hyperlipidemia	328 (12.5)
Diabetes	214 (8.1)
Obesity	285 (10.9)
Cancer	86 (3.3)
Mental health-related disorders, n (%)	00 (3.5)
Attention deficit hyperactivity disorder	68 (2.6)
Posttraumatic stress disorder	79 (3.0)
Anxiety	962 (36.6)
Index year (diagnosis year), n (%)	
2015	331 (12.6)
2016	1,161 (44.2)
2017	1,134 (43.2)



	MDD cohort N=722,802		MDD+SI cohort N=2,626	
	Preindex period	Postindex period	Preindex period	Postindex period
All-cause costs, \$, mean (SD)				
Total all-cause costs	6,547 (23,052)	14,402 (39,019)	11,016 (42,350)	35,950 (91,418)
Total all-cause medical costs	4,968 (21,314)	10,847 (33,687)	9,522 (40,761)	32,533 (88,418)
Inpatient hospitalization	1,717 (16,844)	3,299 (21,602)	4,473 (32,995)	21,068 (73,658)
ER visit	276 (1,278)	575 (2,156)	802 (2,502)	1,244 (3,407)
Office visit	411 (585)	970 (1,040)	498 (642)	1,099 (1,599)
Outpatient encounter	2,557 (10,339)	5,984 (20,564)	3,740 (13,162)	9,088 (25,192)
SNF/long-term care	7 (334)	19 (738)	10 (233)	34 (640)
Total all-cause pharmacy costs	1,579 (7,456)	3,555 (16,748)	1,494 (4,790)	3,417 (11,167)
Mental health-related costs, \$, mean (SD)				
Total mental health-related costs	_	2,364 (7,170)	_	12,565 (21,246)
Total mental health-related medical costs	_	1,432 (4,893)	_	11,644 (20,808)
Inpatient hospitalization	_	83 (1,679)	_	7,948 (16,034)
ER visit	_	14 (207)	_	126 (812)
Office visit	_	304 (572)	_	481 (1,235)
Outpatient encounter	_	1,025 (4,304)	_	3,063 (9,206)
SNF/long-term care	_	6 (353)	_	26 (615)
Total mental health-related pharmacy costs	_	932 (5,178)	_	921 (3,382)





LIMITATIONS

- Administrative claims data are subject to potential coding errors, as the data were intended for billing purposes
- Because medication data are based on filled prescriptions, the number of unfilled prescriptions is unknown, and over-the-counter medications (eg, aspirin) are not represented
- Similarly, medications used during hospitalization are not captured in the IBM MarketScan Commercial Claims and Encounters Database and therefore are not represented in our outcome measures
- Study results are generalizable only to the US population

CONCLUSIONS

- Our study characterized adults with co-occurring diagnoses of MDD and SI/SA in a hospital encounter and found that these patients were most often hospitalized directly or following an ER visit, and that the likelihood of a follow-up psychiatric visit after discharge was notably low
- Patients with MDD and SI/SA have greater health care costs than MDD patients, revealing a significant economic burden on the health care system

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DISCLOSUR

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