

Supplementary Online Content

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eTable 1. ICD-10 Codes for Maternal and Neonatal Diseases

eTable 2. ICD-10 Codes For Major Congenital Malformations According to the European Surveillance of Congenital Anomalies Classification

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

eTable 1. ICD-10 Codes for Maternal and Neonatal Diseases

Diseases	ICD-9/10 codes
Epilepsy*	ICD-9: 354; ICD-10: G40
Maternal complications**	
Placental abruption	ICD-10: O45
Postpartum hemorrhage	ICD-10: O72
Premature rupture of membranes	ICD-10: O42
Prolonged labour	ICD-10: O63.0, O63.1
Psychiatric disorders	ICD-9: 290–319; ICD-10: F00–F99
Substance or alcohol abuse	ICD-9: 303, 304, 305.1, 305.9; ICD-10: F10–F19
Pre-gestational hypertension [†]	ICD-10: I10 to I15, O10 and O11
Preeclampsia and eclampsia	ICD-10: O14 and O15
Pregestational diabetes	ICD-10: E10 to E14, O24.0 to O24.3
Gestational diabetes	ICD-10: O24.4
Maternal infection	ICD-10: A00-B99, G00-G07; I00-I02; I32.0; I33, I38; I40.0; J00-J06; J10-J18; J20-J22; J36; J39.0; J85.1; J86; K35-K37; K57.0; K57.2; K57.4; K57.8; K61; K63.0; K65.0; K65.9; K67; K75.0; K75.1; K80.0; K80.3; K80.4; K81.0; K81.9; K83.0; L00-L03; L05-L08; M00; M01; M86; N10; N12; N15.1; N30; N39.0; N41; N45; N70-N77; O23
Chorioamnionitis	ICD-10: O411, O4110, O411A, O411B, O411C, O411X
Neonatal complications[‡]	
Neonatal infections [¶]	ICD-10: P77.9, P35 to P39
Asphyxia-related neonatal complications	
Meconium aspiration	ICD-10: P24.0
Hypoxic ischemic encephalopathy and related conditions	ICD-10: P91.0, P91.3 to P91.6, P91.8 to P91.9
Convulsions/seizures	ICD-10: P90
Hypoglycemia	ICD-10: P70
Jaundice	ICD-10: P55-P59
Respiratory distress	ICD-10: P20, P22, P24-P28

Congenital malformations	
Any malformation	ICD-10: Q00 to Q99, excluding minor malformations as defined by the Swedish National Board of Health and Welfare ¹ : Q17.0, Q17.5, Q18.0, Q18.1, Q25.0, Q27.0, Q31.5, Q32.0, Q52.3, Q53.0 to Q53.9, Q66.5 to Q66.9, Q69.0 to Q69.9, Q70.0 to Q70.9, Q76.0, Q79.9, Q82.5, and Q82.9

Diseases were defined using the Swedish version of the International classification of Diseases, ninth and tenth revision (ICD-9; ICD-10).

*A case of epilepsy was identified if it met any of the following conditions: A) An occurrence of ≥ 2 ICD-10 codes G40 (epilepsy and status epilepticus, respectively) on separate dates; *or* B) An occurrence of ≥ 1 ICD-10 code R56 (convulsions not elsewhere classified) *and* ≥ 1 ICD-10 codes G40 on separate dates; diagnosis of R56 had to precede that of G40.^{16, 17}

** Maternal diseases, were identified from ICD-10 codes from the Medical Birth Register and from ICD-9 and ICD-10 codes from the National Patient Register.

[†] Definition of pre-gestational hypertension also included self-reported information at the first antenatal visit.

[‡] Neonatal diseases were identified from ICD-10 codes from the Medical Birth Register and the National Patient Register.

^{§§} Information on infections was restricted to the first 28 days of life.

¹ICD-10 codes of minor malformations are available at <http://www.socialstyrelsen.se/register/halsodataregister/medicinskafodelseregistret/Documents/diagnoser-som-inte-ska-rapporteras.pdf>

eTable 2. ICD-10 Codes For Major Congenital Malformations According to the European Surveillance of Congenital Anomalies Classification (EUROCAT; www.eurocat-network.eu) definition. Codes identified in the National Patient Register, and the Swedish Medical Birth Register.

#	Organ System	ICD-10 codes	Comment
1	Nervous System	Q00-Q07	
2	Eye	Q100, Q104, Q106-Q109, Q11-Q12, Q130-Q134, Q136-Q139, Q14-Q15	
3	Ear, Face and Neck	Q16, Q176-Q178, Q183, Q188	
4	Congenital Heart Defects	Q20-Q25, Q260, Q262-Q269	
5	Respiratory System	Q300, Q321-Q329, Q330, Q332-Q335, Q337-Q339, Q34	
6	Orofacial Clefts	Q35-Q37	
7	Digestive System	Q380, Q383-Q389, Q39, Q402-Q409, Q431-Q439, Q44-Q45, Q790	Q385A was not included
8	Abdominal Wall Defects	Q792-Q793, Q795	
9	Urinary System	Q60, Q611-Q619, Q620-Q626, Q628-Q629, Q630-Q632, Q634-Q639, Q64, Q794	
10	Genital Organs	Q50-Q51, Q520-Q522, Q524, Q526, Q528-Q529, Q54-Q56	
11	Limb	Q660-Q661, Q679, Q681-Q682, Q686-Q689, Q70-Q74	
12	Other	Q750, Q77, Q780, Q782-Q788, Q80-Q81, Q820-Q824, Q826-Q829, Q860, Q890, Q893-Q894	
X	Teratogenic/genetic syndromes, microdeletions and chromosomal abnormalities	Q861-Q869, P350-P352, P371, Q619, Q751, Q754, Q771-Q772, Q780, Q796, Q85, Q87, D821, Q90-Q92, Q930-Q939, Q95-Q99	All infants with any of these ICD codes were excluded

eTable 3. Clinical Characteristics of in Women With Epilepsy (n = 3412)

Characteristics	Epilepsy mothers
	No. (%)
Type of epilepsy	
Generalized	928 (27.2)
Focal	1088 (31.9)
Unidendified	1396 (40.9)
Antiepileptic drug treatment during pregnancy	
Yes	1363 (40.0)
No	2049 (60.0)
Type of therapy	
Monotherapy	1138 (83.5)
Polytherapy	181 (13.3)
Unidendified	44 (3.2)
Antiepileptic drug treatment	
Lamotrigine	628 (46.1)
Oxcarbazepine	33 (2.4)
Topiramate	55 (4.0)
Levetiracetam	117 (8.6)
Valproic acid	262 (19.2)
Carbamazepine	418 (30.7)
Major malformation (Monotherapy only)	
Lamotrigine	22/503 (4.4)
Oxcarbazepine	1/23 (4.4)
Topiramate	3/24 (12.5)
Levetiracetam	2/40 (5.0)
Valproic acid	20/188 (10.6)
Carbamazepine	22/360 (6.1)