

Socio-economic inequalities in occurrence and health care costs in rheumatic and musculoskeletal diseases: results from a Spanish population-based study including 1.9 million persons

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Appendix

Table S1. ICD9-CM codes for selected RMD conditions

Concept Code	Concept Name (Short Description)	Alternate Code (ICD-9 Code with Decimals)	Preferred Name (Long Description with ICD-9 codes with Decimal)	Individual RMD	RMD grouped	Additional requirements
27400	Gouty arthropathy NOS	274.00	Gouty arthropathy, unspecified [274.00]	gout	crystals	
27401	Acute gouty arthropathy	274.01	Acute gouty arthropathy [274.01]	gout	crystals	
27402	Chr gouty atrph wo tophi	274.02	Chronic gouty arthropathy without mention of tophus (tophi) [274.02]	gout	crystals	
27403	Chr gouty atroph w tophi	274.03	Chronic gouty arthropathy with tophus (tophi) [274.03]	gout	crystals	
27410	Gouty nephropathy NOS	274.10	Gouty nephropathy, unspecified [274.10]	gout	crystals	
27419	Gouty nephropathy NEC	274.19	Other gouty nephropathy [274.19]	gout	crystals	
27481	Gouty tophi of ear	274.81	Gouty tophi of ear [274.81]	gout	crystals	
27482	Gouty tophi site NEC	274.82	Gouty tophi of other sites, except ear [274.82]	gout	crystals	
27489	Gout w manifestation NEC	274.89	Gout with other specified manifestations [274.89]	gout	crystals	

2749	Gout NOS	274.9	Gout, unspecified [274.9]	gout	crystals	
30780	Psychogenic pain NOS	307.80	Psychogenic pain, site unspecified [307.80]	fm		needs to be present at least 2 times
30789	Psychogenic pain NEC	307.89	Other pain disorders related to psychological factors [307.89]	fm		needs to be present at least 2 times
3380	Central pain syndrome	338.0	Central pain syndrome [338.0]	fm		needs to be present at least 2 times
33829	Chronic pain NEC	338.29	Other chronic pain [338.29]	fm		needs to be present at least 2 times
3384	Chronic pain syndrome	338.4	Chronic pain syndrome [338.4]	fm		needs to be present at least 2 times
4460	Polyarteritis nodosa	446.0	Polyarteritis nodosa [446.0]	ancavasculitis	vasculitis	
4464	Wegener's granulomatosis	446.4	Wegener's granulomatosis [446.4]	ancavasculitis	vasculitis	
4465	Giant cell arteritis	446.5	Giant cell arteritis [446.5]	nonancavasculitis	vasculitis	
4467	Takayasu's disease	446.7	Takayasu's disease [446.7]	nonancavasculitis	vasculitis	
4476	Arteritis NOS	447.6	Arteritis, unspecified [447.6]	nonancavasculitis	vasculitis	
6954	Lupus erythematosus	695.4	Lupus erythematosus [695.4]	sle	ctd	
6960	Psoriatic arthropathy	696.0	Psoriatic arthropathy [696.0]	psa	spondyloarthritis	
7100	Syst lupus erythematosus	710.0	Systemic lupus erythematosus [710.0]	sle	ctd	
7101	Systemic sclerosis	710.1	Systemic sclerosis [710.1]	systemisclerosis	ctd	
7102	Sicca syndrome	710.2	Sicca syndrome [710.2]	sjogren	ctd	

7103	Dermatomyositis	710.3	Dermatomyositis [710.3]	myositis		
7104	Polymyositis	710.4	Polymyositis [710.4]	myositis		
7105	Eosinophilia myalgia snd	710.5	Eosinophilia myalgia syndrome [710.5]	otherctd	ctd	
7108	Diff connect tis dis NEC	710.8	Other specified diffuse diseases of connective tissue [710.8]	otherctd	ctd	
7109	Diff connect tis dis NOS	710.9	Unspecified diffuse connective tissue disease [710.9]	otherctd	ctd	
71110	Reiter arthritis-unspec	711.10	Arthropathy associated with Reiter's disease and nonspecific urethritis, site unspecified [711.10]	reactive	spondyloarthritis	
71111	Reiter arthritis-shlder	711.11	Arthropathy associated with Reiter's disease and nonspecific urethritis, shoulder region [711.11]	reactive	spondyloarthritis	
71112	Reiter arthritis-up/arm	711.12	Arthropathy associated with Reiter's disease and nonspecific urethritis, upper arm [711.12]	reactive	spondyloarthritis	
71113	Reiter arthritis-forearm	711.13	Arthropathy associated with Reiter's disease and nonspecific urethritis, forearm [711.13]	reactive	spondyloarthritis	
71114	Reiter arthritis-hand	711.14	Arthropathy associated with Reiter's disease and nonspecific urethritis, hand [711.14]	reactive	spondyloarthritis	
71115	Reiter arthritis-pelvis	711.15	Arthropathy associated with Reiter's disease and nonspecific urethritis, pelvic region and thigh [711.15]	reactive	spondyloarthritis	
71116	Reiter arthritis-l/leg	711.16	Arthropathy associated with Reiter's disease and nonspecific urethritis, lower leg [711.16]	reactive	spondyloarthritis	
71117	Reiter arthritis-ankle	711.17	Arthropathy associated with Reiter's disease and nonspecific urethritis, ankle and foot [711.17]	reactive	spondyloarthritis	
71118	Reiter arthritis NEC	711.18	Arthropathy associated with Reiter's disease and nonspecific urethritis, other specified sites [711.18]	reactive	spondyloarthritis	
71119	Reiter arthritis-mult	711.19	Arthropathy associated with Reiter's disease and	reactive	spondyloarthritis	

			nonspecific urethritis, multiple sites [711.19]			
71130	Dysenter arthrit-unspec	711.30	Postdysenteric arthropathy, site unspecified [711.30]	reactive	spondyloarthritis	
71131	Dysenter arthrit-shlder	711.31	Postdysenteric arthropathy, shoulder region [711.31]	reactive	spondyloarthritis	
71132	Dysenter arthrit-up/arm	711.32	Postdysenteric arthropathy, upper arm [711.32]	reactive	spondyloarthritis	
71133	Dysenter arthrit-forearm	711.33	Postdysenteric arthropathy, forearm [711.33]	reactive	spondyloarthritis	
71134	Dysenter arthrit-hand	711.34	Postdysenteric arthropathy, hand [711.34]	reactive	spondyloarthritis	
71135	Dysenter arthrit-pelvis	711.35	Postdysenteric arthropathy, pelvic region and thigh [711.35]	reactive	spondyloarthritis	
71136	Dysenter arthrit-l/leg	711.36	Postdysenteric arthropathy, lower leg [711.36]	reactive	spondyloarthritis	
71137	Dysenter arthrit-ankle	711.37	Postdysenteric arthropathy, ankle and foot [711.37]	reactive	spondyloarthritis	
71138	Dysenter arthrit NEC	711.38	Postdysenteric arthropathy, other specified sites [711.38]	reactive	spondyloarthritis	
71139	Dysenter arthrit-mult	711.39	Postdysenteric arthropathy, multiple sites [711.39]	reactive	spondyloarthritis	
71210	Dicalc phos cryst-unspec	712.10	Chondrocalcinosis, due to dicalcium phosphate crystals, site unspecified [712.10]	crystal	crystals	
71211	Dicalc phos cryst-shlder	712.11	Chondrocalcinosis, due to dicalcium phosphate crystals, shoulder region [712.11]	crystal	crystals	
71212	Dicalc phos cryst-up/arm	712.12	Chondrocalcinosis, due to dicalcium phosphate crystals, upper arm [712.12]	crystal	crystals	
71213	Dicalc phos crys-forearm	712.13	Chondrocalcinosis, due to dicalcium phosphate crystals, forearm [712.13]	crystal	crystals	
71214	Dicalc phos cryst-hand	712.14	Chondrocalcinosis, due to dicalcium phosphate crystals, hand [712.14]	crystal	crystals	
71215	Dicalc phos cryst-pelvis	712.15	Chondrocalcinosis, due to dicalcium phosphate	crystal	crystals	

			crystals, pelvic region and thigh [712.15]			
71216	Dicalc phos cryst-l/leg	712.16	Chondrocalcinosis, due to dicalcium phosphate crystals, lower leg [712.16]	crystal	crystals	
71217	Dicalc phos cryst-ankle	712.17	Chondrocalcinosis, due to dicalcium phosphate crystals, ankle and foot [712.17]	crystal	crystals	
71218	Dicalc phos cry-site NEC	712.18	Chondrocalcinosis, due to dicalcium phosphate crystals, other specified sites [712.18]	crystal	crystals	
71219	Dicalc phos cryst-mult	712.19	Chondrocalcinosis, due to dicalcium phosphate crystals, multiple sites [712.19]	crystal	crystals	
71220	Pyrophosph cryst-unspec	712.20	Chondrocalcinosis, due to pyrophosphate crystals, site unspecified [712.20]	crystal	crystals	
71221	Pyrophosph cryst-shlder	712.21	Chondrocalcinosis, due to pyrophosphate crystals, shoulder region [712.21]	crystal	crystals	
71222	Pyrophosph cryst-up/arm	712.22	Chondrocalcinosis, due to pyrophosphate crystals, upper arm [712.22]	crystal	crystals	
71223	Pyrophosph cryst-forearm	712.23	Chondrocalcinosis, due to pyrophosphate crystals, forearm [712.23]	crystal	crystals	
71224	Pyrophosph cryst-hand	712.24	Chondrocalcinosis, due to pyrophosphate crystals, hand [712.24]	crystal	crystals	
71225	Pyrophosph cryst-pelvis	712.25	Chondrocalcinosis, due to pyrophosphate crystals, pelvic region and thigh [712.25]	crystal	crystals	
71226	Pyrophosph cryst-l/leg	712.26	Chondrocalcinosis, due to pyrophosphate crystals, lower leg [712.26]	crystal	crystals	
71227	Pyrophosph cryst-ankle	712.27	Chondrocalcinosis, due to pyrophosphate crystals, ankle and foot [712.27]	crystal	crystals	
71228	Pyrophos cryst-site NEC	712.28	Chondrocalcinosis, due to pyrophosphate crystals, other specified sites [712.28]	crystal	crystals	

71229	Pyrophos cryst-mult	712.29	Chondrocalcinosis, due to pyrophosphate crystals, multiple sites [712.29]	crystal	crystals	
71230	Chondrocalcin NOS-unspec	712.30	Chondrocalcinosis, unspecified, site unspecified [712.30]	crystal	crystals	
71231	Chondrocalcin NOS-shlder	712.31	Chondrocalcinosis, unspecified, shoulder region [712.31]	crystal	crystals	
71232	Chondrocalcin NOS-up/arm	712.32	Chondrocalcinosis, unspecified, upper arm [712.32]	crystal	crystals	
71233	Chondrocalc NOS-forearm	712.33	Chondrocalcinosis, unspecified, forearm [712.33]	crystal	crystals	
71234	Chondrocalcin NOS-hand	712.34	Chondrocalcinosis, unspecified, hand [712.34]	crystal	crystals	
71235	Chondrocalcin NOS-pelvis	712.35	Chondrocalcinosis, unspecified, pelvic region and thigh [712.35]	crystal	crystals	
71236	Chondrocalcin NOS-l/leg	712.36	Chondrocalcinosis, unspecified, lower leg [712.36]	crystal	crystals	
71237	Chondrocalcin NOS-ankle	712.37	Chondrocalcinosis, unspecified, ankle and foot [712.37]	crystal	crystals	
71238	Chondrocalc NOS-oth site	712.38	Chondrocalcinosis, unspecified, other specified sites [712.38]	crystal	crystals	
71239	Chondrocalcin NOS-mult	712.39	Chondrocalcinosis, unspecified, multiple sites [712.39]	crystal	crystals	
71280	Cryst arthrop NEC-unspec	712.80	Other specified crystal arthropathies, site unspecified [712.80]	crystal	crystals	
71281	Cryst arthrop NEC-shlder	712.81	Other specified crystal arthropathies, shoulder region [712.81]	crystal	crystals	
71282	Cryst arthrop NEC-up/arm	712.82	Other specified crystal arthropathies, upper arm [712.82]	crystal	crystals	
71283	Crys arthrop NEC-forearm	712.83	Other specified crystal arthropathies, forearm [712.83]	crystal	crystals	

71284	Cryst arthrop NEC-hand	712.84	Other specified crystal arthropathies, hand [712.84]	crystal	crystals	
71285	Cryst arthrop NEC-pelvis	712.85	Other specified crystal arthropathies, pelvic region and thigh [712.85]	crystal	crystals	
71286	Cryst arthrop NEC-l/leg	712.86	Other specified crystal arthropathies, lower leg [712.86]	crystal	crystals	
71287	Cryst arthrop NEC-ankle	712.87	Other specified crystal arthropathies, ankle and foot [712.87]	crystal	crystals	
71288	Cry arthrop NEC-oth site	712.88	Other specified crystal arthropathies, other specified sites [712.88]	crystal	crystals	
71289	Cryst arthrop NEC-mult	712.89	Other specified crystal arthropathies, multiple sites [712.89]	crystal	crystals	
71290	Cryst arthrop NOS-unspec	712.90	Unspecified crystal arthropathy, site unspecified [712.90]	crystal	crystals	
71291	Cryst arthrop NOS-shldr	712.91	Unspecified crystal arthropathy, shoulder region [712.91]	crystal	crystals	
71292	Cryst arthrop NOS-up/arm	712.92	Unspecified crystal arthropathy, upper arm [712.92]	crystal	crystals	
71293	Crys arthrop NOS-forearm	712.93	Unspecified crystal arthropathy, forearm [712.93]	crystal	crystals	
71294	Cryst arthrop NOS-hand	712.94	Unspecified crystal arthropathy, hand [712.94]	crystal	crystals	
71295	Cryst arthrop NOS-pelvis	712.95	Unspecified crystal arthropathy, pelvic region and thigh [712.95]	crystal	crystals	
71296	Cryst arthrop NOS-l/leg	712.96	Unspecified crystal arthropathy, lower leg [712.96]	crystal	crystals	
71297	Cryst arthrop NOS-ankle	712.97	Unspecified crystal arthropathy, ankle and foot [712.97]	crystal	crystals	
71298	Cry arthrop NOS-oth site	712.98	Unspecified crystal arthropathy, other specified sites [712.98]	crystal	crystals	
71299	Cryst arthrop NOS-mult	712.99	Unspecified crystal arthropathy, multiple sites	crystal	crystals	

			[712.99]			
7131	Arthrop w noninf GI dis	713.1	Arthropathy associated with gastrointestinal conditions other than infections [713.1]	ibd	spondyloarthritis	
7140	Rheumatoid arthritis	714.0	Rheumatoid arthritis [714.0]	ra		
7141	Felty's syndrome	714.1	Felty's syndrome [714.1]	ra		
7142	Syst rheum arthritis NEC	714.2	Other rheumatoid arthritis with visceral or systemic involvement [714.2]	ra		
71430	Juv rheum arthritis NOS	714.30	Polyarticular juvenile rheumatoid arthritis, chronic or unspecified [714.30]	ra		
71431	Polyart juv rheum arthr	714.31	Polyarticular juvenile rheumatoid arthritis, acute [714.31]	ra		
71432	Pauciarth juv rheum arthr	714.32	Pauciarticular juvenile rheumatoid arthritis [714.32]	uma		needs to be present at least 2 times
71433	Monoarth juv rheum arthr	714.33	Monoarticular juvenile rheumatoid arthritis [714.33]	uma		needs to be present at least 2 times
7144	Chr postrheum arthritis	714.4	Chronic postrheumatic arthropathy [714.4]	ua		
71481	Rheumatoid lung	714.81	Rheumatoid lung [714.81]	ra		
71489	Inflamm polyarthrop NEC	714.89	Other specified inflammatory polyarthropathies [714.89]	ua		
7149	Inflamm polyarthrop NOS	714.9	Unspecified inflammatory polyarthropathy [714.9]	ua		
71500	General osteoarthritis	715.00	Osteoarthritis, generalised, site unspecified [715.00]	oageneralised	oa	
71504	Gen osteoarthros-hand	715.04	Osteoarthritis, generalised, hand [715.04]	oahand	oa	
71509	General osteoarthritis	715.09	Osteoarthritis, generalised, multiple sites [715.09]	oageneralised	oa	

71510	Loc prim osteoart-unspec	715.10	Osteoarthritis, localised, primary, site unspecified [715.10]	oaothor	oa	
71511	Loc prim osteoart-shlder	715.11	Osteoarthritis, localised, primary, shoulder region [715.11]	oaothor	oa	
71512	Loc prim osteoart-up/arm	715.12	Osteoarthritis, localised, primary, upper arm [715.12]	oaothor	oa	
71513	Loc prim osteoart-forearm	715.13	Osteoarthritis, localised, primary, forearm [715.13]	oaothor	oa	
71514	Loc prim osteoarth-hand	715.14	Osteoarthritis, localised, primary, hand [715.14]	oahand	oa	
71515	Loc prim osteoart-pelvis	715.15	Osteoarthritis, localised, primary, pelvic region and thigh [715.15]	oahip	oa	
71516	Loc prim osteoart-l/leg	715.16	Osteoarthritis, localised, primary, lower leg [715.16]	oaknee	oa	
71517	Loc prim osteoarth-ankle	715.17	Osteoarthritis, localised, primary, ankle and foot [715.17]	oaothor	oa	
71518	Loc prim osteoarthr NEC	715.18	Osteoarthritis, localised, primary, other specified sites [715.18]	oaothor	oa	
71520	Loc 2nd osteoarth-unspec	715.20	Osteoarthritis, localised, secondary, site unspecified [715.20]	oaothor	oa	
71521	Loc 2nd osteoarth-shlder	715.21	Osteoarthritis, localised, secondary, shoulder region [715.21]	oaothor	oa	
71522	Loc 2nd osteoarth-up/arm	715.22	Osteoarthritis, localised, secondary, upper arm [715.22]	oaothor	oa	
71523	Loc 2nd osteoart-forearm	715.23	Osteoarthritis, localised, secondary, forearm [715.23]	oaothor	oa	
71524	Loc 2nd osteoarthro-hand	715.24	Osteoarthritis, localised, secondary, hand [715.24]	oahand	oa	
71525	Loc 2nd osteoarth-pelvis	715.25	Osteoarthritis, localised, secondary, pelvic region and thigh [715.25]	oahip	oa	

71526	Loc 2nd osteoarthr-l/leg	715.26	Osteoarthritis, localised, secondary, lower leg [715.26]	oaknee	oa	
71527	Loc 2nd osteoarthr-ankle	715.27	Osteoarthritis, localised, secondary, ankle and foot [715.27]	oaothor	oa	
71528	Loc 2nd osteoarthros NEC	715.28	Osteoarthritis, localised, secondary, other specified sites [715.28]	oaothor	oa	
71530	Loc osteoarth NOS-unspec	715.30	Osteoarthritis, localised, not specified whether primary or secondary, site unspecified [715.30]	oaothor	oa	
71531	Loc osteoarth NOS-shlder	715.31	Osteoarthritis, localised, not specified whether primary or secondary, shoulder region [715.31]	oaothor	oa	
71532	Loc osteoarth NOS-up/arm	715.32	Osteoarthritis, localised, not specified whether primary or secondary, upper arm [715.32]	oaothor	oa	
71533	Loc osteoarth NOS-forearm	715.33	Osteoarthritis, localised, not specified whether primary or secondary, forearm [715.33]	oaothor	oa	
71534	Loc osteoarth NOS-hand	715.34	Osteoarthritis, localised, not specified whether primary or secondary, hand [715.34]	oahand	oa	
71535	Loc osteoarth NOS-pelvis	715.35	Osteoarthritis, localised, not specified whether primary or secondary, pelvic region and thigh [715.35]	oahip	oa	
71536	Loc osteoarth NOS-l/leg	715.36	Osteoarthritis, localised, not specified whether primary or secondary, lower leg [715.36]	oaknee	oa	
71537	Loc osteoarth NOS-ankle	715.37	Osteoarthritis, localised, not specified whether primary or secondary, ankle and foot [715.37]	oaothor	oa	
71538	Loc osteoar NOS-site NEC	715.38	Osteoarthritis, localised, not specified whether primary or secondary, other specified sites [715.38]	oaothor	oa	
71580	Osteoarthritis-mult site	715.80	Osteoarthritis involving, or with mention of more than one site, but not specified as generalised, site unspecified [715.80]	oaothor	oa	

71589	Osteoarthritis-mult site	715.89	Osteoarthritis involving, or with mention of more than one site, but not specified as generalised, multiple sites [715.89]	oaothor	oa	
71590	Osteoarthros NOS-unspec	715.90	Osteoarthritis, unspecified whether generalised or localised, site unspecified [715.90]	oaothor	oa	
71591	Osteoarthros NOS-shlder	715.91	Osteoarthritis, unspecified whether generalised or localised, shoulder region [715.91]	oaothor	oa	
71592	Osteoarthros NOS-up/arm	715.92	Osteoarthritis, unspecified whether generalised or localised, upper arm [715.92]	oaothor	oa	
71593	Osteoarthros NOS-forearm	715.93	Osteoarthritis, unspecified whether generalised or localised, forearm [715.93]	oaothor	oa	
71594	Osteoarthros NOS-hand	715.94	Osteoarthritis, unspecified whether generalised or localised, hand [715.94]	oahand	oa	
71595	Osteoarthros NOS-pelvis	715.95	Osteoarthritis, unspecified whether generalised or localised, pelvic region and thigh [715.95]	oahip	oa	
71596	Osteoarthros NOS-l/leg	715.96	Osteoarthritis, unspecified whether generalised or localised, lower leg [715.96]	oaknee	oa	
71597	Osteoarthros NOS-ankle	715.97	Osteoarthritis, unspecified whether generalised or localised, ankle and foot [715.97]	oaothor	oa	
71598	Osteoarthro NOS-oth site	715.98	Osteoarthritis, unspecified whether generalised or localised, other specified sites [715.98]	oaothor	oa	
71650	Polyarthrits NOS-unspec	716.50	Unspecified polyarthropathy or polyarthrits, site unspecified [716.50]	ua		
71651	Polyarthrits NOS-shlder	716.51	Unspecified polyarthropathy or polyarthrits, shoulder region [716.51]	ua		
71652	Polyarthrits NOS-up/arm	716.52	Unspecified polyarthropathy or polyarthrits, upper arm [716.52]	ua		
71653	Polyarthrit NOS-forearm	716.53	Unspecified polyarthropathy or polyarthrits,	ua		

			forearm [716.53]			
71654	Polyarthritis NOS-hand	716.54	Unspecified polyarthropathy or polyarthritis, hand [716.54]	ua		
71655	Polyarthritis NOS-pelvis	716.55	Unspecified polyarthropathy or polyarthritis, pelvic region and thigh [716.55]	ua		
71656	Polyarthritis NOS-l/leg	716.56	Unspecified polyarthropathy or polyarthritis, lower leg [716.56]	ua		
71657	Polyarthritis NOS-ankle	716.57	Unspecified polyarthropathy or polyarthritis, ankle and foot [716.57]	ua		
71658	Polyarthrit NOS-oth site	716.58	Unspecified polyarthropathy or polyarthritis, other specified sites [716.58]	ua		
71659	Polyarthritis NOS-mult	716.59	Unspecified polyarthropathy or polyarthritis, multiple sites [716.59]	ua		
71660	Monoarthritis NOS-unspec	716.60	Unspecified monoarthritis, site unspecified [716.60]	uma		needs to be present at least 2 times
71661	Monoarthritis NOS-shlder	716.61	Unspecified monoarthritis, shoulder region [716.61]	uma		needs to be present at least 2 times
71662	Monoarthritis NOS-up/arm	716.62	Unspecified monoarthritis, upper arm [716.62]	uma		needs to be present at least 2 times
71663	Monoarthrit NOS-forearm	716.63	Unspecified monoarthritis, forearm [716.63]	uma		needs to be present at least 2 times
71664	Monoarthritis NOS-hand	716.64	Unspecified monoarthritis, hand [716.64]	uma		needs to be present at least 2 times
71665	Monoarthritis NOS-pelvis	716.65	Unspecified monoarthritis, pelvic region and thigh	uma		needs to be present at

			[716.65]			least 2 times
71666	Monoarthritis NOS-l/leg	716.66	Unspecified monoarthritis, lower leg [716.66]	uma		needs to be present at least 2 times
71667	Monoarthritis NOS-ankle	716.67	Unspecified monoarthritis, ankle and foot [716.67]	uma		needs to be present at least 2 times
71668	Monoarthrit NOS-oth site	716.68	Unspecified monoarthritis, other specified sites [716.68]	uma		needs to be present at least 2 times
71900	Joint effusion-unspec	719.00	Effusion of joint, site unspecified [719.00]	uma		needs to be present at least 2 times
71901	Joint effusion-shlder	719.01	Effusion of joint, shoulder region [719.01]	uma		needs to be present at least 2 times
71902	Joint effusion-up/arm	719.02	Effusion of joint, upper arm [719.02]	uma		needs to be present at least 2 times
71903	Joint effusion-forearm	719.03	Effusion of joint, forearm [719.03]	uma		needs to be present at least 2 times
71904	Joint effusion-hand	719.04	Effusion of joint, hand [719.04]	uma		needs to be present at least 2 times
71905	Joint effusion-pelvis	719.05	Effusion of joint, pelvic region and thigh [719.05]	uma		needs to be present at least 2 times
71906	Joint effusion-l/leg	719.06	Effusion of joint, lower leg [719.06]	uma		needs to be present at least 2 times

71907	Joint effusion-ankle	719.07	Effusion of joint, ankle and foot [719.07]	uma		needs to be present at least 2 times
71908	Joint effusion-jt NEC	719.08	Effusion of joint, other specified sites [719.08]	uma		needs to be present at least 2 times
71909	Joint effusion-mult jts	719.09	Effusion of joint, multiple sites [719.09]	uma		needs to be present at least 2 times
71930	Palindrom rheum-unspec	719.30	Palindromic rheumatism, site unspecified [719.30]	uma		needs to be present at least 2 times
71931	Palindrom rheum-shlder	719.31	Palindromic rheumatism, shoulder region [719.31]	uma		needs to be present at least 2 times
71932	Palindrom rheum-up/arm	719.32	Palindromic rheumatism, upper arm [719.32]	uma		needs to be present at least 2 times
71933	Palindrom rheum-forearm	719.33	Palindromic rheumatism, forearm [719.33]	uma		needs to be present at least 2 times
71934	Palindrom rheum-hand	719.34	Palindromic rheumatism, hand [719.34]	uma		needs to be present at least 2 times
71935	Palindrom rheum-pelvis	719.35	Palindromic rheumatism, pelvic region and thigh [719.35]	uma		needs to be present at least 2 times
71936	Palindrom rheum-l/leg	719.36	Palindromic rheumatism, lower leg [719.36]	uma		needs to be present at least 2 times
71937	Palindrom rheum-ankle	719.37	Palindromic rheumatism, ankle and foot [719.37]	uma		needs to be present at

						least 2 times
71938	Palindrom rheum-jt NEC	719.38	Palindromic rheumatism, other specified sites [719.38]	uma		needs to be present at least 2 times
71939	Palindrom rheum-mult jts	719.39	Palindromic rheumatism, multiple sites [719.39]	ua		
71949	Joint pain-mult jts	719.49	Pain in joint, multiple sites [719.49]	fm		needs to be present at least 2 times
7200	Ankylosing spondylitis	720.0	Ankylosing spondylitis [720.0]	as	spondyloarthritis	
7202	Sacroiliitis NEC	720.2	Sacroiliitis, not elsewhere classified [720.2]	as	spondyloarthritis	
72081	Spondylopathy in oth dis	720.81	Inflammatory spondylopathies in diseases classified elsewhere [720.81]	uspa	spondyloarthritis	
72089	Inflam spondylopathy NEC	720.89	Other inflammatory spondylopathies [720.89]	uspa	spondyloarthritis	
7209	Inflam spondylopathy NOS	720.9	Unspecified inflammatory spondylopathy [720.9]	uspa	spondyloarthritis	
7210	Cervical spondylosis	721.0	Cervical spondylosis without myelopathy [721.0]	degenerativeneck		
7211	Cerv spondyl w myelopath	721.1	Cervical spondylosis with myelopathy [721.1]	degenerativeneck		
7212	Thoracic spondylosis	721.2	Thoracic spondylosis without myelopathy [721.2]	degenerativeback		
7213	Lumbosacral spondylosis	721.3	Lumbosacral spondylosis without myelopathy [721.3]	degenerativeback		
72141	Spond compr thor sp cord	721.41	Spondylosis with myelopathy, thoracic region [721.41]	degenerativeback		
72142	Spond compr lumb sp cord	721.42	Spondylosis with myelopathy, lumbar region [721.42]	degenerativeback		
7216	Ankyl vert hyperostosis	721.6	Ankylosing vertebral hyperostosis [721.6]	degenerativeback		
72190	Spondylos NOS w/o myelop	721.90	Spondylosis of unspecified site, without mention of	degenerativeback		

			myelopathy [721.90]			
72191	Spondylosis NOS w myelop	721.91	Spondylosis of unspecified site, with myelopathy [721.91]	degenerativeback		
7220	Cervical disc displacmnt	722.0	Displacement of cervical intervertebral disc without myelopathy [722.0]	degenerativeneck		
72210	Lumbar disc displacement	722.10	Displacement of lumbar intervertebral disc without myelopathy [722.10]	degenerativeback		
72211	Thoracic disc displacmnt	722.11	Displacement of thoracic intervertebral disc without myelopathy [722.11]	degenerativeback		
7222	Disc displacement NOS	722.2	Displacement of intervertebral disc, site unspecified, without myelopathy [722.2]	degenerativeback		
7224	Cervical disc degen	722.4	Degeneration of cervical intervertebral disc [722.4]	degenerativeneck		
72251	Thoracic disc degen	722.51	Degeneration of thoracic or thoracolumbar intervertebral disc [722.51]	degenerativeback		
72252	Lumb/lumbosac disc degen	722.52	Degeneration of lumbar or lumbosacral intervertebral disc [722.52]	degenerativeback		
7226	Disc degeneration NOS	722.6	Degeneration of intervertebral disc, site unspecified [722.6]	degenerativeback		
72270	Disc dis w myelopath NOS	722.70	Intervertebral disc disorder with myelopathy, unspecified region [722.70]	degenerativeback		
72271	Cerv disc dis w myelopat	722.71	Intervertebral disc disorder with myelopathy, cervical region [722.71]	degenerativeneck		
72272	Thor disc dis w myelopat	722.72	Intervertebral disc disorder with myelopathy, thoracic region [722.72]	degenerativeback		
72273	Lumb disc dis w myelopat	722.73	Intervertebral disc disorder with myelopathy, lumbar region [722.73]	degenerativeback		
7230	Cervical spinal stenosis	723.0	Spinal stenosis in cervical region [723.0]	degenerativeneck		

7231	Cervicalgia	723.1	Cervicalgia [723.1]	neckpain		needs to be present at least 2 times
7232	Cervicocranial syndrome	723.2	Cervicocranial syndrome [723.2]	neckpain		needs to be present at least 2 times
7233	Cervicobrachial syndrome	723.3	Cervicobrachial syndrome (diffuse) [723.3]	neckpain		needs to be present at least 2 times
7239	Neck disorder/sympt NOS	723.9	Unspecified musculoskeletal disorders and symptoms referable to neck [723.9]	neckpain		needs to be present at least 2 times
72400	Spinal stenosis NOS	724.00	Spinal stenosis, unspecified region [724.00]	degenerativeback		
72401	Spinal stenosis-thoracic	724.01	Spinal stenosis, thoracic region [724.01]	degenerativeback		
72402	Spin sten,lumbr wo claud	724.02	Spinal stenosis, lumbar region, without neurogenic claudication [724.02]	degenerativeback		
72403	Spin sten,lumbr w claud	724.03	Spinal stenosis, lumbar region, with neurogenic claudication [724.03]	degenerativeback		
72409	Spinal stenosis-oth site	724.09	Spinal stenosis, other region [724.09]	degenerativeback		
7241	Pain in thoracic spine	724.1	Pain in thoracic spine [724.1]	chroniclbp		needs to be present at least 2 times
7242	Lumbago	724.2	Lumbago [724.2]	chroniclbp		needs to be present at least 2 times
7243	Sciatica	724.3	Sciatica [724.3]	chroniclbp		needs to be present at least 2 times
7244	Lumbosacral neuritis NOS	724.4	Thoracic or lumbosacral neuritis or radiculitis,	chroniclbp		needs to be present at

			unspecified [724.4]			least 2 times
7245	Backache NOS	724.5	Backache, unspecified [724.5]	chroniclbp		needs to be present at least 2 times
7246	Disorders of sacrum	724.6	Disorders of sacrum [724.6]	chroniclbp		needs to be present at least 2 times
72470	Disorder of coccyx NOS	724.70	Unspecified disorder of coccyx [724.70]	chroniclbp		needs to be present at least 2 times
72471	Hypermobility of coccyx	724.71	Hypermobility of coccyx [724.71]	chroniclbp		needs to be present at least 2 times
72479	Disorder of coccyx NEC	724.79	Other disorders of coccyx [724.79]	chroniclbp		needs to be present at least 2 times
7248	Other back symptoms	724.8	Other symptoms referable to back [724.8]	chroniclbp		needs to be present at least 2 times
7249	Back disorder NOS	724.9	Other unspecified back disorders [724.9]	chroniclbp		needs to be present at least 2 times
725	Polymyalgia rheumatica	725	Polymyalgia rheumatica [725]	pmr		
7260	Adhesive capsulit shlder	726.0	Adhesive capsulitis of shoulder [726.0]	softtissue		
72610	Rotator cuff synd NOS	726.10	Disorders of bursae and tendons in shoulder region, unspecified [726.10]	softtissue		
72611	Calcif tendinitis shlder	726.11	Calcifying tendinitis of shoulder [726.11]	softtissue		
72612	Bicipital tenosynovitis	726.12	Bicipital tenosynovitis [726.12]	softtissue		

72613	Partial tear rotatr cuff	726.13	Partial tear of rotator cuff [726.13]	softtissue		
72619	Rotator cuff dis NEC	726.19	Other specified disorders of bursae and tendons in shoulder region [726.19]	softtissue		
7262	Shoulder region dis NEC	726.2	Other affections of shoulder region, not elsewhere classified [726.2]	softtissue		
72630	Elbow enthesopathy NOS	726.30	Enthesopathy of elbow, unspecified [726.30]	softtissue		
72631	Medial epicondylitis	726.31	Medial epicondylitis [726.31]	softtissue		
72632	Lateral epicondylitis	726.32	Lateral epicondylitis [726.32]	softtissue		
72633	Olecranon bursitis	726.33	Olecranon bursitis [726.33]	softtissue		
72639	Elbow enthesopathy NEC	726.39	Other enthesopathy of elbow region [726.39]	softtissue		
7264	Enthesopathy of wrist	726.4	Enthesopathy of wrist and carpus [726.4]	softtissue		
7265	Enthesopathy of hip	726.5	Enthesopathy of hip region [726.5]	softtissue		
72660	Enthesopathy of knee NOS	726.60	Enthesopathy of knee, unspecified [726.60]	softtissue		
72661	Pes anserinus tendinitis	726.61	Pes anserinus tendinitis or bursitis [726.61]	softtissue		
72662	Tibial coll lig bursitis	726.62	Tibial collateral ligament bursitis [726.62]	softtissue		
72663	Fibula coll lig bursitis	726.63	Fibular collateral ligament bursitis [726.63]	softtissue		
72664	Patellar tendinitis	726.64	Patellar tendinitis [726.64]	softtissue		
72665	Prepatellar bursitis	726.65	Prepatellar bursitis [726.65]	softtissue		
72669	Enthesopathy of knee NEC	726.69	Other enthesopathy of knee [726.69]	softtissue		
72670	Ankle enthesopathy NOS	726.70	Enthesopathy of ankle and tarsus, unspecified [726.70]	softtissue		
72671	Achilles tendinitis	726.71	Achilles bursitis or tendinitis [726.71]	softtissue		
72672	Tibialis tendinitis	726.72	Tibialis tendinitis [726.72]	softtissue		

72673	Calcaneal spur	726.73	Calcaneal spur [726.73]	softtissue		
72679	Ankle enthesopathy NEC	726.79	Other enthesopathy of ankle and tarsus [726.79]	softtissue		
7268	Periph enthesopathy NEC	726.8	Other peripheral enthesopathies [726.8]	softtissue		
72690	Enthesopathy, site NOS	726.90	Enthesopathy of unspecified site [726.90]	softtissue		
72691	Exostosis, site NOS	726.91	Exostosis of unspecified site [726.91]	softtissue		
72700	Synovitis NOS	727.00	Synovitis and tenosynovitis, unspecified [727.00]	softtissue		
72701	Synovitis in oth dis	727.01	Synovitis and tenosynovitis in diseases classified elsewhere [727.01]	softtissue		
72703	Trigger finger	727.03	Trigger finger (acquired) [727.03]	softtissue		
72704	Radial styloid tenosynov	727.04	Radial styloid tenosynovitis [727.04]	softtissue		
72705	Tenosynov hand/wrist NEC	727.05	Other tenosynovitis of hand and wrist [727.05]	softtissue		
72706	Tenosynovitis foot/ankle	727.06	Tenosynovitis of foot and ankle [727.06]	softtissue		
72709	Synovitis NEC	727.09	Other synovitis and tenosynovitis [727.09]	softtissue		
7272	Occupational bursitis	727.2	Specific bursitides often of occupational origin [727.2]	softtissue		
7273	Bursitis NEC	727.3	Other bursitis [727.3]	softtissue		
72761	Rotator cuff rupture	727.61	Complete rupture of rotator cuff [727.61]	softtissue		
72762	Biceps tendon rupture	727.62	Nontraumatic rupture of tendons of biceps (long head) [727.62]	softtissue		
72763	Rupt exten tendon hand	727.63	Nontraumatic rupture of extensor tendons of hand and wrist [727.63]	softtissue		
72764	Rupt flexor tendon hand	727.64	Nontraumatic rupture of flexor tendons of hand and wrist [727.64]	softtissue		
72765	Rupture quadricep tendon	727.65	Nontraumatic rupture of quadriceps tendon [727.65]	softtissue		

72766	Rupture patellar tendon	727.66	Nontraumatic rupture of patellar tendon [727.66]	softtissue		
72767	Rupture achilles tendon	727.67	Nontraumatic rupture of achilles tendon [727.67]	softtissue		
72768	Rupture tendon foot NEC	727.68	Nontraumatic rupture of other tendons of foot and ankle [727.68]	softtissue		
72769	Nontraum tendon rupt NEC	727.69	Nontraumatic rupture of other tendon [727.69]	softtissue		
72789	Synov/tend/bursa dis NEC	727.89	Other disorders of synovium, tendon, and bursa [727.89]	softtissue		
7279	Synov/tend/bursa dis NOS	727.9	Unspecified disorder of synovium, tendon, and bursa [727.9]	softtissue		
72881	Interstitial myositis	728.81	Interstitial myositis [728.81]	myositis		
7290	Rheumatism NOS	729.0	Rheumatism, unspecified and fibrositis [729.0]	fm		needs to be present at least 2 times
7294	Fasciitis NOS	729.4	Fasciitis, unspecified [729.4]	softtissue		
72990	Soft tissue disord NOS	729.90	Disorders of soft tissue, unspecified [729.90]	softtissue		
72999	Soft tissue disorder NEC	729.99	Other disorders of soft tissue [729.99]	softtissue		
73300	Osteoporosis NOS	733.00	Osteoporosis, unspecified [733.00]	op		
73301	Senile osteoporosis	733.01	Senile osteoporosis [733.01]	op		
73302	Idiopathic osteoporosis	733.02	Idiopathic osteoporosis [733.02]	op		
73303	Disuse osteoporosis	733.03	Disuse osteoporosis [733.03]	op		
73309	Osteoporosis NEC	733.09	Other osteoporosis [733.09]	op		
7350	Hallux valgus	735.0	Hallux valgus (acquired) [735.0]	oaothor	oa	
78096	Generalised pain	780.96	Generalised pain [780.96]	fm		needs to be present at least 2 times

Table S2. List of 52 chronic morbidities, criteria employed and classification into categories of Rheumatic Diseases Comorbidity Index.

Chronic condition	Criteria	Category of Rheumatic Diseases Comorbidity Index
Alcohol problems	Dx of Alcohol dependence syndrome (ICD9CM: 303*) ever recorded	Not included
Anorexia or bulimia	Dx Anorexia or bulimia (ICD9CM=307.1 OR 307.51) ever recorded	Not included
Anxiety & other neurotic, stress related & somatoform disorders	Dx of Anxiety, neuroses (EDC-PSY01) in the last 12 months OR prescription of anxiolytics OR hypnotics and sedatives (ATC-codes: N05B OR N05C) during 3 or more months	Not included
Asthma (currently treated)	Dx of Asthma (EDC- ALL04 OR ALL05) ever recorded AND Prescription of drugs to treat Airway Hyperactivity (RxMG-RESx040) in the last 12 months.	Pulmonary
Atrial fibrillation	Dx of Atrial fibrillation and flutter (ICD9CM: 427.3*) ever recorded	Not included
Attention deficit disorder	Dx of Attention deficit disorder (EDC-PSY05) ever recorded AND at least 1 prescription of PSYCHOSTIMULANTS, AGENTS USED FOR ADHD AND NOOTROPICS (ATC: N06B) in the last year	Not included
Blindness & low vision	Dx of Blindness, Retinal disorders, Diabetic retinopathy, Age-related macular degeneration (EDC-EYE02 OR EYE03 OR EYE13 OR EYE15) ever recorded.	Not included
Bronchiectasis	Dx Bronchiectasis (ICD9CM=494*) ever recorded	Pulmonary
Cerebro-vascular disease	Dx of Cerebrovascular disease (EDC-NUR05) ever recorded	Other CV
Chromosomal anomalies or Inherited metabolic disorders	Dx of Chromosomal anomalies, Inherited metabolic disorders (EDC-GTC01 OR GTC02) ever recorded	Not included
Chronic heart disease, others	Dx of Congenital heart disease, Cardiac valve disorders, Cardiomyopathy, Generalised atherosclerosis (EDC-CAR04 OR CAR06 OR CAR07 OR CAR10) ever recorded	Other CV
Chronic kidney disease	Dx of Chronic renal failure, nephritis, nephrosis (EDC-REN01 OR REN04) ever recorded	Not included
OTHER GIChronic liver or pancreatic disease	Dx of Chronic liver disease, Chronic pancreatitis (EDC-GAS05 OR GAS12) ever recorded	Other GI
Chronic sinusitis	Dx Chronic sinusitis (ICD9CM=473*) ever recorded	Not included
Deafness, hearing loss	Dx Deafness, hearing loss (EDC-EAR08) ever recorded	Not included
Degenerative joint disease	Dx Degenerative joint disease (EDC-MUS03) ever recorded	Not included*
Dementia	Dx Dementia and delirium (EDC-NUR11) ever recorded	Not included
Depression	Dx of Depression (EDC-PSY09) in the last 12 months OR prescription of Antidepressants (ATC codes N06A ANTIDEPRESSANTS) during at last 4 months in the last year	Depression
Developmental disorder	Dx Developmental disorder (EDC-NUR19) ever recorded	Not included
Diabetes Mellitus	Dx of Diabetes Mellitus (EDC-END06 OR END07 OR END08 OR END09) OR Prescription of drugs to treat Diabetes (RxMG-ENDx030 OR ENDx040) ever recorded	Diabetes

Disorders of the immune system	Dx Disorders of the immune system (EDC-ALL06) ever recorded	Not included
Diverticular disease of intestine	Dx Diverticular disease of colon (EDC-GAS10) ever recorded	Other GI
Pulm Emphysema, chronic bronchitis, COPD	Dx of Emphysema, chronic bronchitis, COPD (EDC- RES04) ever recorded	Pulmonary
Epilepsy (currently treated)	Dx of Epilepsy and recurrent seizures (ICD9CM: 345*) ever recorded AND prescription of drugs to treat Seizure Disorder (RxMG-NURx050) in the last year	Not included
Glaucoma	Dx of Glaucoma (EDC-EYE08) OR prescription of drugs to treat Glaucoma (RxMG-EYEx030) ever recorded	Not included
Gout	Dx Gout (EDC-RHU02) ever recorded	Not included*
Heart failure	Dx Congestive heart failure (EDC-CAR05) ever recorded	Other CV
Hematologic chronic disorders	Dx of Haemolytic anaemia, Haemophilia, coagulation disorder (EDC-HEM01 OR HEM07) ever recorded	
HIV, AIDS	Dx of HIV, AIDS (EDC-INF04) ever recorded	Not included
Hypertension	Dx of Hypertension (EDC-CAR14 OR CAR15) OR Prescription of drugs to treat High Blood Pressure (RxMG-CARx030) ever recorded	Other CV
Hypothyroidism	Dx of Hypothyroidism (EDC-END04) OR Prescription of drugs to treat Thyroid Disorders (RxMG-ENDx050) ever recorded	Hypertension
Inflammatory bowel disease	Dx Inflammatory bowel disease (EDC-GAS02) ever recorded	Not included
Irritable bowel syndrome	Dx Irritable bowel syndrome (EDC- GAS09) ever recorded	Not included
Ischemic Heart Disease	Dx of Ischemic heart disease or acute myocardial infarction (EDC- CAR03 OR CAR12) ever recorded	Other CV
Low back pain	Dx Low back pain (EDC-MUS14) repeated in at least 3 of the last 4 years	Not included*
Malignancies	Dx of Malignancy (MEDC-MAL) ever recorded	Cancer
Migraine	(Dx of Migraine (EDC-NUR22) ever recorded AND prescription of drugs to treat Migraine Headache (RxMG-NURx03) in the last 12 months) OR (more than 4 prescriptions of Antimigraine preparations (ATC: N02C) in the las year)	Not included
Multiple sclerosis	Dx Multiple sclerosis (EDC-NUR08) ever recorded	Not included
Osteoporosis	Dx Osteoporosis (EDC-END02) ever recorded	Not included*
Other psycho-active substance misuse	Dx of Drug dependence (ICD9CM: 304*) ever recorded	Not included
Paralysis or muscular dystrophy	Dx of Muscular dystrophy, Quadriplegia and paraplegia, Spinal cord injury/disorders, Other paralytic syndromes, Cerebral palsy (EDC-NUR09 OR NUR12 OR NUR16 OR NUR17 OR NUR18) ever recorded	Not included
Parkinson's disease	Dx of Parkinson's disease (EDC-NUR06) OR Prescription of drugs to treat Parkinson's disease (RxMG-NURx040) ever recorded	Not included

Peripheral neuropathy, neuritis	Dx Peripheral neuropathy, neuritis (EDC-NUR03) ever recorded	Not included
Peripheral vascular disease	Dx Peripheral vascular disease (EDC-GSU11) ever recorded	Other_CV
Prostatic hypertrophy	Dx Prostatic hypertrophy (EDC-GUR04) ever recorded	Not included
Psoriasis or eczema	Dx of Psoriasis, dermatitis, eczema (EDC-SKN12 OR SKN02) ever recorded AND prescription during 3 or more months in the last year of "Antipsoriatics" or "Corticosteroids, dermatological preparations Or "Agents for dermatitis, excluding corticosteroids" (ATC: D05 OR DO7 OR D11AH)	Not included*
Rheumatoid arthritis and autoimmune and connective tissue diseases	Dx of Rheumatoid arthritis or Autoimmune and connective tissue diseases (EDC-RHU05 OR RHU01) ever recorded	Not included*
Schizophrenia, affective psychosis or bipolar disorder	Dx of Schizophrenia and affective psychosis or Bipolar disorder (EDC-PSY07 OR PSY12) ever recorded	Not included
Transplant status	Dx Transplant status (EDC-ADM03) ever recorded	Not included
Treated constipation	Dx of constipation (EDC-GAS03) ever recorded AND more than 4 prescription of laxatives (ATC: A06) in the last year	Not included
Treated dyspepsia	Drugs for peptic ulcer and gastro-oesophageal reflux disease (ATC code: A02B) during 3 or more months, without prescription of anti-inflammatory and anti-rheumatic products, non-steroids (ATC code: M01A) NOR Platelet aggregation inhibitors excl. heparin (ATC code: B01AC) in the same month.	Other GI
Viral Hepatitis	Dx Viral hepatitis (ICD9CM=070*) ever recorded	Not included

*RDCI does not include rheumatic conditions

Dx: Diagnosis; EDC: Expanded Diagnosis Clusters; Rx-MGs: Rx-defined Morbidity Groups; ICD-9-CM: Spanish version of the Electronic International Classification of Diseases, Ninth Revision, Clinical Modification; ATC: Anatomical Therapeutic Chemical Classification System.