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Characteristics of women with a pregnancy affected by Trisomy 21 in Queensland 1 July 2007 to 30 June 2010

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Trisomy 21 (or Down syndrome) is a congenital anomaly which is characterised by an excess of chromosome 21 material. It is the most common chromosomal abnormality in Queensland, having been reported at a rate of 16.2 affected fetuses per 10,000 fetuses between 2007/2008 and 2009/2010¹. Despite the public health significance of Trisomy 21, there is little recent information on the characteristics of women with a pregnancy affected by this anomaly. The latest national report – published in 2008 – was based on data from 2002-2003².

This report describes the characteristics of women with pregnancies affected by Trisomy 21 in Queensland between 2007/2008 and 2009/2010. The data are extracted from the Queensland Hospital Admitted Patient Data Collection (QHAPDC: terminations of pregnancy prior to 20 weeks duration) and the Queensland Perinatal Data Collection (QPDC: live births and fetal deaths of at least 20 weeks gestation or 400 grams in birth weight). This allows for the best available surveillance of congenital anomalies from conception to the end of the perinatal period. However, it is recognised that this does not provide full surveillance as events such as spontaneous abortion are not captured.

Table 1: Incidence of Trisomy 21 by selected maternal characteristics: Queensland 2007/2008 to 2009/2010

	Incidence rate per 10,000 pregnancies			
	2007/ 2008	2008/ 2009	2009/ 2010	2007/2008 to 2009/2010
Incidence [n]	18.8 [137]	16.3 [122]	13.9 [103]	16.3 [362]
Maternal age				
< 35 years [n]	10.1 [60]	9.6 [58]	6.3 [38]	8.7 [156]
35+ years [n]	56.0 [77]	44.6 [64]	45.5 [65]	48.6 [206]
Country of birth				
Australia [n]	17.4 [102]	15.3 [90]	13.4 [77]	15.4 [269]
Overseas [n]	24.5 [35]	20.3 [32]	15.4 [26]	19.8 [93]
SEIFA ¹				
Most disadvantaged [n]	15.9 [23]	11.8 [18]	16.8 [25]	14.8 [66]
2 nd Quintile [n]	19.6 [29]	13.6 [21]	9.8 [15]	14.3 [65]
3 rd Quintile [n]	21.8 [32]	14.3 [22]	11.5 [17]	15.8 [71]
Most Advantaged [n] (4 th – 5 th Quintiles)	18.2 [53]	21.3 [61]	15.7 [46]	18.4 [160]
ARIA ²				
Major cities [n]	16.3 [64]	17.8 [72]	14.2 [57]	16.1 [193]
Regional/remote [n]	21.7 [73]	14.6 [50]	13.5 [46]	16.5 [169]

Source:

Queensland Hospital Admitted Patient Data Collection (extracted August 2011);

Queensland Perinatal Data Collection (extracted August 2011; 2010 data were preliminary at the time of extraction)

¹SEIFA: Socioeconomic Indexes For Areas

²ARIA: Accessibility / Remoteness Index of Australia

There were 362 pregnancies affected by Trisomy 21 in Queensland between 2007/2008 and 2009/2010. This corresponds to an incidence rate of 16.3 affected pregnancies per 10,000 pregnancies (Table 1). When compared to their respective comparison groups, Trisomy 21 was more common in older women, in women born overseas and those residing in the most advantaged regions. The incidence of pregnancies affected by Trisomy 21 declined between 2007/2008 and 2009/2010 from 18.8 to 13.9 affected pregnancies per 10,000 pregnancies (Table 1). The decline was observed in all population subgroups with the exception of women residing in the most socioeconomically disadvantaged regions.

Related publications:

Stat Bite # 14: [Trisomy 21 \(Down Syndrome\) in Queensland: 1 July 2007 to 30 June 2010](#)

Stat Bite # 19: [Characteristics of women with a pregnancy affected by neural tube defects in Queensland: 1 July 2007 to 30 June 2010](#)

Stat Bite # 13: [Neural tube defects in Queensland: 1 July 2007 to 30 June 2010](#)

References

¹ Stat Bite # 14: Trisomy 21 (Down Syndrome) in Queensland: 1 July 2007 to 30 June 2010.

² Abeywardana S & Sullivan E 2008. Congenital anomalies in Australia 2002-2003. Birth anomalies series no. 3 Cat no. PER 41. Sydney: AIHW National Perinatal Statistics Unit.