

## Supplementary Materials

### Appendix

**Table A1: Multimorbidity ICD-10 codes**

(Table adapted from Table 1 in Tonelli, M., Wiebe, N., Fortin, M., Guthrie, B., Hemmelgarn, B.R., James, M.T., Klarenbach, S.W., Lewanczuk, R., Manns, B.J., Ronksley, P. and Sargious, P., 2015. Methods for identifying 30 chronic conditions: application to administrative data. *BMC medical informatics and decision making*, 15(1), p.31.)

Morbidity	ICD-10
Alcohol misuse	E52, F10, G62.1, I42.6, K29.2, K70.0, K70.3, K70.9, T51, Z50.2, Z71.4, Z72.1
Asthma	J45
Atrial fibrillation	I48.0
Cancer, lymphoma	C81–C85, C88, C90.0, C90.2, C96
Cancer, metastatic	C77–C80
Cancer, non-metastatic (breast, cervical, colorectal, lung, prostate)	C18-C21, C33-C34, C38.4, C45.0, C46.71, C50, C53, C61, D01.0-D01.3, D02.2, D05-D06, D07.5
Chronic heart failure	I09.9, I25.5, I42.0, I42.5–I42.9, I43, I50
Chronic kidney disease	N00-N23
Chronic pain	F45.4, M08.1, M25.50, M25.51, M25.55 - M25.57, M43.2 - M43.6, M45, M46.1, M46.3, M46.4, M46.9, M47, M48.0, M48.1, M48.8, M48.9, M50.8, M50.9, M51, M53.1 - M53.3, M53.8, M53.9, M54, M60.8, M60.9, M63.3, M79.0 - M79.2, M79.6, M79.7, M96.1
Chronic pulmonary disease	I27.8, I27.9, J40–J44, J46-J47, J60–J67, J68.4, J70.1, J70.3
Chronic viral hepatitis B	B16, B18.0-B18.1
Cirrhosis	K70.3, K74.3, K74.4, K74.5, K74.6
	I85.0, I85.9, I98.2, I98.3, K65.0, K65.8, K65.9, K67.0, K67.1, K67.2, K67.3, K67.8, K76.7, K93.0, R18
Dementia	F00–F03, F05.1, G30, G31.1
Depression	F20.4, F31.3–F31.5, F32, F33, F34.1, F41.2, F43.2
Diabetes	E10-E14
Epilepsy	G40-G41
Hypertension	I10-I13, I15
Hypothyroidism	E00–E03, E89.0
Inflammatory bowel disease	K50, K51
Irritable bowel syndrome	K58
	Exclude C18-C21, C25, C56, C78.5, C79.6, D01.7, D01.9, D37.1-D37.5, K50-K51, K70.2-K70.3, K74.0, K74.2, K74.6, K86.0-K86.1, K90, K91.2
Multiple sclerosis	G35, G36, G37, H46

<b>Morbidity</b>	<b>ICD-10</b>
Myocardial infarction	I21-I22
Parkinson's disease	G20, G21, G22
Peptic ulcer disease	K25.7, K25.9, K26.7, K26.9, K27.7, K27.9, K28.7, K28.9
Peripheral vascular disease	I70.2
Psoriasis	L40.0 - L40.4, L40.8, L40.9
Rheumatoid arthritis	M05, M06, M31.5, M32-M34, M35.1, M35.3, M36.0
Schizophrenia	F20, F21, F23.2, F25
Severe constipation	K55.8, K56.0, K56.4, K56.7, K59.0, K63.1, K63.4, K63.81, K63.88, K92.80, K92.88
	Exclude C17-C21, C45.1, C48, C51-C58, C60-C68, C78.5-C78.6, D01.7, D01.9, D37.1-D37.5, K50-K51, K66.0, N73.6, N99.4 (K56.6 if R10.1), and any CCPx surgery listed in claims
Stroke or TIA	G45.0-G45.3, G45.8-G45.9, H34.1, I60, I61, I63, I64