

APPENDIX 1 (as supplied by the authors): Diagnostic codes

***Codes may appear at any time throughout patient's admission (not necessarily most responsible diagnosis) unless otherwise specified (for example, diabetes has its own algorithm).

Comorbidity	ICD-9	ICD-10	OHIP Diagnostic codes + All Procedure Codes (OHIP, CCI, CCP)
History of acute dialysis, chronic dialysis or transplant (used for exclusion from this study)	<p>Dialysis diagnostic codes: V45.1, V56.0, V56.8, 36104</p> <p>Dialysis procedural codes: 51.27, 51.42, 51.43, 51.95, 66.98</p> <p>Transplant diagnostic codes: V420, E878.0, 996.8, V42, V42.1-V42.2, V43.2-V43.4, V49.83, 996.85, V42.81, 284, 238.77, 996.86</p> <p>Transplant procedural codes: 67.43, 67.5, 67.51, 67.59, 45.5, 45.6, 49.5, 53.0, 62.4, 62.41, 62.49, 64.8, 64.81, 64.82, 64.83, 64.84</p>	<p>Dialysis diagnostic codes: T824, Y602, Y612, Y622, Y841, Z490, Z491, Z492, Z992, E10220, E10221, E10222, E10223, E10224, E10229, N180, E11220, E11221, E11222, E11223, E11224, E11229, E13220, E13221, E13222, E13223, E13224, E13229, E14220, E14221, E14222, E14223, E14224, E14229</p> <p>Dialysis procedural codes: 1OT53DATS, 1OT53HATS, 1OT53LATS, 1PZ21HPD4, 1PZ21HQBR, 1SY55LAFT, 7SC59QD, 1KY76LA, 1KY76LASJ, 1KY76LAXXA, 1KY76LAXXL, 1KY76LAXXN, 1KY80LA, 1KY80LAXXA, 1KY80LAXXK, 1KY80LAXXN, 1KG76MZXXA, 1KG76MZXXN</p> <p>Transplant diagnostic codes: T86100, T86.101, T86.102, N16.5, Z94.0, T86.4, Y83.0, Y83.4, Z94.4, T86.2, T86.3, T86.8, Z94.1, Z94.2, Z94.3, Z94, Z95.2, Z95.3, Z95.4, T86.0, Z52.3, Z94.8</p> <p>Transplant procedural codes: 1PC85, 1PC85LAXXJ, 1PC85LAXXK, 1GR85, 1GT85, 1HY85, 1OA85, 1OK85, 4JP82, 1WY19</p>	<p>Hemodialysis: R849, R850, G323, G324, G336, G325, G326, G327, G860, G862, G863, G865, G866, G099, R825, R826, R827, R833, R840, R841, R843, R848, R851, Z450, Z451, Z452</p> <p>Peritoneal dialysis: G330, G331, G332, G861, G864, R852, R853, R854, R885</p> <p>Continuous renal replacement: G082, G083, G085, G090, G091, G092, G093, G094, G095, G096, G294, G295</p> <p>Misc dialysis codes: G333, H540, H740</p> <p>Transplant: E762, S435, E769, S434, E771, Z631, K014, G347, G348, G412, G408, G409, G411, S436, E753, R870, R874, S294, S295, Z426, E765, G254, J205, M155</p>
Diabetes	250.x	E11	250.x

	<i>Patients with diabetes were defined as those who have evidence of two OHIP claims for diabetes OR one hospitalization with a diagnosis of diabetes within a three-year look-back window. Based on Hux JE et al. Diabetes Care. 2002; 25: 512-6 (1).</i>		
Peripheral Vascular Disease	4439, 4400, 4440	I739	
Chronic Obstructive Pulmonary Disease	491, 492, 496	J40, J41, J42, J43, J44, J45, J46, J47	491, 492, 493, 494, 496
Hypertension	401x-405x	I10-I13, I15	OHIP Diagnostic Codes: 401, 402, 403
	<i>In this study, patients with HTN were defined as those with evidence of at least two OHIP diagnostic codes or one hospital discharge with a diagnosis of hypertension in a three-year look-back window. From Tu K et al. Open Medicine. 2007; 1: e18-26. (2).</i>		
Acute myocardial infarction	410x	I21	
	Sensitivity: 89% PPV: 89% <i>Austin PC, Daly PA, Tu JV. A multicenter study of the coding accuracy of hospital discharge administrative data for patients admitted to cardiac care units in Ontario. Am Heart J. 2002; 144: 290-6 (3).</i>	Sensitivity: 89% PPV: 87% <i>Juurlink D, Preyra C, Croxford R et al. Canadian Institute for Health Information Discharge Abstract Database: a validation study. Institute for Clinical Evaluative Sciences. 2006 (4)</i>	
CAD (not including acute myocardial infarction codes above)	411.1, 411.8, 413.0, 413.1, 413.9, 414.8, 414.9, 414.0, 412	I20, I22, I240, I241, I248, I249, I250, I2510, I2511, I2512, I2513, I2514, I2519, I252, I255, I256, I258, I259.	OHIP diagnostic codes: 410, 412, 413
PTCA/CABG <small>(note: codes in this section to be used for baseline characteristics, not for surgical outcomes)</small>	Procedural: 48.02, 48.03, 48.09, 48.11-48.19	Procedural: 1IJ50, 1IJ76	OHIP Procedural Codes: Z434, R742, R743
	CCI codes: 1IJ50, 1IJ76 Sensitivity: 99-100%, PPV: 97-100% <i>Juurlink D, Preyra C, Croxford R et al. Canadian Institute for Health Information Discharge Abstract Database: a validation study. Institute for Clinical Evaluative Sciences. 2006 (4)</i> CCP codes: 48.02, 48.03, 48.09, 48.11-48.19 Sensitivity: 100%, PPV: 99%. <i>Richards J et al. The data quality study of the Canadian discharge abstract database. Proceedings of Statistics Canada Symposium 2001 – Achieving data quality in a statistical agency: A methodological perspective.(5)</i>		

<p>Cerebrovascular Disease</p>	<p>431, 432.9, 434x, 436</p> <p>PPV: 79-88%</p> <p><i>Liu L et al. Cerebrovasc Dis. 1999; 9: 224-30.(6)</i></p>	<p>I61, I62, I63, I64</p> <p>Sensitivity: 75-81%, PPV: 69-87%</p> <p><i>Juurlink D, Preyra C, Croxford R et al. Canadian Institute for Health Information Discharge Abstract Database: a validation study. Institute for Clinical Evaluative Sciences. 2006 (4)</i></p>	
<p>Chronic Kidney Disease</p>	<p>016.0x, 095.4, 250.4x, 274.1x, 403.xx, 404.xx, 405.01, 405.11, 405.91, 440.1, 446.21, 581.xx, 582.xx, 583.xx, 585.x, 586, 587.x, 588.0, 588.8x, 588.9, 589.x, 590.0x, 593.7x, 791.0, 794.4</p>	<p>A18.1, N29.0, E10.20, E10.21, E11.20, E11.21, M10.39, I12.0, I12.9, I13.0, I13.1, I13.2, I13.9, I15.0, I70.1, M31.0, N03.x, N04.x, N05.x, N06.x, N07.x, N08.x, N11.x, N12, N13.7, N13.8, N13.9, N14.x, N15.x, N16.x, N18.0, N18.8, N18.9x, N18.90, N18.91, N19, N25.0, N25.8, N25.9, N26, N27.x, R80, R94.4</p>	<p>403, 581, 582, 585, 586</p>
<p>Liver Dysfunction</p>	<p>570, 571.1-571.6, 571.8, 571.9, 572.2, 572.3, 572.4, 572.8, 573.0, 456.0, 456.1, 456.2, 571.</p> <p>Procedural : 62.3, 62.4, 66.91.</p>	<p>K701, K702, K703, K704, K709, K742, K71, K720, K721, K729, K730, K731, K732, K738, K739, K740, K741, K743, K744, K745, B150, B180, B181, B182, B188, B189, B190, B199, B162, K761, K766, K767, K768, I850, I859, K746, K760, B160, K778, B162</p> <p>Procedural: 10A85LAXXK, 10A85VCXXK, 10A85WLXXJ, 10A85WLXXK</p>	<p>OHIP diagnostic codes: 571, 573</p>

Cancer	140.0 – 239.9	C000 – D489	OHIP diagnostic codes: 14, 15, 160, 161, 162, 163, 164, 165, 170, 171, 172, 173, 174, 176, 179, 18, 19, 200, 201, 202, 203, 204, 205, 206, 207, 208, 210, 211, 212, 213, 214, 215, 216, 217, 218, 220, 223, 224, 225, 226, 227, 228, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239. OHIP fee codes: G390, G381, H530, G339, G345, G359, G075, G382, A345, A745, A346, A343, A340, A341, A348, C341, C342, C343, C344, C345, C346, C347, C348, C745
Congestive Heart Failure	425, 428, 518.4, 514, 997.1 Procedural: 49.60, 49.61, 49.62, 49.63, 49.64	I255, I42, I43, I50, J81 Procedural: 1HP53, 1HP55	OHIP diagnostic code: 428 OHIP fee codes: R701, R702, Z429

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