

ONLINE SUPPLEMENTARY DATA

Supplementary Table 1. Absolute number of musculoskeletal disorders-related mortality and proportion from all causes deaths by sex and year. Numbers in parentheses show the percentage (%) from all causes deaths.

Year	Underlying cause of death				Multiple cause (any mention)				Underlying/multiple cause ratio		
	Men	Women	All	Women:men ratio	Men	Women	All	Women:men ratio	Men	Women	All
1998	22 (0.4)	54 (0.9)	76 (0.6)	2.5	108 (1.8)	217 (3.6)	325 (2.7)	2.0	0.20	0.25	0.23
1999	19 (0.3)	58 (0.9)	77 (0.6)	3.1	98 (1.7)	238 (3.8)	336 (2.8)	2.4	0.19	0.24	0.23
2000	13 (0.2)	52 (0.8)	65 (0.5)	4.0	100 (1.7)	230 (3.7)	330 (2.8)	2.3	0.13	0.23	0.20
2001	19 (0.3)	47 (0.7)	66 (0.6)	2.5	102 (1.8)	221 (3.5)	323 (2.7)	2.2	0.19	0.21	0.20
2002	21 (0.4)	53 (0.8)	74 (0.6)	2.5	109 (1.9)	227 (3.6)	336 (2.8)	2.1	0.19	0.23	0.22
2003	20 (0.4)	50 (0.8)	70 (0.6)	2.5	105 (1.9)	234 (3.8)	339 (2.9)	2.2	0.19	0.21	0.21
2004	18 (0.3)	48 (0.8)	66 (0.6)	2.7	107 (1.9)	221 (3.6)	328 (2.8)	2.1	0.17	0.22	0.20
2005	16 (0.3)	58 (0.9)	74 (0.6)	3.6	90 (1.6)	221 (3.6)	311 (2.7)	2.5	0.18	0.26	0.24
2006	15 (0.3)	41 (0.7)	56 (0.5)	2.7	89 (1.6)	220 (3.7)	309 (2.7)	2.5	0.17	0.19	0.18
2007	24 (0.4)	46 (0.8)	70 (0.6)	1.9	105 (1.8)	210 (3.4)	315 (2.7)	2.0	0.23	0.22	0.22
2008	9 (0.2)	45 (0.7)	54 (0.5)	5.0	93 (1.6)	231 (3.8)	324 (2.7)	2.5	0.10	0.19	0.17
2009	19 (0.4)	38 (0.6)	57 (0.5)	2.0	103 (1.9)	240 (4.0)	343 (3.0)	2.3	0.18	0.16	0.17
2010	17 (0.3)	53 (0.9)	70 (0.6)	3.1	100 (1.8)	270 (4.5)	370 (3.1)	2.7	0.17	0.20	0.19
2011	22 (0.4)	43 (0.7)	65 (0.6)	2.0	113 (2.0)	245 (4.2)	358 (3.1)	2.2	0.19	0.18	0.18
2012	18 (0.3)	46 (0.7)	64 (0.5)	2.6	124 (2.1)	270 (4.2)	394 (3.2)	2.2	0.15	0.17	0.16
2013	10 (0.2)	39 (0.6)	49 (0.4)	3.9	101 (1.8)	227 (3.6)	328 (2.7)	2.2	0.10	0.17	0.15
2014	21 (0.4)	52 (0.9)	73 (0.6)	2.5	105 (1.9)	258 (4.3)	363 (3.1)	2.5	0.20	0.20	0.20

Supplementary Table 2. Absolute number of rheumatoid arthritis-related mortality and proportion from all causes deaths by sex and year. Numbers in parentheses show the percentage (%) from all causes deaths.

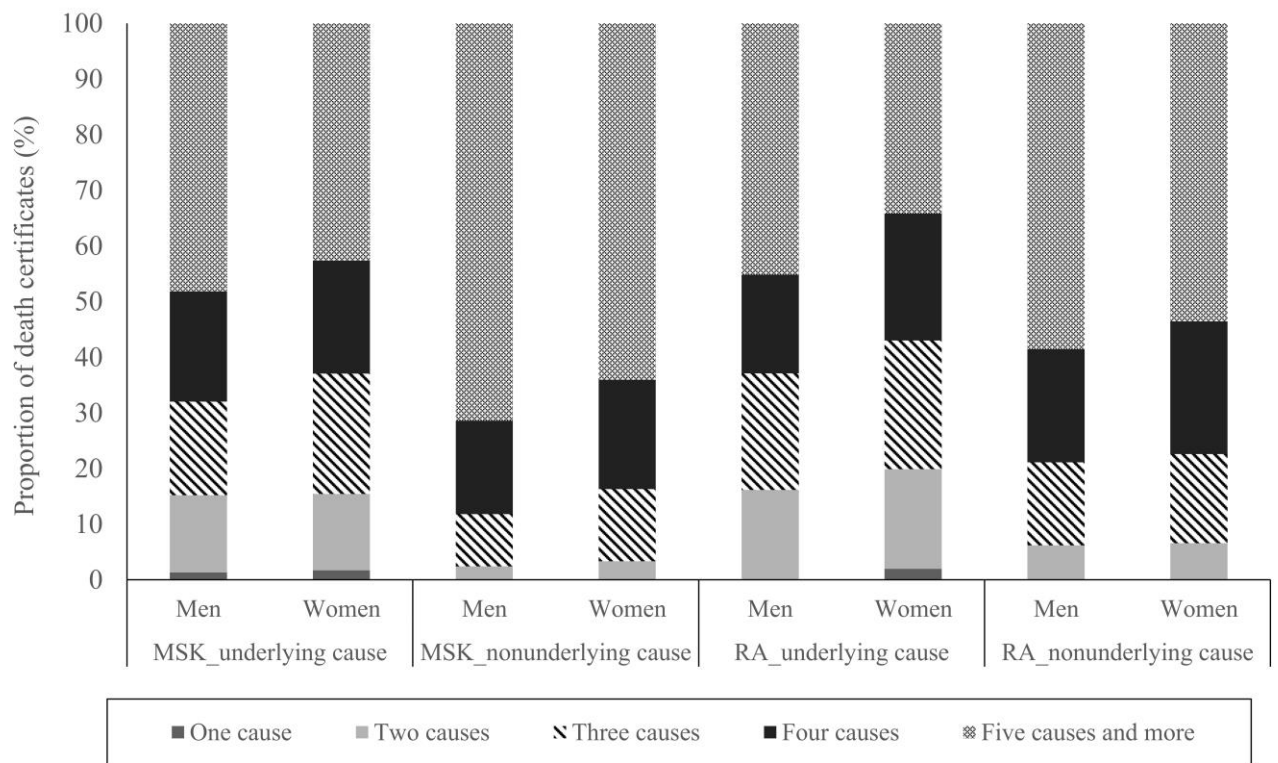
Year	Underlying cause of death				Multiple cause (any mention)				Underlying/multiple cause ratio		
	Men	Women	All	Women:men ratio	Men	Women	Women:men ratio	Men	Women	All	
1998	3 (0.05)	21 (0.4)	24 (0.2)	7.0	24 (0.4)	80 (1.3)	104 (0.9)	3.3	0.13	0.26	0.23
1999	6 (0.1)	22 (0.4)	28 (0.2)	3.7	19 (0.3)	85 (1.3)	104 (0.9)	4.5	0.32	0.26	0.27
2000	1 (0.02)	21 (0.3)	22 (0.2)	21	28 (0.5)	85 (1.4)	113 (0.9)	3.0	0.04	0.25	0.19
2001	5 (0.09)	19 (0.3)	24 (0.2)	3.8	19 (0.3)	69 (1.1)	88 (0.7)	3.6	0.26	0.28	0.27
2002	7 (0.1)	22 (0.3)	29 (0.2)	3.1	25 (0.4)	71 (1.1)	96 (0.8)	2.8	0.28	0.31	0.30
2003	6 (0.1)	20 (0.3)	26 (0.2)	3.3	20 (0.4)	81 (1.3)	101 (0.9)	4.1	0.30	0.25	0.26
2004	5 (0.09)	14 (0.2)	19 (0.2)	2.8	24 (0.4)	68 (1.1)	92 (0.8)	2.8	0.21	0.21	0.21
2005	6 (0.1)	25 (0.4)	31 (0.3)	4.2	21 (0.4)	79 (1.3)	100 (0.9)	3.8	0.29	0.32	0.31
2006	4 (0.07)	14 (0.2)	18 (0.2)	3.5	15 (0.3)	49 (0.8)	64 (0.6)	3.3	0.27	0.29	0.28
2007	3 (0.05)	14 (0.2)	17 (0.1)	4.7	26 (0.5)	63 (1.0)	89 (0.8)	2.4	0.12	0.22	0.19
2008	0 (0)	19 (0.3)	19 (0.2)	–	13 (0.2)	66 (1.1)	79 (0.7)	5.1	0.00	0.29	0.24
2009	3 (0.06)	19 (0.3)	22 (0.2)	6.3	14 (0.3)	75 (1.3)	89 (0.8)	5.4	0.21	0.25	0.25
2010	3 (0.05)	17 (0.3)	20 (0.2)	5.7	18 (0.3)	75 (1.2)	93 (0.8)	4.2	0.17	0.23	0.22
2011	4 (0.07)	16 (0.3)	20 (0.2)	4.0	17 (0.3)	67 (1.1)	84 (0.7)	3.9	0.24	0.24	0.24
2012	0 (0)	14 (0.2)	14 (0.1)	–	23 (0.4)	66 (1.0)	89 (0.7)	2.9	0.00	0.21	0.16
2013	3 (0.05)	14 (0.2)	17 (0.1)	4.7	16 (0.3)	49 (0.8)	65 (0.5)	3.1	0.19	0.29	0.26
2014	3 (0.05)	16 (0.3)	19 (0.2)	5.3	15 (0.3)	47 (0.8)	62 (0.5)	3.1	0.20	0.34	0.31

Supplementary Table 3. Distribution of death certificates with musculoskeletal disorders / rheumatoid arthritis as underlying and multiple cause of death, by sex and age.

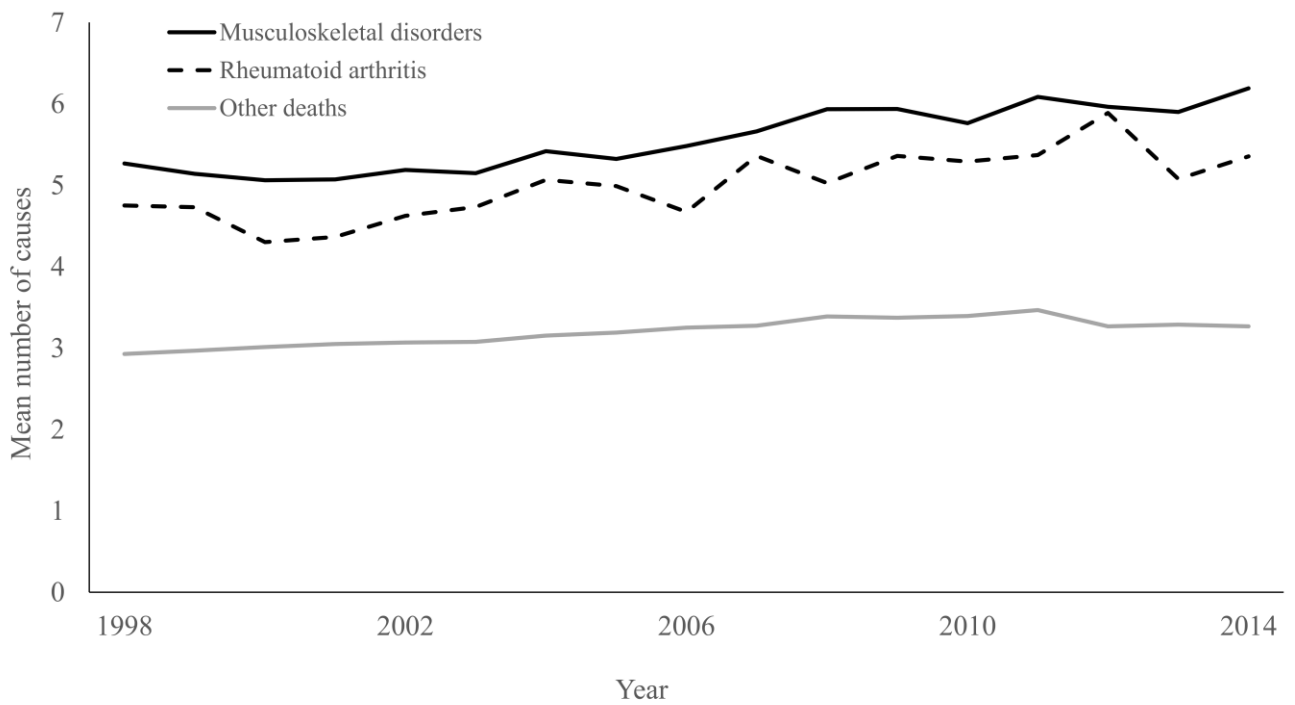
	Musculoskeletal disorders					Rheumatoid arthritis				
	UCD	Rate	MCD	Rate	UCD/MCD ratio	UCD	Rate	MCD	Rate	UCD/MCD ratio
Men										
20-49 years	8	0.2	29	0.7	0.28	0	0.0	0	0.0	-
50-59 years	16	1.2	56	4.3	0.29	1	0.2	2	0.2	0.5
60-69 years	47	4.3	192	17.6	0.24	11	1.3	51	4.7	0.22
70-79 years	90	12.8	419	59.4	0.21	21	3.8	98	13.9	0.21
80-89 years	112	33.0	826	243.2	0.14	22	11.8	156	45.9	0.14
90+ years	30	63.3	230	485.3	0.13	7	21.1	30	63.3	0.23
Women										
20-49 years	18	0.5	42	1.1	0.43	5	0.1	9	0.2	0.56
50-59 years	30	2.3	74	5.7	0.41	7	0.5	18	1.4	0.39
60-69 years	68	6.0	257	22.8	0.26	22	2.0	96	8.5	0.23
70-79 years	197	23.2	796	93.9	0.25	81	9.6	353	41.6	0.23
80-89 years	338	60.1	1812	322.4	0.19	131	23.3	537	95.5	0.24
90+ years	172	129.9	999	754.3	0.17	61	46.1	162	122.3	0.38
All										
20-49 years	26	0.3	71	0.9	0.37	5	0.1	9	0.1	0.56
50-59 years	46	1.8	130	5.0	0.35	8	0.3	20	0.8	0.40
60-69 years	115	5.2	449	20.2	0.26	33	1.6	147	6.6	0.22
70-79 years	287	18.5	1215	78.2	0.24	102	7.0	451	29.0	0.23
80-89 years	450	49.9	2638	292.6	0.17	153	19.0	693	76.9	0.22
90+ years	202	112.3	1229	683.4	0.16	68	39.5	192	106.8	0.35

Rate per 100,000 population; UCD: underlying cause of death; MCD: any mention on death certificate.

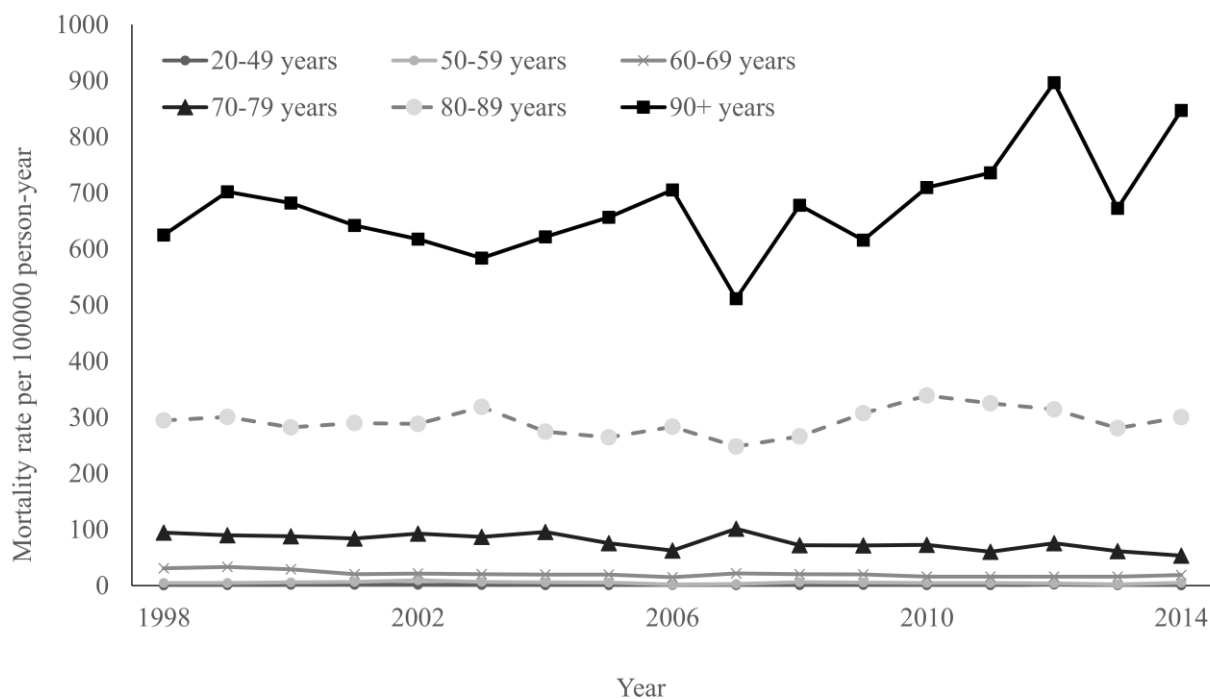
Supplementary Figure 1. Distribution of death certificates according to the number of causes.



Supplementary Figure 2. Mean number of causes on death certificates with any/no mention of musculoskeletal disorders/rheumatoid arthritis



Supplementary Figure 3. Age-specific mortality rate of musculoskeletal disorders (any mention on death certificate)



Supplementary Figure 4. Age-specific mortality rate of rheumatoid arthritis (any mention on death certificate)

