

Definition/Description:

Congenital Anomaly

A congenital anomaly is described as an abnormality of structure, function or body metabolism that is present at birth (even if not diagnosed until later in life) and results in physical or mental disability, or is fatal.¹ This includes, but is not limited to, Down syndrome (Trisomy 21), neural tube defects, congenital heart defects, oral facial clefts, and limb reduction defects. According to the Health Canada report, *Congenital Anomalies in Canada - A Perinatal Health Report, 2002*, congenital anomalies contribute a significant proportion of infant morbidity and mortality, for this reason, it warrants the collection of good epidemiological data.¹

Rate of Hospitalization for Congenital Anomalies

This is the rate of in-patient hospital treatment for congenital anomalies per 1000 population within a fiscal year. Crude rates and counts (number of cases) are presented for this indicator, by age group for children and youth 19 years of age and under.

Methods:

Rate of Hospitalization for Congenital Anomalies

A case was defined as having ICD-9-CM codes: 740-759 as the “diagnosis most responsible for the hospital stay”. Extracted from the Manitoba Health Discharge Abstract database. One year of data, fiscal year 2002-03 is reported. The denominator was the regional population from the same year.

Limitations: This rate reflects the number of visits for in-patient hospitalization for congenital anomalies and therefore does not reflect discrete cases. In other words, one resident could have several hospital visits for treatment of one or more congenital anomalies. Therefore, this indicator should not be used as an indicator of prevalence of congenital anomalies in the region.

Source:

The source data was the Hospital Abstract Database, provided by Decision Support Service, Manitoba Health. All numerical values, tables, and figures were generated by Population Health & Health System Analysis, Winnipeg Regional Health Authority, 2004.

Source of provincial and national data: Canada. Health Canada. *Congenital Anomalies in Canada - A Perinatal Health Report, 2002*. Ottawa: Minister of Public Works and Government Services Canada, 2002.

¹ As cited in: Canada. Health Canada. *Congenital Anomalies in Canada - A Perinatal Health Report, 2002*. Ottawa: Minister of Public Works and Government Services Canada, 2002.

Findings:

Congenital Anomalies: Crude Rate of Hospitalization for Children and Youth in the Winnipeg Health Region, 2002/03

Age	Females		Males		Both Sexes	
	In-patient Cases	Crude Rate per 1000	In-patient Cases	Crude Rate per 1000	In-patient Cases	Crude Rate per 1000
under 1	42	11.88	90	24.20	132	18.19
1-4	10	0.68	28	1.80	38	1.25
5-9	15	0.73	16	0.74	31	0.74
10-14	4	0.19	9	0.40	13	0.30
15-19	11	0.52	10	0.46	21	0.49
All 19 & under	82	1.01	153	1.80	235	1.42

Birth Prevalence Rates of Selected Congenital Anomalies in Manitoba and Canada, 1997-1999² Per 10 000 Total Births³

Congenital Anomaly	Manitoba Rate	Canada Rate
Down Syndrome (Trisomy 21)	13.6	14.0
Spina bifida	5.6	4.5
Neural tube defect	8.3	6.4
Anencephaly	1.6	1.1
Congenital heart defect: HLHS ⁴	2.8	2.8
Cleft lip with or without cleft palate	14.3	10.7
Cleft palate (only)	9.0	7.7
Limb reduction defect	4.6	4.0

Note: There were no statistically significant differences in the birth prevalence rates between Manitoba and Canada for any of the congenital defects listed. This is based upon the comparison of confidence intervals given with each rate. Please refer to the report *Congenital Anomalies in Canada - A Perinatal Health Report, 2002* for further information.

² Canada. Health Canada. *Congenital Anomalies in Canada - A Perinatal Health Report, 2002*. Ottawa: Minister of Public Works and Government Services Canada, 2002.

³ Total Births refers to the sum of the number of livebirths and stillbirths, which is used as the denominator in the rate calculations in the report: *Congenital Anomalies in Canada - A Perinatal Health Report, 2002*.

⁴ HLHS: Hypoplastic Left Heart Syndrome. This heart defect was selected for inclusion in the *Congenital Anomalies in Canada - A Perinatal Health Report, 2002* as an example of a congenital heart defect where there is "superior" validity of the reported rates between the provinces. Refer to the full report for further information.

Highlights:

Note: The crude rates are referred to in this narrative (unless otherwise stated).

- The rate of hospitalization for congenital anomalies for all children and youth, 19 years of age and under, in the Winnipeg Health Region was 1.42 per 1000 population in 2002/03.
- However, this rate varies among the age groups within the children and youth population.
- The rate of hospitalization for congenital anomalies is highest in the under one year of age group, at 18.2 per 1000 population.
- The rate is lowest in the 10-14 years of age group, at 0.30 per 1000 population.
- The rate of hospitalization for congenital anomalies is higher in males than females in the overall child and youth population. The most notable difference is found in the under one year of age group: 24.20 versus 11.88 per 1000 population, for males and females respectively.
- Down syndrome and cleft lip with or without cleft palate are by far the most common congenital anomalies, both provincially and nationally.