

Data Wrangling: Insights from accessing Depression Diagnosis Codes



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BACKGROUND & OBJECTIVE

Depression is a psychiatric disorder characterized by emotional, physical and cognitive symptoms that significantly impact an individual's functioning. The identification of depression from administrative data relies on the use of diagnostic codes. In this study, we present and compare the diagnostic codes employed in Alberta to identify depression or major depressive disorder and explore the challenges associated with the variations in these coding systems.

METHODS

Utilising using health care administrative data of patients diagnosed with depression between 2012 and 2022. We identified depression using three diagnostic codes: the ICD-10 CA (Canadian version of ICD-10); ICD-9 CA codes; Alberta Health (AH) diagnostic codes with utilizes a combination of Claims data and ICD-9 codes.

CHALLENGES/RESULTS

Table 1: Characteristics of the diagnostic codes for major depressive disorder in Alberta

	AH Diagnostic Code	IDC-9 CA	IDC-10 CA
Data source:	Claims data	l laims data	National Ambulatory Care Reporting System (NACRS) & Discharge abstract database (DAAD)
Coverage:	Covers all patients in AB		Only covers patients admitted through emergency departments into hospital care
Format	Numeric up to 1 decimal place	Numeric with up to 2 decimal places	Alphanumeric categories

Table 1: Documentation of major depressive disorder: ICD 10, ICD 9 and Alberta Health diagnostic codes

ICD-9

AH Diagnostic codes 311 - "Depressive disorder, not elsewhere classified (Excludes: acute reaction to major stress with depressive symptoms (308.0) affective personality disorder (301.1)affective psychoses (296.-) brief depressive reaction (309.0) disturbance of emotions specific to childhood and adolescence, with misery and unhappiness (313.1) mixed adjustment reaction with depressive symptoms (309.4) neurotic depression (300.4) prolonged depressive adjustment reaction (309.1) psychogenic depressive psychosis (298.0))" 300.4 - "Neurotic depression (Excludes: adjustment reaction with depressive symptoms (309.0) depression NOS (311) manicdepressive psychosis, depressed type (296.1) reactive depressive

psychosis (298.0))"

296.2 - Major depressive disorder, single episode- unspecified 296.21 - Major depressive disorder, single episode- mild 296.22 - Major depressive disorder, single episode- moderate 296.23 - Major depressive disorder, single episode- severe, without mention of psychotic behavior 296.24 - Major depressive disorder, single episode- severe, specified as with psychotic behavior 296.25 - Major depressive disorder, single episode- in partial or unspecified remission 296.26 - Major depressive disorder, single episode- in full remission 296.3 - Major depressive disorder, recurrent episodeunspecified 296.31 - Major depressive disorder, recurrent episode- mild 296.32 - Major depressive disorder, recurrent episodemoderate 296.33 - Major depressive disorder, recurrent episode- severe, without mention of psychotic behavior 296.34 - Major depressive disorder, recurrent episode- severe, specified as with psychotic behavior 296.35 - Major depressive disorder, recurrent episode- in partial or unspecified remission 296.36 - Major depressive disorder, recurrent episode- in full remission

311 – depressive disorder, not elsewhere classified

F32.0 - Mild depressive episode F32.1 - Moderate depressive episode F32.2 - Severe depressive episode without psychotic symptoms F32.3 - Severe depressive episode with psychotic symptoms F32.4 - Depressive disorder, single episode, in partial remission F32.5 - Depressive disorder, single episode, in full remission F32.8 - Other depressive episodes F32.9 - Depressive episode, unspecified F33.0 - Recurrent depressive disorder, current episode mild F33.1 - Recurrent depressive disorder, current episode moderate F33.2 - Recurrent depressive disorder, current episode severe without psychotic symptoms F33.3 - Recurrent depressive disorder, current episode severe with psychotic symptoms F33.41 - Recurrent depressive disorder, currently in remission F33.42 - Recurrent depressive disorder, currently in remission

F33.8 - Other recurrent depressive disorders

F33.9 – Recurrent depressive disorder, unspecified

F53.0 - Mild mental and behavioural disorders associated with

the puerperium, not elsewhere classified

ICD-10 CA

LESSONS LEARNED

Measures to enhance data accuracy and support informed healthcare decisions should be pursued including:

- Coding systems across healthcare data sources should be standardized
- Robust crosswalk tools for accurate translation between ICD-9 and ICD-10 codes should be used
- Data collection should be expanded to include both hospital and outpatient settings
- Training and support for healthcare providers on diagnostic coding should be provided
- Ongoing research to evaluate coding systems and translation tools should be conducted
- Clear policies and guidelines for the use of diagnostic codes in administrative data are essential steps should be developed.

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