Patterns and Quality of Treatment for Patients With Major Depressive Disorder in Routine Psychiatric Practice

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Recent studies have shown that antidepressants are increasingly used for the treatment of depression. The proportion of outpatients being treated for depression who were receiving antidepressants more than doubled from 1987 to 1997, increasing from 37.3% to 74.5% (1). The overall number of individuals receiving treatment for depression has also increased substantially in recent years. The most recent epidemiologic data from the National Comorbidity Survey (2) indicated that in 2002 an estimated 3.7% of the U.S. population received treatment for major depression in the previous year.

Because psychiatrists tend to treat clinically complex patients with significant impairment (3) and are the primary specialty mental health clinicians licensed to prescribe pharmacologic treatments in most states in the United States, characterizing their patients and the treatment these patients receive is of particular interest. Despite the unique role of psychiatrists in the treatment of depression, there is a paucity of clinically detailed national data on the characteristics of psychiatric patients with major depressive disorder (MDD) and the treatment they receive. Analyses of patterns of treatment consistent with practice guideline treatment recommendations are of particular interest, because evidence-based guideline recommendations that are consistent with professional standards provide accepted measures of quality (4). Understanding patterns of treatment and factors associated with guideline concordance is also valuable for informing future practice guidelines and quality improvement interventions. Because patients in routine practice differ significantly from those in clinical trials (5), and because a significant proportion of patients do not adequately respond to treatments recommended in guidelines, studying patterns and outcomes of treatments provided in routine treatment settings may provide particularly useful information.

The primary aims of this study were threefold: to describe the diagnostic and clinical characteristics of patients with MDD treated in routine psychiatric practice settings; to characterize the types and combinations of psychopharmacologic and psychosocial treatment they receive; and to study patterns of conformance with key APA practice guidelines on the treatment of MDD (6).

Method

Study Population and Data Collection Methods

This study used cross-sectional data from the American Psychiatric Institute for Research and Education (APIRE) Practice Research Network (PRN) 1999 Study of Psychiatric Patients and Treatments (SPPT). The instrument and methods used were replicated from the 1997 SPPT and are described in detail elsewhere (3), so only a summary is provided here. The SPPT sample included 784 eligible psychiatrists who were APA members

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CME Disclosure Statement

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and spent at least 15 hours a week in direct patient care. Of these, 48% (n=378) had been randomly selected and recruited from the APA membership rolls to ensure representativeness across public and private, inpatient and outpatient, and managed care and non–managed care treatment settings; the remainder (n=406) were self-selected APA member volunteers recruited nationwide by the APA central office and local district branches.

The overall response rate to the study was 78% (n=615); 77% (n=291) of those in the randomly selected group and 79% (n=324) of those in the volunteer group completed the study. Participating psychiatrists implemented the study on a randomly assigned start day and time and provided general information on the next 12 consecutive patients they saw in face-to-face treatment. More extensive, clinically detailed data were provided on three of the 12 patients, who had been systematically preselected. All patients were passively informed about the PRN and data collection activities through PRN pamphlets and psychiatrist participation certificates that were posted in the psychiatrists' practice settings. No personal identifying patient information was collected in the SPPT.

Psychiatrists provided detailed clinical data, including DSM-IV principal and comorbid axis I–V diagnoses on 1,843 patients. For this study, we focused on those who were adults diagnosed by the psychiatrist as having MDD that was not in full or partial remission; this subgroup comprised 533, or 31% of the patients in the SPPT. The fifth digit of the DSM-IV diagnostic code was used as an indicator of illness severity to categorize each patient's illness as mild, moderate, severe, or severe with psychotic features. Patients for whom the diagnostic code was 311.00 (depressive disorder not otherwise specified) and those for whom the fifth digit was missing or equal to zero were categorized according to the psychiatrist's rating of their depressive and psychotic symptoms. Those with severe depressive symptoms and mild, moderate, or severe psychotic symptoms were categorized as "severe with psychotic symptoms," and those with no psychotic symptoms were categorized by the level of their depressive symptoms, with none and mild combined into "mild."

To generate national estimates, a three-stage propensity score weighting scheme was used. The weight used in the first stage adjusted for discrepancies between a random sample of APA members who responded to the 1998 National Survey of Psychiatric Practice (NSPP) and the APA membership population profile on variables contained in APA's membership database, such as age, sex, race/ethnicity, region of country, and board certification (7). The weight used in the second stage adjusted for discrepancies between the psychiatrists in the entire PRN membership (including both the randomly selected recruits and the volunteer members) and the NSPP sample profile on relevant demographic information and the extensive set of characteristics assessed in the NSPP (e.g., involvement in medical research, affiliation with a medical school, and outpatient practice setting). The weight used in the third stage adjusted for the fact that the probability of any one patient's being selected into the study was inversely proportional to the number of patients being seen by the psychiatrist during the week of sampling and during the specific period when the patient was seen. Stabilization was used at each stage of weighting using quintile medians to reduce the effect of outliers.

STUDY MEASURES

The key variables from the 1999 SPPT that were examined in this study for the subgroup of adult patients with MDD not in remission included sociodemographic characteristics; health plan characteristics; diagnostic and clinical characteristics, including data on DSM-IV axes I–V and on levels of anxiety, depression, and psychotic symptoms, medication side effects, and treatment compliance; the type of treatment setting; and the types and combinations of psychopharmacologic and psychosocial treatments provided by the psychiatrist and other providers.

To assess conformance with practice guidelines, key evidence-based treatment recommendations from the revised APA Practice Guideline for the Treatment of Patients With Major Depressive Disorder (6) were used. Six key guideline recommendations that could be reasonably operationalized using this database were studied: 1) for mild depression, prescribing an antidepressant medication and/or psychotherapy; 2) for moderate depression, prescribing an antidepressant and/or psychotherapy, unless ECT is provided; 3) for severe depression, prescribing an antidepressant (with or without psychotherapy) or ECT; 4) for psychotic depression, prescribing both antidepressant and antipsychotic medications or ECT; 5) not prescribing antianxiety medications as the sole psychopharmacologic treatment (i.e., antianxiety medications should not be prescribed without also prescribing an antidepressant); 6) for patients with significant psychosocial stressors, interpersonal difficulties, treatment compliance problems, or comorbid axis II disorders, providing psychotherapy along with any other treatments.

STATISTICAL ANALYSIS

Univariate and bivariate (Wald chi-square and Wald F tests) analyses were performed with SUDAAN (8) to adjust for the weights and the nested sample design to generate nationally representative estimates.

RESULTS

PATIENT SOCIODEMOGRAPHIC AND HEALTH PLAN CHARACTERISTICS

Most patients were white (81.1%), and African Americans and Hispanics each constituted 7.3% of the sample. Two-thirds (67.9%) of the patients were female. Sixty-one percent were in the 36–64-year age group, 24.2% in the 18–35 group, and 14.9% in the 65 and older group. Overall, 56.5% had more than a high school education, 52.5% were currently without a partner, and 49.3% were employed, with 28.5% of the patients not working because of a mental or physical disability. Employment status was significantly related to severity of depression (p=0.004). Patients with severe depression and those with psychotic depression were more likely than those with mild or moderate depression to be unemployed because of a mental or physical disability (31.3% and 53.0%, respectively).

Overall, 40.9% of the patients were in a managed care plan and 27.7% in a non–managed care plan, and 17.7% had no health coverage. Private insurance was the most commonly used payment source (43.0%), followed by self-pay (17.6%), Medicaid (14.0%), and Medicare (10.7%).

DIAGNOSTIC AND CLINICAL CHARACTERISTICS

Of the 533 patients in this study, 43.1% had moderate depression, 28.2% severe depression without psychosis, 18.3% mild depression, and 10.4% severe depression with psychosis. Comorbid axis I conditions were present in 51.0%, with anxiety the most common (24.8%), followed by substance use disorders (18.0%) (Table 1). The presence of any comorbid axis I disorder and the presence of a comorbid substance use disorder were both significantly associated with the severity of depression. Patients with psychotic depression had the lowest rates overall of comorbid axis I disorders. Reported illicit drug use by patients increased with the severity of depression.

Over half of the patients (51.8%) had moderate to severe anxiety symptoms, and 6.1% had moderate to severe psychotic symptoms. The presence of moderate to severe anxiety symptoms was related to the severity of depression (p=0.003), although the illness severity groups had comparable rates of comorbid anxiety disorders. Overall, about a quarter (23.7%) of the patients had a comorbid personality disorder, and half (50.3%) had a comorbid general medical condition. The treating psychiatrist rated the patient's general health status as fair to poor in more than a third of cases (37.4%).

The mean Global Assessment of Functioning (GAF) score for the study sample was 56.3 (SE=0.8); one-fifth (20.7%) had scores under 50. Overall, 36.8% of the patients had a prior psychiatric hospitalization. Prior hospitalization was significantly associated with the severity of depression (p=0.002); two-thirds (66.5%) of the patients with psychotic depression had a prior hospitalization, compared with one-quarter (24.7%) of those with mild depression. Disability in various spheres of life was common, with 46.3% of the patients having moderate to severe disability in work or school, 61.9% in social functioning, 44.5% in parenting or family functioning, and 35.3% sexual functioning. Patients with severe depression or psychotic depression had the highest rates of reported disability across all functioning domains measured.

Overall, 54.9% of the patients in the sample had sleep problems, with the highest rates reported for the groups with severe MDD and severe MDD with psychotic features. One-fifth (19.3%) of the patients were experiencing medication side effects, and a similar proportion (17.5%) had treatment compliance problems.

The most common axis IV problems reported were problems with the primary support group (58.9%), problems with the social environment (44.9%), occupational problems (39.8%), and economic problems (27.2%). Having housing problems (10.1% of the patients) was associated with severity of depression (p=0.024).

PATTERNS OF PSYCHOPHARMACOLOGIC AND PSYCHOSOCIAL TREATMENT

Most of the patients (79.6%) were treated in outpatient settings, while 14.5% were treated in inpatient settings, and 5.9% in partial/intermediate treatment settings (Table 1). The most common type of practice setting was the solo office practice (41.3%), followed by the group office practice (25.7%) and the outpatient clinic (17.1%). Severity of depression was significantly associated with inpatient treatment and hospital-based treatment (p<0.001 in both cases).

Most patients (91.0%) received at least an antidepressant medication, and 26.6% received two

Table 1. Diagnostic and Clinical Characteristics of 533 Patients With Major Depressive Disorder Not in Remission

	All		Severity of Illness										
			Mild		Moderate		Severe		Severe With Psychotic Symptoms				
	%	SE	%	SE	%	SE	%	SE	%	SE	χ^2	df	P
Comorbid disorder													
Anxiety	24.8	2.3	28.8	5.6	26.0	3.6	24.1	4.3	14.4	5.7	3.4	3	0.329
Schizophrenia	2.6	0.9	1.8	1.3	4.5	1.9	0.5	0.4	1.5	1.5	4.9	3	0.182
Substance use disorder	18.0	2.1	22.8	5.0	15.3	3.0	23.1	4.5	7.1	3.6	8.7	3	0.034
Axis I comorbidity	51.0	2.8	63.9	6.0	50.1	4.1	52.4	6.0	27.9	7.1	11.1	3	0.011
Axis II personality disorder	23.7	2.5	28.7	6.5	22.0	3.5	23.5	4.3	22.4	6.4	0.9	3	0.835
Axis III general medical condition	50.3	2.8	56.7	6.3	44.7	4.4	52.7	5.1	57.5	8.1	3.6	3	0.314
Axis IV psychosocial problems													
Primary support	58.9	2.7	52.9	5.8	61.4	4.0	58.1	4.9	60.1	7.7	1.5	3	0.680
Occupation	39.8	2.7	32.8	6.5	43.5	4.1	41.1	5.0	31.5	7.4	3.3	3	0.343
Economic	27.2	2.6	25.1	6.2	24.6	3.7	33.3	5.6	26.4	6.4	1.8	3	0.626
Related to social environment	44.9	2.9	34.9	6.5	42.7	4.3	49.0	5.2	62.1	8.3	7.1	3	0.070
Education	5.5	1.2	4.3	2.7	6.3	2.1	4.2	1.4	8.0	3.8	1.4	3	0.696
Housing	10.8	1.9	3.6	1.9	10.6	2.9	13.0	3.6	18.7	6.3	9.5	3	0.024
Crime/legal system	8.4	1.7	6.9	3.5	6.9	2.1	9.5	3.3	15.0	5.9	2.1	3	0.558
Access to health care	10.1	1.7	3.7	2.6	12.1	2.9	7.5	2.5	19.9	7.0	7.7	3	0.052
Moderate/severe symptoms													
Anxiety	51.8	3.0	31.0	6.4	53.2	4.3	58.1	6.1	65.1	8.0	13.9	3	0.003
Psychotic	6.1	1.2	0.5	0.5	4.1	1.7	1.2	0.9	39.0	7.9	19.9	3	0.000
Moderate/severe disability in work	46.3	2.8	29.8	5.5	41.7	3.9	53.2	5.4	78.5	6.6	25.6	3	0.000
Moderate/severe disability in parenting/family	44.5	2.8	28.7	6.4	40.6	4.1	54.0	5.4	64.6	7.9	15.5	3	0.001
Moderate/severe disability in social function	61.9	2.7	37.6	6.6	61.4	4.0	68.9	5.2	89.1	5.0	31.3	3	0.000
Moderate/severe disability in sexual function	35.3	2.9	32.8	6.3	34.0	4.0	34.7	5.1	46.8	8.6	2.1	3	0.544
Medication side effects	19.3	2.1	22.1	5.3	19.6	3.2	16.9	3.8	19.5	6.0	0.7	3	0.878
Current illicit drug use problem	4.5	1.1	0.8	0.6	3.3	1.5	7.5	2.9	8.0	3.7	9.2	3	0.027
Current alcohol use problem	8.8	1.6	7.7	3.1	8.7	2.3	11.4	3.3	3.5	2.1	4.7	3	0.198
Current treatment compliance problem	17.5	2.0	17.6	5.1	12.5	2.7	23.7	4.2	22.6	6.4	5.8	3	0.122
Prior psychiatric hospitalization	36.8	2.7	24.7	4.8	35.7	3.8	36.0	5.2	66.5	8.1	14.8	3	0.002
Sleep problems	54.9	2.8	37.7	6.5	54.6	4.2	62.6	4.9	66.4	7.6	11.1	3	0.011
Fair to poor health status	37.4	2.7	31.6	5.7	35.1	3.9	41.8	5.1	46.6	8.6	3.3	3	0.345
Nicotine problem	16.0	2.2	12.2	4.4	14.7	2.9	19.3	4.1	19.3	7.0	1.9	3	0.596
Mean GAF Score	56.3	0.8	64.5	1.3	57.7	0.9	52.2	1.4	46.1	2.3	22.9	3	0.000
GAF score 50 or less	20.7	2.2	6.3	2.4	14.9	2.8	28.5	4.5	51.5	8.7	30.6	3	0.000
Mean length of treatment, months	26.2	2.2	34.7	4.8	25.4	2.9	22.0	4.0	25.7	9.2	1.4	3	0.229
Locus of treatment													
Inpatient	14.5	2.0	2.6	1.7	9.7	2.4	22.5	4.5	36.0	8.1			
Outpatient	79.6	2.5	96.8	1.8	83.5	3.2	70.6	5.2	55.2	8.6			
Partial hospitalization	5.9	1.7	0.5	0.5	6.8	2.4	6.9	3.1	8.8	5.1	34.9	6	0.000
Type of practice setting													
Solo	41.3	3.2	36.5	6.3	43.7	4.6	42.1	5.9	36.3	9.0			
Group	25.7	3.2	33.0	6.4	26.8	4.3	25.0	6.5	8.1	4.0			
Clinic	17.1	2.5	25.2	6.5	18.4	3.6	9.3	3.2	17.4	7.9			
Hospital based	15.9	2.2	5.3	2.9	11.1	2.6	23.6	4.8	38.2	8.6	30.0	9	0.000

Table 1. Diagnostic and Clinical Characteristics of 533 Patients With Major Depressive Disorder Not in Remission (Continued)

	All		Severity of Illness										
			Mild		Moderate		Severe		Severe With Psychotic Symptoms				
	%	SE	%	SE	%	SE	%	SE	%	SE	χ^2	df	P
Type of health plan													
Managed care	40.9	2.9	47.9	6.6	41.8	4.4	39.8	5.8	27.1	7.6			
Non–managed care	27.7	2.4	28.4	5.3	26.6	3.7	26.5	4.7	34.3	8.0			
None	17.7	2.2	10.4	3.6	13.3	3.2	12.2	3.2	26.4	7.1			
Other or "don't know"	13.7	1.9	13.4	4.2	18.3	3.3	21.6	4.5	12.2	5.4	8.6	9	0.475
Source of payment													
Private insurance	43.0	2.9	54.7	6.6	42.8	4.4	40.6	5.5	29.4	7.1			
Medicare	10.7	1.8	7.9	3.2	8.2	2.1	9.1	2.8	32.0	8.5			
Medicaid	14.0	2.1	9.1	3.7	14.3	3.2	16.0	4.6	16.3	6.1			
Self-pay	17.6	2.1	20.0	5.0	20.8	3.3	15.4	3.6	4.8	2.7			
Other government or public source	7.4	1.6	4.5	2.0	8.3	2.5	8.3	3.2	6.4	2.9			
Other or "don't know"	7.2	1.4	3.7	1.7	5.6	1.7	10.7	3.6	11.1	5.5	23.5	15	0.074
Psychopharmacologic treatment													
Antidepressant	91.0	1.5	88.7	3.7	90.7	2.3	91.8	2.4	95.2	2.8	2.2	3	0.524
Antianxiety	40.2	3.0	40.5	6.7	33.6	4.3	47.7	5.8	48.5	8.6	4.9	3	0.177
Mood stabilizer	6.7	1.4	4.6	2.1	7.1	2.3	5.5	2.2	12.0	5.5	1.9	3	0.593
Antipsychotic	15.7	2.1	8.8	3.5	11.9	2.7	7.4	2.4	69.6	7.9	27.1	3	0.000
Other	33.3	2.6	36.3	6.0	30.7	3.9	34.9	5.0	35.9	7.8	0.89	3	0.828
Number of medications													
None	4.7	1.1	4.1	2.0	6.3	2.0	4.1	1.9	0.0	0.0			
One	26.1	2.5	29.5	5.6	33.2	4.1	19.4	4.3	5.2	2.9			
Two	33.8	2.7	31.9	6.3	30.2	3.9	41.5	5.9	32.0	7.6			
Three	18.9	2.2	20.3	5.2	13.5	2.7	20.2	4.1	37.7	8.1			
Four or more	16.6	2.0	14.2	4.3	16.9	3.2	14.8	3.4	25.0	7.1	34.83	12	0.000
Mean number of medications	2.31	0.08	2.31	0.20	2.12	0.12	2.35	0.15	3.04	0.19	5.64*	3	0.001
Medication combinations													
Antidepressant only	43.5	3.1	44.7	6.9	52.5	4.7	40.5	5.9	10.6	5.4			
Antidepressant and antianxiety	30.2	2.9	32.4	6.7	25.5	3.9	40.7	5.9	18.0	6.7			
Antidepressant and antipsychotic	7.5	1.5	1.3	1.3	5.5	1.9	4.8	2.1	34.1	8.3			
Antidepressant, antianxiety, and antipsychotic	5.4	1.3	4.8	3.0	3.9	1.7	1.4	1.0	23.2	7.0			
Antianxiety only	1.7	0.6	3.8	2.7	0.6	0.4	2.7	1.2	0.0	0.0			
Other	11.8	1.8	13.0	4.1	12.0	2.8	9.8	3.0	14.1	5.7	40.09	15	0.000
Treatment combinations													
Medication only	26.1	2.8	22.5	5.2	30.2	4.1	20.0	4.8	31.6	8.1			
Medication and psychotherapy	68.6	2.9	76.1	5.2	63.1	4.3	72.6	5.3	67.9	8.1			
Psychotherapy only	5.3	1.5	1.4	0.8	6.7	2.5	7.4	3.6	0.5	0.5	12.42	6	0.053
Psychotherapy													
Psychodynamic	24.0	2.5	19.0	4.7	23.9	3.3	28.0	5.1	22.8	7.6	1.75	3	0.626
Cognitive/behavioral	46.7	3.1	46.3	6.1	39.7	4.2	56.2	5.7	52.4	8.7	6.37	3	0.095
Interpersonal therapy	45.1	3.2	44.7	6.4	39.6	4.4	53.5	6.1	47.4	8.7	3.96	3	0.266
Any therapy	71.6	2.8	75.0	5.3	66.4	4.1	79.2	4.8	68.4	8.1	5.28	3	0.152
Provided by psychiatrist	57.3	3.1	62.3	6.0	51.0	4.5	62.8	6.0	61.8	8.3	3.97	3	0.265
Provided by other provider	24.1	2.5	24.8	5.0	24.0	3.7	26.2	5.3	17.2	6.1	1.38	3	0.710
Any ECT	2.4	1.0	0.3	0.3	0.6	0.5	2.9	1.8	13.1	5.6	5.02	3	0.170

Table 2. Ten Most Commonly Prescribed Antidepressant Medications in Routine Psychiatric Practice[a]

Medication	N	%
Fluoxetine	116	18.2
Sertraline	84	13.3
Paroxetine	75	11.8
Bupropion	70	10.9
Trazodone	67	10.6
Citalopram	51	8.0
Venlafaxine	44	6.9
Mirtazapine	34	5.3
Nefazodone	30	4.7
Amitriptyline	17	2.8

a Total of 637 prescriptions for antidepressant medications written for 481 of 533 patients with major depressive disorder. In addition, 49 prescriptions (7.6%) for other antidepressant medications were written.

Table 3. Ten Most Commonly Prescribed Antianxiety Medications in Routine Psychiatric Practice[a]

Medication	N	%
Lorazepam	61	22.9
Clonazepam	55	20.6
Alprazolam	43	16.2
Zolpidem	25	9.5
Buspirone	23	8.6
Diazepam	21	7.8
Temazepam	11	4.1
Hydroxyzine	8	2.8
Clorazepate	7	2.6
Flurazepam	5	2.0

a Total of 267 prescriptions for antianxiety medications written for 221 of 533 patients with major depressive disorder. In addition, eight prescriptions (2.9%) for other antianxiety medications were written.

antidepressants. About a quarter (26.1%) of the patients were treated with medication only, and two-thirds (68.6%) received both medication and psychotherapy from the psychiatrist or another provider in the past 30 days; 5.3% received therapy only. The mean number of psychopharmacologic medications prescribed per patient was 2.3 (SE=0.1). Patients with severe depression with psychotic features were more likely to receive three or more medications ($p<0.001$). Antidepressants were the most commonly used medication (91.0%), followed by antianxiety medications (40.2%). A majority (69.6%) of the patients who had severe depression with psychotic features received an antipsychotic.

The most commonly prescribed antidepressants were fluoxetine (18.2%), sertraline (13.3%), paroxetine (11.8%), bupropion (10.9%), and trazodone (10.6%) (Table 2), and the most commonly prescribed antianxiety medications were lorazepam (22.9%), clonazepam (20.6%), and alprazolam (16.2%) (Table 3). The most frequently used medication combination was an antidepressant and an antianxiety medication (30.2%), followed by an antidepressant and an antipsychotic medication (7.5%) (Table 1).

Psychotherapy had been provided to 71.6% of the patients within the past 30 days from the psychiatrist (57.3%) or another provider (24.1%). The most common types were psychotherapy that was oriented toward cognitive or behavioral therapy—that is, therapy characterized by the psychiatrist as including one or both of the following techniques: "discussed cognitive themes (i.e., the patient's ideas or beliefs)" and "discussed specific activities or tasks for the patient to attempt outside of the session" (46.7%)—and psychotherapy that was characterized as focusing on discussing the patient's current interpersonal relationships (45.1%). One-quarter (24.0%) of the patients received psychotherapy that could be categorized as psychodynamic—that is, therapy that discussed or identified unconscious and/or unrecognized conflicts, dreams, and fantasies and defensive maneuvers used by the patient.

CONFORMANCE WITH KEY APA GUIDELINE RECOMMENDATIONS

Conformance with APA practice guidelines on treatment of MDD ranged from 71% to 98% for the recommendations studied (Table 4). Conformance with the psychopharmacological treatment recommendations for patients with mild, moderate, and severe depression was uniformly high, in the range of 93% to 98%. Conformance was substantially lower (72%) for the recommendation that patients with psychotic depression receive both antidepressant and antipsychotic medications or ECT. Conformance with the psychosocial recommendation we were able to study—namely, that patients with significant psychosocial stressors, interpersonal difficulties, treatment compliance problems, or comorbid axis II disorders receive psychotherapy—was also low (71%). Approximately 52% of guideline-indicated patients received therapy that was characterized as including components

of either cognitive behaviorally oriented or interpersonal oriented psychotherapy.

Discussion

This study provides clinically detailed national cross-sectional data reflecting patients with MDD treated by psychiatrists in the full range of treatment settings in the United States. The available cross-sectional data have several important limitations, however. Data on the clinical context in terms of phase of illness, treatment history, response to treatment, and patient treatment preferences are limited or absent, making it difficult to rigorously operationalize and model the extent to which psychiatrists are providing treatment consistent with APA guideline recommendations. For example, we were unable to assess whether patients were adequately responding to treatment and, if not, whether treatment plans were modified appropriately as recommended by the guidelines. The study was also limited by its relatively small samples of illness severity subgroups and by its exclusive reliance on psychiatrists' reports.

The study findings indicate that most patients with MDD treated in routine psychiatric practice settings are clinically complex, moderately to severely ill, and significantly impaired. Notably, 28.5% of the patients were currently not working because of a mental or physical disability. Many patients also had sleep and sexual functioning problems, and a significant proportion were experiencing medication side effects and treatment compliance problems that could further complicate treatment.

Nearly all patients received at least one prescription for a psychopharmacologic medication, and more than nine out of ten received a prescription for an antidepressant. Rates of polypharmacy in the sample were relatively high, with 69.3% receiving more than one medication and an overall mean of 2.3 medications per patient. Thirty percent of the patients received prescriptions for both an antidepressant and an antianxiety medication. Given that one-quarter of the patients had a comorbid anxiety disorder and half had moderate to severe anxiety symptoms, the use of antianxiety medications would appear to be warranted. Also, some of the antianxiety medications may be prescribed for sleep problems, which more than half of the patients were experiencing.

Despite the growing use of psychopharmacologic treatment over psychotherapy, most of the patients in this sample (71.6%) had received psychotherapy within the past 30 days. Also, despite the trend toward split treatment, in which psychiatrists provide psychopharmacologic treatment and other mental health clinicians provide psychotherapy (9, 10), a majority of patients (57.3%) in this study received psychotherapy from their psychiatrist, while about a quarter received treatment from another mental health provider.

Table 4. Rates of Conformance With APA Guidelines in the Treatment of 533 Patients With Major Depressive Disorder

Guideline Recommendation	Guideline-Concordant Treatment Provided (%)
Antidepressant medication or psychotherapy for mild depression	96
Antidepressant medication or psychotherapy for moderate depression unless ECT planned	95
Antidepressant or ECT (with or without psychotherapy) for severe depression	93
Antidepressant and antipsychotic medications or ECT for psychotic depression	72
No antianxiety alone for depression	98
Psychotherapy for indicated patients	71

The majority of the patients in this sample apparently received antidepressant medication and psychotherapy in a manner consistent with APA practice guidelines. Conformance with the recommendations for psychopharmacologic treatment of patients with mild, moderate, and severe depression without psychotic features appeared to be fairly high. Conformance with recommendations for treating psychotic depression and for providing psychotherapy as clinically indicated were substantially lower. However, we do not know whether these patients were offered or had previously received the indicated treatments. Also, for the patients we report as having received psychotherapy in conformance with the guideline recommendations, we have no psychometrically validated data on the type of psychotherapy provided and the length of time it was provided. The guidelines generally endorse 12 weekly sessions for cognitive behavioral therapy and 16–20 weekly sessions for interpersonal therapy (6).

In order to more rigorously assess patterns of treatment and the extent to which patients receive treatment consistent with evidence-based practice guidelines, future research needs to capture longitudinal data from both patients and clinicians on treatment history, patients' preferences, treatment compliance, and response to and outcomes of treatment. APIRE is currently pilot-testing two longitudinal clinical effectiveness studies of the outcomes of treatment for adults and children with MDD in order to better understand these issues. These studies will assess the extent to which specific patient subgroups (e.g., patients with different illness severity

levels, patients with or without specific comorbid axis I disorders or significant psychosocial problems, and the like) who receive different types, combinations, intensity, and duration of treatment (including guideline-consistent treatment) have better outcomes of care. These studies are also collecting data to systematically assess related clinical issues that may have a direct effect on outcomes, including patient compliance, medication side effects, and treatment optimization (e.g., the extent to which treatment plans are modified for patients who initially do not respond to a treatment, such as by increasing the dose, adding or changing psychopharmacologic or psychosocial treatments, and so on). These studies will also assess the extent to which patients who receive combined psychopharmacologic and psychosocial treatments have better outcomes than patients who receive only one treatment modality.

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Disclosure of Unapproved, Off-label, or Investigational Use of a Product

APA policy requires disclosure by CME authors of unapproved or investigational use of products discusssed in CME programs. Off-label use of medications by individual physicians is permitted and common. Decisions about off-label use can be guided by the scientific literature and clinical experience. This article contains no discussion of off-label use.

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Notes