

**Additional file 3. Prevalences of all diseases categories by sex for each comorbidity class among the CMC in Catalonia, 2016.**

Diseases (N (%))	Oncology class		Neurodevelopment class		Congenital and perinatal class		Respiratory class	
	2141 (36.0%)		818 (13.7%)		1177 (19.8%)		1814 (30.5%)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Septicemia	107 (8.9)	74 (7.9)	49 (9.8)	31 (9.8)	207 (31.0)	143 (28.1)	38 (3.4)	20 (2.8)
Hepatitis	35 (2.9)	20 (2.1)	5 (1.0)	6 (1.9)	4 (0.6)	3 (0.6)	8 (0.7)	3 (0.4)
Cancer of brain and nervous system	77 (6.4)	67 (7.1)	11 (2.2)	7 (2.2)	2 (0.3)	3 (0.6)	0 (0.0)	0 (0.0)
Non-Hodgkin`s lymphoma	53 (4.4)	15 (1.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Leukemias	148 (12.3)	102 (10.8)	0 (0.0)	0 (0.0)	8 (1.2)	2 (0.4)	0 (0.0)	1 (0.1)
Thyroid disorders	42 (3.5)	39 (4.1)	37 (7.4)	23 (7.3)	13 (1.9)	10 (2.0)	8 (0.7)	3 (0.4)
Nutritional deficiencies	67 (5.6)	70 (7.4)	76 (15.2)	58 (18.3)	65 (9.7)	42 (8.3)	22 (2.0)	17 (2.4)
Disorders of lipid metabolism	69 (5.8)	48 (5.1)	11 (2.2)	8 (2.5)	3 (0.4)	1 (0.2)	15 (1.4)	12 (1.7)
Fluid and electrolyte disorders	149 (12.4)	136 (14.5)	121 (24.2)	76 (24.0)	173 (25.9)	146 (28.7)	149 (13.4)	90 (12.8)
Immunity disorders	64 (5.3)	67 (7.1)	26 (5.2)	10 (3.2)	20 (3.0)	10 (2.0)	27 (2.4)	22 (3.1)
Other hereditary and degenerative nervous system conditions	78 (6.5)	56 (6.0)	120 (24.0)	67 (21.1)	22 (3.3)	19 (3.7)	10 (0.9)	5 (0.7)
Paralysis	46 (3.8)	50 (5.3)	187 (37.3)	124 (39.1)	4 (0.6)	2 (0.4)	7 (0.6)	1 (0.1)
Epilepsy; convulsions	114 (9.5)	82 (8.7)	286 (57.1)	196 (61.8)	55 (8.2)	39 (7.7)	75 (6.8)	51 (7.2)
Headache; including migraine	194 (16.2)	198 (21.0)	35 (7.0)	18 (5.7)	1 (0.1)	0 (0.0)	21 (1.9)	17 (2.4)
Coma; stupor; and brain damage	20 (1.7)	21 (2.2)	101 (20.2)	68 (21.5)	9 (1.3)	15 (2.9)	17 (1.5)	4 (0.6)
Other nervous system disorders	284 (23.7)	224 (23.8)	326 (65.1)	202 (63.7)	93 (13.9)	75 (14.7)	102 (9.2)	58 (8.2)
Chronic obstructive pulmonary disease and bronchiectasis	200 (16.7)	157 (16.7)	165 (32.9)	99 (31.2)	151 (22.6)	91 (17.9)	713 (64.2)	437 (62.1)
Asthma	237 (19.8)	183 (19.4)	140 (27.9)	81 (25.6)	97 (14.5)	60 (11.8)	596 (53.7)	334 (47.4)
Aspiration pneumonitis; food/vomitus	1 (0.1)	4 (0.4)	61 (12.2)	32 (10.1)	16 (2.4)	17 (3.3)	13 (1.2)	3 (0.4)
Pleurisy; pneumothorax; pulmonary collapse	64 (5.3)	49 (5.2)	60 (12.0)	46 (14.5)	86 (12.9)	76 (14.9)	98 (8.8)	102 (14.5)
Respiratory failure; insufficiency; arrest	125 (10.4)	104 (11.1)	211 (42.1)	139 (43.8)	276 (41.3)	219 (43.0)	607 (54.7)	377 (53.6)
Cardiac and circulatory congenital anomalies	137 (11.4)	104 (11.1)	160 (31.9)	90 (28.4)	293 (43.9)	220 (43.2)	76 (6.8)	58 (8.2)
Digestive congenital anomalies	47 (3.9)	35 (3.7)	51 (10.2)	23 (7.3)	110 (16.5)	73 (14.3)	92 (8.3)	42 (6.0)
Genitourinary congenital anomalies	120 (10.0)	48 (5.1)	120 (24.0)	31 (9.8)	153 (22.9)	76 (14.9)	128 (11.5)	75 (10.7)
Nervous system congenital anomalies	37 (3.1)	21 (2.2)	189 (37.7)	129 (40.7)	98 (14.7)	64 (12.6)	24 (2.2)	18 (2.6)
Other congenital anomalies	184 (15.3)	140 (14.9)	256 (51.1)	168 (53.0)	246 (36.8)	179 (35.2)	238 (21.4)	151 (21.4)
Short gestation; low birth weight; and fetal growth retardation	1 (0.1)	4 (0.4)	95 (19.0)	47 (14.8)	256 (38.3)	202 (39.7)	68 (6.1)	40 (5.7)
Attention-deficit, conduct, and disruptive behavior disorders	230 (19.2)	122 (13.0)	56 (11.2)	21 (6.6)	0 (0.0)	0 (0.0)	23 (2.1)	8 (1.1)
Miscellaneous mental health disorders	84 (7.0)	89 (9.5)	30 (6.0)	24 (7.6)	15 (2.2)	11 (2.2)	34 (3.1)	26 (3.7)
Malignant cancer	284 (23.7)	232 (24.7)	26 (5.2)	14 (4.4)	15 (2.2)	21 (4.1)	19 (1.7)	10 (1.4)
Diabetes mellitus	71 (5.9)	86 (9.1)	12 (2.4)	4 (1.3)	16 (2.4)	24 (4.7)	27 (2.4)	21 (3.0)
Benign neoplasm	95 (7.9)	74 (7.9)	37 (7.4)	21 (6.6)	41 (6.1)	71 (13.9)	69 (6.2)	50 (7.1)
Essential hypertension	149 (12.4)	113 (12.0)	35 (7.0)	17 (5.4)	27 (4.0)	18 (3.5)	10 (0.9)	3 (0.4)
Infections	824 (68.7)	691 (73.4)	377 (75.2)	253 (79.8)	492 (73.7)	390 (76.6)	1015 (91.4)	660 (93.8)

Other endocrine disorders	434 (36.2)	383 (40.7)	231 (46.1)	169 (53.3)	198 (29.6)	167 (32.8)	277 (25.0)	168 (23.9)
Hematologic disorders	433 (36.1)	329 (35.0)	133 (26.5)	88 (27.8)	237 (35.5)	166 (32.6)	202 (18.2)	116 (16.5)
Central nervous system infection	23 (1.9)	18 (1.9)	45 (9.0)	24 (7.6)	30 (4.5)	24 (4.7)	23 (2.1)	13 (1.8)
Eye disorders	576 (48.0)	462 (49.1)	315 (62.9)	198 (62.5)	252 (37.7)	210 (41.3)	719 (64.8)	446 (63.4)
Ear disorders	569 (47.4)	504 (53.6)	271 (54.1)	163 (51.4)	199 (29.8)	148 (29.1)	833 (75.0)	502 (71.3)
Heart diseases	258 (21.5)	190 (20.2)	143 (28.5)	92 (29.0)	281 (42.1)	205 (40.3)	171 (15.4)	105 (14.9)
Cerebrovascular disease	58 (4.8)	41 (4.4)	121 (24.2)	67 (21.1)	38 (5.7)	24 (4.7)	17 (1.5)	6 (0.9)
Circulatory disease	174 (14.5)	127 (13.5)	115 (23.0)	74 (23.3)	113 (16.9)	68 (13.4)	39 (3.5)	23 (3.3)
Upper respiratory disease	974 (81.2)	779 (82.8)	442 (88.2)	292 (92.1)	567 (84.9)	430 (84.5)	1107 (99.7)	703 (99.9)
Mouth disorders	646 (53.8)	503 (53.5)	232 (46.3)	134 (42.3)	33 (4.9)	34 (6.7)	393 (35.4)	296 (42.0)
Gastrointestinal disorders	765 (63.8)	606 (64.4)	420 (83.8)	259 (81.7)	524 (78.4)	375 (73.7)	954 (85.9)	597 (84.8)
Digestive system disease	146 (12.2)	112 (11.9)	50 (10.0)	25 (7.9)	82 (12.3)	51 (10.0)	45 (4.1)	28 (4.0)
Renal diseases	115 (9.6)	105 (11.2)	41 (8.2)	28 (8.8)	92 (13.8)	75 (14.7)	21 (1.9)	25 (3.6)
Urinary tract disorders	320 (26.7)	359 (38.2)	157 (31.3)	125 (39.4)	192 (28.7)	155 (30.5)	185 (16.7)	221 (31.4)
Genital disorders	256 (21.3)	166 (17.6)	96 (19.2)	32 (10.1)	67 (10.0)	13 (2.6)	390 (35.1)	128 (18.2)
Skin disorders	486 (40.5)	409 (43.5)	213 (42.5)	125 (39.4)	187 (28.0)	161 (31.6)	560 (50.5)	375 (53.3)
Arthritis	333 (27.8)	322 (34.2)	67 (13.4)	50 (15.8)	32 (4.8)	20 (3.9)	108 (9.7)	55 (7.8)
Deformities	470 (39.2)	404 (42.9)	174 (34.7)	101 (31.9)	29 (4.3)	28 (5.5)	170 (15.3)	101 (14.3)
Perinatal trauma	52 (4.3)	43 (4.6)	236 (47.1)	148 (46.7)	562 (84.1)	380 (74.7)	342 (30.8)	158 (22.4)
Fractures and injuries	802 (66.8)	617 (65.6)	302 (60.3)	183 (57.7)	198 (29.6)	149 (29.3)	758 (68.3)	468 (66.5)
Mood and anxiety disorders	243 (20.2)	225 (23.9)	22 (4.4)	27 (8.5)	71 (10.6)	46 (9.0)	31 (2.8)	11 (1.6)
Developmental disorders	307 (25.6)	165 (17.5)	365 (72.9)	225 (71.0)	54 (8.1)	45 (8.8)	136 (12.3)	51 (7.2)