Supplemental Appendix 1: ICD Billing Codes for DRBA-Related EPS or OMD

E939 = Psychotropic agents causing adverse effects in therapeutic use

* **E939.1** Phenothiazine-based tranquilizers causing adverse effects in therapeutic use
* **E939.2** Butyrophenone-based tranquilizers causing adverse effects in therapeutic use
* **E939.3** Other antipsychotics, neuroleptics, and major tranquilizers causing adverse effects in therapeutic use
* **E939.5** Other tranquilizers causing adverse effects in therapeutic use
* **E939.8** Other psychotropic agents causing adverse effects in therapeutic use
* **E939.9** Unspecified psychotropic agent causing adverse effects in therapeutic use

G21 = Secondary parkinsonism

* **G21.0** Malignant neuroleptic syndrome
	+ **333.92** Neuroleptic malignant syndrome
* G21.1 Other drug-induced secondary parkinsonism
	+ **G21.11** Neuroleptic induced parkinsonism

G24 = Dystonia

* G24.0 Drug induced dystonia
	+ **G24.01** Drug induced subacute dyskinesia
		- **333.85** Subacute dyskinesia due to drugs
	+ **G24.02** Drug induced acute dystonia
		- **333.72** Acute dystonia due to drugs
	+ **G24.09** Other drug induced dystonia
		- **333.79** Other acquired torsion dystonia

G25 = Other extrapyramidal and movement disorders

* **G25.1** Drug-induced tremor
* **G25.4** Drug-induced chorea
* G25.6 Drug induced tics and other tics of organic origin
	+ **G25.61** Drug induced tics
* G25.7 Other and unspecified drug induced movement disorders
	+ **G25.70** Drug induced movement disorder, unspecified
	+ **G25.71** Drug induced akathisia
	+ **G25.79** Other drug induced movement disorders
* G25.8 Other specified extrapyramidal and movement disorders
	+ **G25.89** Other specified extrapyramidal and movement disorders
		- **333.99** Other extrapyramidal diseases and abnormal movement disorders
* **G25.9** Extrapyramidal and movement disorder, unspecified
	+ **333.90** Unspecified extrapyramidal disease and abnormal movement disorder

**G26** = Extrapyramidal and movement disorders in diseases classified elsewhere

T40 = Poisoning by, adverse effect of and underdosing of narcotics and psychodysleptics [hallucinogens]

* T40.9 Poisoning by, adverse effect of and underdosing of other and unspecified psychodysleptics [hallucinogens]
	+ T40.90 Poisoning by, adverse effect of and underdosing of unspecified psychodysleptics [hallucinogens]
		- T40.905 Adverse effect of unspecified psychodysleptics [hallucinogens]
			* **T40.905A** Adverse effect of unspecified psychodysleptics [hallucinogens], initial encounter
	+ T40.99 Poisoning by, adverse effect of and underdosing of other psychodysleptics [hallucinogens]
		- T40.995 Adverse effect of other psychodysleptics [hallucinogens]
			* **T40.995A** Adverse effect of other psychodysleptics [hallucinogens], initial encounter

T43 = Poisoning by, adverse effect of and underdosing of psychotropic drugs, not elsewhere classified

* T43.3 Poisoning by, adverse effect of and underdosing of phenothiazine antipsychotics and neuroleptics
	+ T43.3X5 Adverse effect of phenothiazine antipsychotics and neuroleptics
		- **T43.3X5A** Adverse effect of phenothiazine antipsychotics and neuroleptics, initial encounter
* T43.4 Poisoning by, adverse effect of and underdosing of butyrophenone and thiothixene neuroleptics
	+ T43.4X5 Adverse effect of butyrophenone and thiothixene neuroleptics
		- **T434X5A** Adverse effect of butyrophenone and thiothixene neuroleptics, initial encounter
* T43.5 Poisoning by, adverse effect of and underdosing of other and unspecified antipsychotics and neuroleptics
	+ T43.50 Poisoning by, adverse effect of and underdosing of unspecified antipsychotics and neuroleptics
		- T43.501 Poisoning by unspecified antipsychotics and neuroleptics, accidental (unintentional)
			* **T43.501A** Poisoning by unspecified antipsychotics and neuroleptics, accidental (unintentional), initial encounter
			* **T43.501D** Poisoning by unspecified antipsychotics and neuroleptics, accidental (unintentional), subsequent encounter
			* **T43.501S** Poisoning by unspecified antipsychotics and neuroleptics, accidental (unintentional), sequela
		- T43.505 Adverse effect of unspecified antipsychotics and neuroleptics
			* **T43.505A** Adverse effect of unspecified antipsychotics and neuroleptics, initial encounter
			* **T43.505D** Adverse effect of unspecified antipsychotics and neuroleptics, subsequent encounter
			* **T43.505S** Adverse effect of unspecified antipsychotics and neuroleptics, sequela
	+ T43.59 Poisoning by, adverse effect of and underdosing of other antipsychotics and neuroleptics
		- T43.595 Adverse effect of other antipsychotics and neuroleptics
			* **T43.595A** Adverse effect of other antipsychotics and neuroleptics, initial encounter
* T43.8 Poisoning by, adverse effect of and underdosing of other psychotropic drugs
	+ T43.8X5 Adverse effect of other psychotropic drugs
		- **T438X5A** Adverse effect of other psychotropic drugs, initial encounter
* T43.9 Poisoning by, adverse effect of and underdosing of unspecified psychotropic drug
	+ T43.95 Adverse effect of unspecified psychotropic drug
		- **T43.95XA** Adverse effect of unspecified psychotropic drug, initial encounter

Legend: Alphanumeric International Classification of Diseases (ICD) codes describing medical diagnoses that encompass antipsychotic-related extrapyramidal symptom (EPS) events were used to generate a patient list for this study. The 10th revision (ICD-10) of these codes has been in used since 2015, so the 9th revision (ICD-9) was included to broaden the searchable timeframe. The ICD-9 code is listed below the equivalent ICD-10 code if a conversion exists. Each broad category code is followed by the associated path to the billable specifier code in **bold** which was used to search for patient encounters. These codes collectively encompass the majority of possible reactions that were appropriately diagnosed and billed as antipsychotic-related EPS. Manual chart review was performed for each patient encounter corresponding to a unique billing occurrence in order to confirm that the event coded for was indeed antipsychotic-related EPS.