

**Question on Notice**  
**No. 548**  
**Asked on 17 April 2007**

MRS CUNNINGHAM asked the Minister for Health (MR ROBERTSON)-

**QUESTION:**

For the period 1996-2006 for the areas (a) Gladstone, (b) Central Queensland and (c) Queensland (per capita) reported separately—

What is the incidence of leukaemia (all types); cancer (all types); asthma respiratory illness and miscarriage (reported separately)?

**ANSWER:**

The data is presented in the attached table.

The results for Gladstone and Central Queensland show no differences from the state average for asthma, stillbirths and cancers of all types (including leukaemia). For leukaemia specifically, the incidence was higher in Gladstone compared to all of Queensland during the period 2000-2004 (the latest period for which validated data are available). During this time, the expected number of leukaemia cases in Gladstone was 15, whereas 22 cases were diagnosed and reported. However, the difference did not reach statistical significance.

A closer inspection of the data for specific types of leukaemia indicates a higher rate of chronic lymphoid leukaemia in Gladstone during the period 1996 – 2004. The rate was 108% higher than all of Queensland and was statistically significant. Over this period, the expected number of leukaemia cases in Gladstone was 9, whereas 19 cases were diagnosed and reported. This is equivalent to one more case of chronic lymphoid leukaemia than would be expected each year in Gladstone. There have been numerous scientific studies, over four decades, into the causes of chronic lymphoid leukaemia, but no environmental risk factors have been clearly identified.

Other types of leukaemia and an associated condition, myelodysplastic syndrome, were for some time periods higher and for some time periods lower in Gladstone compared to all of Queensland rates but these variations were not statistically significant.

## Attachment

Condition	Time period#	Queensland age standardised rate/100,000	Age Standardised Rate†: Central Qld (95% CI)	Age Standardised Rate†: Gladstone (95% CI)
Cancer (new cases, all types)	1996–1999	466.3	406.1 (390.8-422.5)	488.7 (440.7-540.0)
	2000–2004	470.6	421.2 (407.5-434.8)	505.0 (463.5-549.2)
Leukaemia (all types)	1996–1999	14.4	16.2 (13.2-19.7)	15.2 (7.8-26.5)
	2000–2004	13.1	13.8 (11.4-16.5)	19.9 (12.4-30.1)
Asthma hospitalisations <sup>+</sup>	1995/96–2000/01	300.5	295.7 (285.8-305.9)	290.6 (265.3-317.6)
	2001/02–2005/06	174.9	159.9 (151.8-168.1)	180.5 (159.5-203.6)
Stillbirths*	1996–2004	7.0 (6.8-7.3)	6.8 (5.8-7.9)	6.0 (3.9-8.9)

### Footnotes to Table

# For conditions where changes in disease trends over periods of time have been observed, the reporting period has been broken into two time periods.

+ for asthma, only data on hospitalisations is available

\* Population-based data on miscarriages (spontaneous termination of pregnancy before 20 weeks gestation) are not collected, so data on stillbirths (fetal deaths after 20 weeks) is provided.

† Age standardised rates were calculated by applying the indirectly age standardised ratios for the region of interest to the Queensland rate.

### Notes about data

For the Queensland population, rates have been calculated and directly age-standardised and are expressed as the number of Queensland residents with the condition per 100,000 residents, per year.

Given relatively small populations and numbers of people with each condition, the burden of disease for each condition in Gladstone and Central Queensland compared with the Queensland average is represented by a ratio rather than by a rate. These ratios have been indirectly age-standardised.

Because we are dealing with relatively small numbers of cases for Gladstone and Central Queensland, the data might be subject to random fluctuations and so interpretation is aided by calculating confidence intervals (CIs). If a confidence interval given in Columns 4 or 5 includes the Queensland age-standardised rate given in Column 3 in its range then it is standard statistical practice to consider that the rate in Central Queensland or Gladstone is the same as the Queensland rate.