

Supplementary Online Content

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eTable 1. ICD codes for specific mental, behavioral and neurologic disorders.

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1. ICD codes for specific mental, behavioral and neurologic disorders		
	ICD-10	ICD-8
Mental and behavioral disorders	F00-F99	290-315
Organic	F00-F09	290, 292, 293, 294, 309
Disorders due to psychoactive substance use	F10-F19	291, 303, 304
Schizophrenia, schizotypal and delusional disorders	F20-F29	295, 297, 298
Mood [affective] disorders	F30-F39	296
Neurotic, stress-related and somatoform disorders	F40-F48	300, 305
Behavioral syndromes associated with physiological disturbances and physical factors	F50-F59	306.49, 306.50, 305.58, 306.59
Disorders of adult personality and behavior	F60-F69	301, 302
Mental retardation (<i>ICD10</i> terminology)	F70-F79	310-315
Disorders of psychological development	F80-F89 (not F84.0, F84.1, F84.5, F84.8, F84.9)	306.10, 306.11, 306.12, 306.18, 306.19
Behavioral and emotional disorders with juvenile onset	F90-F98	308, 306.09, 306.29, 306.79, 306.89
<i>attention deficit/hyperactivity disorder</i>	F90, F98.8	
Unspecified mental disorder	F99	
Diseases of the nervous system	G00-G99	320-358
Inflammatory diseases	G00-G09	320-324
Systemic atrophies	G10-G14	331.09, 332, 348.09, 348.20, 348.29, 348.99
Extrapyramidal and movement disorders	G20-G26	342
Other degenerative diseases of the nervous system	G30-G32	
Demyelinating diseases of the central nervous system	G35-G37	340, 341.01
Episodic and paroxysmal disorders	G40-G47	345, 346, 347.00, 347.01, 347.09
<i>epilepsy</i>	G40-G41	345
Nerve, nerve root and plexus disorders	G50-G59	350-358
Polyneuropathies and other disorders of peripheral nervous system	G60-G64	354
Diseases of myoneural junction and muscle	G70-G73	330, 733.09
Cerebral palsy and other paralytic syndromes	G80-G83	343
Other disorders	G90-G99	347.93, 347.94, 347.95, 349.00, 349.01, 349.09

eTable 2. Mortality considering ASD and other mental, behavioral and neurologic morbidities one-by-one

	Risk of death from:								
	(N of ASD deaths) aHR ^a (95% CI)								
	Other morbidity in absence of ASD ^b			ASD in absence of other morbidity ^b			ASD and other morbidity combined ^b		
Considering each mental, behavioral, neurologic morbidity one-by-one									
Mental/behavioral disorders	(863)	3.3	(3.0-3.7)	(16)	1.7	(1.0-3.1)	(52)	2.6	(1.8-3.8)
Organic	(33)	6.9	(4.0-11.9)	(67)	2.1	(1.5-2.9)	(1)	--	--
Disorders due to psychoactive substance use	(354)	10.5	(8.8-12.6)	(62)	1.9	(1.4-2.7)	(6)	14.3	(5.4-38.2)
Schizophrenia, schizotypal, delusional disorders	(207)	7.2	(5.8-9.0)	(57)	1.8	(1.3-2.6)	(11)	6.0	(2.7-13.4)
Mood [affective] disorders	(213)	4.1	(3.4-5.0)	(58)	1.8	(1.3-2.6)	(10)	5.8	(2.8-12.1)
Neurotic, stress-related, somatoform disorders	(389)	3.2	(2.8-3.8)	(51)	1.8	(1.2-2.6)	(17)	4.7	(2.5-8.7)
Behavioral syndromes associated with physiological disturbances and physical factors	(60)	2.3	(1.6-3.4)	(66)	2.0	(1.4-2.8)	(2)	--	--
Disorders of adult personality and behavior	(240)	5.1	(4.1-6.2)	(67)	2.1	(1.5-3.0)	(1)	--	--
'Mental retardation'	(76)	6.1	(4.6-8.2)	(51)	2.1	(1.5-3.0)	(17)	2.0	(0.9-4.4)
Disorders of psychological development	(54)	2.2	(1.5-3.1)	(59)	2.1	(1.5-3.0)	(9)	1.7	(0.7-4.2)
Behavioral and emotional disorders with juvenile onset	(218)	2.4	(1.9-2.9)	(48)	2.2	(1.5-3.3)	(20)	1.8	(1.0-3.3)
<i>attention deficit/hyperactivity disorder</i>	(102)	2.2	(1.7-3.0)	(60)	2.3	(1.6-3.2)	(8)	1.2	(0.4-3.1)
Unspecified mental disorder	(110)	5.5	(4.1-7.3)	(64)	2.0	(1.4-2.8)	(4)	--	--
Neurological disorders	(1568)	10.4	(9.6-11.2)	(41)	2.0	(1.4-3.0)	(27)	7.6	(4.4-13.2)
Inflammatory diseases	(176)	7.9	(6.5-9.6)	(67)	2.0	(1.5-2.8)	(1)	--	--
Systemic atrophies	(35)	31.9	(21.2-48.1)	(68)	2.0	(1.5-2.8)	(0)	--	--
Extrapyramidal and movement disorders	(26)	10.1	(6.3-16.2)	(67)	2.0	(1.5-2.8)	(1)	--	--
Other degenerative diseases	(22)	182.6	(114.8-290.4)	(68)	2.0	(1.5-2.8)	(0)	--	--
Demyelinating diseases	(15)	5.2	(2.5-10.9)	(68)	2.0	(1.5-2.8)	(0)	--	--
Episodic and paroxysmal disorders	(867)	7.8	(7.1-8.5)	(55)	2.3	(1.6-3.3)	(13)	2.8	(1.0-7.4)
<i>epilepsy</i>	(791)	10.6	(9.7-11.7)	(57)	2.3	(1.6-3.2)	(11)	2.4	(0.8-7.6)
Nerve, nerve root and plexus disorders	(58)	2.9	(2.1-4.1)	(66)	1.9	(1.4-2.7)	(2)	--	--
Polyneuropathies and other disorders of the peripheral nervous system	(19)	6.4	(3.4-11.8)	(68)	2.0	(1.5-2.8)	(0)	--	--
Diseases of myoneural junction and muscle	(106)	30.1	(23.8-38.0)	(66)	2.0	(1.5-2.8)	(2)	--	--

Cerebral palsy and other paralytic syndromes	(530)	27.4	(24.5-30.8)	(61)	2.1	(1.5-3.0)	(7)	8.9	(2.9-27.7)
Other disorders	(440)	30.5	(26.8-34.7)	(61)	2.0	(1.4-2.8)	(7)	23.3	(9.7-56.0)
^a adjusted Hazard Ratio: adjusted for all Model 2 variables									
^b no ASD and no other morbidity as referent									

eTable 3. Mortality risk considering ASD and neurologic disorders							
				aHR ^a			aHR ^a
Neurologic disorders		ASD					
<u>Yes</u>		<u>Yes</u>		7.6 (4.4-13.2)			0.7 (0.4-1.3)
		<u>No</u>		10.4 (9.6-11.2)			Referent
<u>No</u>		<u>Yes</u>		2.0 (1.4-3.0)			
		<u>No</u>		Referent			
<u>Covariates</u>							
<u>Sex</u>							
Male				1.7 (1.6-1.8)			
Female				Referent			
<u>Gestational age</u>							
< 37 weeks				0.8 (0.7-1.0)			
37-40 weeks				Referent			
≥41 weeks				1.0 (0.9-1.1)			
<u>Maternal age</u>							
< 35				Referent			
≥35				0.9 (0.8-1.1)			
<u>Paternal age</u>							
< 35				Referent			
≥35				1.0 (1.0-1.1)			
<u>Birth weight</u>							
≤2500 gm				1.8 (1.5-2.0)			
2501-3000 gm				1.3 (1.2-1.4)			
3001-4000 gm				Referent			
≥4001 gm		-		1.0 (0.9-1.1)			
^a adjusted Hazard Ratio: adjusted for all Model Two variables							

eTable 4. Mortality risk considering ASD and other mental/behavioral disorders									
				aHR ^a			aHR ^a		
Mental/behavioral disorders		ASD							
<u>Yes</u>		<u>Yes</u>		2.6 (1.8-3.8)			0.8 (0.5-1.2)		
		<u>No</u>		3.3 (3.0-3.7)			Referent		
<u>No</u>		<u>Yes</u>		1.7 (1.0-3.1)					
		<u>No</u>		Referent					
<u>Covariates</u>									
Sex									
Male				1.8 (1.6-1.9)					
Female				Referent					
Gestational age									
< 37 weeks				0.9 (0.8-1.1)					
37-40 weeks				Referent					
≥41 weeks				1.0 (0.9-1.1)					
Maternal age									
< 35				Referent					
≥35				0.9 (0.8-1.0)					
Paternal age									
< 35				Referent					
≥35				1.0 (1.0-1.1)					
Birth weight									
≤ 2500 gm				1.9 (1.7-2.2)					
2501-3000 gm				1.3 (1.2-1.4)					
3001-4000 gm				Referent					
≥4001 gm				1.0 (0.9-1.1)					
^a adjusted Hazard Ratio: adjusted for all Model Two variables									