

## Supplementary Tables

## Supplementary Table A. Diagnostic categories

<b>Collapsed diagnosis group</b>	<b>ICD-10 codes</b>
Infections	A, B (not B18), G00-G07, J0-J2, J85, J86, Y95, Z22
Primary malignant cancers	C0-C6, C70-C76, C8-C9
Secondary malignant cancers	C77-C79
Other cancers	D0-D4
Blood disorders	D55-D59, D6-D9
Other endocrine, nutritional and metabolic diseases	D50-D53, E0, E12 (not E12.2), E15, E16, E2-E5 (not E51.2), E60, E61, E63-E68, E7, E8, E9
Diabetes	E10 (not E10.2), E11 (not E11.2), E13 (not E13.2), E14 (not E14.2), O24
Wernicke's encephalopathy	E51.2
Dementia	F00, F01, F02, F03, G30, G31.0, G31.3
Delirium	F05
Secondary mental disorders	F06, F07, F09
Alcohol, substance and other mental disorders	F04, F1, F38, F44, F45, F48, F5 (not F50), F6, F8 (not F84), F9
Schizophrenia	F2
Other common mental disorders	F30-F33, F34 (not F34.0), F39, F40-F43, F50
Autism spectrum disorders	F84
Huntington's disease	G10
Motor neurone disease	G12.2
Parkinson disease	G20
Multiple sclerosis	G35
Epilepsy	G40, G41
Other neurological conditions	G08, G09, G11, G12 (not G12.2), G13, G14, G2 (not G20), G3 (not G30, G31.0, G31.3, G35), G43, G44, G47, G5-G7, G81-G83, G9
Cerebral palsy	G80
Diseases of eyes and ears	H (not H0.00)
Coronary heart disease	I20-I25
Stroke	I6
Other circulatory system disorders	G45, G46, I0, I10, I11, I13, I15, I26-I28, I3, I4, I50-I52, I7, I8 (not I85), I9
Asthma	J45, J46
Chronic respiratory diseases	J40-J44, J47, J6, J7, J80-J84, J9
Upper respiratory diseases	J3 (not J34.0)
Dental caries	K02, K04
Other oral disorders	K00, K01, K03, K05-K09, K1
Chronic liver disease	B18, I85, K70-K76
Diseases of the digestive system	K2-K5, K6 (not K62.2, K62.3) K77, K8, K9
Skin disease	A46, B08, B86, H00.0, H60, J34.0, L0-L7, L8 (not L89), L90-L95, L98 (not L98.4), L99
Pressure injury and ulcers	L89, L97, L98.4
Musculoskeletal	M
Acute and chronic renal disease	E10.2, E11.2, E12.2, E13.2, E14.2, I12, N0 (not N00, N01), N1, N20-N28, N35, N36, N37, N39.1, N39.2, Q61

## Supplementary Tables

Other genitourinary diseases	D25, K62.2, K62.3, N30-N32, N34, "N39", N39.0, N39.3, N39.4, N4, N50, N6, N7, N8, N9, O94, R15, R32
Other symptoms and signs	R00, R02, R20-R23, R30, R31, R33-R39, R47-R49, R50-R55, R57-R65
Neurological symptoms and signs	R25-R29, R40-R44, R56
Gastrointestinal symptoms and signs	R10-R14, R16-R19
Circulatory and respiratory symptoms and signs	R01, R03-R09
Behavioural and emotional symptoms and signs	R45, R46
Traumatic brain injury	"S02", S02.0, S02.1, S02.7, S02.9, S06
Spinal cord injury	"S14", S14.0, S14.1, S14.7, 'S24', S24.0, S24.1, S24.7, "S34", S34.0, S34.1, S34.7, T06.0, T06.1, T09.3
Fractures	S02.2-S02.6, S02.8, S12, S22, S32, S42, S49, S52, S59.7, S62, S69, S72, S82, S92, T02, T08, T10, T12, T14.2 S00, S01, S03-S05, S07, S08, S09, S10, S11, S13, S14.2-S14.6, S15, S16, S17, S18, S19, S20, S21, S23, S24.2-S24.6, S25, S26, S27, S28, S29, S30, S31, S33, S34.2-S34.6, S34.8, S35-S41, S43-S48, S50, S51, S53-S58, "S59", S59.7, S59.8, S59.9, S60, S61, S63-S68, S69.8, S69.9, S70, S71, S73-S78, S80, S81, S83-S91, S93-S99, T00, T01, T03-T05, T06.2-T06.8, T07, "T09", T09.0-T09.2, T09.4-T09.9, T11, T13, "T14", T14.0, T14.1, T14.3-T14.9, T15-T19, T2, T3, T4, T5, T6, T70-T74, T75 (not T75.1), T79, T80, T81, T88, T89, V (not V90, V92), W2-W6, W70, W73-W79, W8, W9, X0-X5, X85-X89, X9, Y0, Y35, Y36, Y4-Y7, Y80-Y86, Y87 (not 87.0), Y88, Y89
Other injuries	
Falls	W0, W1
Intentional self-harm	X6, X7, X80-X84, Y87.0
Rehabilitation, convalescence and respite	Z50, Z54, Z75.5
Housing and living situation	Z59-Z65
Palliative care	Z51.5
Mobility and personal care	Z74, Z75.0, "Z99", Z99.3, Z99.8, Z99.9
Other Z codes	Y93, Y96, Y98, Z00-Z07, Z11-Z13, Z20, Z21, Z28, Z29, Z4, "Z51", Z51.0-Z51.4, Z51.6, Z51.81, Z51.88, Z51.9, Z52, Z53, Z55-Z59, Z71-Z73, "Z75", Z75.1-Z75.4, Z75.8, Z75.9, Z76, Z8, Z90, Z91 (not Z91.7), Z92-Z98, Z99.0-Z99.2

## Supplementary Tables

Supplementary Table B. Diagnostic predictors of transfer from hospital to RAC on discharge using diagnoses recorded during hospital admissions in the 365 days prior to the index admission

<b>Diagnosis variable</b>	<b>Cases<sup>a</sup></b> n=4,406	<b>Controls<sup>b</sup></b> n=512,063	<b>Unadjusted</b> Odds ratio (95%CI)	<b>Partially adjusted</b> Odds ratio <sup>d</sup> (95%CI)	<b>Full model</b> Odds ratio <sup>c</sup> (95% CI)
Huntington disease	87 (2.0%)	187 (0.0%)	55.14 (42.68–71.23)	30.84 (22.82–41.67)	33.41 (23.56–47.37)
Dementia	621 (14.1%)	1,131 (0.2%)	74.12 (66.87–82.16)	18.26 (16.21–20.56)	13.39 (11.66–15.37)
Multiple sclerosis	199 (4.5%)	3,067 (0.6%)	7.85 (6.78–9.09)	7.67 (6.52–9.04)	6.71 (5.54–8.12)
Wernicke's encephalopathy	70 (1.6%)	239 (0.0%)	34.57 (26.44–45.20)	7.81 (5.73–10.65)	5.91 (4.14–8.42)
Need for palliative care	471 (10.7%)	2,567 (0.5%)	23.76 (21.43–26.34)	7.53 (6.72–8.44)	4.99 (4.24–5.87)
Motor neurone disease	58 (1.3%)	562 (0.1%)	12.14 (9.25–15.94)	6.53 (4.86–8.79)	4.74 (3.34–6.71)
Parkinson's disease	149 (3.4%)	1,255 (0.2%)	14.25 (11.99–16.93)	5.33 (4.39–6.46)	4.57 (3.61–5.77)
Intellectual disability	700 (15.9%)	17,257 (3.4%)	5.42 (4.99–5.88)	3.89 (3.52–4.30)	3.51 (3.12–3.95)
Stroke	1,063 (24.1%)	14,373 (2.8%)	11.01 (10.26–11.82)	3.65 (3.38–3.96)	2.86 (2.57–3.18)
Problems with mobility and personal care	1,063 (24.1%)	5,308 (1.0%)	30.36 (28.19–32.69)	7.99 (7.33–8.71)	2.73 (2.47–3.01)
Other genitourinary diseases	2,195 (49.8%)	41,614 (8.1%)	11.22 (10.57–11.92)	5.48 (5.13–5.87)	2.35 (2.17–2.55)
Cerebral palsy	90 (2.0%)	2,182 (0.4%)	4.87 (3.94–6.03)	5.89 (4.62–7.52)	2.32 (1.77–3.05)
Pressure injury and ulcers	1,007 (22.9%)	6,728 (1.3%)	22.25 (20.66–23.97)	4.32 (3.96–4.72)	2.17 (1.96–2.41)
Falls	1,165 (26.4%)	25,109 (4.9%)	6.97 (6.51–7.46)	2.77 (2.57–2.99)	1.70 (1.52–1.89)
Epilepsy	508 (11.5%)	15,652 (3.1%)	4.13 (3.76–4.54)	3.31 (2.98–3.68)	1.64 (1.45–1.86)
Neurological symptoms and signs	1,837 (41.7%)	36,962 (7.2%)	9.19 (8.65–9.77)	4.06 (3.80–4.34)	1.62 (1.49–1.76)

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Primary malignant cancers	711 (16.1%)	18,282 (3.6%)	5.20 (4.79–5.64)	2.16 (1.98–2.36)	1.57 (1.35–1.82)
Secondary mental disorders	228 (5.2%)	2,285 (0.4%)	12.17 (10.59–14.00)	3.31 (2.79–3.92)	1.45 (1.20–1.76)
Other factors influencing health status and contact with health services	3,608 (81.9%)	270,761 (52.9%)	4.03 (3.73–4.35)	1.91 (1.76–2.07)	1.40 (1.28–1.54)
Chronic liver disease	539 (12.2%)	16,403 (3.2%)	4.21 (3.84–4.62)	1.84 (1.67–2.04)	1.38 (1.22–1.56)
Infections	2,550 (57.9%)	83,614 (16.3%)	7.04 (6.63–7.48)	2.95 (2.76–3.15)	1.37 (1.26–1.50)
Delirium	417 (9.5%)	4,707 (0.9%)	11.27 (10.15–12.51)	3.14 (2.79–3.54)	1.32 (1.15–1.53)
Gastrointestinal symptoms and signs	1,368 (31.0%)	44,335 (8.7%)	4.75 (4.45–5.07)	2.73 (2.54–2.93)	1.32 (1.21–1.44)
Chronic respiratory diseases	1,179 (26.8%)	26,339 (5.1%)	6.74 (6.30–7.21)	1.87 (1.74–2.02)	1.31 (1.19–1.43)
Other neurological conditions	2,203 (50.0%)	148,120 (28.9%)	2.46 (2.32–2.61)	2.21 (2.07–2.36)	1.30 (1.20–1.42)
Other endocrine, nutritional and metabolic diseases	2,463 (55.9%)	84,603 (16.5%)	6.40 (6.03–6.80)	2.19 (2.06–2.34)	1.24 (1.14–1.35)
Problems related to housing, economic and social situation	995 (22.6%)	57,548 (11.2%)	2.30 (2.15–2.47)	1.47 (1.36–1.59)	1.23 (1.12–1.35)
Behavioural and emotional symptoms and signs	502 (11.4%)	23,666 (4.6%)	2.65 (2.42–2.91)	1.83 (1.64–2.04)	1.22 (1.07–1.39)
Dental caries	92 (2.1%)	3,123 (0.6%)	3.48 (2.82–4.29)	1.60 (1.25–2.06)	1.20 (0.91–1.59)
Diabetes	983 (22.3%)	35,856 (7.0%)	3.81 (3.55–4.10)	1.37 (1.26–1.48)	1.20 (1.09–1.31)
Other symptoms and signs	2,153 (48.9%)	73,456 (14.3%)	5.71 (5.38–6.06)	2.71 (2.53–2.89)	1.13 (1.04–1.23)
Traumatic brain injury	215 (4.9%)	12,094 (2.4%)	2.12 (1.85–2.44)	1.57 (1.34–1.84)	1.13 (0.94–1.36)
Alcohol, substance and other mental disorders	1,457 (33.1%)	153,056 (29.9%)	1.16 (1.09–1.23)	1.06 (0.99–1.14)	1.07 (0.98–1.17)
Skin disease	981 (22.3%)	28,613 (5.6%)	4.84 (4.50–5.20)	1.83 (1.68–1.99)	1.07 (0.97–1.17)
Diseases of eyes and ears	761 (17.3%)	20,568 (4.0%)	4.99 (4.61–5.40)	1.85 (1.69–2.02)	1.06 (0.96–1.18)

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Other injuries	2,332 (52.9%)	134,307 (26.2%)	3.16 (2.98–3.36)	1.80 (1.69–1.92)	1.02 (0.93–1.10)
Diseases of the digestive system	1,778 (40.4%)	83,648 (16.3%)	3.47 (3.26–3.68)	1.59 (1.49–1.70)	0.99 (0.92–1.07)
Secondary malignant cancers	350 (7.9%)	6,874 (1.3%)	6.34 (5.67–7.09)	2.61 (2.32–2.94)	0.98 (0.81–1.19)
Fractures	612 (13.9%)	28,682 (5.6%)	2.72 (2.49–2.96)	1.48 (1.35–1.63)	0.97 (0.85–1.10)
Other circulatory system disorders	2,323 (52.7%)	88,989 (17.4%)	5.30 (5.00–5.63)	1.57 (1.47–1.68)	0.95 (0.87–1.03)
Circulatory and respiratory symptoms and signs	610 (13.8%)	33,924 (6.6%)	2.26 (2.08–2.47)	1.16 (1.06–1.27)	0.92 (0.83–1.03)
Other common mental disorders	1,099 (24.9%)	136,978 (26.8%)	0.91 (0.85–0.97)	0.85 (0.79–0.92)	0.92 (0.84–1.00)
Schizophrenia	464 (10.5%)	34,839 (6.8%)	1.61 (1.46–1.78)	0.41 (0.36–0.46)	0.90 (0.79–1.03)
Other oral disorders	166 (3.8%)	6,828 (1.3%)	2.90 (2.48–3.39)	1.40 (1.17–1.69)	0.87 (0.71–1.06)
Rehabilitation, convalescence and respite	1,484 (33.7%)	22,958 (4.5%)	10.82 (10.15–11.53)	2.38 (2.20–2.58)	0.85 (0.77–0.94)
Acute and chronic renal disease	744 (16.9%)	20,147 (3.9%)	4.96 (4.58–5.37)	1.39 (1.27–1.52)	0.85 (0.76–0.95)
Musculoskeletal	1,861 (42.2%)	105,794 (20.7%)	2.81 (2.64–2.98)	1.48 (1.38–1.58)	0.85 (0.77–0.92)
Asthma	107 (2.4%)	10,767 (2.1%)	1.16 (0.96–1.41)	0.81 (0.66–1.00)	0.84 (0.67–1.05)
Other cancers	203 (4.6%)	15,683 (3.1%)	1.53 (1.33–1.76)	0.92 (0.79–1.07)	0.75 (0.63–0.89)
Blood disorders	827 (18.8%)	20,929 (4.1%)	5.42 (5.02–5.86)	1.58 (1.44–1.72)	0.73 (0.65–0.81)
Coronary heart disease	326 (7.4%)	18,079 (3.5%)	2.18 (1.95–2.45)	0.69 (0.61–0.77)	0.62 (0.54–0.71)
Intentional self-harm	93 (2.1%)	29,150 (5.7%)	0.36 (0.29–0.44)	0.45 (0.36–0.56)	0.59 (0.46–0.75)
Upper respiratory diseases	65 (1.5%)	12,798 (2.5%)	0.58 (0.46–0.75)	0.73 (0.56–0.95)	0.56 (0.42–0.76)
Spinal cord injury	25 (0.6%)	775 (0.2%)	3.76 (2.53–5.61)	0.32 (0.20–0.51)	0.29 (0.18–0.47)