

Supporting Information

S1 Table. Recodification of garbage codes in the GBD 2010 groups.

Garbage codes	GBD codes	ICD-10 codes
Septicaemia	Other infectious diseases	A267, A327, A400, A401, A402, A403, A408, A409, A410, A411, A412, A413, A414, A415, A418, A419, A427, B377
	Other salmonella infections	A021
Ill-defined codes from A00-B99	Cirrhosis of the liver	B189
	Encephalitis	A86X
	Fungal skin diseases	B369
	Other diarrheal diseases	A049, A059, A079, A084
	Other infectious diseases	A209, A219, A229, A239, A244, A269, A279, A289, A319, A329, A429, A439, A449, A480, A490, A491, A492, A493, A498, A499, A669, A679, A699, A749, A819, A89X, A99X, B259, B279, B309, B340, B341, B342, B343, B344, B348, B349, B379, B382, B389, B399, B409, B419, B429, B439, B449, B459, B465, B479, B49X, B950, B951, B952, B953, B954, B955, B956, B957, B958, B960, B961, B962, B963, B964, B965, B966, B967, B968, B970, B971, B972, B973, B974, B975, B976, B977, B978
	Other meningitis	A879
	Other neglected tropical diseases	A689, A759, A779, A799, A94X
	Other sexually transmitted diseases	A64X
	Viral skin diseases	B009
Cardiogenic shock and other shock	Other infectious diseases	A483
B19, Unspecified viral hepatitis	Other infectious diseases	B190, B199
Pneumonitis	Other chronic respiratory diseases	J677, J678, J679, J680
	Other infectious diseases	B250
	Pneumoconiosis	J690, J691, J698
All unspecified	Other infectious diseases	B589, B64X, B689, B820, B829, B89X

Garbage codes	GBD codes	ICD-10 codes
parasitic diseases	Other neglected tropical diseases	B719, B749, B789, B839
Sequela of different diseases and injuries	Gall bladder and bile duct disease	K870, K871
	Injuries with undetermined intent	Y872, Y899
	Ischemic stroke	I694, I698
	Other chronic respiratory diseases	J990, J991, J998
	Other digestive diseases	K238, K678, K910, K911, K912, K913, K914, K915, K918, K919, K938
	Other endocrine, nutritional, blood, and immune disorders	E68X, E890, E891, E892, E893, E894, E895, E896, E898, E899
	Other gynecological diseases	N950, N951, N952, N953, N958, N990, N991, N992, N993, N994, N995, N998, N999
	Other infectious diseases	B942, B948, B949, G09X
	Other musculoskeletal disorders	M032, M036, M074, M075, M076, M091, M092, M140, M141, M143, M144, M145, M146, M148, M360, M361, M362, M363, M364, M368, M490, M491, M492, M493, M494, M495, M498, M630, M631, M632, M633, M638, M738, M840, M841, M842, M901, M902, M903, M904, M905, M906, M907, M908, M960, M961, M962, M963, M964, M965, M966, M968
	Other neurological disorders	G130, G131, G132, G138, G530, G531, G532, G533, G550, G551, G552, G553, G558, G590, G598, G730, G731, G732, G733, G734, G735, G736, G737, G970, G971, G972, G978, G979, G990, G991, G992, G998
	Other nutritional deficiencies	E642, E643, E648, E649
	Other sense organ diseases	H590, H598
	Other skin and subcutaneous diseases	L998
	Other urinary diseases	N080, N081, N082, N084, N085, N088, N140, N141, N142, N143, N144, N160, N161, N162, N163, N164, N165, N168,

Garbage codes	GBD codes	ICD-10 codes
		N250, N251, N258, N259, N291, N298, N338, N350, N351, N370, N378
	Sense organ diseases	H950, H951, H958, H959
	Unintentional injuries other than transport injuries	Y859, Y86X
B99, Other and unspecified bacterial and infectious diseases	Other infectious diseases	B99X
C14,1-9, Other and ill- defined sites in the lip, oral cavity and pharynx	Cancer of other part of pharynx and oropharinx	C142, C148
C26,0-9, Other and ill- defined sites in the lip, oral cavity and pharynx	Other neoplasms	C260, C261, C268, C269
C39,0-9,Other and ill- defined sites in the lip, oral cavity and pharynx	Other neoplasms	C390, C398, C399
C55,0-9, Uterus, part unspecified	Uterine cáncer	C55X
C57,9, Female genital organ unspecified	Other neoplasms	C579
C63,9, Male genital organ unspecified	Other neoplasms	C639
C68,9, Urinary organ unspecified	Other neoplasms	C689
C75,9, Endocrine gland unspecified	Other neoplasms	C759
C76,0-9, Malignant neoplasm of other and ill- defined sites	Other neoplasms	C760, C761, C762, C763, C764, C765, C767, C768
C80,0-9, Malignant neoplasm without specification of site	Other neoplasms	C80X
All unspecified site in situ carcinoma and unspecified site Neoplasm of	Brain and nervous system cancers	D429, D432, D439
	Breast cancer	D059

Garbage codes	GBD codes	ICD-10 codes
uncertain or unknown behavior	Cervical cancer	D069
	Malignant melanoma of skin	D033, D039
	Non melanoma skin cancer	D043, D049
	Other neoplasms	D014, D019, D024, D073, D076, D091, D099, D379, D386, D399, D409, D419, D449
Ill-defined codes from D10-D36,9	Other neoplasms	D103, D105, D109, D126, D133, D144, D159, D179, D180, D181, D199, D229, D239, D269, D289, D299, D309, D316, D319, D329, D339, D359, D369
DIC, cardiac arrest, acute respiratory failure and coma	Other cardiovascular and circulatory diseases	I460, I461, I469
	Other endocrine, nutritional, blood, and immune disorders	D65X
	Other Lower respiratory infections	J960
All encephalopathy and cerebral edema	Encephalitis	G050, G051, G052, G058
	Hemorrhagic and other nonischemic stroke	I64X
	Other neurological disorders	G92X, G930, G931, G932, G933, G934, G935, G936, G937, G938, G939, G948
	Other nutritional deficiencies	E512
E85, Amyloidosis	Other endocrine, nutritional, blood, and immune disorders	E850, E851, E852, E853, E854, E858, E859
All disorders of electrolyte & fluid balance	Other endocrine, nutritional, blood, and immune disorders	E86X, E870, E871, E872, E873, E874, E875, E876, E877, E878
E889, Metabolic disorder unspecified	Other endocrine, nutritional, blood, and immune disorders	E889
Ill-defined codes from F32-F99	Other mental and behavioral disorders	F349, F39X, F459, F489, F519, F539, F609, F639, F649, F659, F669, F69X, F819, F849, F89X, F939, F949, F959, F989, F99X
Ill-defined codes from G43-G58,9	Other neurological disorders	G479, G509, G519, G529, G538, G542, G543, G544, G549, G569, G578, G589
Different paralytic syndrome and palsy	Other neurological disorders	G800, G801, G802, G803, G804, G808, G809, G810, G811, G819, G820, G821,

Garbage codes	GBD codes	ICD-10 codes
syndrome		G822, G823, G824, G825, G830, G831, G832, G833, G834, G838, G839
All hydrocephalus	Other neurological disorders	G910, G911, G912, G913, G918, G919, G940, G941, G942
Ill-defined codes from H00-H99	Cataracts	H281, H282, H288
	Other hearing loss	H919
	Other sense organ diseases	H019, H029, H030, H031, H038, H049, H059, H060, H061, H063, H103, H109, H119, H131, H132, H138, H159, H169, H179, H189, H190, H192, H193, H198, H209, H219, H279, H439, H449, H450, H451, H458, H470, H471, H477, H579, H580, H581, H588, H599, H609, H619, H699, H729, H739, H749, H750, H758, H809, H819, H82X, H839, H939
	Other vision loss	H309, H319, H320, H328, H349, H359, H539, H547
	Sense organ diseases	H220, H221, H228, H368, H480, H481, H488, H940, H948
Hypertension	Hypertensive heart disease	I10X, I150, I151, I152, I158, I159
Pulmonary embolism	Other cardiovascular and circulatory diseases	I260, I269
I27, 1, Kyphoscoliotic heart disease	Other cardiovascular and circulatory diseases	I271
All ill-defined descriptions of heart disease	Other cardiovascular and circulatory diseases	I279, I309, I319, I320, I321, I328, I349, I359, I369, I379, I38X, I390, I391, I392, I393, I394, I398, I510, I511, I512, I513, I514, I515, I516, I517, I518, I519
I31, 2, Haemopericardium not classified elsewhere	Other cardiovascular and circulatory diseases	I312
I31, 3, Pericardial effusion (noninflammatory)	Other cardiovascular and circulatory diseases	I313
All cardiac conduction disorders	Other cardiovascular and circulatory diseases	I440, I441, I442, I443, I444, I445, I446, I447, I450, I451, I452, I453, I454, I455, I456, I458, I459, I470, I471, I472, I479,

Garbage codes	GBD codes	ICD-10 codes
		I490, I491, I492, I493, I494, I495, I498, I499
I50, Heart failure	Other cardiovascular and circulatory diseases	I500, I501, I509
Atherosclerosis	Peripheral vascular disease	I700, I701, I709
Embolism & thrombosis	Other cardiovascular and circulatory diseases	I740, I741, I742, I743, I744, I745, I748, I749, I81X, I822, I823, I828, I829
I99, Other and unspecified disorders of circulatory system	Other cardiovascular and circulatory diseases	I99X
Ill-defined codes from J30-J35,9	Other chronic respiratory diseases	J304, J329, J339, J359
J80, Adult respiratory distress syndrome	Interstitial lung disease and pulmonary sarcoidosis	J80X
J81, Pulmonary oedema	Interstitial lung disease and pulmonary sarcoidosis	J81X
Thorax and pleural problem	Other chronic respiratory diseases	J90X, J91X, J920, J929, J930, J931, J938, J939, J940, J941, J942, J948, J949
	Other Lower respiratory infections	J860, J869
J98, 9, Respiratory disorder unspecified	Other Lower respiratory infections	J961, J969, J981, J982, J983, J989
Ill-defined codes from K00-K14,9	Other digestive diseases	K009, K039, K049, K069, K074, K079, K089, K099, K109, K119, K149
K65, Peritonitis	Other digestive diseases	K650, K658, K659
Unspecified liver disease	Cirrhosis of the liver	K769
GI signs and symptoms	Other digestive diseases	K920, K921
K92,9, Disease of digestive system unspecified	Other digestive diseases	K929
Ill-defined codes from L01-L98, 9	Other skin and subcutaneous diseases	L109, L119, L129, L139, L14X, L309, L439, L449, L45X, L519, L539, L540, L548, L559, L569, L589, L599, L609, L620, L628, L649, L659, L669, L679, L689, L719, L729, L739, L749, L759, L819, L859, L86X, L879, L909, L919, L929, L949, L959, L989

Garbage codes	GBD codes	ICD-10 codes
Ill-defined codes from M09-M99	Other musculoskeletal disorders	M098, M119, M130, M139, M206, M219, M229, M239, M249, M259, M319, M329, M339, M349, M359, M402, M405, M419, M429, M439, M464, M609, M619, M629, M659, M665, M679, M709, M719, M729, M759, M769, M779, M790, M792, M793, M799, M839, M849, M859, M879, M889, M899, M939, M949, M959, M969, M999
Osteomyelitis	Other musculoskeletal disorders	M462, M860, M861, M862, M863, M864, M865, M866, M868, M869
N17-N19, Renal failure	Chronic kidney diseases unspecified	N170, N171, N172, N178, N179, N180, N188, N189, N19X
Ill-defined codes from N39,3-N97,8	Other gynecological diseases	N609, N649, N759, N770, N771, N778, N829, N832, N839, N849, N859, N879, N889, N893, N899, N903, N909, N912, N915, N926, N939, N946, N949, N959
	Other urinary diseases	N399, N419, N429, N433, N489, N499, N510, N511, N512, N518
	Sexually transmitted diseases excluding HIV	N709, N719, N732, N735, N739
P96,9, Condition originating in the perinatal period unspecified	Other neonatal disorders	P95X, P969
Ill-defined codes from Q10-Q84,9	Congenital heart anomalies	Q209, Q219, Q229, Q239, Q249, Q259, Q264, Q269, Q279, Q289
	Other congenital anomalies	Q129, Q139, Q149, Q159, Q169, Q179, Q189, Q309, Q319, Q339, Q349, Q399, Q403, Q409, Q419, Q429, Q438, Q439, Q459, Q519, Q529, Q539, Q549, Q559, Q563, Q564, Q602, Q605, Q613, Q619, Q639, Q649, Q652, Q655, Q659, Q669, Q699, Q709, Q719, Q729, Q730, Q738, Q749, Q759, Q769, Q779, Q789, Q799, Q809, Q819, Q829, Q839, Q849
Q89,9, Congenital malformations unspecified	Other congenital anomalies	Q899
Q99,9, Chromosomal abnormality unspecified	Other chromosomal abnormalities	Q999
All unspecified transport and road	Motorized vehicle with three or more wheels	V393, V399, V493, V499, V593, V598, V599, V693, V699, V793, V799

Garbage codes	GBD codes	ICD-10 codes
injuries	Motorized vehicle with two wheels	V293, V299
	Other transport injury	V819, V890, V891, V899, V99X
	Pedal cycle vehicle	V193, V199
	Pedestrian injury by road vehicle	V093, V099
	Road injury other	V809, V829, V892, V893
X84, Intentional self-harm by unspecified means	Self-harm and interpersonal violence	X840, X841, X842, X843, X844, X845, X846, X847, X848, X849
Y09, Assault by unspec. means	Assault by other means	Y090, Y091, Y092, Y093, Y094, Y095, Y096, Y097, Y098, Y099
All undetermined intentional or unintentional	Injuries with undetermined intent	Y100, Y101, Y102, Y103, Y104, Y105, Y106, Y107, Y108, Y109, Y110, Y111, Y112, Y113, Y114, Y115, Y116, Y117, Y118, Y119, Y120, Y121, Y122, Y123, Y124, Y125, Y126, Y127, Y128, Y129, Y130, Y131, Y132, Y133, Y134, Y135, Y136, Y137, Y138, Y139, Y140, Y141, Y142, Y143, Y144, Y145, Y146, Y147, Y148, Y149, Y150, Y151, Y152, Y153, Y154, Y155, Y156, Y157, Y158, Y160, Y161, Y162, Y163, Y164, Y165, Y166, Y167, Y168, Y169, Y170, Y171, Y172, Y173, Y174, Y175, Y176, Y177, Y178, Y179, Y180, Y181, Y182, Y183, Y184, Y185, Y186, Y187, Y188, Y189, Y190, Y191, Y192, Y193, Y194, Y195, Y196, Y197, Y198, Y199, Y200, Y201, Y202, Y203, Y204, Y205, Y206, Y207, Y208, Y209, Y210, Y211, Y212, Y213, Y214, Y215, Y216, Y217, Y218, Y219, Y220, Y221, Y222, Y223, Y224, Y225, Y226, Y227, Y228, Y229, Y230, Y231, Y232, Y233, Y234, Y235, Y236, Y237, Y238, Y239, Y240, Y241, Y242, Y243, Y244, Y245, Y246, Y247, Y248, Y249, Y250, Y251, Y252, Y253, Y254, Y255, Y256, Y257, Y258, Y259, Y260, Y261, Y262, Y263, Y264, Y265, Y266, Y267, Y268, Y269, Y270, Y271, Y272, Y273, Y274, Y275, Y276, Y277, Y278, Y279, Y280, Y281, Y282, Y283, Y284, Y285, Y286, Y287, Y288, Y289, Y290, Y291, Y292, Y293, Y294, Y295, Y296, Y297, Y298,

Garbage codes	GBD codes	ICD-10 codes
		Y299, Y300, Y301, Y302, Y303, Y304, Y305, Y306, Y307, Y308, Y309, Y310, Y311, Y312, Y313, Y314, Y315, Y316, Y317, Y318, Y319, Y320, Y321, Y322, Y323, Y324, Y325, Y326, Y327, Y328, Y329, Y330, Y331, Y332, Y333, Y334, Y335, Y336, Y337, Y337, Y338, Y339, Y340, Y341, Y342, Y343, Y344, Y345, Y346, Y347, Y348, Y349