Newly Initiated In-Hospital Antipsychotics Continued at Discharge in Non-psychiatric Patients

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Abstract

Objectives: Antipsychotics are commonly initiated in the hospital for agitation and delirium and may be inappropriately continued upon floor transfer and at discharge. We sought to evaluate the magnitude of this issue within our health care system. **Methods:** We conducted a multicenter, retrospective cohort study within a 22-hospital health care system to evaluate the proportion of patients without identifiable psychiatric illness who received newly initiated inpatient antipsychotics and were then continued on an antipsychotic at hospital discharge. **Results:** Of 23 049 patients who received at least 1 in-hospital dose of haloperidol, olanzapine, quetiapine, risperidone, or ziprasidone, 8297 patients were included in the final analysis after applying exclusion for identifiable psychiatric illness or previous antipsychotic use. Ultimately, 334 patients (4%) were discharged with a new antipsychotic prescription. Patients receiving antipsychotics at discharge were more likely as an inpatient to receive quetiapine (77.2% vs 35.9%; odds ratio [OR]: 6.1, 95% confidence interval [CI]: 4.7-8.0; $P < .001$) and less likely to receive haloperidol (15% vs 47%; OR: 0.2, 95% CI: 0.14-0.27; $P < .001$) or olanzapine (16.2% vs 20.9%; OR: 0.73, 95% CI: 0.53-0.98; $P < .04$). **Conclusions:** Antipsychotics may be inappropriately continued in non-psychiatric patients at hospital discharge. Strategies to limit potentially unnecessary antipsychotics upon discharge should be evaluated.

Keywords

antipsychotics, transitions of care, discharge medications, quetiapine

Introduction

Antipsychotics are utilized for a variety of acute inpatient indications including the treatment and prevention of delirium, agitation, and insomnia.^{1,2} Length of treatment for these indications is highly dependent on patient-specific factors such as clinical response, toxicities, adverse drug events, drug-drug interactions, and overall clinical course.^{3,4} Unfortunately, discrepancies in medication reconciliation occur frequently, and as a result, patients may inappropriately remain on antipsychotics upon transfer from an intensive care unit (ICU) to a lower acuity floor or upon discharge from any hospital unit.⁴⁻¹⁰

Complications of both short- and long-term antipsychotic use include acute kidney injury, pneumonia, hypotension, serotonin syndrome, extrapyramidal symptoms, neuroleptic malignant syndrome, QTc prolongation, anticholinergic effects, and increased risk of out-of-hospital cardiac arrest.^{3,11,12} Antipsychotics also carry a boxed warning for increased mortality in elderly patients with dementia. An estimated 15 272 annual emergency department visits are attributed to adverse drug events related to atypical antipsychotic use.¹³ This equates to 11.7 emergency department

visits per 10 000 outpatient prescriptions, which is greater than sedatives and anxiolytics (3.6 visits), stimulants (2.9 visits), and antidepressants (2.4 visits) combined.¹³ In the absence of an ongoing indication for an antipsychotic, it is imperative to discontinue these medications when the acute indication has lapsed.

We aimed to elucidate the magnitude of the issue of continuing potentially inappropriate antipsychotics at hospital discharge in a large, multihospital health care system. The primary objective of this study was to determine the proportion of patients, without an identifiable psychiatric illness and without former antipsychotic use, who received an inpatient antipsychotic and were discharged with a potentially inappropriate antipsychotic prescription.

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Figure 1. Patient Selection.

Note. Patients were sequentially excluded in a stepwise manner for the listed criteria and were only counted within the first exclusion criteria met. ICD-9 = International Classification of Diseases, Ninth Revision.

Methods

A retrospective review of electronic medical records was performed of patients at least 18 years of age who were admitted to any of 22 hospitals within the Intermountain Healthcare system (Utah and southern Idaho) from January 1, 2010, through December 31, 2013. Data were obtained from the Intermountain Healthcare Enterprise Data Warehouse (EDW), an electronic data repository containing all inpatient and outpatient records including medication administration, prescriptions, laboratory, imaging, and other medical information. Patients had to receive at least 1 dose of haloperidol, olanzapine, quetiapine, risperidone, or ziprasidone during their hospital stay. This included administration in both ICU and non-ICU floors. To isolate only potentially inappropriate antipsychotic continuation at hospital discharge, patients were excluded if they had an identifiable psychiatric illness present upon admission, documented during the index hospitalization, or upon discharge (except for delirium, which was not considered a chronic psychiatric illness). These included psychiatric diagnoses with a possible indication for chronic antipsychotic therapy which were identified using selected International Classification of Diseases, Ninth Revision (ICD-9) codes (see Appendix). Whether an antipsychotic prescription at discharge was truly inappropriate given a lack of indication could not definitely be identified, however. Previous antipsychotic utilization, previous admission to a psychiatric unit, or an antipsychotic on the admission medication history were additional exclusion criteria. Previous antipsychotic utilization was obtained from the EDW, and included historical medication administration records from any previous hospitalization at any of the 22 Intermountain Healthcare hospitals or an electronic prescription documented within the electronic medical record at any time prior to the study period.

Data collection included baseline demographics, inpatient antipsychotic(s) received, hospital and ICU lengths of stay (LOS), mortality, and receipt of an electronic antipsychotic prescription at hospital discharge. Electronic antipsychotic prescriptions at discharge were obtained from the electronic RX Module, an e-prescribing functionality of the electronic medical record, which also allows for prescription printing. The primary outcome was the proportion of patients without an identifiable psychiatric illness or previous antipsychotic utilization who received an antipsychotic at hospital discharge after at least 1 inpatient dose. Secondary, descriptive outcomes included hospital and ICU LOS and 30-day readmission. The Institutional Review Board approved the study protocol with a waiver of informed consent.

Results

Primary Outcome

Over the 4-year study period, 23 049 patients received at least 1 dose of haloperidol, olanzapine, quetiapine, risperidone, or ziprasidone as an inpatient. Of those, 8297 patients remained after applying exclusion criteria (Figure 1). In the study cohort ($n = 8297$), the majority of patients received either haloperidol (45.7%) or quetiapine (37.5%) while inpatient (Table 1). Ultimately, 334 patients (4%) were discharged with an electronic, outpatient antipsychotic prescription. The majority of patients discharged with an outpatient antipsychotic prescription ($n = 334$) received only 1 antipsychotic during their admission (91.3%), though 29 patients (8.7%) received multiple antipsychotics. On average, patients receiving antipsychotic prescriptions at discharge received 6.5 doses of an inpatient antipsychotic versus 5.1 doses in patients discharged without an antipsychotic prescription. Patients receiving antipsychotic prescriptions at discharge

Table 1. Inpatient Antipsychotics Used and Odds of Being Discharged With an Antipsychotic Prescription.

Antipsychotic medications, ^a n (%)	Study cohort (n = 8297)	Discharged with antipsychotic prescription (n = 334)	Discharged without antipsychotic prescription (n = 7963)	OR, 95% CI; P value ^b
Quetiapine	3115 (37.5)	258 (77.2)	2857 (35.9)	6.07, 4.66-7.98; <.001
Olanzapine	1719 (20.7)	54 (16.2)	1665 (20.9)	0.73, 0.53-0.98; .04
Haloperidol	3792 (45.7)	50 (15)	3742 (47)	0.20, 0.14-0.27; <.001
Risperidone	544 (6.6)	20 (6)	524 (6.6)	0.90, 0.54-1.44; .74
Ziprasidone	332 (4)	12 (3.6)	320 (4)	0.89, 0.45-1.60; .89

Note. OR = odds ratio; CI = confidence interval.

^aPatients who received multiple antipsychotics were counted for each medication they received.

^bOdds ratios are comparing the relative likelihood of being discharged with versus without antipsychotic prescriptions when receiving a particular inpatient antipsychotic.

were more likely to receive quetiapine (77.2% vs 35.9%; odds ratio [OR]: 6.1, 95% confidence interval [CI]: 4.7-8.0; $P < .001$), and less likely to receive haloperidol (15% vs 47%; OR: 0.2, 95% CI: 0.14-0.27; $P < .001$) or olanzapine (16.2% vs 20.9%; OR: 0.73, 95% CI: 0.53-0.98; $P = .04$) as an inpatient (Table 1).

Secondary, Descriptive Outcomes

Patients discharged with an antipsychotic prescription (n = 334) were predominantly Caucasian (62%), male (58.4%), with a median age of 37 years (interquartile range [IQR]: 25-62 years), and a median 10 (IQR: 7-15) chronic and acute diagnoses. The median (IQR) hospital and ICU LOS for the discharge versus the overall study cohort were 3.7 (2.3-5.1) versus 4.1 (2.2-9.2) and 3.6 (1.7-5.7) versus 4.9 (2.1-10.3) days, respectively. Of the 334 patients discharged with an antipsychotic prescription, 139 patients (41.6%) were readmitted within 30 days, compared with 3421 patients (41.2%) in the overall study cohort.

Discussion

One in 25 patients without an identifiable antecedent or incidental psychiatric illness was discharged with an antipsychotic prescription after receiving an inpatient antipsychotic within our health system. Although 4% is relatively low in comparison with prior studies,⁶⁻⁹ this may be due to the inclusion of patients who were treated in both ICU and non-ICU floors, the inclusion of those who were prescribed an antipsychotic for acute indications other than delirium, and the thorough exclusion criteria for psychiatric illnesses. Nonetheless, the number of patients receiving potentially inappropriate medications at discharge warrants further consideration.

In our study, inpatient quetiapine was more likely to be used in patients discharged home with an antipsychotic prescription. This does not necessarily mean that patients receiving inpatient quetiapine were then discharged with a prescription for quetiapine, as they could have been sent home with a prescription for another antipsychotic.

Quetiapine tends to be used for indications such as insomnia more commonly than other antipsychotics. Perhaps because of the more frequent use of quetiapine in patients with insomnia, an indication with uncertain benefit,^{14,15} providers are more inclined to discharge patients home with a prescription for this particular antipsychotic. However, an analysis of this perceived correlation was not conducted in our study.

Similar studies have been recently conducted. A retrospective review of 80 adult ICU patients at a single center evaluated prescribing patterns of newly initiated atypical antipsychotics utilized for ICU delirium. Of the 59 patients (73.8%) who survived to discharge, 28 (47.5%) had an antipsychotic continued when transferred from the ICU, and 20 (33.9%) had an antipsychotic continued at discharge.⁸ Another retrospective review evaluated the rate of antipsychotic continuation during transitions of care from a medical ICU. Of 87 patients included, 23 (26%) were continued on antipsychotic therapy after being transferred out of the ICU, and 9 (10.3%) were discharged with an antipsychotic prescription.⁶ The most recent study, a retrospective cohort of 39 248 ICU admissions, found 8% of antipsychotic utilization was newly initiated within the ICU, and 21% continued therapy at discharge.⁹ Similar to our study, quetiapine use was more frequent in those discharged on an antipsychotic (OR: 3.2, 95% CI: 2.5-4.0; $P < .0001$).⁹ In one study, patients discharged on a newly prescribed antipsychotic had a high rate of hospital readmission (41%), antipsychotic continuation (65%), and 1-year mortality (29%).¹⁰ However, the indication for and the appropriateness of the antipsychotics were not evaluated and may play a role in the patients' underlying diseases.

Many factors likely play a role in drug continuation, including care discontinuity and lack of communication in transitions of care between critical- and acute-care floors and also at the time of discharge.^{5,6} Preventing inappropriate antipsychotic continuation would likely decrease the myriad adverse effects associated with antipsychotic use, as well as emergency department visits due to these adverse effects.^{3,13} To prevent inappropriate prescribing or continuation of antipsychotics, available evidence supports the use

of medication reconciliation interventions when focusing on patients at high risk for adverse events.¹⁶ One pre-/post-antipsychotic tapering bundle study showed a reduction in antipsychotic continuation at ICU discharge (27.9% vs 17.7% in the pre- and post-bundle groups, respectively; $P < .05$). The reduction in antipsychotic continuation also held true at hospital discharge (OR: 0.4, 95% CI: 0.18–0.89).¹⁷ Additional methods for addressing this issue and areas of future study include automatic discontinuation protocols, pharmacist counseling and intervention, and intensive discharge medication reconciliation. The last approach is currently being studied and will evaluate the impact of electronic medication reconciliation on the incidence of adverse drug events in a cluster-randomized trial (NCT01179867).

On the other hand, antipsychotics continued upon transfer from an ICU to a hospital floor, or at hospital discharge, could be appropriate. For instance, ongoing agitated delirium or suspected, but not clinically diagnosed psychiatric illnesses may be appropriate reasons, in some situations, to continue antipsychotics during transitions of care. The appropriateness of this practice, however, needs further evaluation and is beyond the scope of our study.

Strengths of our study include the large patient population (8297 vs 146 patients combined in 2 former studies^{6,8}) and the inclusion of both ICU and non-ICU patients. Data from 22 hospitals within the health system included large academic medical centers, smaller community hospitals, and urban and rural facilities, thereby enabling an evaluation of many patients and practice types. Thorough exclusion criteria were utilized to focus only on patients without

identifiable psychiatric illnesses, a practice not employed in former studies.

The primary limitation of our study is that patients were only evaluated if the prescription they received was electronically documented within the electronic medical record used at our health system. If a handwritten prescription was given to a patient at discharge, they would not have been identified. We may have therefore underestimated the proportion of patients inappropriately discharged on an antipsychotic. Secondly, we did not search for and exclude patients with Tourette syndrome, a potential indication for certain antipsychotic medications. In addition, patients may have had psychiatric illness documented outside the health system which was not accessible. Last, our study was meant to report the incidence of potentially inappropriate antipsychotic continuation at hospital discharge and not necessarily the outcomes associated with this practice. Future studies should further elucidate the clinical and financial impact of inappropriate antipsychotic continuation at discharge and thoroughly evaluate methods of reducing inappropriate medication continuation.

Conclusion

Within a large, integrated health care system, 1 in 25 patients receiving an inpatient antipsychotic without an identified psychiatric illness was discharged with an antipsychotic prescription. Strategies to limit the number of potentially inappropriate antipsychotic prescriptions at hospital discharge should be evaluated to reduce the undue adverse effect burden and emergency department visits associated with antipsychotic use.

Appendix

International Classification of Diseases, Ninth Revision (ICD-9) Codes Used in Exclusion

Schizophrenia

ICD-9 Code	ICD-9 Code Description
295.00	SIMPLE TYPE SCHIZOPHRENIA UNSPECIFIED STATE
295.01	SIMPLE TYPE SCHIZOPHRENIA SUBCHRONIC STATE
295.02	SIMPLE TYPE SCHIZOPHRENIA CHRONIC STATE
295.03	SIMPLE TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.04	SIMPLE TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.05	SIMPLE TYPE SCHIZOPHRENIA IN REMISSION
295.10	DISORGANIZED TYPE SCHIZOPHRENIA UNSPECIFIED STATE
295.11	DISORGANIZED TYPE SCHIZOPHRENIA SUBCHRONIC STATE
295.12	DISORGANIZED TYPE SCHIZOPHRENIA CHRONIC STATE
295.13	DISORGANIZED TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.14	DISORGANIZED TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.15	DISORGANIZED TYPE SCHIZOPHRENIA IN REMISSION
295.20	CATATONIC TYPE SCHIZOPHRENIA UNSPECIFIED STATE

(continued)

Appendix. (continued)

ICD-9 Code	ICD-9 Code Description
295.21	CATATONIC TYPE SCHIZOPHRENIA SUBCHRONIC STATE
295.22	CATATONIC TYPE SCHIZOPHRENIA CHRONIC STATE
295.23	CATATONIC TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.24	CATATONIC TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.25	CATATONIC TYPE SCHIZOPHRENIA IN REMISSION
295.30	PARANOID TYPE SCHIZOPHRENIA UNSPECIFIED STATE
295.31	PARANOID TYPE SCHIZOPHRENIA SUBCHRONIC STATE
295.32	PARANOID TYPE SCHIZOPHRENIA CHRONIC STATE
295.33	PARANOID TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.34	PARANOID TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.35	PARANOID TYPE SCHIZOPHRENIA IN REMISSION
295.50	LATENT SCHIZOPHRENIA UNSPECIFIED STATE
295.51	LATENT SCHIZOPHRENIA SUBCHRONIC STATE
295.52	LATENT SCHIZOPHRENIA CHRONIC STATE
295.53	LATENT SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.54	LATENT SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.55	LATENT SCHIZOPHRENIA IN REMISSION
295.80	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA UNSPECIFIED STATE
295.81	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA SUBCHRONIC STATE
295.82	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA CHRONIC STATE
295.83	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.84	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.85	OTHER SPECIFIED TYPES OF SCHIZOPHRENIA IN REMISSION
295.90	UNSPECIFIED TYPE SCHIZOPHRENIA UNSPECIFIED STATE
295.91	UNSPECIFIED TYPE SCHIZOPHRENIA SUBCHRONIC STATE
295.92	UNSPECIFIED TYPE SCHIZOPHRENIA CHRONIC STATE
295.93	UNSPECIFIED TYPE SCHIZOPHRENIA SUBCHRONIC STATE WITH ACUTE EXACERBATION
295.94	UNSPECIFIED TYPE SCHIZOPHRENIA CHRONIC STATE WITH ACUTE EXACERBATION
295.95	UNSPECIFIED TYPE SCHIZOPHRENIA IN REMISSION

Bipolar Disorder

ICD-9 Code	ICD-9 Code Description
296.00	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, UNSPECIFIED
296.01	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, MILD
296.02	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, MODERATE
296.03	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, SEVERE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR
296.04	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, SEVERE, SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.05	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, IN PARTIAL OR UNSPECIFIED REMISSION
296.06	BIPOLAR I DISORDER, SINGLE MANIC EPISODE, IN FULL REMISSION
296.40	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, UNSPECIFIED
296.41	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, MILD
296.42	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, MODERATE
296.43	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, SEVERE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR
296.44	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, SEVERE, SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.45	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, IN PARTIAL OR UNSPECIFIED REMISSION
296.46	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MANIC, IN FULL REMISSION

(continued)

Appendix. (continued)

ICD-9 Code	ICD-9 Code Description
296.50	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, UNSPECIFIED
296.51	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, MILD
296.52	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, MODERATE
296.53	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, SEVERE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR
296.54	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, SEVERE, SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.55	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, IN PARTIAL OR UNSPECIFIED REMISSION
296.56	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) DEPRESSED, IN FULL REMISSION
296.60	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, UNSPECIFIED
296.61	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, MILD
296.62	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, MODERATE
296.63	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, SEVERE, WITHOUT MENTION OF PSYCHOTIC BEHAVIOR
296.64	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, SEVERE, SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.65	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, IN PARTIAL OR UNSPECIFIED REMISSION
296.66	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) MIXED, IN FULL REMISSION
296.7	BIPOLAR I DISORDER, MOST RECENT EPISODE (OR CURRENT) UNSPECIFIED
296.80	BIPOLAR DISORDER, UNSPECIFIED
296.89	OTHER AND UNSPECIFIED BIPOLAR DISORDERS, OTHER

Autistic Disorder—Irritability

ICD-9 Code	ICD-9 Code Description
299.00	AUTISTIC DISORDER, CURRENT OR ACTIVE STATE
299.01	AUTISTIC DISORDER, RESIDUAL STATE

Major Depressive Disorder

ICD-9 Code	ICD-9 Code Description
290.13	PRESENILE DEMENTIA WITH DEPRESSIVE FEATURES
290.21	SENILE DEMENTIA WITH DEPRESSIVE FEATURES
296.20	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE UNSPECIFIED DEGREE
296.21	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE MILD DEGREE
296.22	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE MODERATE DEGREE
296.23	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE SEVERE DEGREE WITHOUT PSYCHOTIC BEHAVIOR
296.24	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.25	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE IN PARTIAL OR UNSPECIFIED REMISSION
296.26	MAJOR DEPRESSIVE AFFECTIVE DISORDER SINGLE EPISODE IN FULL REMISSION
296.30	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE UNSPECIFIED DEGREE
296.31	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE MILD DEGREE
296.32	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE MODERATE DEGREE
296.33	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE SEVERE DEGREE WITHOUT PSYCHOTIC BEHAVIOR

(continued)

Appendix. (continued)

ICD-9 Code	ICD-9 Code Description
296.34	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE SEVERE DEGREE SPECIFIED AS WITH PSYCHOTIC BEHAVIOR
296.35	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE IN PARTIAL OR UNSPECIFIED REMISSION
296.36	MAJOR DEPRESSIVE AFFECTIVE DISORDER RECURRENT EPISODE IN FULL REMISSION
296.82	ATYPICAL DEPRESSIVE DISORDER
298.0	DEPRESSIVE TYPE PSYCHOSIS
301.12	CHRONIC DEPRESSIVE PERSONALITY DISORDER
309.1	ADJUSTMENT REACTION WITH PROLONGED DEPRESSIVE REACTION
311	DEPRESSIVE DISORDER NOT ELSEWHERE CLASSIFIED

Schizoaffective Disorder

ICD-9 Code	ICD-9 Code Description
295.70	SCHIZOAFFECTIVE DISORDER, UNSPECIFIED
295.71	SCHIZOAFFECTIVE DISORDER, SUBCHRONIC
295.72	SCHIZOAFFECTIVE DISORDER, CHRONIC
295.73	SCHIZOAFFECTIVE DISORDER, SUBCHRONIC WITH ACUTE EXACERBATION
295.74	SCHIZOAFFECTIVE DISORDER, CHRONIC WITH ACUTE EXACERBATION
295.75	SCHIZOAFFECTIVE DISORDER, IN REMISSION

Declaration of Conflicting Interests

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