

Supplementary tables

Table A. Charlson comorbidity index

Weights	Conditions	ICD-8 codes	ICD-10 codes
1	Myocardial infarction	410	I21; I22; I23
	Congestive heart failure	427.09; 427.10; 427.11; 427.19; 428.99; 782.49	I50; I11.0; I13.0; I13.2
	Peripheral vascular disease	440; 441; 442; 443; 444; 445	I70; I71; I72; I73; I74; I77
	Cerebrovascular disease	430-438	I60-I69; G45; G46
	Dementia	290.09-290.19; 293.09	F00-F03; F05.1; G30
	Chronic pulmonary disease	490-493; 515-518	J40-J47; J60-J67; J68.4; J70.1; J70.3; J84.1; J92.0; J96.1; J98.2; J98.3
	Connective tissue disease	712; 716; 734; 446; 135.99	M05; M06; M08; M09; M30; M31; M32; M33; M34; M35; M36; D86
	Ulcer disease	530.91; 530.98; 531-534	K22.1; K25-K28
	Mild liver disease	571; 573.01; 573.04	B18; K70.0-K70.3; K70.9; K71; K73; K74; K76.0
	Diabetes without end organ damage	249.00; 249.06; 249.07; 249.09; 250.00; 250.06; 250.07; 250.09	E10.0, E10.1; E10.9; E11.0; E11.1; E11.9
2	Diabetes with end organ damage	249.01-249.05; 249.08; 250.01-250.05; 250.08	E10.2-E10.8, E11.2-E11.8
	Hemiplegia	344	G81; G82
	Moderate to severe renal disease	403; 404; 580-583; 584; 590.09; 593.19; 753.10-753.19; 792	I12; I13; N00-N05; N07; N11; N14; N17-N19; Q61
	Non-metastatic solid tumour	140-194	C00-C75
	Leukaemia	204-207	C91-C95
	Lymphoma	200-203; 275.59	C81-C85; C88; C90; C96
3	Moderate to severe liver disease	070.00; 070.02; 070.04; 070.06; 070.08; 573.00; 456.00-456.09	B15.0; B16.0; B16.2; B19.0; K70.4; K72; K76.6; I85
6	Metastatic cancer	195-198; 199	C76-C80
	AIDS	079.83	B21-B24

Table B. Number of people with a first-time hospitalisation for myocardial infarction in Denmark in 5-year periods from 1984 through 2008, by comorbidity category

	Calendar periods of diagnosis					Total
	1984-1988	1989-1993	1994-1998	1999-2003	2004-2008	
	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
Total	56,454 (100)	50,249 (100)	42,261 (100)	44,365 (100)	41,002 (100)	234,331 (100)
Comorbidity category*						
Normal	42,645 (75.5)	37,771 (75.2)	30,041 (71.1)	28,323 (63.8)	26,157 (63.8)	164,937 (70.4)
Moderate	7,455 (13.2)	6,845 (13.6)	6,409 (15.2)	7,599 (17.1)	6,633 (16.2)	34,941 (14.9)
Severe	4,168 (7.4)	3,701 (7.4)	3,571 (8.4)	4,592 (10.4)	4,295 (10.5)	20,327 (8.7)
Very severe	2,186 (3.9)	1,932 (3.8)	2,240 (5.3)	3,851 (8.7)	3,917 (9.6)	14,126 (6.0)
Charlson score=3	1,393 (2.5)	1,219 (2.4)	1,337 (3.2)	2,116 (4.8)	1,978 (4.8)	8,043 (3.4)
Charlson score=4	434 (0.8)	397 (0.8)	501 (1.2)	939 (2.1)	950 (2.3)	3,221 (1.4)
Charlson score=5	138 (0.2)	103 (0.2)	179 (0.4)	415 (0.9)	436 (1.1)	1,271 (0.5)
Charlson score=6	157 (0.3)	144 (0.3)	138 (0.3)	230 (0.5)	339 (0.8)	1,008 (0.4)
Charlson score=7	43 (0.1)	39 (0.1)	45 (0.1)	95 (0.2)	123 (0.3)	345 (0.1)
Charlson score=8	15 (0.0)	22 (0.0)	26 (0.1)	37 (0.1)	59 (0.1)	159 (0.1)
Charlson score=9	4 (0.0)	5 (0.0)	8 (0.0)	7 (0.0)	13 (0.0)	37 (0.0)
Charlson score≥10	2 (0.0)	3 (0.0)	6 (0.0)	12 (0.0)	19 (0.0)	42 (0.0)

* Categories of comorbidity were based on Charlson comorbidity index scores of 0 (normal), 1 (moderate), 2 (severe), and ≥3 (very severe).

Table C. Mortality risk and mortality rate ratio after first-time hospitalisation for myocardial infarction associated with comorbidity category, by 5-year calendar periods of diagnosis

Comorbidity category*	No.	30-day mortality			31-365 day mortality		
		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)	
			Unadjusted	Adjusted†		Unadjusted	Adjusted†
1984-1988							
Normal	42,645	27.6 (27.2 to 28.1)	1 (reference)	1 (reference)	12.6 (12.2 to 13.0)	1 (reference)	1 (reference)
Moderate	7,455	39.3 (38.2 to 40.4)	1.51 (1.45 to 1.57)	1.31 (1.26 to 1.37)	23.8 (22.6 to 25.1)	2.02 (1.89 to 2.16)	1.71 (1.60 to 1.83)
Severe	4,168	44.6 (43.1 to 46.1)	1.76 (1.67 to 1.85)	1.51 (1.44 to 1.59)	29.3 (27.5 to 31.2)	2.57 (2.37 to 2.79)	2.14 (1.97 to 2.33)
Very severe	2,186	51.6 (49.6 to 53.8)	2.09 (1.97 to 2.23)	1.81 (1.70 to 1.92)	38.8 (35.9 to 41.8)	3.66 (3.30 to 4.05)	3.05 (2.76 to 3.38)
Charlson score=3	1,393	48.9 (46.3 to 51.5)	1.95 (1.80 to 2.10)	1.68 (1.55 to 1.81)	36.8 (33.4 to 40.5)	3.42 (3.02 to 3.88)	2.85 (2.52 to 3.23)
Charlson score=4	434	58.1 (53.5 to 62.7)	2.47 (2.18 to 2.80)	2.13 (1.88 to 2.42)	39.0 (32.4 to 46.5)	3.65 (2.89 to 4.62)	3.03 (2.40 to 3.84)
Charlson score=5	138	55.1 (47.0 to 63.5)	2.35 (1.88 to 2.95)	2.06 (1.65 to 2.59)	48.4 (36.8 to 61.4)	5.09 (3.56 to 7.29)	4.35 (3.04 to 6.23)
Charlson score≥6	221	54.3 (47.9 to 61.0)	2.19 (1.83 to 2.62)	1.89 (1.58 to 2.27)	46.5 (37.4 to 56.7)	4.62 (3.47 to 6.16)	3.85 (2.89 to 5.14)
1989-1993							
Normal	37,771	23.5 (23.0 to 23.9)	1 (reference)	1 (reference)	10.1 (9.7 to 10.4)	1 (reference)	1 (reference)
Moderate	6,845	36.0 (34.9 to 37.2)	1.62 (1.55 to 1.70)	1.38 (1.32 to 1.44)	21.3 (20.1 to 22.5)	2.25 (2.09 to 2.42)	1.81 (1.68 to 1.95)
Severe	3,701	40.4 (38.9 to 42.0)	1.86 (1.77 to 1.97)	1.57 (1.48 to 1.66)	27.3 (25.5 to 29.3)	3.00 (2.75 to 3.27)	2.36 (2.16 to 2.58)
Very severe	1,932	50.0 (47.8 to 52.3)	2.40 (2.25 to 2.57)	2.03 (1.90 to 2.17)	38.3 (35.3 to 41.4)	4.49 (4.03 to 5.00)	3.47 (3.12 to 3.87)
Charlson score=3	1,219	48.1 (45.3 to 50.9)	2.28 (2.10 to 2.48)	1.91 (1.76 to 2.08)	35.5 (32.0 to 39.4)	4.10 (3.58 to 4.70)	3.15 (2.75 to 3.60)
Charlson score=4	397	52.9 (48.1 to 57.9)	2.59 (2.25 to 2.96)	2.18 (1.90 to 2.50)	42.8 (36.1 to 50.2)	5.10 (4.08 to 6.37)	4.00 (3.20 to 4.99)
Charlson score=5	103	52.4 (43.2 to 62.3)	2.67 (2.05 to 3.49)	2.27 (1.74 to 2.97)	40.8 (28.6 to 55.8)	4.99 (3.21 to 7.74)	3.62 (2.33 to 5.62)
Charlson score≥6	213	54.5 (47.9 to 61.3)	2.61 (2.17 to 3.14)	2.34 (1.95 to 2.81)	46.4 (37.1 to 56.8)	5.70 (4.25 to 7.65)	4.73 (3.52 to 6.35)
1994-1998							
Normal	30,041	19.8 (19.4 to 20.3)	1 (reference)	1 (reference)	8.0 (7.7 to 8.4)	1 (reference)	1 (reference)
Moderate	6,409	30.2 (29.1 to 31.3)	1.59 (1.51 to 1.68)	1.31 (1.24 to 1.38)	18.6 (17.5 to 19.8)	2.46 (2.26 to 2.66)	1.96 (1.81 to 2.13)
Severe	3,571	33.4 (31.9 to 35.0)	1.78 (1.68 to 1.90)	1.46 (1.37 to 1.56)	23.3 (21.6 to 25.0)	3.15 (2.86 to 3.46)	2.43 (2.21 to 2.68)
Very severe	2,240	42.7 (40.7 to 44.8)	2.37 (2.22 to 2.54)	1.91 (1.78 to 2.05)	34.8 (32.3 to 37.5)	5.12 (4.62 to 5.68)	3.88 (3.50 to 4.31)
Charlson score=3	1,337	40.1 (37.5 to 42.8)	2.22 (2.03 to 2.42)	1.76 (1.61 to 1.92)	33.1 (29.9 to 36.5)	4.80 (4.22 to 5.45)	3.57 (3.14 to 4.06)
Charlson score=4	501	44.7 (40.5 to 49.2)	2.49 (2.18 to 2.84)	2.02 (1.77 to 2.31)	35.4 (30.1 to 41.3)	5.19 (4.24 to 6.36)	3.99 (3.26 to 4.89)
Charlson score=5	179	45.8 (38.8 to 53.4)	2.57 (2.07 to 3.20)	2.11 (1.70 to 2.62)	44.3 (35.1 to 54.8)	6.72 (4.97 to 9.09)	5.11 (3.78 to 6.91)
Charlson score≥6	223	51.1 (44.8 to 57.8)	2.89 (2.40 to 3.48)	2.49 (2.07 to 3.00)	37.6 (29.3 to 47.4)	6.04 (4.43 to 8.23)	5.12 (3.76 to 6.97)
1999-2003							
Normal	28,323	14.1 (13.7 to 14.5)	1 (reference)	1 (reference)	7.2 (6.9 to 7.5)	1 (reference)	1 (reference)
Moderate	7,599	22.3 (21.3 to 23.2)	1.64 (1.55 to 1.74)	1.31 (1.23 to 1.38)	16.5 (15.6 to 17.5)	2.40 (2.22 to 2.60)	1.81 (1.67 to 1.96)
Severe	4,592	25.7 (24.5 to 27.0)	1.92 (1.80 to 2.05)	1.50 (1.40 to 1.60)	23.3 (21.9 to 24.7)	3.51 (3.23 to 3.82)	2.59 (2.38 to 2.82)

Comorbidity category*	No.	30-day mortality			31-365 day mortality		
		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)	
			Unadjusted	Adjusted†		Unadjusted	Adjusted†
Very severe	3,851	30.8 (29.4 to 32.3)	2.36 (2.21 to 2.52)	1.84 (1.72 to 1.96)	33.8 (32.0 to 35.6)	5.45 (5.03 to 5.91)	3.97 (3.66 to 4.31)
Charlson score=3	2,116	29.4 (27.6 to 31.4)	2.25 (2.07 to 2.45)	1.73 (1.59 to 1.88)	31.5 (29.2 to 33.9)	5.00 (4.51 to 5.53)	3.57 (3.23 to 3.96)
Charlson score=4	939	31.4 (28.6 to 34.5)	2.40 (2.13 to 2.70)	1.84 (1.64 to 2.08)	33.4 (29.9 to 37.2)	5.38 (4.67 to 6.20)	3.91 (3.39 to 4.50)
Charlson score=5	415	34.5 (30.1 to 39.2)	2.68 (2.27 to 3.17)	2.12 (1.80 to 2.51)	37.9 (32.4 to 43.9)	6.27 (5.14 to 7.64)	4.64 (3.80 to 5.66)
Charlson score≥6	381	33.1 (28.6 to 38.0)	2.52 (2.11 to 3.01)	2.18 (1.83 to 2.61)	44.0 (38.2 to 50.4)	7.65 (6.32 to 9.26)	6.25 (5.16 to 7.57)
2004-2008							
Normal	26,157	10.8 (10.4 to 11.2)	1 (reference)	1 (reference)	6.2 (5.9 to 6.5)	1 (reference)	1 (reference)
Moderate	6,633	19.2 (18.3 to 20.2)	1.85 (1.73 to 1.98)	1.35 (1.26 to 1.45)	15.5 (14.6 to 16.5)	2.64 (2.42 to 2.87)	1.83 (1.68 to 2.00)
Severe	4,295	21.4 (20.2 to 22.7)	2.09 (1.94 to 2.25)	1.52 (1.41 to 1.64)	20.6 (19.3 to 22.1)	3.61 (3.30 to 3.96)	2.50 (2.29 to 2.74)
Very severe	3,917	27.1 (25.7 to 28.5)	2.72 (2.53 to 2.91)	1.96 (1.83 to 2.11)	31.2 (29.5 to 32.9)	5.80 (5.34 to 6.31)	3.89 (3.58 to 4.24)
Charlson score=3	1,978	25.6 (23.7 to 27.6)	2.55 (2.32 to 2.80)	1.78 (1.61 to 1.95)	26.6 (24.4 to 28.9)	4.81 (4.30 to 5.38)	3.09 (2.76 to 3.46)
Charlson score=4	950	28.9 (26.2 to 31.9)	2.94 (2.60 to 3.33)	2.09 (1.85 to 2.37)	31.6 (28.2 to 35.2)	5.84 (5.06 to 6.75)	3.83 (3.32 to 4.43)
Charlson score=5	436	28.7 (24.7 to 33.2)	2.92 (2.44 to 3.50)	2.14 (1.79 to 2.56)	36.7 (31.6 to 42.3)	7.03 (5.81 to 8.51)	4.97 (4.11 to 6.02)
Charlson score≥6	553	27.8 (24.3 to 31.8)	2.77 (2.36 to 3.26)	2.37 (2.01 to 2.78)	43.4 (38.7 to 48.4)	8.82 (7.53 to 10.33)	7.13 (6.09 to 8.35)

*Categories of comorbidity were based on Charlson comorbidity index scores of 0 (normal), 1 (moderate), 2 (severe), and ≥3 (very severe).

†Adjusted for gender and age.

Table D. Mortality risk and mortality rate ratio after first-time hospitalisation for myocardial infarction associated with comorbidity category during 2004-2008, by age subgroup

Age group and comorbidity category*	No.	30-day mortality			31-365 day mortality		
		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)		Mortality risk, % (95% CI)	Mortality rate ratio (95% CI)	
			Unadjusted	Adjusted†		Unadjusted	Adjusted†
15-49 years							
Normal	2,916	2.1 (1.6 to 2.6)	1 (reference)	1 (reference)	0.6 (0.4 to 1.0)	1 (reference)	1 (reference)
Moderate	247	2.4 (1.1 to 5.3)	1.18 (0.51 to 2.74)	1.09 (0.47 to 2.54)	2.5 (1.1 to 5.5)	3.99 (1.58 to 10.06)	3.95 (1.56 to 10.01)
Severe	136	3.7 (1.5 to 8.6)	1.81 (0.73 to 4.50)	1.73 (0.69 to 4.31)	6.1 (3.1 to 11.8)	9.96 (4.33 to 22.90)	9.94 (4.31 to 22.90)
Very severe	110	18.2 (12.1 to 26.7)	9.36 (5.64 to 15.53)	8.98 (5.39 to 14.97)	15.6 (9.5 to 24.8)	26.40 (13.13 to 53.09)	25.89 (12.83 to 52.25)
50-59 years							
Normal	5,102	3.3 (2.8 to 3.8)	1 (reference)	1 (reference)	0.9 (0.7 to 1.2)	1 (reference)	1 (reference)
Moderate	583	6.9 (5.1 to 9.2)	2.11 (1.50 to 2.98)	2.09 (1.48 to 2.95)	2.4 (1.4 to 4.1)	2.64 (1.42 to 4.89)	2.60 (1.40 to 4.82)
Severe	362	8.6 (6.1 to 12.0)	2.66 (1.82 to 3.91)	2.62 (1.79 to 3.85)	6.6 (4.4 to 9.9)	7.46 (4.48 to 12.42)	7.31 (4.38 to 12.20)
Very severe	249	12.4 (8.9 to 17.2)	3.90 (2.66 to 5.72)	3.85 (2.62 to 5.65)	19.3 (14.6 to 25.2)	23.79 (15.62 to 36.23)	23.46 (15.39 to 35.78)
60-69 years							
Normal	6,415	5.6 (5.1 to 6.2)	1 (reference)	1 (reference)	2.7 (2.3 to 3.1)	1 (reference)	1 (reference)
Moderate	1,277	10.5 (8.9 to 12.3)	1.91 (1.57 to 2.33)	1.90 (1.56 to 2.32)	6.2 (5.0 to 7.8)	2.35 (1.78 to 3.11)	2.33 (1.76 to 3.08)
Severe	809	13.7 (11.5 to 16.3)	2.54 (2.05 to 3.14)	2.52 (2.03 to 3.12)	11.2 (9.1 to 13.8)	4.33 (3.31 to 5.67)	4.26 (3.25 to 5.59)
Very severe	726	22.7 (19.8 to 26.0)	4.41 (3.67 to 5.30)	4.39 (3.65 to 5.28)	21.7 (18.6 to 25.4)	8.99 (7.11 to 11.37)	8.91 (7.05 to 11.28)
70-79 years							
Normal	5,838	12.6 (11.8 to 13.5)	1 (reference)	1 (reference)	6.3 (5.7 to 7.0)	1 (reference)	1 (reference)
Moderate	1,954	16.8 (15.2 to 18.5)	1.35 (1.19 to 1.54)	1.34 (1.18 to 1.53)	14.0 (12.4 to 15.8)	2.31 (1.95 to 2.73)	2.31 (1.95 to 2.73)
Severe	1,353	19.7 (17.7 to 22.0)	1.61 (1.40 to 1.85)	1.60 (1.39 to 1.84)	19.3 (17.1 to 21.8)	3.28 (2.76 to 3.90)	3.28 (2.75 to 3.90)
Very severe	1381	24.2 (22.0 to 26.5)	2.01 (1.77 to 2.29)	2.00 (1.76 to 2.28)	32.6 (29.8 to 35.5)	5.95 (5.11 to 6.93)	5.95 (5.11 to 6.93)
≥80 years							
Normal	5,886	25.5 (24.4 to 26.6)	1 (reference)	1 (reference)	20.4 (19.2 to 21.6)	1 (reference)	1 (reference)
Moderate	2,572	29.8 (28.1 to 31.6)	1.19 (1.09 to 1.30)	1.19 (1.09 to 1.30)	28.5 (26.4 to 30.6)	1.46 (1.31 to 1.63)	1.46 (1.31 to 1.63)
Severe	1,635	30.9 (28.7 to 33.2)	1.25 (1.13 to 1.38)	1.25 (1.13 to 1.38)	33.5 (30.9 to 36.4)	1.79 (1.58 to 2.01)	1.79 (1.58 to 2.01)
Very severe	1,451	35.1 (32.8 to 37.7)	1.46 (1.32 to 1.62)	1.46 (1.32 to 1.62)	39.5 (36.5 to 42.7)	2.17 (1.92 to 2.45)	2.17 (1.92 to 2.45)

*Categories of comorbidity were based on Charlson comorbidity index scores of 0 (normal), 1 (moderate), 2 (severe), and ≥3 (very severe).

†Adjusted for gender and age.