

RESEARCH ARTICLE

Prevalence of Down syndrome using certificates of live births and fetal deaths in México 2008-2011

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Abstract

Background: Down syndrome (DS) or trisomy 21 is the most common genetic cause of mental retardation with the clinical presentation of a series of well-defined characteristics. Advanced maternal age has been associated with DS.

Methods: The databases of all the certificates of live births and fetal deaths in Mexico were combined. Codes based on the International Classification of Diseases 10th Revision (ICD-10) in Chapter XVII "Congenital malformations, deformations and chromosomal abnormalities" were selected.

Results: A database of 8,250,375 births during the period 2008-2011 was constructed: 99.2% were live births with 0.8% of fetal deaths and 3,076 cases diagnosed with DS.

Conclusions: The importance of this report is to initiate an epidemiological surveillance of newborn cases of DS nationwide and by state using census information systems available in the country since 2008. An increased risk has been observed for having a child with DS since the mother is ≥ 35 years, as has been reported in other studies.

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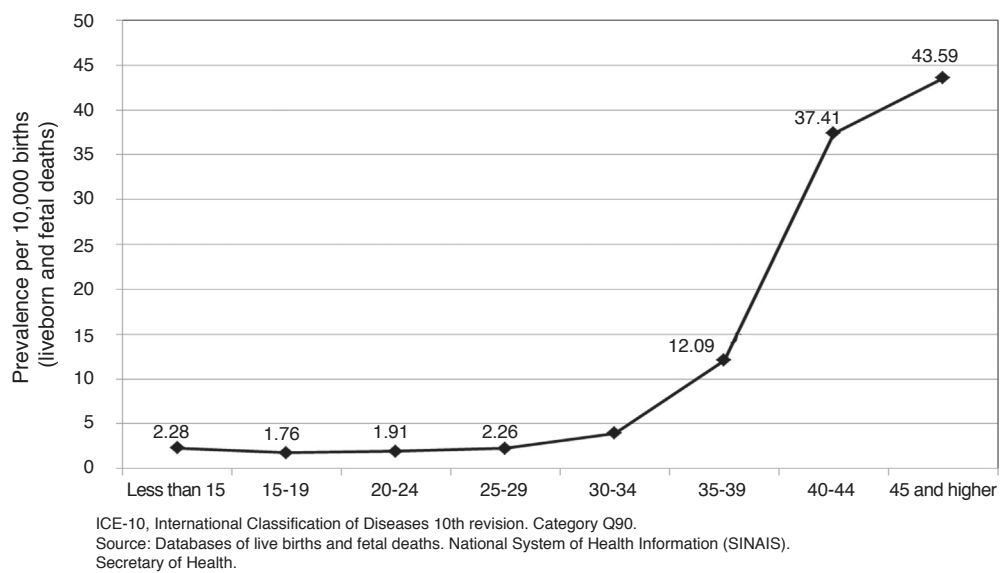
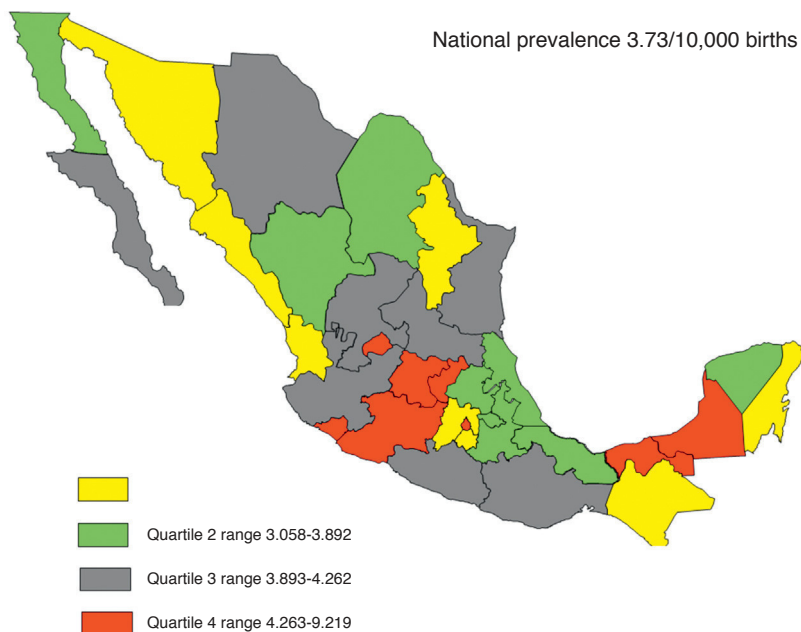


Figure 1 Prevalence of newborns with Down syndrome according to maternal age groups (Mexico, 2008-2011).

			Prevalence	Relation
Federal	Cases with		per 10,000	of birth
Entity	Down	Total	births	with
	Syndrome			Down S.
Nuevo León	50	315,159	1.587	1/6,302
Chiapas	55	299,970	1.834	1/5,453
Sonora	47	180,635	2.602	1/3,842
Estado de México	335	1,189,811	2.816	1/3,551
Morelos	36	125,776	2.862	1/3,493
Sinaloa	60	205,983	2.913	1/3,432
Quintana Roo	30	100,922	2.973	1/3,363
Nayarit	25	82,356	3.036	1/3,293
Durango	42	134,576	3.121	1/3,203
Coahuila	69	217,826	3.168	1/3,156
Hidalgo	64	197,417	3.242	1/3,084
Veracruz	163	469,157	3.474	1/2,877
Tlaxcala	38	99,621	3.814	1/2,621
Baja California Norte	83	217,528	3.816	1/2,620
Yucatán	52	135,090	3.849	1/2,597
Puebla	182	469,392	3.877	1/2,578
Chihuahua	93	238,015	3.907	1/2,558
Oaxaca	91	232,385	3.916	1/2,553
Guerrero	84	214,388	3.918	1/2,551
Baja California Sur	19	48,346	3.930	1/2,544
Tamaulipas	105	256,591	4.092	1/2,443
Zacatecas	49	118,952	4.119	1/2,427
Jalisco	235	561,327	4.187	1/2,388
San Luis Potosí	83	194,815	4.260	1/2,346
Michoacán	148	347,252	4.262	1/2,345
Tabasco	88	199,019	4.422	1/2,261
Campeche	27	60,199	4.485	1/2,229
Distrito Federal	238	513,596	4.634	1/2,157
Guanajuato	259	474,900	5.454	1/1,833
Queretaro	86	152,453	5.641	1/1,772
Colima	36	48,121	7.481	1/1,336
Aguascalientes	96	104,136	9.219	1/1,084



Source: Databases of live births and fetal deaths.
National Institute of Health Information (SINAIS). Secretary of Health.

