

# Perinatal health status in Alberta Health Services (Edmonton Area)















DECEMBER 2008

| Population for the Capital Health region, 2007 |         |         |           |  |  |  |  |  |  |
|------------------------------------------------|---------|---------|-----------|--|--|--|--|--|--|
| Age Group                                      | Females | Males   | Total     |  |  |  |  |  |  |
| < 1                                            | 6,725   | 6,888   | 13,613    |  |  |  |  |  |  |
| 1-4                                            | 24,532  | 25,907  | 50,439    |  |  |  |  |  |  |
| 5-9                                            | 29,977  | 31,655  | 61,632    |  |  |  |  |  |  |
| 10-14                                          | 33,104  | 34,897  | 68,001    |  |  |  |  |  |  |
| 15-19                                          | 36,448  | 37,958  | 74,406    |  |  |  |  |  |  |
| 20-44                                          | 198,859 | 197,129 | 395,988   |  |  |  |  |  |  |
| 45-64                                          | 138,832 | 139,428 | 278,260   |  |  |  |  |  |  |
| 65-74                                          | 32,981  | 30,424  | 63,405    |  |  |  |  |  |  |
| 75+                                            | 33,384  | 21,981  | 55,365    |  |  |  |  |  |  |
| Total                                          | 534,842 | 526,267 | 1,061,109 |  |  |  |  |  |  |



City of Edmonton

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### 1.1 Executive summary/highlights

### Summary

Overall, the perinatal health of people living in the Alberta Health Services (Edmonton Area) is very good. Some of the notable trends in the Edmonton Area over the ten year period, from 1998 to 2007, are listed below.

Going Up ↑

- the number of live births and the general fertility rate have been increasing, particularly over the last couple of years.
- the maternal age at delivery for first birth has continued to increase, and therefore, the delayed childbearing trend appears to be continuing.
- the small-for-gestational age rate decreased from 1997 to 2002 and then had a slight increase more recently.
- the low birth weight rate has steadily increased over the period.
- the midwife-attendance rate shows an increasing trend.

Coming Down↓

- the high birth weight rate and large-for-gestational age rate have both decreased.
- for most of the period, the preterm birth rate increased; most recently, however, the rate has decreased.
- the home birth rate shows a decreasing trend.
- the maternal prenatal smoking rate has steadily decreased over the period.

The annual infant mortality rate fluctuates due to small numbers. The five-year average rate shows the trend to be fairly stable, with only a slight increase for the last 5-year period. The three-year average multiple birth rate shows a slightly increasing trend over this time period but appears to be stabilizing.

The last section in the report on poverty and perinatal health indicates that women living in low SES (socio-economic status) neighbourhoods compared to women living in high SES neighbourhoods have:

- a higher rate of low birth rate babies;
- a higher rate of preterm births;
- a lower rate of multiple births;
- a teen birth rate that is 10 times higher; and
- a birth rate for older women (35-39 yrs) that is half as high

.

### Highlights

While the perinatal health, for the Edmonton Area, is very good, it is not homogeneous across all geographical areas within the Area; nor is it homogeneous across all maternal age groups. Some of the highlights are shown in the table below with the higher and lower rates indicated.

| Indicator                                                                          | Year      | High                                                         | Low                                                                                 | Edmonton<br>Area |
|------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------|
| Teen birth rate (per<br>1,000 15-19 year olds)                                     | 2004-2006 | 39.3 (Eastwood)                                              | 4.9 (Strathcona Country<br>and St. Albert)                                          | 16.1             |
| Birth rate for women<br>35-39 years (per<br>1,000)                                 | 2004-2006 | 62.3 (Twin Brooks)                                           | 28.2 (Fort Saskatchewan)                                                            | 43.5             |
| Low birth weight<br>rate (per 100 live<br>births)                                  | 2004-2006 | 10.4 (Eastwood)                                              | 5.1 (Leduc County)                                                                  | 6.8              |
| Low birth weight<br>rate (per 100 live<br>births)                                  | 2004-2006 | 9.7 (women <20 yrs)<br>10.7 (women >=40 yrs)                 | 6.1 (women 25-29 yrs)                                                               | 6.8              |
| Singleton small-for-<br>gestational-age rate<br>(per 100 singleton<br>live births) | 2004-2006 | 9.8 (Eastwood)<br>9.3 (Mill Woods)                           | <ul><li>5.1 (Fort Saskatchewan)</li><li>5.4 (St. Albert and<br/>WestView)</li></ul> | 7.4              |
| Singleton small-for-<br>gestational-age rate<br>(per 100 singleton<br>live births) | 2004-2006 | 9.3 (women <20 yrs)<br>9.1 (women >=40 yrs)                  | 6.7 (women 30-34 yrs)                                                               | 7.4              |
| Preterm birth (per<br>100 live births)                                             | 2004-2006 | 13.5 (Eastwood)                                              | 8.5 (Strathcona County)                                                             | 9.6              |
| Preterm birth (per<br>100 live births)                                             | 2004-2006 | 11.9 (women <20 yrs)<br>13.8 (women >=40 yrs)                | 8.8 (women 25-29 yrs)                                                               | 9.6              |
| Multiple birth rate<br>(per 100 live births)                                       | 2004-2006 | <ul><li>4.8 (St. Albert)</li><li>4.6 (Twin Brooks)</li></ul> | 2.2 (Woodcroft)                                                                     | 3.5              |
| Multiple birth rate<br>(per 100 live births)                                       | 2004-2006 | 5.4 (women 35+ yrs)                                          | 2.3 (women 20-24 yrs)                                                               | 3.5              |
| Average maternal<br>age at delivery (yrs)                                          | 2006      | 30.4 (Twin Brooks)                                           | 27.6 (Eastwood, North<br>East, and Fort<br>Saskatchewan)                            | 28.9             |
| Average maternal<br>age at delivery of<br><u>first</u> live birth (yrs)            | 2006      | 28.7 (Twin Brooks)<br>28.6 (St. Albert)                      | 24.9 (Fort Saskatchewan)                                                            | 27.1             |
| % live births to<br>women 35+ yrs                                                  | 1997-2006 | 22.0 (Bonnie Doon)<br>21.3 (Twin Brooks)                     | 9.9 (Fort Saskatchewan)                                                             | 15.6             |
| Maternal prenatal<br>smoking rate (per<br>100 women<br>delivering)                 | 2004-2006 | 31.5 (Eastwood)                                              | 8.2 (Twin Brooks)                                                                   | 17.7             |
| Maternal prenatal<br>smoking rate (per<br>100 women<br>delivering)                 | 2004-2006 | 45.9 (women <20 yrs)                                         | 9.8 (30-34 yrs)                                                                     | 17.7             |

### 2.1 BACKGROUND

For over 10 years, an annual health status report has been released for Alberta Health Services (Edmonton Area), formerly called Capital Health region. As a companion report to the most recent *How healthy are we? 2007 Annual report of the Medical Officer of Health*, this report provides perinatal health statistics for Alberta Health Services (Edmonton Area) as well as the fifteen public health service areas within the Area. For provincial comparability, the format of this document follows that of the report titled *Alberta Reproductive Health: Pregnancies & Births, 2008* written by the Reproductive Health Working Group, Alberta Health and Wellness.

Another related document, titled *Quick facts for Edmonton and Area*, was released in October 2008 and is available on the Alberta Health Services (Edmonton Area) website, www.capitalhealth.ca, and in paper copy. The report provides data for current population, 2006 federal census, vital statistics, and health services utilization.

### **2.2 DATA SOURCES**

### • Population

Historical population values (that is, for points in time between June 30, 1986 and March 31, 2007) are interpolations of actual population values (that is, annual values from June 30, 1986 to June 30, 1991 and from March 31, 1992 to March 31, 2007) from the Alberta Health Care Insurance Plan (AHCIP) Registration File. Forecast values (that is, for points in time after March 31, 2007) are estimated using the March 31, 2007 AHCIP Registration File values and year-overyear population growth values based on forecasts provided by the Surveillance and Environmental Health Branch of Alberta Health and Wellness. The forecasts have been further adjusted using December 31, 2007 Alberta Health and Wellness Registration File data.

### • Vital Statistics

Vital statistics are managed by Service Alberta with regional data distributed through Alberta Health and Wellness. The data used in this report include records of all live births and deaths before one year of age. Still births are not included.

### • Alberta Perinatal Health Program

Delivery record data for Alberta Health Services (Edmonton Area) are obtained from the data repository (PeriLink) of the Alberta Perinatal Health Program. Risk factor data including prepregnancy weight and smoking are obtained from this source.

 (1) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (2) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies and Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness. (3) Reproductive Health Working Group (2008). Alberta Reproductive Health: Pregnancies and Births 2008. Edmonton, AB: Alberta Health and Wellness. Data are used from these reports to provide comparisons among Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta.

### 2.3 Notes and Limitations

- For ease of wording, the names Edmonton Area and Calgary Area are used to denote Alberta Health Services (Edmonton Area) and Alberta Health Services (Calgary Area), respectively, throughout the report.
- The data used in this report reflect women who reside in the Edmonton Area based on the 6-digit postal code. It excludes women who may have received service in the Edmonton Area but reside outside the Area boundaries.
- Data reflect the April 2003 boundary change for the Edmonton Area as well as the September 2005 changes to some of the public health service areas within the Edmonton Area.
- The public health service areas for the Edmonton Area are shown on the map on the inside front cover. Data are geocoded to the fifteen areas using the 6 digit postal code. If the event is unable to be geocoded to a particular area, the event is still counted in the Edmonton Area total. As such, the sum of numbers across public health service areas may not add up to the Edmonton Area total.
- The maternal prenatal smoking and obesity rates are derived from data obtained from PeriLink, the provincial data repository for the Alberta Perinatal Health Program, and as such, the denominator for the rates is the number of women delivering (data are obtained from the delivery record) as opposed to the number of live births which is the denominator often used in other rates throughout the document.
- The years covered in the summary table on page 6 are 1998-2007, reflecting the most recent data for Edmonton Area as a whole. The rest of the report covers the years 1997 to 2006 for which data for the public health service areas within the Edmonton Area are available.
- When showing rates for the public health service areas within the region, the data are presented using a black dot, representing the rate, with the 95% confidence intervals\* shown in a dark grey, with an upper and lower horizontal line demarking the upper and lower boundaries. The two black horizontal lines running across the chart denote the upper and lower confidence interval for the Edmonton Area rate. Public health service area rates with their corresponding confidence intervals that do not overlap the upper and lower horizontal lines for the Edmonton Area, are significantly different than the Edmonton Area rate.

\* Standard Error (SE) for crude rate) = 
$$\sqrt{\frac{p(1)}{p(1)}}$$

$$\frac{p(1-p)}{n}$$

Where: p is the proportion (estimate of probability) and n is the number of births.

Lower boundary for 95% confidence interval = p - 1.96\*(SE) Upper boundary for 95% confidence interval = p + 1.96\*(SE)

• Data on estimated pregnancies, spontaneous abortions, reproductive care services (including induced abortions, labour induction, and deliveries) as well as pre-pregnancy conditions and prenatal morbidity for Alberta Health Services (Edmonton Area) are taken from reports by the Reproductive Health Working Group, Alberta Health and Wellness (2006, 2007, 2008).

|                                                                | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2007*  |
|----------------------------------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Live Births                                                    | 11,172 | 11,306 | 10,777 | 11,043 | 11,285 | 11,693 | 11,910 | 12,096 | 13,116 | 14,398 |
| Estimated Pregnancies                                          | 16,117 | 16,113 | 15,755 | 15,980 | 16,361 | 16,786 | 17,060 | 17,188 | 18,566 | 20,270 |
| Estimated Pregnancy Rate (per 1,000 women 15-49)               | 65.5   | 64.2   | 62.2   | 62.2   | 62.5   | 63.5   | 64.2   | 64.3   | 68.3   | 72.3   |
| Spontaneous Abortions                                          | 1,364  | 1,299  | 1,343  | 1,322  | 1,330  | 1,314  | 1,330  | 1,404  | 1,504  | 1,708  |
| Spontaneous Abortion Rate (per 1,000 women 15-49)              | 5.5    | 5.2    | 5.3    | 5.1    | 5.1    | 5.0    | 5.0    | 5.2    | 5.5    | 6.1    |
| Spontaneous Abortion Rate (per 100 estimated pregnancies)      | 8.5    | 8.1    | 8.5    | 8.3    | 8.1    | 7.8    | 7.8    | 8.2    | 8.1    | 8.4    |
| Induced Abortions                                              | 3,517  | 3,418  | 3,555  | 3,539  | 3,657  | 3,691  | 3,739  | 3,597  | 3,833  | 4,054  |
| Induced Abortion Rate (per 1,000 women 15-49)                  | 14.3   | 13.6   | 14.0   | 13.8   | 14.0   | 14.0   | 14.1   | 13.5   | 14.1   | 14.5   |
| Induced Abortion Rate (per 100 estimated pregnancies)          | 21.9   | 21.2   | 22.6   | 22.2   | 22.4   | 22.0   | 21.9   | 20.9   | 20.7   | 20.0   |
| Total Labour Induction Rate (per 100 hospital deliveries)      |        |        |        |        |        |        | 27.8   | 28.7   | 26.5   |        |
| Cesarean Section Rate (per 100 hospital deliveries)            |        |        |        |        |        |        | 24.9   | 25.8   | 26.2   |        |
| Average Maternal Age at Delivery (years)                       | 28.3   | 28.5   | 28.5   | 28.6   | 28.6   | 28.8   | 28.8   | 28.8   | 28.9   | 29.4   |
| Average Maternal Age at Delivery of First Live Birth (years)   | 26.5   | 26.5   | 26.7   | 26.8   | 26.8   | 26.9   | 27.2   | 27.1   | 27.1   |        |
| General Fertility Rate (per 1,000 women 15-49)                 | 45.2   | 45.0   | 42.4   | 42.9   | 43.2   | 44.2   | 44.7   | 45.2   | 48.1   | 51.3   |
| Crude Birth Rate (per 1,000 population)                        | 12.4   | 12.3   | 11.6   | 11.7   | 11.7   | 11.9   | 12.0   | 12.0   | 12.7   | 13.5   |
| Low Birth Weight Rate (per 100 live births)                    | 6.3    | 5.9    | 6.2    | 6.0    | 6.4    | 6.4    | 6.5    | 6.9    | 7.0    | 6.9    |
| Small for Gestational Age Rate (per 100 singleton live births) | 8.5    | 8.0    | 7.9    | 7.7    | 7.0    | 7.1    | 7.3    | 7.1    | 7.7    | 7.6    |
| High Birth Weight Rate (per 100 live births)                   | 12.2   | 12.6   | 12.6   | 12.4   | 12.4   | 12.0   | 11.4   | 11.2   | 10.7   | 11.6   |
| Large for Gestational Age Rate (per 100 singleton live births) | 11.8   | 12.2   | 12.6   | 12.2   | 12.4   | 12.1   | 11.9   | 11.6   | 10.8   | 11.6   |
| Preterm Birth Rate (per 100 live births)                       | 8.2    | 8.4    | 9.4    | 8.9    | 9.0    | 9.4    | 9.9    | 9.7    | 9.1    | 8.6    |
| Multiple Birth Rate (per 100 live births)                      | 2.8    | 2.5    | 3.1    | 2.9    | 2.8    | 3.0    | 3.7    | 3.5    | 3.4    | 3.5    |
| Infant Mortality Rate (per 1,000 live births)                  | 4.6    | 6.1    | 7.2    | 6.3    | 5.0    | 6.6    | 7.4    | 7.4    | 5.9    |        |
| Maternal Prenatal Smoking (per 100 women delivering)           |        | 23.4   | 22.2   | 21.7   | 20.3   | 18.2   | 17.9   | 17.2   | 18.1   |        |

### 2.4 Selected indicators for pregnancies and births, Alberta Health Services (Edmonton Area), 1998 to 2007

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Alberta Health Care Insurance Plan Registration File, Alberta Health and Wellness, March 2006 release. (3) Reproductive Health Working Group (2008). Alberta Reproductive Health: Pregnancies and Births 2008. Edmonton, AB: Alberta Health and Wellness. (4) PeriLink, Alberta Perinatal Health Program (1999-2006).

\* 2007 data obtained from Reproductive Health Working Group (2008). Alberta Reproductive Health: Pregnancies and Births 2008. Edmonton, AB: Alberta Health and Wellness.

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### 3.1 Live Births and Fertility

**Live Birth:** "The complete expulsion or extraction from the mother, irrespective of the duration of the pregnancy, of a fetus in which, after expulsion or extraction, there is breathing, beating of the heart, pulsation of the umbilical cord or unmistakable movement of voluntary muscle, whether or not the umbilical cord has been cut or the placenta is attached." (Alberta Vital Statistics Act, RSA 1980 cV-4 s1).

**Home Birth:** A birth for which the location is listed on the Registration of Birth as "home". This variable does not distinguish between planned and unplanned home births.

Home Birth Rate: Number of live home births per 100 live births.

**Midwife-attended Birth:** A birth for which the primary attendant at birth is listed on the Notice of Birth as "midwife".

Midwife-attended birth rate: Number of live births with midwife as attendant per 100 live births.

Crude Birth Rate: Number of live births per 1,000 population in a given year.

General fertility rate: Number of live births per 1,000 women aged 15-49 years in a given year.

Age-specific fertility rate: Number of live births per 1,000 women in a given age group in a given year.

Time Trends (Data tables 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.1.5)

• From 1992 to 1997, the number of live births decreased from year to year in the Edmonton Area. Since 2001, the percentage change has been positive with the largest percentage increase, 8.4%, occurring from 2005 to 2006.



### Percent change in live births from one year to the next, Edmonton Area, 1997 to 2006

- There were 13,116 live births in the Edmonton Area in 2006 resulting in a crude birth rate (CBR) of 12.7 births per 1,000 population. In 2006, there were 44,658 live births in Alberta (CBR=13.5 per 1,000) and 16,341 live births in the Calgary Area (CBR=13.5 per 1,000).
- The crude birth rate in the Edmonton Area decreased to a low of 11.6 births per 1,000 population in 2000.
- As is observed in both the Calgary Area and the province, the general fertility rate in the Edmonton Area dipped around 2000 to 2001 and then began to rise again.
- The general fertility rate (GFR) in the Edmonton Area in 2006 was 48.1 (per 1,000 women 15-49 years of age).
- The GFR for 2006 in the Edmonton Area is lower than the Alberta rate of 51.3 and lower than the Calgary Area rate of 49.4.
- The home birth rate in the Edmonton Area has decreased significantly from 1997-1999 to 2004-2006. In the 3-year period 1997-1999, there were 366 home births (rate=1.1 per 100 live births) versus 254 home births in 2004-2006 (rate=0.68 per 100 live births).
- In Alberta, there were 926 home births in the three year period 2003-2005 resulting in a home birth rate of 0.76 per 100 live births. The home birth rate in Alberta has not varied significantly between 1996 and 2005.









Home birth rate in the Edmonton Area, 1997-1999 to 2004-2006 (3 year rolling average)



- In the Edmonton Area, the home birth rate increases with maternal age. The 10year combined (1997-2006) home birth rate of 1.7 per 100 live births, or 1.7%, for women 35 years and older is significantly higher than the rate of 0.8% for women younger than 35 years of age.
- While the home birth rate appears to be decreasing in the Edmonton Area, the midwife attendant rate



shows an increasing trend. In Alberta, the 'midwife attendant' rate shows a similar increasing trend. There were 601 'midwife attendant' births in 2005 giving a rate of 1.4 per 100 live births compared to a rate of 0.3 per 100 live births in 1997.

• For the 3-year period, 1997-1999, there were 200 'midwife attendant' births (0.60 per 100 live births) in the Edmonton Area. In 2004-2006, there were 739 'midwife attendant' births giving a rate of 1.99 per 100 live births (or 2.0%). The increasing rate in the Edmonton Area is likely due to the *Shared Care Maternity Program* operating in the WestView public health service area. Over the 5 year period, 2002-2006, 333 out of the 1,032 (32%) midwife attendant births were in WestView. As observed with the home birth rate, the midwife attendant rate increases with age, with women aged 35 years and older having a significantly higher rate (1.7%) than women younger than 35 years of age (1.2%).

### Age Effects (Data tables 3.1.6, 3.1.7, 3.1.8)

• The age-specific fertility rates are higher in the Edmonton Area than the Calgary Area for younger women (18-19 years old and 20-24 years old) and lower than the rates in the Calgary Area for women aged 30 years or older.





- From 1997-1999 to 2004-2006, the agespecific rate curve has moved slightly to the right reflecting the increasing fertility rates among older women.
- The rate for 2004-2006 indicates that one in ten women between the ages of 25 and 34 years gave birth each year. The age-specific fertility



Age-specific fertility rate by age group,

rate for 2004-2006 was highest for women aged 25 and 29 years (105.6 per 1,000 women); the rate for this age group hasn't changed from the 3 year combined rate in 1997-1999. Women aged 30-34 years had the second highest rate, in 2004-2006, at 103.4 per 1,000 women.

• The age-specific fertility rate for 18-19 year old females decreased significantly from 1997 to 2006 while the rates for the older age groups (30-34, 35-39, 40+) increased significantly. There was no significant change for the age groups: <= 17 years, 20-24 years, and 25-29 years.



Age-specific fertility rates in the Edmonton Area, 1997 to 2006

### Sub-Edmonton Area Differences (Data tables 3.1.9, 3.1.10, 3.1.11, 3.1.12, 3.1.13)

• For the combined years 2004-2006, the general fertility rate (per 1,000 females aged 15-49 years) was significantly lower than the Edmonton Area rate of 46.0 per 1,000 in St. Albert, Woodcroft, Eastwood, Bonnie Doon, and Strathcona County. The lowest rate was in Bonnie Doon at 36.6 per 1,000. Significantly higher rates than the Edmonton Area rate were observed in Castle Downs, North East, Twin Brooks, Mill Woods and WestView. The highest rate was in Castle Downs (54.6 per 1,000 females aged 15-49 years).



General fertility rate by public health service area, Edmonton Area, 2004-2006 combined

• The teen (15-19 years) birth rate in 2004-2006 was significantly higher than the Edmonton Area rate of 16.1 per 1,000 in four public health service areas: Woodcroft (33.0 per 1,000), Eastwood (39.3 per 1,000), North Central (21.9 per 1,000), and North East (26.1 per 1,000).





The 2004-2006 Edmonton Area age-specific fertility rate for women 35-39 years of age is 43.5 • births per 1,000. Two public health service areas have a fertility rate that is significantly higher than the Edmonton Area rate: St. Albert (53.8 per 1,000) and Twin Brooks (62.3 per 1,000). Fort Saskatchewan public health service area has not experienced an increase in the fertility rate for older women as other public health service areas have experienced.



### Age specific fertility rate for women aged 35-39 years by public health service area, Edmonton Area, 2004-2006 combined

In 2002-2006, there were 1,032 'midwife attendant' births giving a rate of 1.7 per 100 live births (or 1.7%) in the Edmonton Area. There is a considerably higher percentage of midwife attendant births in the WestView public health service area (7.6%), and as noted earlier, the higher percentage is likely due to the Shared Care Maternity Program operating in the WestView public health service area.



## Midwife attendant rate by public health service area,

### Table 3.1.1 Number of live births and percent change from one year to the next, Alberta Health Services (Edmonton Area), 1997 to 2006

| Year | Live Births | Percent change from one<br>year to the next | Year | Live Births | Percent change from one<br>year to the next |
|------|-------------|---------------------------------------------|------|-------------|---------------------------------------------|
| 1997 | 10,802      | -5.5%                                       | 2002 | 11,285      | 2.2%                                        |
| 1998 | 11,172      | 3.4%                                        | 2003 | 11,693      | 3.6%                                        |
| 1999 | 11,306      | 1.2%                                        | 2004 | 11,910      | 1.9%                                        |
| 2000 | 10,777      | -4.7%                                       | 2005 | 12,096      | 1.6%                                        |
| 2001 | 11,043      | 2.5%                                        | 2006 | 13,116      | 8.4%                                        |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Live Births       | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Edmonton<br>Area  | 10,802    | 11,172    | 11,306    | 10,777    | 11,043    | 11,285    | 11,693    | 11,910    | 12,096    | 13,116    |
| Calgary<br>Area   | 12,437    | 12,900    | 12,990    | 13,064    | 13,109    | 13,588    | 14,473    | 14,606    | 15,418    | 16,341    |
| Alberta           | 36,550    | 37,529    | 37,778    | 36,625    | 37,226    | 38,293    | 39,868    | 40,292    | 41,587    | 44,659    |
| Population        | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      |
| Edmonton<br>Area  | 891,375   | 903,303   | 919,615   | 932,650   | 947,825   | 965,867   | 981,238   | 993,319   | 1,005,315 | 1,028,734 |
| Calgary<br>Area   | 956,892   | 991,800   | 1,025,073 | 1,047,774 | 1,074,744 | 1,104,657 | 1,128,129 | 1,149,491 | 1,171,200 | 1,207,965 |
| Alberta           | 2,791,334 | 2,854,621 | 2,923,449 | 2,967,755 | 3,022,891 | 3,086,646 | 3,134,337 | 3,179,036 | 3,222,191 | 3,298,028 |
| CBR               | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      |
| Edmonton<br>Area  | 12.1      | 12.4      | 12.3      | 11.6      | 11.7      | 11.7      | 11.9      | 12.0      | 12.0      | 12.7      |
| Calgary<br>Area   | 13.0      | 13.0      | 12.7      | 12.5      | 12.2      | 12.3      | 12.8      | 12.7      | 13.2      | 13.5      |
| Alberta           | 13.1      | 13.1      | 12.9      | 12.3      | 12.3      | 12.4      | 12.7      | 12.7      | 12.9      | 13.5      |
| Standard<br>Error | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004      | 2005      | 2006      |
| Edmonton<br>Area  | 0.12      | 0.12      | 0.11      | 0.11      | 0.11      | 0.11      | 0.11      | 0.11      | 0.11      | 0.11      |
|                   |           |           |           |           | 0.11      | 0.10      | 0.11      | 0.10      | 0.11      | 0.11      |
| Calgary<br>Area   | 0.12      | 0.11      | 0.11      | 0.11      | 0.11      | 0.10      |           | 0110      |           |           |

 Table 3.1.2
 Crude birth rate (CBR), Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. (3) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (4) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

### Table 3.1.3 General fertility rate (GFR), Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

| General Fertility<br>Rate (per 1,000<br>females 15-49 yrs) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|------------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|
| Edmonton Area                                              | 44.2 | 45.3 | 45.0 | 42.5 | 42.9 | 43.2 | 44.2 | 44.7 | 45.2 | 48.1 |
| Calgary Area                                               | 46.1 | 46.0 | 44.9 | 44.3 | 43.4 | 43.9 | 46.0 | 45.9 | 47.8 | 49.4 |
| Alberta                                                    | 48.3 | 48.5 | 47.7 | 45.7 | 45.6 | 46.0 | 47.4 | 47.6 | 48.7 | 51.3 |
| Standard Error                                             | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Edmonton Area                                              | 0.42 | 0.42 | 0.41 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.40 | 0.41 |
| Calgary Area                                               | 0.40 | 0.40 | 0.38 | 0.38 | 0.37 | 0.37 | 0.37 | 0.37 | 0.38 | 0.38 |
| Alberta                                                    | 0.25 | 0.24 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.24 |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. (3) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (4) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

| Edmonton Area                               | 1997   | 1998   | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          |
|---------------------------------------------|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| # Home Births                               | 139    | 111    | 116           | 111           | 109           | 98            | 96            | 68            | 88            | 98            |
| # Live Births                               | 10,802 | 11,172 | 11,306        | 10,777        | 11,043        | 11,285        | 11,693        | 11,910        | 12,096        | 13,116        |
| Home Birth<br>Rate (per 100<br>live births) | 1.29   | 0.99   | 1.03          | 1.03          | 0.99          | 0.87          | 0.82          | 0.57          | 0.73          | 0.75          |
| Edmonton Area<br>(3 years)                  |        |        | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| # Home Births                               |        |        | 366           | 338           | 336           | 318           | 303           | 262           | 252           | 254           |
| # Live Births                               |        |        | 33,280        | 33,255        | 33,126        | 33,105        | 34,021        | 34,888        | 35,699        | 37,122        |
| Home Birth<br>Rate (per 100<br>live births) |        |        | 1.10          | 1.02          | 1.01          | 0.96          | 0.89          | 0.75          | 0.71          | 0.68          |
| Standard Error<br>(SE)                      |        |        | 0.06          | 0.06          | 0.06          | 0.05          | 0.05          | 0.05          | 0.04          | 0.04          |
| Alberta                                     | 1997   | 1998   | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          |
| # Home Births                               | 288    | 283    | 304           | 302           | 349           | 332           | 341           | 274           | 315           | 378           |
| # Live Births                               | 36,550 | 37,529 | 37,778        | 36,625        | 37,226        | 38,293        | 39,868        | 40,292        | 41,587        | 44,659        |
| Home Birth<br>Rate (per 100<br>live births) | 0.79   | 0.75   | 0.80          | 0.82          | 0.94          | 0.87          | 0.86          | 0.68          | 0.75          | 0.85          |
| Standard Error<br>(SE)                      | 0.05   | 0.04   | 0.05          | 0.05          | 0.05          | 0.05          | 0.05          | 0.04          | 0.04          | 0.04          |

### Table 3.1.4 Home birth rate, Alberta Health Services (Edmonton Area) and Alberta, 1997 to 2006 and 1997-1999 to 2004-2006 combined (3 year moving average)

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness.

| Edmonton Area                                      | 1997   | 1998   | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          | 2006          |
|----------------------------------------------------|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Midwife Attendant<br>Births                        | 60     | 69     | 71            | 79            | 147           | 131           | 164           | 227           | 275           | 237           |
| Live Births                                        | 10,802 | 11,172 | 11,306        | 10,777        | 11,043        | 11,285        | 11,693        | 11,910        | 12,096        | 13,116        |
| Midwife Attendant<br>Rate (per 100 live<br>births) | 0.56   | 0.62   | 0.63          | 0.73          | 1.33          | 1.16          | 1.40          | 1.91          | 2.27          | 1.81          |
| Edmonton Area (3yr)                                |        |        | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| Midwife Attendant<br>Births                        |        |        | 200           | 219           | 297           | 357           | 442           | 522           | 666           | 739           |
| Live Births                                        |        |        | 33,280        | 33,255        | 33,126        | 33,105        | 34,021        | 34,888        | 35,699        | 37,122        |
| Midwife Attendant<br>Rate (per 100 live<br>births) |        |        | 0.60          | 0.66          | 0.90          | 1.08          | 1.30          | 1.50          | 1.87          | 1.99          |
| Standard Error (SE)                                |        |        | 0.04          | 0.04          | 0.05          | 0.06          | 0.06          | 0.07          | 0.07          | 0.07          |
| Alberta                                            | 1997   | 1998   | 1999          | 2000          | 2001          | 2002          | 2003          | 2004          | 2005          |               |
| Midwife Attendant<br>Births                        | 122    | 189    | 196           | 211           | 370           | 359           | 456           | 505           | 601           | 573           |
| Live Births                                        | 36,550 | 37,529 | 37,778        | 36,625        | 37,226        | 38,293        | 39,868        | 40,292        | 41,587        | 44,659        |
| Midwife Attendant<br>Rate (per 100 live<br>births) | 0.3    | 0.5    | 0.5           | 0.6           | 1.0           | 0.9           | 1.1           | 1.3           | 1.4           | 1.3           |
| Standard Error (SE)                                | 0.03   | 0.04   | 0.04          | 0.04          | 0.05          | 0.05          | 0.05          | 0.06          | 0.06          | 0.05          |

## Table 3.1.5Midwife attendant birth rate, Alberta Health Services (Edmonton Area) and Alberta,<br/>1997 to 2006 and 1997-1999 to 2004-2006 (3 year moving average)

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness.

## Table 3.1.6Age-specific fertility rate, Alberta Health Services (Edmonton Area),<br/>Alberta Health Services (Calgary Area), and Alberta, 2007

| Age-Specific Birth Rate (per 1,000 females) | Edmonton Area | Calgary Area | Alberta |
|---------------------------------------------|---------------|--------------|---------|
| 15-17 years                                 | 9.2           | 6.7          | 10.5    |
| 18-19 years                                 | 29.3          | 22.0         | 35.6    |
| 20-24 years                                 | 59.9          | 53.6         | 71.6    |
| 25-29 years                                 | 114.6         | 103.6        | 119.9   |
| 30-34 years                                 | 112.9         | 121.6        | 113.0   |
| 35-39 years                                 | 51.2          | 60.5         | 50.6    |
| 40-44 years                                 | 8.3           | 10.5         | 8.5     |

Sources: (1) Reproductive Health Working Group (2008). Alberta Reproductive Health: Pregnancies and Births 2008. Edmonton, AB: Alberta Health and Wellness.

| 1997-1999            | <=17 <sup>*</sup> yrs | 18-19 yrs | 20-24 yrs | 25-29 yrs | 30-34 yrs | 35-39 yrs | 40+ <sup>°</sup> yrs |
|----------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|----------------------|
| # Live Births        | 745                   | 1,370     | 6,270     | 10,488    | 9,565     | 4,156     | 683                  |
| Female Population    | 96,391                | 37,042    | 95,786    | 99,516    | 109,891   | 125,849   | 216,567              |
| Birth Rate per 1,000 | 7.7                   | 37.0      | 65.5      | 105.4     | 87.0      | 33.0      | 3.2                  |
| 2004-2006            | <=17 <sup>*</sup> yrs | 18-19 yrs | 20-24 yrs | 25-29 yrs | 30-34 yrs | 35-39 yrs | 40+ <sup>°</sup> yrs |
| # Live Births        | 508                   | 1219      | 6671      | 11887     | 11041     | 4822      | 973                  |
| Female Population    | 104,519               | 43,038    | 115,126   | 112,574   | 106,786   | 110,840   | 255,149              |
| Birth Rate per 1,000 | 4.9                   | 28.3      | 57.9      | 105.6     | 103.4     | 43.5      | 3.8                  |

#### Table 3.1.7 Age-specific fertility rate, Alberta Health Services (Edmonton Area), 1997-1999 and 2004-2006 combined

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999, 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File s of March 31 for each year. \*The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| Live Births                                                                                                                          | 1997                                                                                                                         | 1998                                                                        | 1999                                                                                | 2000                                                                               | 2001                                                                                | 2002                                                                                | 2003                                                                                                                         | 2004                                                                                 | 2005                                                                                 | 2006                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <=17 years                                                                                                                           | 235                                                                                                                          | 261                                                                         | 249                                                                                 | 187                                                                                | 182                                                                                 | 163                                                                                 | 156                                                                                                                          | 148                                                                                  | 155                                                                                  | 205                                                                                                               |
| 18-19 years                                                                                                                          | 445                                                                                                                          | 468                                                                         | 457                                                                                 | 465                                                                                | 403                                                                                 | 406                                                                                 | 437                                                                                                                          | 375                                                                                  | 428                                                                                  | 416                                                                                                               |
| 20-24 years                                                                                                                          | 1,986                                                                                                                        | 2,137                                                                       | 2,147                                                                               | 2,051                                                                              | 2,077                                                                               | 2,127                                                                               | 2,173                                                                                                                        | 2,135                                                                                | 2,202                                                                                | 2,334                                                                                                             |
| 25-29 years                                                                                                                          | 3,474                                                                                                                        | 3,513                                                                       | 3,501                                                                               | 3,329                                                                              | 3,456                                                                               | 3,560                                                                               | 3,601                                                                                                                        | 3,853                                                                                | 3,890                                                                                | 4,144                                                                                                             |
| 30-34 years                                                                                                                          | 3,156                                                                                                                        | 3,215                                                                       | 3,194                                                                               | 3,097                                                                              | 3,241                                                                               | 3,301                                                                               | 3,505                                                                                                                        | 3,555                                                                                | 3,581                                                                                | 3,905                                                                                                             |
| 35-39 years                                                                                                                          | 1,307                                                                                                                        | 1,360                                                                       | 1,489                                                                               | 1,419                                                                              | 1,439                                                                               | 1,493                                                                               | 1,514                                                                                                                        | 1,533                                                                                | 1,515                                                                                | 1,774                                                                                                             |
| >=40 years                                                                                                                           | 199                                                                                                                          | 215                                                                         | 269                                                                                 | 229                                                                                | 244                                                                                 | 235                                                                                 | 307                                                                                                                          | 311                                                                                  | 324                                                                                  | 338                                                                                                               |
| Female Population                                                                                                                    | 1997                                                                                                                         | 1998                                                                        | 1999                                                                                | 2000                                                                               | 2001                                                                                | 2002                                                                                | 2003                                                                                                                         | 2004                                                                                 | 2005                                                                                 | 2006                                                                                                              |
| <=17 years                                                                                                                           | 31,517                                                                                                                       | 32,058                                                                      | 32,817                                                                              | 33,280                                                                             | 33,640                                                                              | 33,990                                                                              | 34,339                                                                                                                       | 34,552                                                                               | 34,759                                                                               | 35,189                                                                                                            |
| 18-19 years                                                                                                                          | 11,942                                                                                                                       | 12,328                                                                      | 12,772                                                                              | 13,176                                                                             | 13,680                                                                              | 14,020                                                                              | 14,108                                                                                                                       | 14,241                                                                               | 14,348                                                                               | 14,464                                                                                                            |
| 20-24 years                                                                                                                          | 31,026                                                                                                                       | 31,814                                                                      | 32,945                                                                              | 33,517                                                                             | 34,290                                                                              | 35,550                                                                              | 36,680                                                                                                                       | 37,623                                                                               | 38,093                                                                               | 39,332                                                                                                            |
| 25-29 years                                                                                                                          | 33,069                                                                                                                       | 33,113                                                                      | 33,333                                                                              | 33,381                                                                             | 33,895                                                                              | 34,878                                                                              | 35,685                                                                                                                       | 36,378                                                                               | 37,296                                                                               | 38,845                                                                                                            |
| 30-34 years                                                                                                                          | 37,834                                                                                                                       | 36,494                                                                      | 35,564                                                                              | 34,891                                                                             | 34,839                                                                              | 34,989                                                                              | 35,305                                                                                                                       | 35,233                                                                               | 35,276                                                                               | 36,219                                                                                                            |
| 35-39 years                                                                                                                          | 41,795                                                                                                                       | 41,987                                                                      | 42,067                                                                              | 41,645                                                                             | 40,481                                                                              | 39,454                                                                              | 38,284                                                                                                                       | 37,240                                                                               | 36,360                                                                               | 37,031                                                                                                            |
| >=40 years                                                                                                                           | 69,950                                                                                                                       | 71,933                                                                      | 74,684                                                                              | 77,213                                                                             | 79,814                                                                              | 82,067                                                                              | 83,775                                                                                                                       | 84,695                                                                               | 85,306                                                                               | 85,332                                                                                                            |
| Age-Specific Birth Rate (per 1,000 females)                                                                                          | 1997                                                                                                                         | 1998                                                                        | 1999                                                                                | 2000                                                                               | 2001                                                                                | 2002                                                                                | 2003                                                                                                                         | 2004                                                                                 | 2005                                                                                 | 2006                                                                                                              |
| <=17 years                                                                                                                           | 7.5                                                                                                                          | 8.1                                                                         | 7.6                                                                                 | 5.6                                                                                | 5.4                                                                                 | 4.8                                                                                 | 4.5                                                                                                                          | 4.3                                                                                  | 4.5                                                                                  | 5.8                                                                                                               |
| 18-19 years                                                                                                                          | 37.3                                                                                                                         | 38.0                                                                        | 35.8                                                                                | 05.0                                                                               | 00 F                                                                                | 29.0                                                                                | 31.0                                                                                                                         | 26.3                                                                                 | 29.8                                                                                 | 28.8                                                                                                              |
| 20.24 years                                                                                                                          |                                                                                                                              |                                                                             | 00.0                                                                                | 35.3                                                                               | 29.5                                                                                | 20.0                                                                                | 00                                                                                                                           | 20.5                                                                                 | 29.0                                                                                 | 20.0                                                                                                              |
| 20-24 years                                                                                                                          | 64.0                                                                                                                         | 67.2                                                                        | 65.2                                                                                | 35.3<br>61.2                                                                       | 29.5<br>60.6                                                                        | 59.8                                                                                | 59.2                                                                                                                         | 56.7                                                                                 | 29.8<br>57.8                                                                         | 59.3                                                                                                              |
| 20-24 years<br>25-29 years                                                                                                           | 64.0<br>105.1                                                                                                                | 67.2<br>106.1                                                               |                                                                                     |                                                                                    |                                                                                     |                                                                                     |                                                                                                                              |                                                                                      |                                                                                      |                                                                                                                   |
|                                                                                                                                      |                                                                                                                              |                                                                             | 65.2                                                                                | 61.2                                                                               | 60.6                                                                                | 59.8                                                                                | 59.2                                                                                                                         | 56.7                                                                                 | 57.8                                                                                 | 59.3                                                                                                              |
| 25-29 years                                                                                                                          | 105.1                                                                                                                        | 106.1                                                                       | 65.2<br>105.0                                                                       | 61.2<br>99.7                                                                       | 60.6<br>102.0                                                                       | 59.8<br>102.1                                                                       | 59.2<br>100.9                                                                                                                | 56.7<br>105.9                                                                        | 57.8<br>104.3                                                                        | 59.3<br>106.7                                                                                                     |
| 25-29 years<br>30-34 years                                                                                                           | 105.1<br>83.4                                                                                                                | 106.1<br>88.1                                                               | 65.2<br>105.0<br>89.8                                                               | 61.2<br>99.7<br>88.8                                                               | 60.6<br>102.0<br>93.0                                                               | 59.8<br>102.1<br>94.3                                                               | 59.2<br>100.9<br>99.3                                                                                                        | 56.7<br>105.9<br>100.9                                                               | 57.8<br>104.3<br>101.5                                                               | 59.3<br>106.7<br>107.8                                                                                            |
| 25-29 years<br>30-34 years<br>35-39 years                                                                                            | 105.1<br>83.4<br>31.3                                                                                                        | 106.1<br>88.1<br>32.4                                                       | 65.2<br>105.0<br>89.8<br>35.4                                                       | 61.2<br>99.7<br>88.8<br>34.1                                                       | 60.6<br>102.0<br>93.0<br>35.5                                                       | 59.8<br>102.1<br>94.3<br>37.8                                                       | 59.2<br>100.9<br>99.3<br>39.5                                                                                                | 56.7<br>105.9<br>100.9<br>41.2                                                       | 57.8<br>104.3<br>101.5<br>41.7                                                       | 59.3<br>106.7<br>107.8<br>47.9                                                                                    |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years                                                                              | 105.1<br>83.4<br>31.3<br>2.8                                                                                                 | 106.1<br>88.1<br>32.4<br>3.0                                                | 65.2<br>105.0<br>89.8<br>35.4<br>3.6                                                | 61.2<br>99.7<br>88.8<br>34.1<br>3.0                                                | 60.6<br>102.0<br>93.0<br>35.5<br>3.1                                                | 59.8<br>102.1<br>94.3<br>37.8<br>2.9                                                | 59.2<br>100.9<br>99.3<br>39.5<br>3.7                                                                                         | 56.7<br>105.9<br>100.9<br>41.2<br>3.7                                                | 57.8<br>104.3<br>101.5<br>41.7<br>3.8                                                | 59.3<br>106.7<br>107.8<br>47.9<br>4.0                                                                             |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years<br>Standard Error                                                            | 105.1<br>83.4<br>31.3<br>2.8<br><b>1997</b>                                                                                  | 106.1<br>88.1<br>32.4<br>3.0<br><b>1998</b>                                 | 65.2<br>105.0<br>89.8<br>35.4<br>3.6<br><b>1999</b>                                 | 61.2<br>99.7<br>88.8<br>34.1<br>3.0<br><b>2000</b>                                 | 60.6<br>102.0<br>93.0<br>35.5<br>3.1<br><b>2001</b>                                 | 59.8<br>102.1<br>94.3<br>37.8<br>2.9<br><b>2002</b>                                 | 59.2<br>100.9<br>99.3<br>39.5<br>3.7<br><b>2003</b>                                                                          | 56.7<br>105.9<br>100.9<br>41.2<br>3.7<br><b>2004</b>                                 | 57.8<br>104.3<br>101.5<br>41.7<br>3.8<br><b>2005</b>                                 | 59.3         106.7         107.8         47.9         4.0         2006                                            |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years<br>Standard Error<br><=17 years                                              | 105.1           83.4           31.3           2.8           1997           0.48                                              | 106.1<br>88.1<br>32.4<br>3.0<br><b>1998</b><br>0.50                         | 65.2<br>105.0<br>89.8<br>35.4<br>3.6<br><b>1999</b><br>0.48                         | 61.2         99.7         88.8         34.1         3.0 <b>2000</b> 0.41           | 60.6<br>102.0<br>93.0<br>35.5<br>3.1<br><b>2001</b><br>0.40                         | 59.8<br>102.1<br>94.3<br>37.8<br>2.9<br><b>2002</b><br>0.37                         | 59.2         100.9         99.3         39.5         3.7 <b>2003</b> 0.36                                                    | 56.7<br>105.9<br>100.9<br>41.2<br>3.7<br><b>2004</b><br>0.35                         | 57.8<br>104.3<br>101.5<br>41.7<br>3.8<br><b>2005</b><br>0.36                         | 59.3         106.7         107.8         47.9         4.0 <b>2006</b> 0.41                                        |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years<br>Standard Error<br><=17 years<br>18-19 years                               | 105.1           83.4           31.3           2.8           1997           0.48           1.72                               | 106.1<br>88.1<br>32.4<br>3.0<br><b>1998</b><br>0.50<br>1.72                 | 65.2<br>105.0<br>89.8<br>35.4<br>3.6<br><b>1999</b><br>0.48<br>1.64                 | 61.2<br>99.7<br>88.8<br>34.1<br>3.0<br><b>2000</b><br>0.41<br>1.61                 | 60.6<br>102.0<br>93.0<br>35.5<br>3.1<br><b>2001</b><br>0.40<br>1.45                 | 59.8<br>102.1<br>94.3<br>37.8<br>2.9<br><b>2002</b><br>0.37<br>1.42                 | 59.2           100.9           99.3           39.5           3.7 <b>2003</b> 0.36           1.46                             | 56.7<br>105.9<br>100.9<br>41.2<br>3.7<br><b>2004</b><br>0.35<br>1.34                 | 57.8<br>104.3<br>101.5<br>41.7<br>3.8<br><b>2005</b><br>0.36<br>1.42                 | 59.3<br>106.7<br>107.8<br>47.9<br>4.0<br><b>2006</b><br>0.41<br>1.39                                              |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years<br>Standard Error<br><=17 years<br>18-19 years<br>20-24 years                | 105.1           83.4           31.3           2.8           1997           0.48           1.72           1.40                | 106.1<br>88.1<br>32.4<br>3.0<br><b>1998</b><br>0.50<br>1.72<br>1.40         | 65.2<br>105.0<br>89.8<br>35.4<br>3.6<br><b>1999</b><br>0.48<br>1.64<br>1.36         | 61.2<br>99.7<br>88.8<br>34.1<br>3.0<br><b>2000</b><br>0.41<br>1.61<br>1.31         | 60.6<br>102.0<br>93.0<br>35.5<br>3.1<br><b>2001</b><br>0.40<br>1.45<br>1.29         | 59.8<br>102.1<br>94.3<br>37.8<br>2.9<br><b>2002</b><br>0.37<br>1.42<br>1.26         | 59.2           100.9           99.3           39.5           3.7           2003           0.36           1.46           1.23 | 56.7<br>105.9<br>100.9<br>41.2<br>3.7<br><b>2004</b><br>0.35<br>1.34<br>1.19         | 57.8<br>104.3<br>101.5<br>41.7<br>3.8<br><b>2005</b><br>0.36<br>1.42<br>1.19         | 59.3<br>106.7<br>107.8<br>47.9<br>4.0<br><b>2006</b><br>0.41<br>1.39<br>1.19                                      |
| 25-29 years<br>30-34 years<br>35-39 years<br>>=40 years<br>Standard Error<br><=17 years<br>18-19 years<br>20-24 years<br>25-29 years | 105.1           83.4           31.3           2.8           1997           0.48           1.72           1.40           1.69 | 106.1<br>88.1<br>32.4<br>3.0<br><b>1998</b><br>0.50<br>1.72<br>1.40<br>1.69 | 65.2<br>105.0<br>89.8<br>35.4<br>3.6<br><b>1999</b><br>0.48<br>1.64<br>1.36<br>1.68 | 61.2<br>99.7<br>88.8<br>34.1<br>3.0<br><b>2000</b><br>0.41<br>1.61<br>1.31<br>1.64 | 60.6<br>102.0<br>93.0<br>35.5<br>3.1<br><b>2001</b><br>0.40<br>1.45<br>1.29<br>1.64 | 59.8<br>102.1<br>94.3<br>37.8<br>2.9<br><b>2002</b><br>0.37<br>1.42<br>1.26<br>1.62 | 59.2         100.9         99.3         39.5         3.7         2003         0.36         1.46         1.23         1.59    | 56.7<br>105.9<br>100.9<br>41.2<br>3.7<br><b>2004</b><br>0.35<br>1.34<br>1.19<br>1.61 | 57.8<br>104.3<br>101.5<br>41.7<br>3.8<br><b>2005</b><br>0.36<br>1.42<br>1.19<br>1.58 | 59.3         106.7         107.8         47.9         4.0 <b>2006</b> 0.41         1.39         1.19         1.57 |

#### Table 3.1.8 Age-specific fertility rate, Alberta Health Services (Edmonton Area), 1997 to 2006

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| Public Health Service Area | # Live Births<br>2004-2006 | Population (15-49<br>females) 2004-2006 | GFR (per 1,000<br>females 15-49 yrs)<br>2004-2006 | Standard<br>Error |
|----------------------------|----------------------------|-----------------------------------------|---------------------------------------------------|-------------------|
| St. Albert                 | 1,778                      | 44,214                                  | 40.2                                              | 0.93              |
| Castle Downs               | 2,111                      | 38,651                                  | 54.6                                              | 1.16              |
| Woodcroft                  | 2,529                      | 63,995                                  | 39.5                                              | 0.77              |
| Eastwood                   | 2,022                      | 46,938                                  | 43.1                                              | 0.94              |
| North Central              | 2,523                      | 52,362                                  | 48.2                                              | 0.94              |
| North East                 | 3,062                      | 61,311                                  | 49.9                                              | 0.88              |
| West Jasper Place          | 3,848                      | 83,376                                  | 46.2                                              | 0.73              |
| Twin Brooks                | 3,649                      | 74,679                                  | 48.9                                              | 0.79              |
| Bonnie Doon                | 2,514                      | 68,620                                  | 36.6                                              | 0.72              |
| Mill Woods                 | 4,534                      | 87,010                                  | 52.1                                              | 0.75              |
| Strathcona County          | 2,645                      | 62,835                                  | 42.1                                              | 0.80              |
| Leduc County               | 1,457                      | 31,428                                  | 46.4                                              | 1.19              |
| WestView                   | 2,752                      | 54,996                                  | 50.0                                              | 0.93              |
| Sturgeon County            | 1,178                      | 24,802                                  | 47.5                                              | 1.35              |
| Fort Saskatchewan          | 506                        | 11,396                                  | 44.4                                              | 1.93              |
| Edmonton Area              | 37,122                     | 806,623                                 | 46.0                                              | 0.23              |

## Table 3.1.9 General fertility rate (GFR) by public health service area, Alberta Health Services (Edmonton Area), 2004-2006 combined

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year.

Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| Public Health Service<br>Area | 15-19<br>years | 20-24<br>years | 25-29<br>years | 30-34<br>years | 35-39<br>years | >=40*<br>years | All Live<br>Births |
|-------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|--------------------|
| St. Albert                    | 33             | 175            | 510            | 687            | 327            | 45             | 1778               |
| Castle Downs                  | 91             | 369            | 738            | 634            | 222            | 57             | 2111               |
| Woodcroft                     | 195            | 568            | 724            | 640            | 333            | 66             | 2529               |
| Eastwood                      | 190            | 526            | 536            | 472            | 236            | 62             | 2022               |
| North Central                 | 159            | 545            | 799            | 691            | 276            | 48             | 2523               |
| North East                    | 216            | 756            | 991            | 736            | 294            | 68             | 3062               |
| West Jasper Place             | 183            | 719            | 1,148          | 1,145          | 538            | 115            | 3848               |
| Twin Brooks                   | 68             | 417            | 1,062          | 1,324          | 652            | 125            | 3649               |
| Bonnie Doon                   | 84             | 414            | 708            | 754            | 446            | 108            | 2514               |
| Mill Woods                    | 162            | 831            | 1,655          | 1,271          | 504            | 107            | 4534               |
| Strathcona County             | 48             | 238            | 866            | 1,033          | 391            | 69             | 2645               |
| Leduc County                  | 51             | 253            | 576            | 394            | 155            | 28             | 1457               |
| WestView                      | 137            | 504            | 989            | 781            | 281            | 58             | 2752               |
| Sturgeon County               | 65             | 234            | 429            | 320            | 118            | 12             | 1178               |
| Fort Saskatchewan             | 25             | 118            | 155            | 157            | 46             | 4              | 506                |
| Edmonton Area                 | 1,710          | 6,667          | 11,886         | 11,039         | 4,819          | 972            | 37,122             |

## Table 3.1.10 Live births by public health service area and maternal age group, Alberta Health Services (Edmonton Area), 2004-2006 combined

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (2004-2006).

\* For the >=40 age group, the births and population includes females 40-49 years of age.

| Public Health Service Area | 15-19<br>years | 20-24<br>years | 25-29<br>years | 30-34<br>years | 35-39<br>years | >=40*<br>years |
|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| St. Albert                 | 6,774          | 5,901          | 4,435          | 5,301          | 6,075          | 15,728         |
| Castle Downs               | 5,079          | 5,782          | 5,796          | 5,369          | 5,249          | 11,376         |
| Woodcroft                  | 5,900          | 10,199         | 11,431         | 9,073          | 8,396          | 18,997         |
| Eastwood                   | 4,840          | 7,421          | 7,746          | 6,759          | 6,255          | 13,918         |
| North Central              | 7,263          | 7,157          | 6,960          | 7,097          | 7,521          | 16,364         |
| North East                 | 8,289          | 9,295          | 8,938          | 8,131          | 8,387          | 18,270         |
| West Jasper Place          | 10,992         | 11,784         | 11,173         | 10,600         | 11,197         | 27,631         |
| Twin Brooks                | 9,810          | 10,856         | 10,357         | 9,832          | 10,470         | 23,356         |
| Bonnie Doon                | 6,577          | 10,383         | 12,699         | 9,569          | 9,248          | 20,144         |
| Mill Woods                 | 11,730         | 12,636         | 12,651         | 12,054         | 11,673         | 26,268         |
| Strathcona County          | 9,715          | 7,737          | 6,352          | 7,763          | 9,248          | 22,021         |
| Leduc County               | 4,933          | 4,144          | 3,698          | 3,817          | 4,308          | 10,528         |
| WestView                   | 8,449          | 7,190          | 6,299          | 6,926          | 7,727          | 18,405         |
| Sturgeon County            | 4,078          | 3,098          | 2,690          | 2,972          | 3,455          | 8,510          |
| Fort Saskatchewan          | 1,718          | 1,543          | 1,348          | 1,524          | 1,631          | 3,632          |
| Edmonton Area              | 106,148        | 115,126        | 112,574        | 106,786        | 110,840        | 255,149        |

Table 3.1.11 Female population by public health service area and age group, Alberta Health Services (Edmonton Area), 2004-2006 combined

Source: (1) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. \* For the >=40 age group, the births and population includes females 40-49 years of age.

| Public Health Service Area | 15-19 years | 20-24 years | 25-29<br>years | 30-34<br>years | 35-39<br>years | >=40<br>years |
|----------------------------|-------------|-------------|----------------|----------------|----------------|---------------|
| St. Albert                 | 4.9         | 29.7        | 115.0          | 129.6          | 53.8           | 2.9           |
| Castle Downs               | 17.9        | 63.8        | 127.3          | 118.1          | 42.3           | 5.0           |
| Woodcroft                  | 33.0        | 55.7        | 63.3           | 70.5           | 39.7           | 3.5           |
| Eastwood                   | 39.3        | 70.9        | 69.2           | 69.8           | 37.7           | 4.5           |
| North Central              | 21.9        | 76.2        | 114.8          | 97.4           | 36.7           | 2.9           |
| North East                 | 26.1        | 81.3        | 110.9          | 90.5           | 35.1           | 3.7           |
| West Jasper Place          | 16.6        | 61.0        | 102.7          | 108.0          | 48.0           | 4.2           |
| Twin Brooks                | 6.9         | 38.4        | 102.5          | 134.7          | 62.3           | 5.4           |
| Bonnie Doon                | 12.8        | 39.9        | 55.8           | 78.8           | 48.2           | 5.4           |
| Mill Woods                 | 13.8        | 65.8        | 130.8          | 105.4          | 43.2           | 4.1           |
| Strathcona County          | 4.9         | 30.8        | 136.3          | 133.1          | 42.3           | 3.1           |
| Leduc County               | 10.3        | 61.1        | 155.8          | 103.2          | 36.0           | 2.7           |
| WestView                   | 16.2        | 70.1        | 157.0          | 112.8          | 36.4           | 3.2           |
| Sturgeon County            | 15.9        | 75.5        | 159.5          | 107.7          | 34.2           | 1.4           |
| Fort Saskatchewan          | 14.6        | 76.5        | 115.0          | 103.0          | 28.2           | 1.1           |
| Edmonton Area              | 16.1        | 57.9        | 105.6          | 103.4          | 43.5           | 3.8           |

#### Table 3.1.12 Age-specific fertility rate (per 1,000 population) by public health service area, Alberta Health Services (Edmonton Area), 2004-2006 combined

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year.

| Public Health Service Area | Midwife Attendant Live<br>Births<br>2002-2006 | Live Births<br>2002-2006 | Midwife<br>Attendant Rate<br>(per 100 live<br>births) | Standard<br>Error |
|----------------------------|-----------------------------------------------|--------------------------|-------------------------------------------------------|-------------------|
| St. Albert                 | 33                                            | 2,925                    | 1.1                                                   | 0.93              |
| Castle Downs               | 19                                            | 3,227                    | 0.6                                                   | 1.16              |
| Woodcroft                  | 62                                            | 4,296                    | 1.4                                                   | 0.77              |
| Eastwood                   | 54                                            | 3,408                    | 1.6                                                   | 0.94              |
| North Central              | 16                                            | 4,198                    | 0.4                                                   | 0.94              |
| North East                 | 23                                            | 4,891                    | 0.5                                                   | 0.88              |
| West Jasper Place          | 75                                            | 6,114                    | 1.2                                                   | 0.73              |
| Twin Brooks                | 76                                            | 5,667                    | 1.3                                                   | 0.79              |
| Bonnie Doon                | 128                                           | 4,249                    | 3.0                                                   | 0.72              |
| Mill Woods                 | 65                                            | 7,222                    | 0.9                                                   | 0.75              |
| Strathcona County          | 71                                            | 4,406                    | 1.6                                                   | 0.80              |
| Leduc County               | 42                                            | 2,351                    | 1.8                                                   | 1.19              |
| WestView                   | 333                                           | 4,403                    | 7.6                                                   | 0.93              |
| Sturgeon County            | 27                                            | 1,883                    | 1.4                                                   | 1.35              |
| Fort Saskatchewan          | 8                                             | 837                      | 1.0                                                   | 1.93              |
| Edmonton Area              | 1,032                                         | 60,100                   | 1.7                                                   | 0.23              |

### Midwife attendant birth rate by public health service area, Alberta Health Services (Edmonton Area), 2002-2006 combined Table 3.1.13

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (2002-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

### 3.2.1 Low Birth Weight

Low birth weight: Birth weight of less than 2500 grams.

Low birth weight rate: Number of low birth weight live births per 100 live births.

### Time Trends (Data tables 3.2.1.1, 3.2.1.2)

- Over the last ten years, the low birth weight rate trend in the Edmonton Area has been very similar to the provincial trend. The Calgary Area rate has been consistently higher than both the Edmonton Area rate and the Alberta rate.
- The low birth weight rate in the Edmonton Area stayed fairly steady between 1997 and 2001, with fluctuations between 5.9% and 6.3%. In 2002, the rate increased to 6.4%, with the latest rate (2006) being 7.0%.
- Among babies born in 2006 with a low birth weight (<2500g), approximately three-quarters (73.5%) were born preterm. For those babies born with a birth weight of 2500 grams or more, the percentage of preterm births was 4.2%.









- The majority of low birth weight babies are in the 1500-2499 gram weight category.
- In 2006, 83.9% of low birth weight babies born to women in the Edmonton Area weighed between 1500 and 2499 grams. In Alberta, 83.0% of LBW babies were born in this category (2006).

### Low birth weight babies by three birth weight groups, Edmonton Area, 1997-2006



### Age Effects (Data table 3.3.1.3)

- The 2004-2006 low birth weight rate for the Edmonton Area (all ages) is 6.8 per 100 live births; however, there is variation among age groups.
- The U-curve indicates that the low birth weight rate is higher for both younger and older mothers. For mothers younger than 20 years, the rate in 2004-2006 was 9.7 per 100 live births. The rate was highest for



mothers older than 39 years at 10.7 per 100 live births.

- The 2004-2006 LBW-by-age-group curve is more pronounced at the ends for younger and older mothers than it was for the 1997-1999 curve indicating a larger increase in the percentage of LBW babies for mothers in these age groups.
- Women between 25 and 29 years had the lowest low birth weight rate at both time periods, 6.1 per 100 live births in 2004-2006 and 5.6 per 100 live births in 1997-1999.

### Sub-Edmonton Area Differences (Data tables 3.2.1.4, 3.2.1.5, 3.2.1.6, 3.2.1.7)

- The low birth weight rate for Alberta Health Services (Edmonton Area) for 2004-2006 combined was 6.8 per 100 live births (or 6.8%).
- Although there was variation in the low birth weight rate among the public health service areas in 2006, only Eastwood public health service area had a low birth weigh rate (10.4 per 100 live births) that was significantly higher than the Edmonton Area rate. Leduc County had a significantly lower low birth weight rate at 5.1%.



### Low birth weight rate by public health service area Edmonton Area, 2004-2006 combined

| Low Birth Weight Live Births | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Edmonton Area                | 672   | 709   | 670   | 672   | 666   | 720   | 753   | 774   | 836   | 919   |
| Calgary Area                 | 846   | 891   | 806   | 861   | 873   | 992   | 990   | 1,046 | 1,132 | 1,222 |
| Alberta                      | 2,251 | 2,328 | 2,243 | 2,250 | 2,265 | 2,486 | 2,517 | 2,589 | 2,728 | 3,109 |
| Rate (per 100 live births)   | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                | 6.2   | 6.3   | 5.9   | 6.2   | 6.0   | 6.4   | 6.4   | 6.5   | 6.9   | 7.0   |
| Calgary Area                 | 6.8   | 6.9   | 6.2   | 6.6   | 6.7   | 7.3   | 6.8   | 7.2   | 7.3   | 7.5   |
| Alberta                      | 6.2   | 6.2   | 5.9   | 6.1   | 6.1   | 6.5   | 6.3   | 6.4   | 6.6   | 7.0   |
| Standard Error               | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                | 0.23  | 0.23  | 0.22  | 0.23  | 0.23  | 0.23  | 0.23  | 0.23  | 0.23  | 0.22  |
| Calgary Area                 | 0.23  | 0.22  | 0.21  | 0.22  | 0.22  | 0.22  | 0.21  | 0.21  | 0.21  | 0.21  |
| Alberta                      | 0.13  | 0.12  | 0.12  | 0.13  | 0.12  | 0.13  | 0.12  | 0.12  | 0.12  | 0.12  |

Table 3.2.1.1Low birth weight (LBW) rate, Alberta Health Services (Edmonton Area), Alberta Health<br/>Services (Calgary Area), and Alberta, 1997 to 2006

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). *Alberta Reproductive Health: Pregnancies and Births 2006.* Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). *Alberta Reproductive Health:Pregnancies & Births Table Update 2007.* Edmonton, AB:Alberta Health and Wellness.

| Table 3.2.1.2 | Number and percent of low birth weight (LBW) live births by three birth weight groups, Alberta |
|---------------|------------------------------------------------------------------------------------------------|
|               | Health Services (Edmonton Area), 1997 to 2006                                                  |

|                                  | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|
| Low Birth Weight Births (<2500g) | 672  | 709  | 670  | 672  | 666  | 720  | 753  | 774  | 836  | 919  |
| # <1000g                         | 54   | 48   | 52   | 80   | 70   | 52   | 63   | 80   | 90   | 65   |
| # 1000-1499g                     | 62   | 63   | 49   | 79   | 67   | 66   | 81   | 76   | 80   | 83   |
| # 1500-2499g                     | 556  | 598  | 569  | 513  | 529  | 602  | 609  | 618  | 666  | 771  |
|                                  | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| %<1000g                          | 8.0  | 6.8  | 7.8  | 11.9 | 10.5 | 7.2  | 8.4  | 10.3 | 10.8 | 7.1  |
| %1000-1499g                      | 9.2  | 8.9  | 7.3  | 11.8 | 10.1 | 9.2  | 10.8 | 9.8  | 9.6  | 9.0  |
| %1500-2499g                      | 82.7 | 84.3 | 84.9 | 76.3 | 79.4 | 83.6 | 80.9 | 79.8 | 79.7 | 83.9 |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Table 3.2.1.3 | Low birth weight (LBW) rate by maternal age group, Alberta Health Services (Edmonton Area), |
|---------------|---------------------------------------------------------------------------------------------|
|               | 1997-1999 and 2004-2006 combined                                                            |

| Low Birth Weight Live Births                                          | 1997-1999                       | 2004-2006                        |
|-----------------------------------------------------------------------|---------------------------------|----------------------------------|
| <=17 years*                                                           | 67                              | 44                               |
| 18-19 years                                                           | 100                             | 123                              |
| <20 years                                                             | 167                             | 167                              |
| 20-24 years                                                           | 413                             | 448                              |
| 25-29 years                                                           | 591                             | 720                              |
| 30-34 years                                                           | 571                             | 695                              |
| 35-39 years                                                           | 258                             | 395                              |
| >=40 years*                                                           | 51                              | 104                              |
| Rate (per 100 live births)                                            | 1007 1000                       | 2004 2006                        |
| Rate (per 100 live birtins)                                           | 1997-1999                       | 2004-2006                        |
| <=17 years*                                                           | 9.0                             | 8.7                              |
| . ,                                                                   |                                 |                                  |
| <=17 years*                                                           | 9.0                             | 8.7                              |
| <=17 years*<br>18-19 years                                            | 9.0<br>7.3                      | 8.7<br>10.1                      |
| <=17 years*<br>18-19 years<br><20 years                               | 9.0<br>7.3<br>7.9               | 8.7<br>10.1<br>9.7               |
| <=17 years*<br>18-19 years<br><20 years<br>20-24 years                | 9.0<br>7.3<br>7.9<br>6.6        | 8.7<br>10.1<br>9.7<br>6.7        |
| <=17 years*<br>18-19 years<br><20 years<br>20-24 years<br>25-29 years | 9.0<br>7.3<br>7.9<br>6.6<br>5.6 | 8.7<br>10.1<br>9.7<br>6.7<br>6.1 |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. \*The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| Table 3.2.1.4 | Low birth weight (LBW) live births by public health service area, Alberta Health Services |
|---------------|-------------------------------------------------------------------------------------------|
|               | (Edmonton Area), 1997 to 2006 and 2004-2006 combined                                      |

| Low Birth Weight Live Births | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004 -2006 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------------|
| St. Albert                   | 31   | 20   | 37   | 34   | 25   | 32   | 36   | 29   | 35   | 41   | 105        |
| Castle Downs                 | 26   | 30   | 24   | 30   | 32   | 38   | 38   | 26   | 45   | 53   | 124        |
| Woodcroft                    | 52   | 63   | 48   | 55   | 45   | 65   | 68   | 73   | 63   | 60   | 196        |
| Eastwood                     | 57   | 73   | 59   | 49   | 75   | 65   | 69   | 66   | 57   | 87   | 210        |
| North Central                | 47   | 52   | 49   | 53   | 58   | 56   | 39   | 65   | 62   | 61   | 188        |
| North East                   | 71   | 77   | 60   | 71   | 62   | 57   | 76   | 63   | 67   | 101  | 231        |
| West Jasper Place            | 69   | 77   | 68   | 57   | 73   | 64   | 67   | 68   | 96   | 87   | 251        |
| Twin Brooks                  | 50   | 47   | 45   | 47   | 41   | 48   | 67   | 69   | 64   | 80   | 213        |
| Bonnie Doon                  | 37   | 46   | 55   | 39   | 58   | 52   | 45   | 49   | 60   | 64   | 173        |
| Mill Woods                   | 105  | 87   | 83   | 105  | 64   | 86   | 98   | 102  | 115  | 107  | 324        |
| Strathcona County            | 38   | 40   | 31   | 31   | 45   | 45   | 50   | 57   | 58   | 54   | 169        |
| Leduc County                 | 17   | 21   | 25   | 24   | 24   | 24   | 27   | 21   | 25   | 28   | 74         |
| WestView                     | 37   | 44   | 56   | 30   | 38   | 52   | 47   | 63   | 43   | 57   | 163        |
| Sturgeon County              | 22   | 21   | 20   | 22   | 18   | 18   | 17   | 16   | 36   | 26   | 78         |
| Fort Saskatchewan            | 11   | 10   | 10   | 11   | 6    | 16   | 9    | 7    | 10   | 12   | 29         |
| Edmonton Area                | 672  | 709  | 670  | 672  | 666  | 720  | 753  | 774  | 836  | 919  | 2,529      |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| Live Births          | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   | 2004 -2006 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------------|
| St. Albert           | 523    | 551    | 578    | 531    | 541    | 575    | 572    | 568    | 619    | 591    | 1,778      |
| Castle Downs         | 484    | 509    | 524    | 469    | 517    | 509    | 607    | 670    | 665    | 776    | 2,111      |
| Woodcroft            | 846    | 933    | 913    | 859    | 875    | 912    | 855    | 873    | 816    | 840    | 2,529      |
| Eastwood             | 702    | 719    | 707    | 662    | 724    | 688    | 698    | 632    | 657    | 733    | 2,022      |
| North Central        | 685    | 779    | 799    | 760    | 827    | 810    | 865    | 816    | 798    | 909    | 2,523      |
| North East           | 938    | 969    | 950    | 929    | 906    | 901    | 928    | 953    | 982    | 1,127  | 3,062      |
| West Jasper<br>Place | 1,144  | 1,201  | 1,179  | 1,098  | 1,167  | 1,085  | 1,181  | 1,261  | 1,212  | 1,375  | 3,848      |
| Twin Brooks          | 881    | 861    | 900    | 912    | 879    | 936    | 1,082  | 1,090  | 1,176  | 1,383  | 3,649      |
| Bonnie Doon          | 880    | 887    | 915    | 822    | 869    | 880    | 855    | 869    | 779    | 866    | 2,514      |
| Mill Woods           | 1,372  | 1,343  | 1,302  | 1,275  | 1,236  | 1,330  | 1,358  | 1,485  | 1,486  | 1,563  | 4,534      |
| Strathcona<br>County | 698    | 735    | 779    | 725    | 819    | 849    | 912    | 834    | 924    | 887    | 2,645      |
| Leduc County         | 371    | 421    | 429    | 369    | 416    | 449    | 445    | 467    | 474    | 516    | 1,457      |
| WestView             | 729    | 732    | 750    | 766    | 761    | 815    | 836    | 864    | 929    | 959    | 2,752      |
| Sturgeon<br>County   | 398    | 357    | 398    | 315    | 342    | 348    | 357    | 365    | 387    | 426    | 1,178      |
| Fort<br>Saskatchewan | 138    | 166    | 180    | 175    | 154    | 192    | 139    | 157    | 187    | 162    | 506        |
| Edmonton Area        | 10,802 | 11,172 | 11,306 | 10,777 | 11,043 | 11,285 | 11,693 | 11,910 | 12,096 | 13,116 | 37,122     |

### Live births by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined Table 3.2.1.5

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| LBW Rate (per 100 live births) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004 -2006 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|------------|
| St. Albert                     | 5.9  | 3.6  | 6.4  | 6.4  | 4.6  | 5.6  | 6.3  | 5.1  | 5.7  | 6.9  | 5.9        |
| Castle Downs                   | 5.4  | 5.9  | 4.6  | 6.4  | 6.2  | 7.5  | 6.3  | 3.9  | 6.8  | 6.8  | 5.9        |
| Woodcroft                      | 6.1  | 6.8  | 5.3  | 6.4  | 5.1  | 7.1  | 8.0  | 8.4  | 7.7  | 7.1  | 7.8        |
| Eastwood                       | 8.1  | 10.2 | 8.3  | 7.4  | 10.4 | 9.4  | 9.9  | 10.4 | 8.7  | 11.9 | 10.4       |
| North Central                  | 6.9  | 6.7  | 6.1  | 7.0  | 7.0  | 6.9  | 4.5  | 8.0  | 7.8  | 6.7  | 7.5        |
| North East                     | 7.6  | 7.9  | 6.3  | 7.6  | 6.8  | 6.3  | 8.2  | 6.6  | 6.8  | 9.0  | 7.5        |
| West Jasper Place              | 6.0  | 6.4  | 5.8  | 5.2  | 6.3  | 5.9  | 5.7  | 5.4  | 7.9  | 6.3  | 6.5        |
| Twin Brooks                    | 5.7  | 5.5  | 5.0  | 5.2  | 4.7  | 5.1  | 6.2  | 6.3  | 5.4  | 5.8  | 5.8        |
| Bonnie Doon                    | 4.2  | 5.2  | 6.0  | 4.7  | 6.7  | 5.9  | 5.3  | 5.6  | 7.7  | 7.4  | 6.9        |
| Mill Woods                     | 7.7  | 6.5  | 6.4  | 8.2  | 5.2  | 6.5  | 7.2  | 6.9  | 7.7  | 6.8  | 7.1        |
| Strathcona County              | 5.4  | 5.4  | 4.0  | 4.3  | 5.5  | 5.3  | 5.5  | 6.8  | 6.3  | 6.1  | 6.4        |
| Leduc County                   | 4.6  | 5.0  | 5.8  | 6.5  | 5.8  | 5.3  | 6.1  | 4.5  | 5.3  | 5.4  | 5.1        |
| WestView                       | 5.1  | 6.0  | 7.5  | 3.9  | 5.0  | 6.4  | 5.6  | 7.3  | 4.6  | 5.9  | 5.9        |
| Sturgeon County                | 5.5  | 5.9  | 5.0  | 7.0  | 5.3  | 5.2  | 4.8  | 4.4  | 9.3  | 6.1  | 6.6        |
| Fort Saskatchewan              | 8.0  | 6.0  | 5.6  | 6.3  | 3.9  | 8.3  | 6.5  | 4.5  | 5.3  | 7.4  | 5.7        |
| Edmonton Area                  | 6.2  | 6.3  | 5.9  | 6.2  | 6.0  | 6.4  | 6.4  | 6.5  | 6.9  | 7.0  | 6.8        |

 Table 3.2.1.6
 Low birth weight (LBW) rate by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Table 3.2.1.7 | Standard errors for low birth weight (LBW) rate by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |                                                                                                                                                             |

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004 -2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|------------|
| St. Albert        | 1.03 | 0.80 | 1.02 | 1.06 | 0.90 | 0.96 | 1.02 | 0.92 | 0.93 | 1.05 | 0.56       |
| Castle Downs      | 1.02 | 1.04 | 0.91 | 1.13 | 1.06 | 1.16 | 0.98 | 0.75 | 0.97 | 0.91 | 0.51       |
| Woodcroft         | 0.83 | 0.82 | 0.74 | 0.84 | 0.75 | 0.85 | 0.93 | 0.94 | 0.93 | 0.89 | 0.53       |
| Eastwood          | 1.03 | 1.13 | 1.04 | 1.02 | 0.13 | 1.12 | 1.13 | 1.22 | 1.10 | 1.19 | 0.68       |
| North Central     | 0.97 | 0.89 | 0.85 | 0.92 | 0.89 | 0.89 | 0.71 | 0.95 | 0.95 | 0.83 | 0.52       |
| North East        | 0.86 | 0.87 | 0.79 | 0.87 | 0.84 | 0.81 | 0.90 | 0.80 | 0.80 | 0.85 | 0.48       |
| West Jasper Place | 0.70 | 0.71 | 0.68 | 0.67 | 0.71 | 0.72 | 0.67 | 0.64 | 0.78 | 0.66 | 0.40       |
| Twin Brooks       | 0.78 | 0.77 | 0.73 | 0.73 | 0.71 | 0.72 | 0.73 | 0.74 | 0.66 | 0.63 | 0.39       |
| Bonnie Doon       | 0.68 | 0.74 | 0.79 | 0.74 | 0.85 | 0.79 | 0.76 | 0.78 | 0.96 | 0.89 | 0.50       |
| Mill Woods        | 0.72 | 0.67 | 0.68 | 0.77 | 0.63 | 0.67 | 0.70 | 0.66 | 0.69 | 0.64 | 0.38       |
| Strathcona County | 0.86 | 0.84 | 0.70 | 0.75 | 0.80 | 0.77 | 0.75 | 0.87 | 0.80 | 0.80 | 0.48       |
| Leduc County      | 1.09 | 1.06 | 1.13 | 1.28 | 1.14 | 1.06 | 1.13 | 0.96 | 1.03 | 1.00 | 0.58       |
| WestView          | 0.81 | 0.88 | 0.96 | 0.70 | 0.79 | 0.86 | 0.80 | 0.88 | 0.69 | 0.76 | 0.45       |
| Sturgeon County   | 1.15 | 1.25 | 1.10 | 1.44 | 1.21 | 1.19 | 1.13 | 1.07 | 1.48 | 1.16 | 0.72       |
| Fort Saskatchewan | 2.31 | 1.85 | 1.71 | 1.83 | 1.56 | 1.99 | 2.09 | 1.65 | 1.65 | 2.06 | 1.03       |
| Edmonton Area     | 0.23 | 0.23 | 0.23 | 0.22 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.22 | 0.13       |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

### 3.2.2 High Birth Weight

High birth weight: Birth weight of 4000 grams or more.

High birth weight rate: Number of high birth weight live births per 100 live births.

### Time Trends (Data table 3.2.2.1)

- High birth weight rate in the Edmonton Area, Calgary The high birth Area, and Alberta, 1997 to 2006 weight rate trend is similar for Edmonton and 14 Calgary Areas as well Edmonton Area - Calgary Area - Alberta as the province. The 13 rate rose in the late Rate (per 100 live births) 12 1990s but since 2001, the rate has steadily 11 declined. 10 While the trend lines have similar shapes, 9 the rates for the Edmonton Area and 8 1997 2000 2001 2002 2003 Alberta are 1998 1999 2004 2005 2006 consistently higher than the Calgary Area for each year.
- In 2006, the high birth weight rate in the Edmonton Area was 10.7 per 100 live births compared to 9.1 per 100 live births in the Calgary Area.

### Age Effects (Data table 3.2.2.2)



### Sub-Edmonton Area Differences (Data tables 3.2.2.3, 3.2.2.4, 3.2.2.5)

• The high birth weight rate for the Edmonton Area for the years 2004-2006 combined was 11.1 per 100 live births (or 11.1%). St. Albert (13.0%), Strathcona County (13.0%), and WestView (12.9%) had significantly higher high birth weight rates than the Edmonton Area rate.





| # High Birth<br>Weight Live<br>Births | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|---------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Edmonton Area                         | 1,253 | 1,360 | 1,429 | 1,360 | 1,370 | 1,394 | 1,407 | 1,359 | 1,359 | 1,403 |
| Calgary Area                          | 1,241 | 1,381 | 1,456 | 1,427 | 1,414 | 1,387 | 1,490 | 1,380 | 1,442 | 1,480 |
| Alberta                               | 4,176 | 4,633 | 4,764 | 4,713 | 4,796 | 4,773 | 4,834 | 4,684 | 4,657 | 4,983 |
| HBW Rate (per<br>100 live births)     | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                         | 11.6  | 12.2  | 12.6  | 12.6  | 12.4  | 12.4  | 12.0  | 11.4  | 11.2  | 10.7  |
| Calgary Area                          | 10.0  | 10.7  | 11.2  | 10.9  | 10.8  | 10.2  | 10.3  | 9.4   | 9.3   | 9.1   |
| Alberta                               | 11.4  | 12.3  | 12.6  | 12.9  | 12.9  | 12.5  | 12.1  | 11.6  | 11.2  | 11.2  |
| Standard Error                        | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                         | 0.31  | 0.31  | 0.31  | 0.32  | 0.31  | 0.31  | 0.30  | 0.29  | 0.29  | 0.27  |
| Calgary Area                          | 0.27  | 0.27  | 0.28  | 0.27  | 0.27  | 0.26  | 0.25  | 0.24  | 0.23  | 0.22  |
| Alberta                               | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  | 0.16  | 0.16  | 0.15  | 0.15  |

#### Table 3.2.2.1 High birth weight (HBW) rate, Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

#### Table 3.2.2.2 High birth weight (HBW) rate by maternal age group, Alberta Health Services (Edmonton Area), 1997-1999 and 2004-2006 combined

| # High Birth Weight Live Births | 1997-1999 | 2004-2006 |
|---------------------------------|-----------|-----------|
| <=17 years*                     | 65        | 54        |
| 18-19 years                     | 124       | 123       |
| <20 years                       | 189       | 177       |
| 20-24 years                     | 653       | 710       |
| 25-29 years                     | 1340      | 1338      |
| 30-34 years                     | 1229      | 1206      |
| 35-39 years                     | 540       | 579       |
| >=40 years*                     | 89        | 111       |
| HBW Rate (per 100 live births)  | 1997-1999 | 2004-2006 |
| <=17 years*                     | 8.7       | 10.6      |
| 18-19 years                     | 9.1       | 10.1      |
| <20 years                       | 8.9       | 10.1      |
| 20-24 years                     | 10.4      | 10.6      |
| 25-29 years                     | 12.8      | 11.3      |
| 30-34 years                     | 12.8      | 10.9      |
| 35-39 years                     | 13.0      | 12.0      |
| >=40 years*                     | 13.0      | 11.4      |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year

The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| High Birth Weight<br>Live Births | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2004 - 2006 |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| St. Albert                       | 70    | 63    | 87    | 90    | 76    | 84    | 89    | 84    | 81    | 67    | 232         |
| Castle Downs                     | 42    | 56    | 53    | 53    | 68    | 64    | 57    | 77    | 65    | 94    | 236         |
| Woodcroft                        | 87    | 105   | 110   | 86    | 101   | 98    | 113   | 83    | 91    | 97    | 271         |
| Eastwood                         | 72    | 66    | 58    | 71    | 85    | 68    | 83    | 59    | 81    | 79    | 219         |
| North Central                    | 62    | 86    | 82    | 89    | 79    | 75    | 94    | 101   | 77    | 89    | 267         |
| North East                       | 122   | 114   | 116   | 91    | 103   | 129   | 100   | 92    | 112   | 108   | 312         |
| West Jasper Place                | 124   | 159   | 142   | 139   | 151   | 134   | 125   | 134   | 145   | 125   | 404         |
| Twin Brooks                      | 99    | 114   | 133   | 135   | 113   | 107   | 130   | 109   | 115   | 118   | 342         |
| Bonnie Doon                      | 119   | 125   | 116   | 110   | 104   | 117   | 92    | 101   | 79    | 99    | 279         |
| Mill Woods                       | 128   | 140   | 144   | 132   | 138   | 133   | 138   | 149   | 143   | 167   | 459         |
| Strathcona County                | 117   | 100   | 116   | 113   | 117   | 106   | 126   | 105   | 120   | 119   | 344         |
| Leduc County                     | 48    | 51    | 59    | 53    | 45    | 67    | 60    | 68    | 54    | 66    | 188         |
| WestView                         | 92    | 112   | 121   | 113   | 121   | 129   | 123   | 122   | 129   | 104   | 355         |
| Sturgeon County                  | 47    | 50    | 64    | 50    | 46    | 50    | 59    | 51    | 46    | 44    | 141         |
| Fort Saskatchewan                | 24    | 18    | 28    | 23    | 22    | 32    | 18    | 23    | 21    | 27    | 71          |
| Edmonton Area                    | 1,253 | 1,360 | 1,429 | 1,360 | 1,370 | 1,394 | 1,407 | 1,359 | 1,359 | 1,403 | 4,121       |

High birth weight (HBW) live births by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined Table 3.2.2.3

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| Table 3.2.2.4 | High birth weight (HBW) rate by public health service area, Alberta Health Services (Edmonton |
|---------------|-----------------------------------------------------------------------------------------------|
|               | Area), 1997 to 2006 and 2004-2006 combined                                                    |

| HBW Rate (per 100 live births) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004 - 2006 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|-------------|
| St. Albert                     | 13.4 | 11.4 | 15.1 | 16.9 | 14.0 | 14.6 | 15.6 | 14.8 | 13.1 | 11.3 | 13.0        |
| Castle Downs                   | 8.7  | 11.0 | 10.1 | 11.3 | 13.2 | 12.6 | 9.4  | 11.5 | 9.8  | 12.1 | 11.2        |
| Woodcroft                      | 10.3 | 11.3 | 12.0 | 10.0 | 11.5 | 10.7 | 13.2 | 9.5  | 11.2 | 11.5 | 10.7        |
| Eastwood                       | 10.3 | 9.2  | 8.2  | 10.7 | 11.7 | 9.9  | 11.9 | 9.3  | 12.3 | 10.8 | 10.8        |
| North Central                  | 9.1  | 11.0 | 10.3 | 11.7 | 9.6  | 9.3  | 10.9 | 12.4 | 9.6  | 9.8  | 10.6        |
| North East                     | 13.0 | 11.8 | 12.2 | 9.8  | 11.4 | 14.3 | 10.8 | 9.7  | 11.4 | 9.6  | 10.2        |
| West Jasper Place              | 10.8 | 13.2 | 12.0 | 12.7 | 12.9 | 12.4 | 10.6 | 10.6 | 12.0 | 9.1  | 10.5        |
| Twin Brooks                    | 11.2 | 13.2 | 14.8 | 14.8 | 12.9 | 11.4 | 12.0 | 10.0 | 9.8  | 8.5  | 9.4         |
| Bonnie Doon                    | 13.5 | 14.1 | 12.7 | 13.4 | 12.0 | 13.3 | 10.8 | 11.6 | 10.1 | 11.4 | 11.1        |
| Mill Woods                     | 9.3  | 10.4 | 11.1 | 10.4 | 11.2 | 10.0 | 10.2 | 10.0 | 9.6  | 10.7 | 10.1        |
| Strathcona County              | 16.8 | 13.6 | 14.9 | 15.6 | 14.3 | 12.5 | 13.8 | 12.6 | 13.0 | 13.4 | 13.0        |
| Leduc County                   | 12.9 | 12.1 | 13.8 | 14.4 | 10.8 | 14.9 | 13.5 | 14.6 | 11.4 | 12.8 | 12.9        |
| WestView                       | 12.6 | 15.3 | 16.1 | 14.8 | 15.9 | 15.8 | 14.7 | 14.1 | 13.9 | 10.8 | 12.9        |
| Sturgeon County                | 11.8 | 14.0 | 16.1 | 15.9 | 13.5 | 14.4 | 16.5 | 14.0 | 11.9 | 10.3 | 12.0        |
| Fort Saskatchewan              | 17.4 | 10.8 | 15.6 | 13.1 | 14.3 | 16.7 | 12.9 | 14.6 | 11.2 | 16.7 | 14.0        |
| Edmonton Area                  | 11.6 | 12.2 | 12.6 | 12.6 | 12.4 | 12.4 | 12.0 | 11.4 | 11.2 | 10.7 | 11.1        |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004 - 2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-------------|
| St. Albert        | 1.49 | 1.36 | 1.49 | 1.63 | 1.49 | 1.47 | 1.52 | 1.49 | 1.36 | 1.30 | 0.80        |
| Castle Downs      | 1.28 | 1.39 | 1.32 | 1.46 | 1.49 | 1.47 | 1.18 | 1.23 | 1.15 | 1.17 | 0.69        |
| Woodcroft         | 1.04 | 1.03 | 1.08 | 1.02 | 1.08 | 1.03 | 1.16 | 0.99 | 1.10 | 1.10 | 0.62        |
| Eastwood          | 1.15 | 1.08 | 1.03 | 1.20 | 1.20 | 1.14 | 1.23 | 1.16 | 1.28 | 1.15 | 0.69        |
| North Central     | 1.10 | 1.12 | 1.07 | 1.17 | 1.02 | 1.02 | 1.06 | 1.15 | 1.05 | 0.99 | 0.61        |
| North East        | 1.10 | 1.04 | 1.06 | 0.98 | 1.05 | 1.17 | 1.02 | 0.96 | 1.01 | 0.88 | 0.55        |
| West Jasper Place | 0.92 | 0.98 | 0.95 | 1.00 | 0.98 | 1.00 | 0.90 | 0.87 | 0.93 | 0.78 | 0.49        |
| Twin Brooks       | 1.06 | 1.16 | 1.18 | 1.18 | 1.13 | 1.04 | 0.99 | 0.91 | 0.87 | 0.75 | 0.48        |
| Bonnie Doon       | 1.15 | 1.17 | 1.10 | 1.19 | 1.10 | 1.14 | 1.06 | 1.09 | 1.08 | 1.08 | 0.63        |
| Mill Woods        | 0.79 | 0.83 | 0.87 | 0.85 | 0.90 | 0.82 | 0.82 | 0.78 | 0.77 | 0.78 | 0.45        |
| Strathcona County | 1.41 | 1.26 | 1.28 | 1.35 | 1.22 | 1.13 | 1.14 | 1.15 | 1.11 | 1.14 | 0.65        |
| Leduc County      | 1.74 | 1.59 | 1.66 | 1.83 | 1.52 | 1.68 | 1.62 | 1.63 | 1.46 | 1.47 | 0.88        |
| WestView          | 1.23 | 1.33 | 1.34 | 1.28 | 1.33 | 1.28 | 1.23 | 1.18 | 1.13 | 1.00 | 0.64        |
| Sturgeon County   | 1.62 | 1.84 | 1.84 | 2.06 | 1.84 | 1.88 | 1.97 | 1.81 | 1.65 | 1.47 | 0.95        |
| Fort Saskatchewan | 3.23 | 2.41 | 2.70 | 2.55 | 2.82 | 2.69 | 2.85 | 2.82 | 2.31 | 2.93 | 1.54        |
| Edmonton Area     | 0.31 | 0.31 | 0.31 | 0.32 | 0.31 | 0.31 | 0.30 | 0.29 | 0.29 | 0.27 | 0.16        |

Table 3.2.2.5Standard errors for high birth weight (HBW) rate by public health service area, Alberta Health<br/>Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).
## 3.3.1 Singleton Small-for-Gestational Age

**Small-for-gestational age:** Infants with a birth weight below the 10<sup>th</sup> percentile of appropriate weight for gestational age.

**Small-for-gestational age rate:** Number of singleton small-for-gestational-age live births per 100 singleton live births.

Time Trends (Data table 3.3.1.1)

- A similar trend is seen in the Edmonton and Calgary Areas as well as the province, with a decreasing small-for-gestational age rate in the late 1990s and then a leveling off between 2000 and 2006.
- The Edmonton Area singleton small-for-gestational age rate was 8.7 per 100 singleton live births in 1997 and decreased to 7.7 in 2006.
- The small-for-gestational age rate in the Edmonton Area is

significantly lower from 1997 through 2006 than the rate in the Calgary Area.

## Age Effects (Data table 3.3.1.2)

- The small-for-gestational age rate is higher for younger (<20 years) and older mothers (40+ years). The rate in 2004-2006 combined was lowest for women aged 30-34 years at 6.7 per 100 singleton live births and highest for women 40 years and older at 9.1.
- Overall, the curve has shifted downwards from 1997-1999 indicating lower rates for small-for-gestational age babies across all age groups.



Singleton small-for-gestational age rate by maternal age group, Edmonton Area, 1997-1999 and 2004-2006 combined



Perinatal health status in Alberta Health Services (Edmonton Area), December 2008

## Sub-Edmonton Area Differences (Data tables 3.3.1.3, 3.3.1.4, 3.3.1.5)

- The 2004-2006 small-for-gestational age rate in the Edmonton Area varies from a low of 5.1 per 100 singleton live births in Fort Saskatchewan to a high of 9.8 in Eastwood.
- Public health service areas with rates that are significantly lower than the Edmonton Area rate of . 7.4 per 100 singleton live births include: St. Albert (5.4%), Strathcona County (5.8%), WestView (5.4%), and Fort Saskatchewan (5.1%).
- The small-for-gestational age rate is significantly higher than the Edmonton Area rate in • Eastwood (9.8%) and Mill Woods (9.3%).



# Singleton small-for-gestational age rate by public health

| SGA Singleton<br>Live Births                   | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Edmonton Area                                  | 920   | 919   | 881   | 819   | 820   | 763   | 803   | 840   | 832   | 977   |
| Calgary Area                                   | 1,265 | 1,298 | 1,133 | 1,074 | 1,113 | 1,113 | 1,215 | 1,243 | 1,389 | 1,474 |
| Alberta                                        | 3,356 | 3,311 | 3,035 | 2,813 | 2,825 | 2,803 | 2,923 | 3,015 | 3,175 | 3,508 |
| SGA Rate (per 100<br>singleton live<br>births) | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                                  | 8.7   | 8.5   | 8.0   | 7.8   | 7.6   | 7.0   | 7.1   | 7.3   | 7.1   | 7.7   |
| Calgary Area                                   | 10.5  | 10.4  | 9.0   | 8.5   | 8.8   | 8.5   | 8.7   | 8.8   | 9.3   | 9.3   |
| Alberta                                        | 9.4   | 9.1   | 8.3   | 7.9   | 7.8   | 7.6   | 7.6   | 7.7   | 7.9   | 8.1   |
| Standard Error                                 | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                                  | 0.28  | 0.27  | 0.26  | 0.26  | 0.26  | 0.24  | 0.24  | 0.24  | 0.24  | 0.24  |
| Calgary Area                                   | 0.28  | 0.27  | 0.26  | 0.25  | 0.25  | 0.24  | 0.24  | 0.24  | 0.24  | 0.23  |
| Alberta                                        | 0.15  | 0.15  | 0.14  | 0.14  | 0.14  | 0.14  | 0.13  | 0.14  | 0.13  | NA    |

#### Table 3.3.1.1 Singleton small-for-gestational age (SGA) rate, Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

#### Table 3.3.1.2 Singleton small-for-gestational age (SGA) rate by maternal age group, Alberta Health Services (Edmonton Area), 1997-1999 and 2004-2006 combined

| SGA Singleton Live Births                | 1997-1999 | 2004-2006 |
|------------------------------------------|-----------|-----------|
| <=17 years*                              | 66        | 49        |
| 18-19 years                              | 159       | 107       |
| <20 years                                | 225       | 156       |
| 20-24 years                              | 595       | 534       |
| 25-29 years                              | 784       | 857       |
| 30-34 years                              | 701       | 707       |
| 35-39 years                              | 351       | 316       |
| >=40 years*                              | 64        | 80        |
| SGA Rate (per 100 singleton live births) | 1997-1999 | 2004-2006 |
| <=17 years*                              | 9.2       | 9.8       |
| 18-19 years                              | 11.7      | 9.0       |
| <20 years                                | 10.8      | 9.3       |
| 20-24 years                              | 9.7       | 7.9       |
| 25-29 years                              | 7.7       | 6.9       |
| 30-34 years                              | 7.6       | 6.7       |
| 35-39 years                              | 8.7       | 7.4       |
| >=40 years*                              | 9.7       | 9.1       |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. \*The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| SGA Singleton Live<br>Births | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert                   | 36   | 29   | 32   | 29   | 35   | 22   | 32   | 21   | 32   | 38   | 91        |
| Castle Downs                 | 42   | 36   | 48   | 36   | 39   | 45   | 45   | 41   | 39   | 63   | 143       |
| Woodcroft                    | 64   | 84   | 71   | 74   | 82   | 79   | 75   | 57   | 70   | 68   | 195       |
| Eastwood                     | 80   | 86   | 80   | 75   | 77   | 65   | 50   | 58   | 58   | 74   | 190       |
| North Central                | 66   | 68   | 74   | 64   | 72   | 63   | 61   | 63   | 60   | 68   | 191       |
| North East                   | 98   | 92   | 87   | 94   | 77   | 55   | 72   | 77   | 69   | 88   | 234       |
| West Jasper Place            | 107  | 88   | 86   | 72   | 76   | 80   | 67   | 97   | 90   | 87   | 274       |
| Twin Brooks                  | 60   | 73   | 61   | 55   | 48   | 60   | 75   | 84   | 75   | 83   | 242       |
| Bonnie Doon                  | 65   | 73   | 63   | 69   | 61   | 54   | 55   | 65   | 63   | 54   | 182       |
| Mill Woods                   | 143  | 125  | 111  | 111  | 120  | 89   | 117  | 128  | 126  | 155  | 409       |
| Strathcona County            | 47   | 47   | 53   | 40   | 31   | 46   | 46   | 45   | 43   | 61   | 149       |
| Leduc County                 | 27   | 27   | 30   | 25   | 31   | 27   | 33   | 34   | 31   | 35   | 100       |
| WestView                     | 46   | 56   | 55   | 40   | 44   | 40   | 60   | 49   | 41   | 54   | 145       |
| Sturgeon County              | 28   | 23   | 19   | 17   | 15   | 25   | 12   | 15   | 24   | 40   | 79        |
| Fort Saskatchewan            | 10   | 12   | 11   | 7    | 12   | 13   | 3    | 6    | 10   | 9    | 25        |
| Edmonton Area                | 921  | 920  | 883  | 821  | 824  | 767  | 803  | 841  | 832  | 977  | 2,650     |

Singleton small-for-gestational age (SGA) live births by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined Table 3.3.1.3

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| Table 3.3.1.4 | Singleton small-for-gestational age (SGA) rate by public health service area, Alberta Health |
|---------------|----------------------------------------------------------------------------------------------|
|               | Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined                                |

| SGA Rate (per<br>100 singleton live<br>births) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|------------------------------------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert                                     | 7.2  | 5.4  | 5.7  | 5.7  | 6.5  | 3.9  | 5.7  | 3.9  | 5.5  | 6.6  | 5.4       |
| Castle Downs                                   | 8.8  | 7.4  | 9.3  | 8.0  | 7.7  | 9.2  | 7.6  | 6.3  | 6.0  | 8.5  | 7.0       |
| Woodcroft                                      | 7.6  | 9.2  | 8.0  | 8.8  | 9.6  | 8.9  | 9.1  | 6.7  | 8.8  | 8.2  | 7.9       |
| Eastwood                                       | 11.6 | 12.3 | 11.6 | 11.5 | 10.8 | 9.7  | 7.4  | 9.5  | 9.0  | 10.6 | 9.8       |
| North Central                                  | 9.9  | 9.0  | 9.5  | 8.6  | 8.9  | 7.9  | 7.2  | 8.0  | 7.7  | 7.8  | 7.8       |
| North East                                     | 10.7 | 9.7  | 9.4  | 10.4 | 8.8  | 6.3  | 8.0  | 8.4  | 7.2  | 8.1  | 7.9       |
| West Jasper Place                              | 9.6  | 7.6  | 7.5  | 6.7  | 6.7  | 7.6  | 5.8  | 7.9  | 7.8  | 6.5  | 7.4       |
| Twin Brooks                                    | 7.1  | 8.6  | 7.0  | 6.2  | 5.6  | 6.6  | 7.1  | 8.1  | 6.6  | 6.3  | 7.0       |
| Bonnie Doon                                    | 7.5  | 8.3  | 7.0  | 8.7  | 7.3  | 6.4  | 6.6  | 7.8  | 8.3  | 6.5  | 7.5       |
| Mill Woods                                     | 10.8 | 9.6  | 8.8  | 9.0  | 10.0 | 6.9  | 8.8  | 9.0  | 8.8  | 10.2 | 9.3       |
| Strathcona County                              | 6.9  | 6.5  | 7.0  | 5.7  | 3.9  | 5.6  | 5.2  | 5.6  | 4.8  | 7.2  | 5.8       |
| Leduc County                                   | 7.4  | 6.6  | 7.3  | 7.0  | 7.7  | 6.3  | 7.8  | 7.4  | 7.0  | 6.9  | 7.1       |
| WestView                                       | 6.5  | 7.9  | 7.6  | 5.4  | 6.0  | 5.0  | 7.5  | 5.9  | 4.6  | 5.8  | 5.4       |
| Sturgeon County                                | 7.3  | 6.7  | 4.9  | 5.5  | 4.5  | 7.3  | 3.4  | 4.2  | 6.5  | 9.8  | 7.0       |
| Fort Saskatchewan                              | 7.5  | 7.4  | 6.2  | 4.2  | 8.1  | 7.1  | 2.3  | 3.9  | 5.6  | 5.8  | 5.1       |
| Edmonton Area                                  | 8.7  | 8.5  | 8.0  | 7.8  | 7.6  | 7.0  | 7.1  | 7.3  | 7.1  | 7.7  | 7.4       |

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 1.16 | 0.98 | 0.98 | 1.02 | 1.07 | 0.82 | 0.98 | 0.84 | 0.94 | 1.04 | 0.55      |
| Castle Downs      | 1.29 | 1.18 | 1.27 | 1.28 | 1.20 | 1.31 | 1.09 | 0.95 | 0.94 | 1.02 | 0.56      |
| Woodcroft         | 0.92 | 0.96 | 0.91 | 0.98 | 1.01 | 0.95 | 1.00 | 0.86 | 1.00 | 0.95 | 0.54      |
| Eastwood          | 1.22 | 1.24 | 1.22 | 1.25 | 1.17 | 1.16 | 1.01 | 1.19 | 1.13 | 1.17 | 0.67      |
| North Central     | 1.15 | 1.04 | 1.05 | 1.03 | 1.00 | 0.96 | 0.89 | 0.97 | 0.96 | 0.91 | 0.54      |
| North East        | 1.02 | 0.96 | 0.97 | 1.02 | 0.96 | 0.82 | 0.90 | 0.91 | 0.84 | 0.83 | 0.50      |
| West Jasper Place | 0.89 | 0.78 | 0.78 | 0.77 | 0.75 | 0.81 | 0.69 | 0.77 | 0.79 | 0.67 | 0.43      |
| Twin Brooks       | 0.88 | 0.96 | 0.86 | 0.82 | 0.79 | 0.82 | 0.79 | 0.85 | 0.73 | 0.67 | 0.43      |
| Bonnie Doon       | 0.90 | 0.94 | 0.86 | 1.01 | 0.90 | 0.84 | 0.86 | 0.93 | 1.00 | 0.86 | 0.54      |
| Mill Woods        | 0.85 | 0.82 | 0.79 | 0.82 | 0.86 | 0.70 | 0.78 | 0.76 | 0.75 | 0.78 | 0.44      |
| Strathcona County | 0.97 | 0.92 | 0.93 | 0.87 | 0.69 | 0.80 | 0.75 | 0.82 | 0.71 | 0.88 | 0.46      |
| Leduc County      | 1.36 | 1.22 | 1.28 | 1.34 | 1.33 | 1.17 | 1.30 | 1.22 | 1.21 | 1.13 | 0.69      |
| WestView          | 0.93 | 1.02 | 0.99 | 0.83 | 0.88 | 0.78 | 0.93 | 0.83 | 0.70 | 0.76 | 0.44      |
| Sturgeon County   | 1.32 | 1.34 | 1.10 | 1.31 | 1.15 | 1.41 | 0.98 | 1.06 | 1.29 | 1.47 | 0.76      |
| Fort Saskatchewan | 2.27 | 2.06 | 1.80 | 1.57 | 2.24 | 1.91 | 1.31 | 1.57 | 1.74 | 1.87 | 1.00      |
| Edmonton Area     | 0.28 | 0.27 | 0.26 | 0.26 | 0.26 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.14      |

Table 3.3.1.5Standard errors for singleton small-for-gestational age (SGA) rate by public health service<br/>area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

## 3.3.2 Singleton Large-for-Gestational Age

**Large-for-gestational age:** Infants with a birth weight above the 90th percentile of appropriate weight for gestational age.

**Large-for-gestational age rate:** Number of singleton large-for-gestational-age live births per 100 singleton live births.

Time Trends (Data tables 3.3.2.1)

- The large-for-gestational age rate showed an increasing trend through the late 1990s and then started to decrease and level off around 2002.
- The large-for-gestational age rates in the Edmonton Area and Alberta have been very similar over the past 10 years. The largefor-gestational age rate in the Edmonton Area was significantly higher than the Calgary Area rate from 1997 through 2006.



Singleton large-for-gestational age rate in the Edmonton Area, Calgary Area, and Alberta: 1997 to 2006

• The singleton large-for-gestational age rate, for the Edmonton Area, was 11.4 per 100 singleton live births in 1997 and decreased to 10.8 in 2006.

Age Effects (Data table 3.3.2.2)

• Both trend lines for largefor-gestational age show increasing rates with increasing age. For 2004-2006, the rate for women younger than 20 years of age was 10.2 per 100 singleton live births; for women 40 years and older, the rate was 12.9.





## Sub-Edmonton Area Differences (Data tables 3.3.2.3, 3.3.2.4, 3.3.2.5)

- The 2004-2006 combined large-for-gestational age rate in Edmonton Area was 11.4 per 100 singleton live births.
- Significantly higher rates than the area rate were observed in two public health service areas including: St. Albert (14.0%) and Sturgeon County (14.1%). The rate in Twin Brooks, at 9.5%, was significantly lower than the regional rate.



# Singleton large-for-gestational age rate by public health service area, Edmonton Area, 2004-2006

| # LGA Singleton<br>Live Births                 | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Edmonton Area                                  | 1,196 | 1,286 | 1,343 | 1,318 | 1,309 | 1,356 | 1,377 | 1,370 | 1,353 | 1,371 |
| Calgary Area                                   | 1,034 | 1,186 | 1,271 | 1,329 | 1,317 | 1,316 | 1,375 | 1,370 | 1,353 | 1,432 |
| Alberta                                        | 3,747 | 4,169 | 4,278 | 4,382 | 4,498 | 4,492 | 4,589 | 4,615 | 4,472 | 4,799 |
| LGA Rate (per 100<br>singleton live<br>births) | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                                  | 11.4  | 11.8  | 12.2  | 12.6  | 12.2  | 12.4  | 12.1  | 11.9  | 11.6  | 10.8  |
| Calgary Area                                   | 8.6   | 9.5   | 10.1  | 10.5  | 10.4  | 10.0  | 9.9   | 9.7   | 9.0   | 9.1   |
| Alberta                                        | 10.5  | 11.4  | 11.6  | 12.3  | 12.5  | 12.1  | 11.9  | 11.9  | 11.1  | 11.1  |
| Standard Error<br>(SE)                         | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                                  | 0.31  | 0.31  | 0.31  | 0.32  | 0.32  | 0.31  | 0.31  | 0.30  | 0.30  | 0.28  |
| Calgary Area                                   | 0.26  | 0.26  | 0.27  | 0.27  | 0.27  | 0.26  | 0.25  | 0.25  | 0.23  | 0.23  |
| Alberta                                        | 0.16  | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  | 0.16  | 0.16  | 0.16  | 0.15  |

#### Table 3.3.2.1 Singleton large-for-gestational age (LGA) rate, Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

### Singleton large-for-gestational age (LGA) rate by maternal age group, Alberta Health Services (Edmonton Area), 1997-1999 and 2004-2006 combined Table 3.3.2.2

| # LGA Singleton Live Births                 | 1997-1999 | 2004-2006 |
|---------------------------------------------|-----------|-----------|
| <=17 years*                                 | 63        | 46        |
| 18-19 years                                 | 104       | 126       |
| <20 years                                   | 167       | 172       |
| 20-24 years                                 | 605       | 685       |
| 25-29 years                                 | 1259      | 1285      |
| 30-34 years                                 | 1160      | 1229      |
| 35-39 years                                 | 541       | 604       |
| >=40 years*                                 | 92        | 119       |
| LGA Rate (per 100 singleton live<br>births) | 1997-1999 | 2004-2006 |
| <=17 years*                                 | 8.7       | 9.2       |
| 18-19 years                                 | 7.6       | 10.7      |
| <20 years                                   | 8.0       | 10.2      |
| 20-24 years                                 | 9.8       | 10.5      |
| 25-29 years                                 | 12.3      | 11.1      |
| 30-34 years                                 | 12.5      | 11.6      |
| 35-39 years                                 | 13.5      | 13.2      |
| >=40 years*                                 | 13.9      | 12.9      |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. \*The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| LGA Singleton Live Births | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2004-2006 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| St. Albert                | 52    | 57    | 73    | 81    | 72    | 81    | 92    | 84    | 78    | 75    | 237       |
| Castle Downs              | 41    | 48    | 58    | 60    | 75    | 54    | 52    | 78    | 67    | 91    | 236       |
| Woodcroft                 | 88    | 95    | 105   | 87    | 99    | 88    | 114   | 81    | 85    | 89    | 255       |
| Eastwood                  | 75    | 72    | 65    | 72    | 80    | 77    | 78    | 67    | 81    | 81    | 229       |
| North Central             | 70    | 85    | 71    | 86    | 88    | 83    | 92    | 91    | 80    | 90    | 261       |
| North East                | 104   | 105   | 116   | 97    | 105   | 118   | 109   | 95    | 113   | 110   | 318       |
| West Jasper Place         | 120   | 164   | 137   | 125   | 131   | 130   | 120   | 144   | 148   | 130   | 422       |
| Twin Brooks               | 87    | 104   | 121   | 127   | 98    | 106   | 124   | 103   | 115   | 114   | 332       |
| Bonnie Doon               | 105   | 99    | 101   | 100   | 94    | 92    | 84    | 98    | 84    | 79    | 261       |
| Mill Woods                | 143   | 142   | 138   | 145   | 138   | 148   | 144   | 162   | 149   | 163   | 474       |
| Strathcona County         | 98    | 89    | 105   | 103   | 104   | 110   | 120   | 106   | 104   | 102   | 312       |
| Leduc County              | 44    | 46    | 52    | 49    | 39    | 65    | 63    | 60    | 57    | 63    | 180       |
| WestView                  | 91    | 107   | 113   | 99    | 113   | 123   | 113   | 113   | 122   | 109   | 344       |
| Sturgeon County           | 51    | 50    | 62    | 60    | 48    | 51    | 56    | 58    | 50    | 52    | 160       |
| Fort Saskatchewan         | 25    | 21    | 26    | 18    | 23    | 29    | 16    | 29    | 20    | 23    | 72        |
| Edmonton Area             | 1,196 | 1,286 | 1,344 | 1,318 | 1,309 | 1,356 | 1,377 | 1,370 | 1,353 | 1,371 | 4,094     |

Table 3.3.2.3Singleton large-for-gestational age (LGA) live births by public health service area, Alberta<br/>Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

Table 3.3.2.4Singleton large-for-gestational age (LGA) rate by public health service area, Alberta Health<br/>Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

| LGA Rate (per 100 singleton live births) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|------------------------------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert                               | 10.5 | 10.7 | 13.0 | 15.9 | 13.5 | 14.5 | 16.5 | 15.7 | 13.4 | 13.0 | 14.0      |
| Castle Downs                             | 8.6  | 9.8  | 11.2 | 13.4 | 14.9 | 11.1 | 8.8  | 12.0 | 10.4 | 12.2 | 11.6      |
| Woodcroft                                | 10.5 | 10.4 | 11.8 | 10.4 | 11.6 | 9.9  | 13.8 | 9.6  | 10.7 | 10.7 | 10.3      |
| Eastwood                                 | 10.8 | 10.3 | 9.4  | 11.1 | 11.3 | 11.5 | 11.6 | 11.0 | 12.6 | 11.6 | 11.8      |
| North Central                            | 10.5 | 11.3 | 9.1  | 11.6 | 10.9 | 10.5 | 10.9 | 11.6 | 10.3 | 10.3 | 10.7      |
| North East                               | 11.3 | 11.1 | 12.6 | 10.8 | 12.1 | 13.5 | 12.1 | 10.3 | 11.9 | 10.1 | 10.7      |
| West Jasper Place                        | 10.8 | 14.2 | 11.9 | 11.7 | 11.5 | 12.3 | 10.4 | 11.7 | 12.8 | 9.7  | 11.3      |
| Twin Brooks                              | 10.2 | 12.3 | 13.8 | 14.4 | 11.5 | 11.6 | 11.8 | 10.0 | 10.1 | 8.7  | 9.5       |
| Bonnie Doon                              | 12.2 | 11.3 | 11.3 | 12.6 | 11.2 | 10.8 | 10.1 | 11.8 | 11.1 | 9.5  | 10.8      |
| Mill Woods                               | 10.8 | 10.9 | 10.9 | 11.8 | 11.5 | 11.4 | 10.9 | 11.4 | 10.4 | 10.7 | 10.8      |
| Strathcona County                        | 14.4 | 12.4 | 13.8 | 14.7 | 13.2 | 13.4 | 13.7 | 13.3 | 11.5 | 12.0 | 12.2      |
| Leduc County                             | 12.0 | 11.2 | 12.6 | 13.6 | 9.7  | 15.1 | 14.9 | 13.1 | 12.9 | 12.5 | 12.8      |
| WestView                                 | 12.9 | 15.2 | 15.7 | 13.4 | 15.3 | 15.4 | 14.1 | 13.7 | 13.6 | 11.6 | 12.9      |
| Sturgeon County                          | 13.2 | 14.5 | 16.0 | 19.5 | 14.5 | 14.9 | 16.0 | 16.2 | 13.6 | 12.7 | 14.1      |
| Fort Saskatchewan                        | 18.7 | 13.0 | 14.6 | 10.9 | 15.5 | 15.9 | 12.2 | 19.0 | 11.3 | 14.7 | 14.8      |
| Edmonton Area                            | 11.4 | 11.8 | 12.2 | 12.6 | 12.2 | 12.4 | 12.1 | 11.9 | 11.6 | 10.8 | 11.4      |

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 1.37 | 1.33 | 1.42 | 1.62 | 1.48 | 1.49 | 1.57 | 1.57 | 1.41 | 1.40 | 0.8       |
| Castle Downs      | 1.28 | 1.35 | 1.39 | 1.61 | 1.58 | 1.42 | 1.16 | 1.27 | 1.20 | 1.20 | 0.7       |
| Woodcroft         | 1.06 | 1.01 | 10.8 | 10.5 | 1.10 | 1.00 | 1.20 | 1.01 | 1.09 | 1.07 | 0.6       |
| Eastwood          | 1.18 | 1.15 | 1.11 | 1.23 | 1.19 | 1.23 | 1.23 | 1.27 | 1.31 | 1.22 | 0.7       |
| North Central     | 1.18 | 1.15 | 1.03 | 1.18 | 1.10 | 1.09 | 1.07 | 1.14 | 1.09 | 1.03 | 0.6       |
| North East        | 1.05 | 1.02 | 1.09 | 1.03 | 1.10 | 1.16 | 1.08 | 1.00 | 1.05 | 0.91 | 0.6       |
| West Jasper Place | 0.93 | 1.03 | 0.95 | 0.98 | 0.95 | 1.01 | 0.90 | 0.92 | 0.98 | 0.81 | 0.5       |
| Twin Brooks       | 1.04 | 1.13 | 1.17 | 1.18 | 1.09 | 1.06 | 0.99 | 0.93 | 0.89 | 0.78 | 0.5       |
| Bonnie Doon       | 1.11 | 1.07 | 1.06 | 1.18 | 1.09 | 1.07 | 1.05 | 1.12 | 1.14 | 1.02 | 0.6       |
| Mill Woods        | 0.85 | 0.86 | 0.88 | 0.92 | 0.92 | 0.88 | 0.86 | 0.84 | 0.81 | 0.79 | 0.5       |
| Strathcona County | 1.35 | 1.23 | 1.25 | 1.33 | 1.21 | 1.19 | 1.16 | 1.20 | 1.06 | 1.11 | 0.6       |
| Leduc County      | 1.70 | 1.56 | 1.63 | 1.81 | 1.48 | 1.72 | 1.73 | 1.57 | 1.59 | 1.47 | 0.9       |
| WestView          | 1.26 | 1.35 | 1.35 | 1.25 | 1.33 | 1.28 | 1.23 | 1.20 | 1.14 | 1.05 | 0.6       |
| Sturgeon County   | 1.72 | 1.90 | 1.86 | 2.26 | 1.94 | 1.93 | 1.96 | 1.95 | 1.79 | 1.64 | 1.0       |
| Fort Saskatchewan | 3.37 | 2.64 | 2.65 | 2.43 | 2.98 | 2.71 | 2.86 | 3.17 | 2.38 | 2.84 | 1.6       |
| Edmonton Area     | 0.31 | 0.31 | 0.31 | 0.32 | 0.32 | 0.31 | 0.31 | 0.30 | 0.30 | 0.28 | 0.17      |

Table 3.3.2.5Standard errors for singleton large-for-gestational age (LGA) rate by public health service<br/>area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

## 3.4 Preterm Birth

**Preterm birth:** Birth that occurs prior to 37 completed weeks of gestation.

Preterm birth rate: Number of preterm births per 100 live births.

## Time Trends (Data Table 3.4.1, 3.4.2)

- For the Edmonton and Calgary Areas as well as Alberta, the preterm birth rate has shown a similar and steadily increasing trend over the last 10 years.
- The preterm birth rate in the Edmonton Area has increased over the last 10 years from 8.1 in 1997 to 9.2 in 2006.
- As was described in a previous section, three quarters (75%) of low birth weight babies in the Edmonton Area were preterm in 2006 compared to 4% of non-low birth weight babies.
- Among multiple births, 55% of the babies were preterm in 2006 compared to 8% of singleton births.
- About 80% of preterm births occur between 33 and 36 weeks gestation.





## Preterm birth rate in the Edmonton Area, Calgary Area, and Alberta: 1997 to 2006

## Age Effects (Data table 3.4.3)



• The trend line shifted upwards from 1997-1999 to 2004-2006 with significant increases occurring for women aged 25-29 years, 30-34 years, and 35-39 years.

## Sub-Edmonton Area Differences (Data tables 3.4.4, 3.4.5, 3.4.6)

• The preterm birth rate for 2006 in the Edmonton Area was 9.2 per 100 live births. The 2004-2006 combined rates show that two public health service areas have a significantly higher preterm birth rate than the Edmonton Area rate of 9.6% (or 9.6 per 100 live births) including: Woodcroft (11.3%) and Eastwood (13.5%).





| Preterm Live<br>Births         | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Edmonton Area                  | 871   | 918   | 952   | 1,014 | 986   | 1,021 | 1,097 | 1,177 | 1,178 | 1,201 |
| Calgary Area                   | 917   | 994   | 1,045 | 1,131 | 1,126 | 1,243 | 1,349 | 1,383 | 1,509 | 1,511 |
| Alberta                        | 2,655 | 2,815 | 2,936 | 3,098 | 3,108 | 3,300 | 3,521 | 3,666 | 3,781 | 3,957 |
| PTB Rate (per 100 live births) | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                  | 8.1   | 8.2   | 8.4   | 9.4   | 8.9   | 9.0   | 9.4   | 9.9   | 9.7   | 9.2   |
| Calgary Area                   | 7.4   | 7.7   | 8.0   | 8.7   | 8.6   | 9.1   | 9.3   | 9.5   | 9.8   | 9.2   |
| Alberta                        | 7.3   | 7.5   | 7.8   | 8.5   | 8.3   | 8.6   | 8.8   | 9.1   | 9.1   | 8.9   |
| Standard Error<br>(SE)         | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
| Edmonton Area                  | 0.26  | 0.26  | 0.26  | 0.28  | 0.27  | 0.27  | 0.27  | 0.27  | 0.27  | 0.25  |
| Calgary Area                   | 0.23  | 0.23  | 0.24  | 0.25  | 0.24  | 0.25  | 0.24  | 0.24  | 0.24  | 0.23  |
| Alberta                        | 0.14  | 0.14  | 0.14  | 0.15  | 0.14  | 0.14  | 0.14  | 0.14  | 0.14  | 0.13  |

## Table 3.4.1 Preterm birth (PTB) rate, Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

### Table 3.4.2 Percent of preterm births (PTB) by gestational age, Alberta Health Services (Edmonton Area), 1997 to 2006

|                             | 1997 | 1998 | 1999 | 2000  | 2001 | 2002  | 2003  | 2004  | 2005  | 2006  |
|-----------------------------|------|------|------|-------|------|-------|-------|-------|-------|-------|
| Preterm Births<br>(<37 wks) | 871  | 918  | 952  | 1,014 | 986  | 1,021 | 1,097 | 1,177 | 1,178 | 1,201 |
| # <33 wks                   | 166  | 190  | 179  | 239   | 193  | 193   | 238   | 242   | 278   | 228   |
| # 33-36 wks                 | 705  | 728  | 773  | 775   | 793  | 828   | 859   | 935   | 900   | 973   |
| %<33 wks                    | 19.1 | 20.7 | 18.8 | 23.6  | 19.6 | 18.9  | 21.7  | 20.6  | 23.6  | 19.0  |
| %33-36 wks                  | 80.9 | 79.3 | 81.2 | 76.4  | 80.4 | 81.1  | 78.3  | 79.4  | 76.4  | 81.0  |

| Preterm Live Births                                                   | 1997-1999                        | 2004-2006                          |
|-----------------------------------------------------------------------|----------------------------------|------------------------------------|
| <=17 years*                                                           | 77                               | 62                                 |
| 18-19 years                                                           | 123                              | 143                                |
| <20 years                                                             | 200                              | 205                                |
| 20-24 years                                                           | 541                              | 619                                |
| 25-29 years                                                           | 811                              | 1046                               |
| 30-34 years                                                           | 746                              | 1007                               |
| 35-39 years                                                           | 373                              | 544                                |
| >=40 years*                                                           | 70                               | 134                                |
|                                                                       |                                  |                                    |
| PTB Rate (per 100 live births)                                        | 1997-1999                        | 2004-2006                          |
| PTB Rate (per 100 live births)<br><=17 years*                         | <b>1997-1999</b><br>10.3         | <b>2004-2006</b><br>12.2           |
| . ,                                                                   |                                  |                                    |
| <=17 years*                                                           | 10.3                             | 12.2                               |
| <=17 years*<br>18-19 years                                            | 10.3<br>9.0                      | 12.2<br>11.7                       |
| <=17 years*<br>18-19 years<br><20 years                               | 10.3<br>9.0<br>9.5               | 12.2<br>11.7<br>11.9               |
| <=17 years*<br>18-19 years<br><20 years<br>20-24 years                | 10.3<br>9.0<br>9.5<br>8.6        | 12.2<br>11.7<br>11.9<br>9.3        |
| <=17 years*<br>18-19 years<br><20 years<br>20-24 years<br>25-29 years | 10.3<br>9.0<br>9.5<br>8.6<br>7.7 | 12.2<br>11.7<br>11.9<br>9.3<br>8.8 |

Preterm birth (PTB) rate by maternal age group, Alberta Health Services (Edmonton Area), 1997-1999 and 2004-2006 combined Table 3.4.3

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| Table 3.4.4 | Preterm births (PTB) by public health service area, Alberta Health Services (Edmonton Area), |
|-------------|----------------------------------------------------------------------------------------------|
|             | 1997 to 2006 and 2004-2006 combined                                                          |

| Preterm Live Births | 1997 | 1998 | 1999 | 2000  | 2001 | 2002  | 2003  | 2004  | 2005  | 2006  | 2004-<br>2006 |
|---------------------|------|------|------|-------|------|-------|-------|-------|-------|-------|---------------|
| St. Albert          | 43   | 29   | 50   | 49    | 45   | 50    | 49    | 56    | 56    | 52    | 164           |
| Castle Downs        | 27   | 47   | 32   | 43    | 58   | 49    | 50    | 55    | 70    | 58    | 183           |
| Woodcroft           | 73   | 83   | 93   | 80    | 79   | 76    | 89    | 107   | 92    | 88    | 287           |
| Eastwood            | 76   | 83   | 74   | 68    | 85   | 79    | 95    | 92    | 77    | 103   | 272           |
| North Central       | 63   | 67   | 71   | 72    | 81   | 70    | 65    | 80    | 85    | 82    | 247           |
| North East          | 75   | 84   | 88   | 91    | 94   | 80    | 108   | 99    | 94    | 114   | 307           |
| West Jasper Place   | 86   | 104  | 100  | 96    | 96   | 83    | 116   | 115   | 117   | 113   | 345           |
| Twin Brooks         | 61   | 66   | 59   | 67    | 68   | 85    | 89    | 86    | 103   | 123   | 312           |
| Bonnie Doon         | 64   | 66   | 72   | 73    | 91   | 68    | 67    | 73    | 67    | 76    | 216           |
| Mill Woods          | 118  | 102  | 121  | 155   | 86   | 136   | 143   | 167   | 167   | 139   | 473           |
| Strathcona County   | 48   | 65   | 52   | 55    | 71   | 70    | 75    | 77    | 72    | 75    | 224           |
| Leduc County        | 25   | 32   | 30   | 37    | 31   | 43    | 41    | 33    | 42    | 53    | 128           |
| WestView            | 62   | 50   | 61   | 58    | 55   | 71    | 75    | 94    | 68    | 81    | 243           |
| Sturgeon County     | 30   | 25   | 31   | 34    | 33   | 38    | 27    | 27    | 48    | 33    | 108           |
| Fort Saskatchewan   | 16   | 13   | 18   | 16    | 10   | 20    | 8     | 15    | 20    | 10    | 45            |
| Edmonton Area       | 871  | 918  | 952  | 1,014 | 986  | 1,021 | 1,097 | 1,177 | 1,178 | 1,201 | 3,556         |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: Regional totals include events for residents with unknown ages and/or unknown public health service areas.

| PTB Rate              | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| (per 100 live births) | 1337 | 1330 | 1333 | 2000 | 2001 | 2002 | 2003 | 2004 | 2003 | 2000 | 2004-2000 |
| St. Albert            | 8.2  | 5.3  | 8.7  | 9.2  | 8.3  | 8.7  | 8.6  | 9.9  | 9.0  | 8.8  | 9.2       |
| Castle Downs          | 5.6  | 9.2  | 6.1  | 9.2  | 11.2 | 9.6  | 8.2  | 8.2  | 10.5 | 7.5  | 8.7       |
| Woodcroft             | 8.6  | 8.9  | 10.2 | 9.3  | 9.0  | 8.3  | 10.4 | 12.3 | 11.3 | 10.5 | 11.3      |
| Eastwood              | 10.8 | 11.5 | 10.5 | 10.3 | 11.7 | 11.5 | 13.6 | 14.6 | 11.7 | 14.1 | 13.5      |
| North Central         | 9.2  | 8.6  | 8.9  | 9.5  | 9.8  | 8.6  | 7.5  | 9.8  | 10.7 | 9.0  | 9.8       |
| North East            | 8.0  | 8.7  | 9.3  | 9.8  | 10.4 | 8.9  | 11.6 | 10.4 | 9.6  | 10.1 | 10.0      |
| West Jasper Place     | 7.5  | 8.7  | 8.5  | 8.7  | 8.2  | 7.6  | 9.8  | 9.1  | 9.7  | 8.2  | 9.0       |
| Twin Brooks           | 6.9  | 7.7  | 6.6  | 7.3  | 7.7  | 9.1  | 8.2  | 7.9  | 8.8  | 8.9  | 8.6       |
| Bonnie Doon           | 7.3  | 7.4  | 7.9  | 8.9  | 10.5 | 7.7  | 7.8  | 8.4  | 8.6  | 8.8  | 8.6       |
| Mill Woods            | 8.6  | 7.6  | 9.3  | 12.2 | 7.0  | 10.2 | 10.5 | 11.2 | 11.2 | 8.9  | 10.4      |
| Strathcona County     | 6.9  | 8.8  | 6.7  | 7.6  | 8.7  | 8.2  | 8.2  | 9.2  | 7.8  | 8.5  | 8.5       |
| Leduc County          | 6.7  | 7.6  | 7.0  | 10.0 | 7.5  | 9.6  | 9.2  | 7.1  | 8.9  | 10.3 | 8.8       |
| WestView              | 8.5  | 6.8  | 8.1  | 7.6  | 7.2  | 8.7  | 9.0  | 10.9 | 7.3  | 8.4  | 8.8       |
| Sturgeon County       | 7.5  | 7.0  | 7.8  | 10.8 | 9.6  | 10.9 | 7.6  | 7.4  | 12.4 | 7.7  | 9.2       |
| Fort Saskatchewan     | 11.6 | 7.8  | 10.0 | 9.1  | 6.5  | 10.4 | 5.8  | 9.6  | 10.7 | 6.2  | 8.9       |
| Edmonton Area         | 8.1  | 8.2  | 8.4  | 9.4  | 8.9  | 9.0  | 9.4  | 9.9  | 9.7  | 9.2  | 9.6       |

Table 3.4.5Preterm birth (PTB) rate by public health service area, Alberta Health Services (Edmonton Area),<br/>1997 to 2006 and 2004-2006 combined

| Table 3.4.6 | Standard errors for preterm birth (PTB) rate by public health service area, Alberta Health Services, |
|-------------|------------------------------------------------------------------------------------------------------|
|             | 1997 to 2006 and 2004-2006 combined                                                                  |

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 1.20 | 0.95 | 1.17 | 1.26 | 1.19 | 1.18 | 1.17 | 1.25 | 1.15 | 1.17 | 0.69      |
| Castle Downs      | 1.04 | 1.28 | 1.05 | 1.33 | 1.39 | 1.31 | 1.12 | 1.06 | 1.19 | 0.94 | 0.61      |
| Woodcroft         | 0.97 | 0.93 | 1.00 | 0.99 | 0.97 | 0.92 | 1.04 | 1.11 | 1.11 | 1.06 | 0.63      |
| Eastwood          | 1.17 | 1.19 | 1.15 | 1.18 | 1.20 | 1.22 | 1.30 | 1.40 | 1.25 | 1.28 | 0.76      |
| North Central     | 1.10 | 1.00 | 1.01 | 1.06 | 1.03 | 0.99 | 0.90 | 1.04 | 1.09 | 0.95 | 0.59      |
| North East        | 0.89 | 0.90 | 0.94 | 0.98 | 1.01 | 0.95 | 1.05 | 0.99 | 0.94 | 0.90 | 0.54      |
| West Jasper Place | 0.78 | 0.81 | 0.81 | 0.85 | 0.80 | 0.81 | 0.87 | 0.81 | 0.85 | 0.74 | 0.46      |
| Twin Brooks       | 0.86 | 0.91 | 0.83 | 0.86 | 0.90 | 0.94 | 0.84 | 0.82 | 0.82 | 0.77 | 0.46      |
| Bonnie Doon       | 0.88 | 0.88 | 0.89 | 0.99 | 1.04 | 0.90 | 0.92 | 0.94 | 1.00 | 0.96 | 0.56      |
| Mill Woods        | 0.76 | 0.72 | 0.80 | 0.92 | 0.72 | 0.83 | 0.83 | 0.82 | 0.82 | 0.72 | 0.45      |
| Strathcona County | 0.96 | 1.05 | 0.89 | 0.98 | 0.98 | 0.94 | 0.91 | 1.00 | 0.88 | 0.93 | 0.54      |
| Leduc County      | 1.30 | 1.29 | 1.23 | 1.56 | 1.29 | 1.39 | 1.37 | 1.19 | 1.31 | 1.34 | 0.74      |
| WestView          | 1.03 | 0.93 | 1.00 | 0.96 | 0.94 | 0.99 | 0.99 | 1.06 | 0.85 | 0.90 | 0.54      |
| Sturgeon County   | 1.32 | 1.35 | 1.34 | 1.75 | 1.60 | 1.67 | 1.40 | 1.37 | 1.68 | 1.30 | 0.84      |
| Fort Saskatchewan | 2.73 | 2.09 | 2.24 | 2.18 | 1.99 | 2.20 | 1.98 | 2.35 | 2.26 | 1.89 | 1.27      |
| Edmonton Area     | 0.26 | 0.26 | 0.26 | 0.28 | 0.27 | 0.27 | 0.27 | 0.27 | 0.27 | 0.25 | 0.15      |

## 3.5 Multiple Birth

Multiple birth: The birth of two or more offspring produced in the same gestation period.

Multiple birth rate: Number of multiple births per 100 live births.

## Time Trends (Data table 3.5.1)

- Due to the relatively small numbers for both the Edmonton and Calgary Areas, the multiple birth rate is presented as a 3-year moving average rate. The provincial rate shows a steady increase from 1996 to 2004 but appears to be stabilizing in more recent years.
- In the Edmonton Area, the multiple birth rate was 2.6% in 1997-1999. The rate increased to

## Multiple birth rate in the Edmonton Area, Calgary Area, and Alberta, 1997 to 2006 (3 year moving average)



3.5% in 2004-2006. The trend appears to be increasing.

## Age Effects (Data table 3.5.2)

• The multiple birth rate varies with maternal age. In the Edmonton Area, the rate for women aged 20-24 years was 2.3% for 2004-2006 combined compared to 5.4% for women 35-39 years old and 40 years and older.



• The multiple birth rate curve in the Edmonton Area has

shifted upwards since 1997-1999, indicating a higher multiple birth rate for all age groups but it is especially evident in the older age groups.

## Sub-Edmonton Area Differences (Data tables 3.5.3, 3.5.4, 3.5.5)

• The multiple birth rate for the Edmonton Area for 2004-2006 combined was 3.5% or 3.5 per 100 live births. The multiple birth rates in St. Albert (4.8%) and Twin Brooks (4.6%) were significantly higher than the area rate. Woodcroft public health service area had a significantly lower multiple birth rate at 2.2%.



## Multiple birth rate by public health service area Edmonton Area, 2004-2006 combined

#### Table 3.5.1 Multiple birth rate, Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997-1999 to 2004-2006 (3 year moving average)

| Multiple Live Births                         | 1997-1999 | 1998-000  | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
|----------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Edmonton Area                                | 879       | 930       | 944       | 975       | 987       | 1,109     | 1,208     | 1,308     |
| Calgary Area                                 | 1,100     | 1,138     | 1,207     | 1,305     | 1,449     | 1,491     | 1,501     | 1,523     |
| Alberta                                      | 2,963     | 3,129     | 3,267     | 3,459     | 3,655     | 3,874     | 3,991     | 4,139     |
| Multiple Birth Rate<br>(per 100 live births) | 1997-1999 | 1998-2000 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
| Edmonton Area                                | 2.6       | 2.8       | 2.8       | 2.9       | 2.9       | 3.2       | 3.4       | 3.5       |
| Calgary Area                                 | 2.9       | 2.9       | 3.1       | 3.3       | 3.5       | 3.5       | 3.4       | 3.3       |
| Alberta                                      | 2.6       | 2.8       | 2.9       | 3.1       | 3.2       | 3.3       | 3.3       | 3.3       |
| Standard Error                               | 1997-1999 | 1998-2000 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
| Edmonton Area                                | 0.09      | 0.09      | 0.09      | 0.09      | 0.09      | 0.09      | 0.10      | 0.10      |
| Calgary Area                                 | 0.09      | 0.09      | 0.09      | 0.09      | 0.09      | 0.09      | 0.09      | 0.08      |
| Alberta                                      | 0.05      | 0.05      | 0.05      | 0.05      | 0.05      | 0.05      | 0.05      | 0.05      |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

#### Multiple birth rate by maternal age group, Alberta Health Services (Edmonton Area), 1997-1999 Table 3.5.2 and 2004-2006 combined

| Multiple Live Births                      | 1997-1999                | 2004-2006                |
|-------------------------------------------|--------------------------|--------------------------|
| <=17 years*                               | 24                       | 8                        |
| 18-19 years                               | 10                       | 36                       |
| <20 years                                 | 34                       | 44                       |
| 20-24 years                               | 111                      | 154                      |
| 25-29 years                               | 256                      | 357                      |
| 30-34 years                               | 318                      | 441                      |
| 35-39 years                               | 140                      | 259                      |
| >=40 years*                               | 20                       | 53                       |
| Multiple Birth Rate (per 100 live births) | 1997-1999                | 2004-2006                |
| <=17 years*                               | 2.0                      | 1.6                      |
|                                           | 3.2                      | 1.0                      |
| 18-19 years                               | 0.7                      | 3.0                      |
| 18-19 years<br><20 years                  |                          |                          |
|                                           | 0.7                      | 3.0                      |
| <20 years                                 | 0.7                      | 3.0<br>2.5               |
| <20 years<br>20-24 years                  | 0.7<br>1.6<br>1.8        | 3.0<br>2.5<br>2.3        |
| <20 years<br>20-24 years<br>25-29 years   | 0.7<br>1.6<br>1.8<br>2.4 | 3.0<br>2.5<br>2.3<br>3.0 |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-1999 and 2004-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year. \*The <=17 yr age group includes females 13-17 years of age and the >=40 yr age group includes females 40-49 years of age.

| Multiple Births   | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 26   | 16   | 16   | 20   | 6    | 16   | 13   | 33   | 37   | 16   | 86        |
| Castle Downs      | 6    | 20   | 6    | 20   | 12   | 22   | 15   | 18   | 20   | 31   | 69        |
| Woodcroft         | 8    | 23   | 23   | 22   | 23   | 23   | 28   | 28   | 18   | 10   | 56        |
| Eastwood          | 10   | 17   | 16   | 12   | 13   | 16   | 23   | 22   | 15   | 37   | 74        |
| North Central     | 16   | 24   | 16   | 19   | 21   | 16   | 22   | 30   | 20   | 35   | 85        |
| North East        | 21   | 22   | 28   | 29   | 35   | 28   | 25   | 31   | 30   | 38   | 99        |
| West Jasper Place | 34   | 50   | 28   | 29   | 32   | 26   | 26   | 30   | 58   | 37   | 125       |
| Twin Brooks       | 30   | 13   | 25   | 29   | 27   | 26   | 30   | 59   | 36   | 72   | 167       |
| Bonnie Doon       | 18   | 12   | 18   | 28   | 31   | 30   | 26   | 40   | 20   | 38   | 98        |
| Mill Woods        | 49   | 42   | 35   | 44   | 32   | 34   | 34   | 58   | 52   | 43   | 153       |
| Strathcona County | 19   | 17   | 20   | 22   | 31   | 30   | 34   | 37   | 21   | 35   | 93        |
| Leduc County      | 4    | 10   | 16   | 10   | 15   | 18   | 22   | 8    | 32   | 10   | 50        |
| WestView          | 25   | 26   | 28   | 26   | 24   | 18   | 32   | 38   | 29   | 22   | 89        |
| Sturgeon County   | 12   | 12   | 11   | 8    | 12   | 6    | 8    | 7    | 20   | 16   | 43        |
| Fort Saskatchewan | 4    | 4    | 2    | 10   | 6    | 10   | 8    | 4    | 10   | 6    | 20        |
| Edmonton Area     | 283  | 308  | 288  | 334  | 322  | 319  | 346  | 444  | 418  | 446  | 1,308     |

Table 3.5.3Multiple births by public health service area, Alberta Health Services (Edmonton Area), 1997 to<br/>2006 and 2004-2006 combined

 Table 3.5.4
 Multiple birth rate by public health service area, Alberta Health Services (Edmonton Area), 1997 to 2006 and 2004-2006 combined

| Multiple Birth Rate<br>(per 100 live births) | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|----------------------------------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert                                   | 5.0  | 2.9  | 2.8  | 3.8  | 1.1  | 2.8  | 2.3  | 5.8  | 6.0  | 2.7  | 4.8       |
| Castle Downs                                 | 1.2  | 3.9  | 1.1  | 4.3  | 2.3  | 4.3  | 2.5  | 2.7  | 3.0  | 4.0  | 3.3       |
| Woodcroft                                    | 0.9  | 2.5  | 2.5  | 2.6  | 2.6  | 2.5  | 3.3  | 3.2  | 2.2  | 1.2  | 2.2       |
| Eastwood                                     | 1.4  | 2.4  | 2.3  | 1.8  | 1.8  | 2.3  | 3.3  | 3.5  | 2.3  | 5.0  | 3.7       |
| North Central                                | 2.3  | 3.1  | 2.0  | 2.5  | 2.5  | 2.0  | 2.5  | 3.7  | 2.5  | 3.9  | 3.4       |
| North East                                   | 2.2  | 2.3  | 2.9  | 3.1  | 3.9  | 3.1  | 2.7  | 3.3  | 3.1  | 3.4  | 3.2       |
| West Jasper Place                            | 3.0  | 4.2  | 2.4  | 2.6  | 2.7  | 2.4  | 2.2  | 2.4  | 4.8  | 2.7  | 3.2       |
| Twin Brooks                                  | 3.4  | 1.5  | 2.8  | 3.2  | 3.1  | 2.8  | 2.8  | 5.4  | 3.1  | 5.2  | 4.6       |
| Bonnie Doon                                  | 2.0  | 1.4  | 2.0  | 3.4  | 3.6  | 3.4  | 3.0  | 4.6  | 2.6  | 4.4  | 3.9       |
| Mill Woods                                   | 3.6  | 3.1  | 2.7  | 3.5  | 2.6  | 2.6  | 2.5  | 3.9  | 3.5  | 2.8  | 3.4       |
| Strathcona County                            | 2.7  | 2.3  | 2.6  | 3.0  | 3.8  | 3.5  | 3.7  | 4.4  | 2.3  | 3.9  | 3.5       |
| Leduc County                                 | 1.1  | 2.4  | 3.7  | 2.7  | 3.6  | 4.0  | 4.9  | 1.7  | 6.8  | 1.9  | 3.4       |
| WestView                                     | 3.4  | 3.6  | 3.7  | 3.4  | 3.2  | 2.2  | 3.8  | 4.4  | 3.1  | 2.3  | 3.2       |
| Sturgeon County                              | 3.0  | 3.4  | 2.8  | 2.5  | 3.5  | 1.7  | 2.2  | 1.9  | 5.2  | 3.8  | 3.7       |
| Fort Saskatchewan                            | 2.9  | 2.4  | 1.1  | 5.7  | 3.9  | 5.2  | 5.8  | 2.5  | 5.3  | 3.7  | 4.0       |
| Edmonton Area                                | 2.6  | 2.8  | 2.5  | 3.1  | 2.9  | 2.8  | 3.0  | 3.7  | 3.5  | 3.4  | 3.5       |

| Standard Error    | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 0.95 | 0.72 | 0.68 | 0.83 | 0.45 | 0.69 | 0.62 | 0.98 | 0.95 | 0.67 | 0.51      |
| Castle Downs      | 0.50 | 0.86 | 0.46 | 0.93 | 0.66 | 0.90 | 0.63 | 0.62 | 0.66 | 0.70 | 0.39      |
| Woodcroft         | 0.33 | 0.51 | 0.52 | 0.54 | 0.54 | 0.52 | 0.61 | 0.60 | 0.51 | 0.37 | 0.29      |
| Eastwood          | 0.45 | 0.57 | 0.56 | 0.52 | 0.49 | 0.57 | 0.68 | 0.73 | 0.58 | 0.81 | 0.42      |
| North Central     | 0.58 | 0.62 | 0.50 | 0.57 | 0.55 | 0.49 | 0.54 | 0.66 | 0.55 | 0.64 | 0.36      |
| North East        | 0.48 | 0.48 | 0.55 | 0.57 | 0.64 | 0.58 | 0.53 | 0.57 | 0.55 | 0.54 | 0.32      |
| West Jasper Place | 0.50 | 0.58 | 0.44 | 0.48 | 0.48 | 0.46 | 0.43 | 0.43 | 0.61 | 0.44 | 0.29      |
| Twin Brooks       | 0.61 | 0.42 | 0.55 | 0.58 | 0.58 | 0.54 | 0.50 | 0.69 | 0.50 | 0.60 | 0.35      |
| Bonnie Doon       | 0.48 | 0.39 | 0.46 | 0.63 | 0.63 | 0.61 | 0.59 | 0.71 | 0.57 | 0.70 | 0.39      |
| Mill Woods        | 0.50 | 0.47 | 0.45 | 0.51 | 0.45 | 0.43 | 0.42 | 0.50 | 0.48 | 0.41 | 0.27      |
| Strathcona County | 0.62 | 0.55 | 0.57 | 0.64 | 0.67 | 0.63 | 0.63 | 0.71 | 0.49 | 0.65 | 0.36      |
| Leduc County      | 0.54 | 0.74 | 0.91 | 0.85 | 0.91 | 0.93 | 1.03 | 0.60 | 1.15 | 0.61 | 0.48      |
| WestView          | 0.67 | 0.68 | 0.69 | 0.65 | 0.63 | 0.51 | 0.66 | 0.70 | 0.57 | 0.48 | 0.34      |
| Sturgeon County   | 0.86 | 0.95 | 0.82 | 0.89 | 0.99 | 0.70 | 0.78 | 0.72 | 1.13 | 0.92 | 0.55      |
| Fort Saskatchewan | 1.43 | 1.19 | 0.78 | 1.75 | 1.56 | 1.60 | 1.98 | 1.26 | 1.65 | 1.48 | 0.87      |
| Edmonton Area     | 0.15 | 0.15 | 0.15 | 0.17 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.16 | 0.10      |

Table 3.5.5Standard errors for multiple birth rate by public health service area, Alberta Health Services<br/>(Edmonton Area), 1997 to 2006 and 2004-2006 combined

## 4.1 Infant Mortality

Infant Death: An infant death is defined as an infant dying before 12 months of age.

Infant Mortality Rate: Number of infant deaths per 1,000 live births.

## Time Trends (Data table 4.1.1)



## Sub-Edmonton Area Differences (Data tables 4.1.2, 4.1.3, 4.1.4)

• The IMR for the Edmonton Area, for 2002-2006 combined, was 6.4 per 1,000 live births. There were no public health service areas that had a significantly higher infant mortality rate than the Area rate. Twin Brooks was the only public health service area with a significantly lower rate at 3.4 per 1,000 live births.



## Infant mortality rate (per 1,000 live births) by public health service area, Edmonton Area, 2002-2006 combined

## Table 4.1.1 Infant mortality rate (IMR), Alberta Health Services (Edmonton Area), Alberta Health Services (Calgary Area), and Alberta, 1997-2001 to 2002-2006 (5 year moving average)

| Infant Deaths               | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Edmonton Area               | 329       | 324       | 350       | 369       | 381       | 387       |
| Calgary Area                | 298       | 347       | 377       | 367       | 391       | 401       |
| Alberta                     | 1,020     | 1,116     | 1,205     | 1,222     | 1,259     | 1,300     |
| IMR (per 1,000 live births) | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
| Edmonton Area               | 6.0       | 5.8       | 6.2       | 6.5       | 6.6       | 6.4       |
| Calgary Area                | 4.6       | 5.3       | 5.6       | 5.3       | 5.5       | 5.4       |
| Alberta                     | 5.5       | 6.0       | 6.3       | 6.4       | 6.4       | 6.4       |
| Standard Error              | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
| Edmonton Area               | 0.33      | 0.32      | 0.33      | 0.34      | 0.34      | 0.33      |
| Calgary Area                | 0.27      | 0.28      | 0.29      | 0.28      | 0.28      | 0.27      |
| Alberta                     | 0.17      | 0.18      | 0.18      | 0.18      | 0.18      | 0.18      |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

| Table 4.1.2 | t deaths by pu<br>02-2006 comb |           | rvice area, Alb | erta Health Sei | rvices (Edmon | ton Area), 1997 | 7-2001 |
|-------------|--------------------------------|-----------|-----------------|-----------------|---------------|-----------------|--------|
|             | 1007 0001                      | 4000 0000 | 1000 0000       | 0000 0004       | 0004 0005     |                 |        |

| Infant Deaths     | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| St. Albert        | 20        | 17        | 17        | 17        | 12        | 14        |
| Castle Downs      | 18        | 17        | 16        | 14        | 12        | 12        |
| Woodcroft         | 23        | 22        | 20        | 23        | 26        | 29        |
| Eastwood          | 53        | 54        | 42        | 41        | 29        | 33        |
| North Central     | 24        | 21        | 21        | 21        | 19        | 24        |
| North East        | 35        | 34        | 28        | 29        | 29        | 31        |
| West Jasper Place | 31        | 35        | 34        | 39        | 40        | 32        |
| Twin Brooks       | 12        | 14        | 12        | 14        | 17        | 19        |
| Bonnie Doon       | 33        | 32        | 32        | 29        | 26        | 34        |
| Mill Woods        | 37        | 28        | 26        | 29        | 31        | 48        |
| Strathcona County | 17        | 20        | 16        | 21        | 24        | 18        |
| Leduc County      | 9         | 13        | 13        | 12        | 12        | 9         |
| WestView          | 23        | 19        | 21        | 20        | 21        | 32        |
| Sturgeon County   | 9         | 7         | V         | V         | 5         | 11        |
| Fort Saskatchewan | V         | V         | V         | V         | V         | V         |
| Edmonton Area     | 329       | 324       | 350       | 368       | 380       | 387       |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: V indicates that the numbers are too small to be reported.

| IMR (per 1,000 live births) | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| St. Albert                  | 7.2       | 6.1       | 6.1       | 6.2       | 4.4       | 4.8       |
| Castle Downs                | 6.5       | 6.5       | 6.3       | 5.6       | 4.8       | 3.7       |
| Woodcroft                   | 5.3       | 5.0       | 4.5       | 5.2       | 5.7       | 6.8       |
| Eastwood                    | 15.6      | 15.5      | 12.0      | 11.7      | 8.0       | 9.7       |
| North Central               | 5.9       | 5.2       | 5.3       | 5.5       | 5.1       | 5.7       |
| North East                  | 7.6       | 7.4       | 6.0       | 6.2       | 6.1       | 6.3       |
| West Jasper Place           | 5.4       | 6.1       | 5.9       | 6.7       | 7.0       | 5.2       |
| Twin Brooks                 | 2.4       | 3.0       | 2.7       | 3.2       | 3.8       | 3.4       |
| Bonnie Doon                 | 7.7       | 7.4       | 7.3       | 6.6       | 5.8       | 8.0       |
| Mill Woods                  | 5.5       | 4.3       | 4.0       | 4.4       | 4.6       | 6.6       |
| Strathcona County           | 4.1       | 4.9       | 4.1       | 5.6       | 6.5       | 4.1       |
| Leduc County                | 4.2       | 6.2       | 6.2       | 6.0       | 6.0       | 3.8       |
| WestView                    | 5.7       | 4.8       | 5.5       | 5.4       | 5.6       | 7.3       |
| Sturgeon County             | 5.2       | 4.0       | V         | V         | 2.7       | 5.8       |
| Fort Saskatchewan           | V         | V         | V         | V         | V         | V         |
| Edmonton Area               | 6.0       | 5.8       | 6.2       | 6.5       | 6.5       | 6.4       |

### Infant mortality rate (IMR) by public health service area, Alberta Health Services (Edmonton Area), 1997-2001 to 2002-2006 (5 year moving average) Table 4.1.3

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

Note: V indicates that the numbers were too small, resulting in high variability in the rate and therefore, are not reported.

#### Standard errors for infant mortality rate (IMR) by public health service area, Alberta Health Table 4.1.4 Services (Edmonton Area), 1997-2001 to 2002-2006

| Standard Error    | 1997-2001 | 1998-2002 | 1999-2003 | 2000-2004 | 2001-2005 | 2002-2006 |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| St. Albert        | 1.51      | 1.48      | 1.47      | 1.60      | 1.25      | 1.28      |
| Castle Downs      | 1.49      | 1.58      | 1.57      | 1.53      | 1.16      | 1.07      |
| Woodcroft         | 1.03      | 0.94      | 1.04      | 1.12      | 1.20      | 1.25      |
| Eastwood          | 1.79      | 1.82      | 2.04      | 2.08      | 1.96      | 1.68      |
| North Central     | 1.13      | 1.06      | 1.07      | 1.17      | 1.19      | 1.16      |
| North East        | 1.18      | 1.17      | 1.28      | 1.28      | 1.19      | 1.13      |
| West Jasper Place | 1.08      | 1.01      | 1.03      | 0.96      | 1.04      | 0.92      |
| Twin Brooks       | 0.84      | 0.80      | 0.82      | 0.73      | 0.72      | 0.77      |
| Bonnie Doon       | 1.25      | 1.31      | 1.30      | 1.29      | 1.33      | 1.37      |
| Mill Woods        | 0.85      | 0.81      | 0.81      | 0.90      | 0.97      | 0.96      |
| Strathcona County | 1.22      | 1.02      | 1.09      | 0.99      | 1.00      | 0.96      |
| Leduc County      | 1.72      | 1.72      | 1.71      | 1.40      | 1.25      | 1.27      |
| WestView          | 1.19      | 1.20      | 1.14      | 1.23      | 1.28      | 1.28      |
| Sturgeon County   | 0.96      | 1.14      | V         | V         | 1.66      | 1.76      |
| Fort Saskatchewan | V         | V         | V         | V         | V         | V         |
| Edmonton Area     | 0.33      | 0.32      | 0.33      | 0.34      | 0.33      | 0.33      |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). Note: V indicates that the numbers were too small, resulting in high variability in the rate and therefore, SEs are not reported.

## 5.1 Maternal Age

Maternal Age: Refers to the age of the mother at the time of the event.

### Time Trends (Data tables 5.1.1, 5.1.2)



age. In 2006, the average maternal age in the Calgary Area was 30.4 years and in the province, it was 29.1 years. The Calgary Area showed a higher average maternal age than both the Edmonton Area and the province over the last 10 years.

The average age at first live birth among women delivering a 30.5 multiple birth was 30.0 29.7 years in 2006 29.5 compared to 27.1 years for women 29.0 Average age (years) delivering a 28.5 singleton. Both 28.0 trend lines show 27.5 an overall increase 27.0 in maternal age 26.5 over the last 10 26.0 years.





• For the years 2005-2007 (combined), the percent of live births born to women 35 years and older was: 15.8% (Edmonton Area), 20.0% (Calgary Area), and 15.2% (Alberta).

## Summary Table: Mean maternal age (years) for selected types of birth and percent of women 35 years and older giving birth to live infants, Alberta Health Services (Edmonton Area) and Alberta, 1997 to 2006

| Edmonton Area                     | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| All live births                   | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.8 | 28.8 | 28.8 | 28.9 |
| First live birth                  | 26.6 | 26.5 | 26.6 | 26.7 | 26.8 | 26.8 | 26.9 | 27.2 | 27.1 | 27.1 |
| Singleton live birth              | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.7 | 28.7 | 28.7 | 28.8 |
| Multiple live birth               | 29.8 | 29.3 | 30.0 | 30.0 | 30.5 | 30.3 | 30.3 | 30.9 | 30.1 | 30.0 |
| % live births to<br>women 35+ yrs | 13.9 | 14.1 | 15.5 | 15.3 | 15.2 | 15.3 | 15.6 | 15.5 | 15.2 | 16.1 |
| Alberta                           | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| All live births                   | 28.6 | 28.6 | 28.7 | 28.8 | 28.8 | 28.9 | 29.0 | 29.1 | 29.1 | 29.1 |
| First live birth                  | 26.8 | 26.7 | 26.9 | 27.0 | 27.0 | 27.3 | 27.4 | 27.4 | 27.4 | 27.4 |
| Singleton live birth              | 28.6 | 28.5 | 28.6 | 28.7 | 28.8 | 28.8 | 29.0 | 29.0 | 29.1 | 29.0 |
| Multiple live birth               | 30.3 | 30.5 | 30.6 | 30.5 | 30.6 | 30.5 | 30.6 | 30.9 | 30.7 | 30.8 |
| % live births to<br>women 35+ yrs | 13.4 | 13.3 | 14.2 | 14.7 | 14.6 | 14.5 | 14.9 | 14.8 | 15.1 | 15.2 |

## Age Effects (Data table 5.1.3)

Selected health indicators by maternal age group, show that younger women (<20 years) have higher rates of prenatal smoking while older women (35+ years) have higher rates of multiple birth and midwife attended births.

Birth outcomes such as small-for-gestational age and preterm birth are indicators that have a U-shaped relationship with maternal age.



## Selected indicators by maternal age, Edmonton Area, 2004-2006 combined

## Sub-Edmonton Area Differences (Data tables 5.1.4, 5.1.5, 5.1.6)

The average age varies considerably at the sub-area level. The lowest average maternal age (27.6 years) was in the North East. Eastwood and Fort Saskatchewan public health service areas. The public health service areas with the highest average maternal age included: St. Albert



(30.3 years), Twin Brooks (30.4 years), Bonnie Doon (29.9 years), and Strathcona County (30.2 years). For women having their first live birth, the highest average maternal age was, again, in St. Albert, Twin Brooks, Bonnie Doon, and Strathcona. Fort Saskachewan public health service area had the lowest average maternal age at first live birth of 24.9 years.

Four public health service areas have significantly higher percentages of babies born to older women than the Edmonton Area rate of 15.6% (1997-2006 data combined) including St. Albert (20.9%), Twin Brooks (21.3%), Bonnie Doon (22.0%), and Strathcona County (17.4%).





| Table 5.1.1 | Average maternal age (years) at delivery, Alberta Health Services (Edmonton Area), Alberta |
|-------------|--------------------------------------------------------------------------------------------|
|             | Health Services (Calgary Area), and Alberta, 1997 to 2006                                  |

| Age (years)   | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---------------|------|------|------|------|------|------|------|------|------|------|
| Edmonton Area | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.8 | 28.8 | 28.8 | 28.9 |
| Calgary Area  | 29.7 | 29.7 | 29.8 | 29.8 | 30.0 | 30.0 | 30.2 | 30.2 | 30.4 | 30.4 |
| Alberta       | 28.6 | 28.6 | 28.7 | 28.8 | 28.8 | 28.9 | 29.0 | 29.1 | 29.1 | 29.1 |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Reproductive Health Working Group (2006). Alberta Reproductive Health: Pregnancies and Births 2006. Edmonton, AB: Alberta Health and Wellness. (3) Alberta Reproductive Health Report Working Group (2007). Alberta Reproductive Health: Pregnancies & Births Table Update 2007. Edmonton, AB: Alberta Health and Wellness.

### Table 5.1.2 Average maternal age (years) and percent of live births to aged women 35 years and older, Alberta Health Services (Edmonton Area), 1997 to 2006

|                                   | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|
| All live births                   | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.8 | 28.8 | 28.8 | 28.9 |
| Singleton                         | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.7 | 28.7 | 28.7 | 28.8 |
| Multiple                          | 29.8 | 29.3 | 30.0 | 30.0 | 30.5 | 30.3 | 30.3 | 30.9 | 30.1 | 30.0 |
| First live birth                  | 26.6 | 26.5 | 26.6 | 26.7 | 26.8 | 26.8 | 26.9 | 27.2 | 27.1 | 27.1 |
| Singleton                         | 26.6 | 26.4 | 26.5 | 26.7 | 26.8 | 26.7 | 26.9 | 27.1 | 27.0 | 27.1 |
| Multiple                          | 29.0 | 28.2 | 29.1 | 28.6 | 29.5 | 28.8 | 29.5 | 30.0 | 29.3 | 29.7 |
| % of live births to women 35+ yrs | 13.9 | 14.1 | 15.5 | 15.3 | 15.2 | 15.3 | 15.6 | 15.5 | 15.2 | 16.1 |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

## Table 5.1.3 Selected indicators by maternal age group, Alberta Health Services (Edmonton Area), 2004-2006 combined

| Indicator                                                                | <20 years | 20-24<br>years | 25-29<br>years | 30-34<br>years | 35-39<br>years | 40+<br>years |
|--------------------------------------------------------------------------|-----------|----------------|----------------|----------------|----------------|--------------|
| Smoking during pregnancy rate (per 100 women delivering)                 | 45.9      | 33.3           | 15.7           | 9.8            | 10.2           | 12.0         |
| Small-for-gestational age singleton rate (per 100 singleton live births) | 9.3       | 7.9            | 6.9            | 6.7            | 7.4            | 9.1          |
| Large-for-gestational age singleton rate (per 100 singleton live births) | 10.2      | 10.5           | 11.1           | 11.6           | 13.2           | 12.9         |
| Low birth weight rate (per 100 live births)                              | 9.7       | 6.7            | 6.1            | 6.3            | 8.2            | 10.7         |
| High birth weight rate (per 100 live births)                             | 10.1      | 10.6           | 11.3           | 10.9           | 12.0           | 11.4         |
| Preterm birth rate (per 100 live births)                                 | 11.9      | 9.3            | 8.8            | 9.1            | 11.3           | 13.8         |
| Multiple birth rate (per 100 live births)                                | 2.5       | 2.3            | 3.0            | 4.0            | 5.4            | 5.4          |
| Midwife Attendant rate (per 100 live births)                             | 0.5       | 0.9            | 1.3            | 1.4            | 1.7            | 1.8          |

Sources: (1) Vital Statistics, Municipal Affairs, Service Alberta (2004-2006). (2) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

| Age (years)       | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| St. Albert        | 30.1 | 29.5 | 29.6 | 30.0 | 29.8 | 29.9 | 30.5 | 30.3 | 30.6 | 30.3 |
| Castle Downs      | 28.4 | 27.9 | 28.0 | 28.0 | 28.7 | 28.6 | 28.6 | 28.7 | 28.4 | 28.8 |
| Woodcroft         | 27.6 | 28.0 | 28.0 | 27.9 | 27.7 | 27.8 | 28.0 | 28.2 | 27.9 | 28.2 |
| Eastwood          | 27.2 | 26.9 | 26.6 | 27.1 | 27.2 | 27.1 | 27.1 | 27.4 | 27.5 | 27.6 |
| North Central     | 27.2 | 27.8 | 28.0 | 27.9 | 27.8 | 28.2 | 28.5 | 27.8 | 28.1 | 28.3 |
| North East        | 27.4 | 27.1 | 27.3 | 27.3 | 27.5 | 27.4 | 27.7 | 27.8 | 27.3 | 27.6 |
| West Jasper Place | 28.6 | 28.5 | 28.9 | 28.8 | 28.9 | 28.9 | 28.8 | 28.8 | 29.0 | 29.0 |
| Twin Brooks       | 29.8 | 29.9 | 30.0 | 29.9 | 30.1 | 30.2 | 30.4 | 30.5 | 30.2 | 30.4 |
| Bonnie Doon       | 29.3 | 29.5 | 29.7 | 29.8 | 29.6 | 29.5 | 29.9 | 29.9 | 29.6 | 29.9 |
| Mill Woods        | 28.2 | 28.2 | 28.2 | 28.4 | 28.5 | 28.5 | 28.4 | 28.6 | 28.6 | 28.7 |
| Strathcona County | 30.0 | 29.6 | 29.8 | 30.2 | 30.4 | 30.3 | 30.0 | 30.2 | 30.2 | 30.2 |
| Leduc County      | 27.4 | 27.8 | 28.2 | 28.1 | 28.4 | 28.4 | 28.3 | 28.7 | 28.3 | 28.5 |
| WestView          | 28.2 | 27.9 | 28.0 | 28.0 | 28.2 | 27.8 | 28.2 | 28.3 | 28.6 | 28.1 |
| Sturgeon County   | 28.0 | 28.2 | 28.5 | 27.9 | 27.9 | 28.1 | 27.7 | 28.0 | 27.8 | 28.1 |
| Fort Saskatchewan | 27.4 | 27.6 | 28.3 | 28.1 | 29.0 | 27.7 | 28.5 | 28.2 | 27.6 | 27.6 |
| Edmonton Area     | 28.4 | 28.3 | 28.5 | 28.5 | 28.6 | 28.6 | 28.8 | 28.8 | 28.8 | 28.9 |

# Table 5.1.4Average maternal age (years) at delivery by public health service area, Alberta Health Services<br/>(Edmonton Area), 1997 to 2006

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

## Table 5.1.5Average maternal age (years) at delivery for first live birth by public health service area,<br/>Alberta Health Services (Edmonton Area), 1997 to 2006

| Age (years)       | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------|------|------|------|------|------|------|------|------|------|------|
| St. Albert        | 28.1 | 27.9 | 27.2 | 27.9 | 27.9 | 27.7 | 28.8 | 29.2 | 28.6 | 28.6 |
| Castle Downs      | 26.3 | 26.5 | 25.7 | 25.9 | 27.3 | 26.7 | 26.8 | 26.6 | 26.6 | 27.3 |
| Woodcroft         | 26.3 | 26.5 | 26.3 | 26.3 | 26.3 | 26.4 | 26.4 | 26.9 | 26.6 | 26.8 |
| Eastwood          | 25.6 | 25.2 | 24.6 | 25.4 | 25.4 | 25.5 | 25.8 | 26.0 | 26.0 | 26.3 |
| North Central     | 25.1 | 25.6 | 26.2 | 25.9 | 26.0 | 26.1 | 26.6 | 25.7 | 26.1 | 26.1 |
| North East        | 25.5 | 25.3 | 25.0 | 25.3 | 25.1 | 25.4 | 25.4 | 25.6 | 25.7 | 25.9 |
| West Jasper Place | 27.1 | 26.6 | 27.3 | 27.2 | 26.8 | 26.9 | 27.0 | 27.0 | 27.2 | 27.5 |
| Twin Brooks       | 28.2 | 28.2 | 28.2 | 28.3 | 28.5 | 28.1 | 28.6 | 29.2 | 28.8 | 28.7 |
| Bonnie Doon       | 27.8 | 28.1 | 28.2 | 28.3 | 28.0 | 27.8 | 28.5 | 29.0 | 28.2 | 28.4 |
| Mill Woods        | 26.2 | 26.1 | 25.9 | 26.3 | 26.6 | 26.6 | 26.3 | 26.7 | 26.8 | 26.9 |
| Strathcona County | 28.4 | 27.2 | 27.9 | 28.2 | 28.3 | 28.7 | 28.2 | 28.5 | 28.5 | 28.3 |
| Leduc County      | 25.2 | 25.3 | 25.2 | 26.5 | 26.6 | 26.3 | 25.6 | 26.7 | 26.5 | 25.9 |
| WestView          | 25.5 | 25.0 | 25.4 | 25.8 | 26.1 | 26.1 | 25.9 | 26.5 | 26.6 | 26.2 |
| Sturgeon County   | 25.5 | 26.1 | 26.4 | 25.6 | 25.6 | 25.5 | 25.2 | 25.6 | 25.9 | 25.8 |
| Fort Saskatchewan | 25.3 | 25.7 | 26.7 | 26.8 | 27.5 | 25.6 | 26.7 | 26.2 | 25.8 | 24.9 |
| Edmonton Area     | 26.6 | 26.5 | 26.5 | 26.7 | 26.8 | 26.8 | 26.9 | 27.2 | 27.1 | 27.1 |

| % Live<br>Births     | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 1997-2006 |
|----------------------|------|------|------|------|------|------|------|------|------|------|-----------|
| St. Albert           | 15.0 | 13.5 | 16.4 | 18.5 | 15.2 | 16.2 | 20.3 | 18.5 | 21.8 | 22.3 | 20.9      |
| Castle Downs         | 12.8 | 12.6 | 13.0 | 14.3 | 16.8 | 15.9 | 13.2 | 13.1 | 12.0 | 14.3 | 13.2      |
| Woodcroft            | 13.1 | 15.5 | 17.1 | 17.1 | 14.6 | 15.2 | 15.2 | 15.1 | 15.1 | 17.1 | 15.8      |
| Eastwood             | 12.3 | 13.1 | 15.0 | 13.4 | 14.2 | 13.4 | 11.3 | 15.5 | 14.6 | 14.2 | 14.7      |
| North Central        | 9.8  | 13.4 | 14.1 | 12.5 | 11.5 | 15.4 | 15.0 | 11.5 | 11.3 | 15.4 | 12.8      |
| North East           | 10.6 | 9.3  | 11.9 | 12.1 | 11.9 | 11.3 | 13.8 | 13.4 | 11.1 | 11.1 | 11.8      |
| West Jasper<br>Place | 15.9 | 15.6 | 17.9 | 16.8 | 17.1 | 16.4 | 16.3 | 16.5 | 17.7 | 16.8 | 17.0      |
| Twin Brooks          | 21.1 | 20.2 | 22.9 | 19.3 | 20.6 | 22.4 | 21.9 | 21.7 | 20.9 | 21.3 | 21.3      |
| Bonnie Doon          | 19.1 | 19.1 | 19.5 | 20.2 | 20.6 | 20.2 | 22.2 | 22.1 | 20.8 | 23.1 | 22.0      |
| Mill Woods           | 11.7 | 12.4 | 12.4 | 14.8 | 13.7 | 12.9 | 12.2 | 12.9 | 13.7 | 13.8 | 13.5      |
| Strathcona<br>County | 16.6 | 15.1 | 17.1 | 17.5 | 18.7 | 18.0 | 17.7 | 18.1 | 16.0 | 18.2 | 17.4      |
| Leduc County         | 9.7  | 10.5 | 11.9 | 9.2  | 10.6 | 12.7 | 14.8 | 13.5 | 11.6 | 12.6 | 12.6      |
| WestView             | 13.7 | 12.8 | 12.8 | 12.3 | 12.7 | 11.4 | 12.2 | 11.1 | 13.5 | 12.3 | 12.3      |
| Sturgeon<br>County   | 10.4 | 12.4 | 13.1 | 11.7 | 9.9  | 10.9 | 10.4 | 11.3 | 10.3 | 12.0 | 11.2      |
| Fort<br>Saskatchewan | 5.8  | 7.2  | 10.0 | 12.0 | 15.6 | 8.9  | 7.2  | 12.1 | 6.4  | 11.7 | 9.9       |
| Edmonton<br>Area     | 13.9 | 14.1 | 15.5 | 15.3 | 15.2 | 15.3 | 15.6 | 15.5 | 15.2 | 16.1 | 15.6      |

# Table 5.1.6Percent of live births to women 35 years and older by public health service area, Alberta<br/>Health Services (Edmonton Area), 1997 to 2006
### 5.2 Maternal Obesity

There are number of pre-pregnancy conditions that can compromise the health of the baby such as maternal obesity, diabetes, heart disease, hypertension, and chronic renal disease. Due to small numbers in the Edmonton Area, a geographic breakdown by public health service area is only presented for maternal obesity. Edmonton Area rates for the other conditions can be found in the report *Alberta Reproductive Health: Pregnancies and Births 2008*.

Maternal obesity: Pre-pregnancy weight of 91 kg or more.

Maternal obesity rate: Number of women weighing 91 kg or more per 100 women delivering.

Time Trends (Data table 5.2.1)

- Due to the relatively small numbers for the Edmonton Area, the rate for maternal obesity is presented as a 3 year moving average rate. The provincial rate for 2004-2006 was 8.7 per 100 women delivering. The 3-year combined rate for the Calgary Area was 6.7 per 100 women delivering compared to the Edmonton Area rate of 9.3 for that same period.
- In the Edmonton Area, the maternal obesity rate has remained steady over the last 5 years at 9.3 per 100 women delivering.



### Age Effects (Data table 5.2.2)



• In Alberta, the obesity rate is highest for women aged 25-29 years at 9.4 per 100 women delivering (2004-2006 data combined).

#### Sub-Edmonton Area Differences (Data table 5.2.3)



the more rural areas of Leduc County, WestView, Sturgeon County, and Fort Saskatchewan.

#### Maternal obesity rate, Alberta Health Services (Edmonton Area), 1999-2001 to 2004-2006 Table 5.2.1 combined (3 year moving average)

|                                 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
|---------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Number of Obesity Cases         | 2,585     | 2,805     | 3,007     | 3,182     | 3,248     | 3,404     |
| Number of Women                 | 32,014    | 32,645    | 33,456    | 34,300    | 35,042    | 36,497    |
| Rate (per 100 women delivering) | 8.1       | 8.6       | 9.0       | 9.3       | 9.3       | 9.3       |
| Standard Error                  | 0.15      | 0.16      | 0.16      | 0.16      | 0.15      | 0.15      |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

#### Table 5.2.2 Maternal obesity rate by maternal age group, Alberta Health Services (Edmonton Area), 1999-2001 and 2004-2006 combined

|             | Maternal Ol | besity Cases        | Rate (per 100 women delivering) |           |  |  |  |
|-------------|-------------|---------------------|---------------------------------|-----------|--|--|--|
|             | 1999-2001   | 1999-2001 2004-2006 |                                 | 2004-2006 |  |  |  |
| <20 years*  | 85          | 85                  | 4.5                             | 5.0       |  |  |  |
| 20-24 years | 509         | 608                 | 8.4                             | 9.3       |  |  |  |
| 25-29 years | 853         | 1,127               | 8.6                             | 9.7       |  |  |  |
| 30-34 years | 743         | 1,070               | 8.1                             | 9.9       |  |  |  |
| 35-39 years | 333         | 437                 | 7.8                             | 9.2       |  |  |  |
| >=40 years* | 57          | 76                  | 7.8                             | 8.0       |  |  |  |
| All Ages    | 2,585       | 3,404               | 8.1                             | 9.3       |  |  |  |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink). \* For the <20 age group, the births and population include females 13-19 years of age. For the >=40 age group, the births and population include females 40-49 years of age.

|                   | Maternal Obesity Cases | Maternal Obesity Rate<br>(per 100 women delivering) | Standard Error |
|-------------------|------------------------|-----------------------------------------------------|----------------|
| St. Albert        | 207                    | 7.1                                                 | 0.47           |
| Castle Downs      | 280                    | 9.0                                                 | 0.51           |
| Woodcroft         | 386                    | 9.0                                                 | 0.44           |
| Eastwood          | 314                    | 9.0                                                 | 0.49           |
| North Central     | 437                    | 10.6                                                | 0.48           |
| North East        | 589                    | 12.4                                                | 0.48           |
| West Jasper Place | 526                    | 8.7                                                 | 0.36           |
| Twin Brooks       | 334                    | 6.1                                                 | 0.32           |
| Bonnie Doon       | 324                    | 7.5                                                 | 0.40           |
| Mill Woods        | 663                    | 9.4                                                 | 0.35           |
| Strathcona County | 391                    | 9.0                                                 | 0.44           |
| Leduc County      | 263                    | 11.6                                                | 0.67           |
| WestView          | 460                    | 10.7                                                | 0.47           |
| Sturgeon County   | 211                    | 11.4                                                | 0.74           |
| Fort Saskatchewan | 110                    | 13.5                                                | 1.19           |
| Edmonton Area     | 5,495                  | 9.3                                                 | 0.12           |

#### Maternal obesity rate by public health service area, Alberta Health Services (Edmonton Area), Table 5.2.3 2002-2006 combined

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

### 5.3 Maternal Prenatal Smoking

**Maternal Prenatal Smoking:** Refers to women who reported smoking cigarettes at some point during pregnancy.

Maternal prenatal smoking rate (per 100 women delivering): Number of women who reported smoking cigarettes at some point during pregnancy per 100 women delivering.

#### Time Trends (Data table 5.3.1)

 In the Edmonton Area, the smoking rate among pregnant women has declined since 2000. In 2000, 22.2% of mothers reported smoking during pregnancy compared to 18.1% in 2006. In Alberta, the rate has decreased from 23.4% in 2000 to 19.0% in 2006.



• For the combined years 2004-2006,

the maternal prenatal smoking rate was 13.1 per 100 women delivering in the Calgary Area compared to 17.8 per 100 women delivering in the Edmonton Area and 19.0 per 100 women delivering in Alberta.

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### Age Effects (Data table 5.3.2)

- The maternal prenatal smoking rate is much higher among younger women, <20 years and 20-24 years of age, than older women.
- In 2004-2006, 45.9% of women younger than 20 years of age reported smoking compared to 9.8% of women between 30 and 34 years.
- 50 (per 100 women delivering) 40 30 20 . Rate ( 10 0 <20 20-24 25-29 30-34 35-39 40+ Age Group (years)
- The maternal prenatal smoking rate curve has

shifted downwards since 1999 reflecting a lower smoking rate for all age groups. In Alberta, 48.5% of women younger than 20 years reported smoking during pregnancy (2004-2006 data). Perinatal health status in Alberta Health Services (Edmonton Area), December 2008



• 2004-2006

**1999-2001** 

### Sub-Edmonton Area Differences (Data tables 5.3.3, 5.3.4. 5.3.5)

• There were seven public health service areas that experienced significantly higher rates of maternal prenatal smoking than the Edmonton Area rate with the highest rates in Woodcroft (24.8%), Eastwood (31.5%) and North East (26.3%).



Maternal prenatal smoking rates by public health service area, Edmonton Area, 2004-2006 combined

#### Table 5.3.1 Maternal prenatal smoking rate, Alberta Health Services (Edmonton Area) and Alberta, 2000-2006

| Edmonton Area                   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   |
|---------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Prenatal smoking cases          | 2,241  | 2,339  | 2,251  | 2,089  | 2,088  | 2,034  | 2,337  |
| Rate (per 100 women delivering) | 10,077 | 10,771 | 11,116 | 11,471 | 11,671 | 11,858 | 12,936 |
| Standard error                  | 0.41   | 0.40   | 0.38   | 0.36   | 0.35   | 0.35   | 0.34   |
| Alberta                         | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   |
| Prenatal smoking cases          | 8,223  | 8,209  | 8,144  | 7,879  | 7,866  | 7,490  | 8,268  |
| Rate (per 100 women delivering) | 23.4   | 22.7   | 21.6   | 20.1   | 19.6   | 18.4   | 19.0   |
| Standard error                  | 0.23   | 0.22   | 0.21   | 0.20   | 0.20   | 0.19   | 0.19   |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink). (2) Reproductive Health Working Group (2008). Alberta Reproductive Health: Pregnancies and Births 2008. Edmonton, AB: Alberta Health and Wellness.

#### Table 5.3.2 Maternal prenatal smoking rate by maternal age group, Alberta Health Services (Edmonton Area), 1999-2001 and 2004-2006 combined

| Prenatal Smoking Cases          | 1999-2001 | 2004-2006 |
|---------------------------------|-----------|-----------|
| <20*                            | 986       | 783       |
| 20-24                           | 2,126     | 2,183     |
| 25-29                           | 1,824     | 1,831     |
| 30-34                           | 1,286     | 1,059     |
| 35-39                           | 686       | 488       |
| >=40*                           | 98        | 114       |
| Rate (per 100 women delivering) | 1999-2001 | 2004-2006 |
| <20*                            | 53.5      | 45.9      |
| 20-24                           | 35.9      | 33.3      |
| 25-29                           | 18.9      | 15.7      |
| 30-34                           | 14.5      | 9.8       |
| 35-39                           | 16.4      | 10.2      |
| >=40*                           | 13.6      | 12.0      |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink). \* For the <20 age group, the births and population include females 13-19 years of age. For the >=40 age group, the births and population include females 40-49 years of age.

| Table 5.3.3 | Maternal prenatal smoking cases by public health service area, 1999 to 2006 and 2004-2006 |
|-------------|-------------------------------------------------------------------------------------------|
|             | combined                                                                                  |

| Prenatal Smoking Cases | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  | 2004-2006 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|
| St. Albert             | 62    | 79    | 60    | 83    | 44    | 60    | 61    | 80    | 201       |
| Castle Downs           | 99    | 86    | 115   | 80    | 102   | 94    | 100   | 114   | 308       |
| Woodcroft              | 248   | 240   | 263   | 244   | 205   | 219   | 205   | 200   | 624       |
| Eastwood               | 259   | 220   | 260   | 232   | 197   | 197   | 225   | 240   | 662       |
| North Central          | 206   | 169   | 186   | 194   | 157   | 177   | 143   | 170   | 490       |
| North East             | 299   | 285   | 262   | 273   | 242   | 234   | 244   | 293   | 771       |
| West Jasper Place      | 220   | 185   | 234   | 181   | 202   | 194   | 192   | 239   | 625       |
| Twin Brooks            | 112   | 110   | 95    | 99    | 96    | 87    | 95    | 106   | 288       |
| Bonnie Doon            | 168   | 146   | 158   | 142   | 141   | 127   | 102   | 138   | 367       |
| Mill Woods             | 277   | 228   | 226   | 222   | 221   | 237   | 200   | 216   | 653       |
| Strathcona County      | 108   | 100   | 100   | 104   | 111   | 97    | 84    | 87    | 268       |
| Leduc County           | 103   | 83    | 81    | 100   | 85    | 97    | 90    | 105   | 292       |
| WestView               | 182   | 195   | 193   | 186   | 180   | 159   | 171   | 207   | 537       |
| Sturgeon County        | 78    | 82    | 85    | 77    | 82    | 75    | 91    | 105   | 271       |
| Fort Saskatchewan      | 22    | 33    | 21    | 34    | 24    | 34    | 31    | 37    | 102       |
| Edmonton Area          | 2,443 | 2,241 | 2,338 | 2,251 | 2,089 | 2,088 | 2,034 | 2,337 | 6,459     |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

| Rate (per 100 women delivering) | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|---------------------------------|------|------|------|------|------|------|------|------|-----------|
| St. Albert                      | 15.2 | 15.8 | 11.2 | 14.3 | 7.9  | 10.7 | 9.8  | 13.4 | 11.3      |
| Castle Downs                    | 22.6 | 19.3 | 22.8 | 16.9 | 17.5 | 14.4 | 15.8 | 15.1 | 15.1      |
| Woodcroft                       | 29.1 | 28.8 | 29.6 | 26.7 | 24.1 | 25.2 | 25.3 | 24.0 | 24.8      |
| Eastwood                        | 37.1 | 33.3 | 36.1 | 34.0 | 28.3 | 30.8 | 32.1 | 31.4 | 31.5      |
| North Central                   | 28.7 | 23.7 | 24.0 | 24.9 | 18.8 | 21.9 | 17.9 | 19.2 | 19.7      |
| North East                      | 33.6 | 32.8 | 29.8 | 30.5 | 26.8 | 26.1 | 26.0 | 26.8 | 26.3      |
| West Jasper Place               | 20.1 | 20.0 | 20.6 | 16.8 | 17.3 | 15.6 | 16.4 | 17.8 | 16.6      |
| Twin Brooks                     | 13.1 | 12.2 | 10.8 | 11.0 | 9.1  | 8.2  | 8.4  | 8.0  | 8.2       |
| Bonnie Doon                     | 18.7 | 17.6 | 18.2 | 15.6 | 16.6 | 14.6 | 12.8 | 15.2 | 14.3      |
| Mill Woods                      | 21.3 | 18.6 | 19.0 | 17.0 | 16.5 | 16.3 | 13.9 | 14.1 | 14.8      |
| Strathcona County               | 14.2 | 13.7 | 12.2 | 12.2 | 12.4 | 11.7 | 9.2  | 10.0 | 10.3      |
| Leduc County                    | 25.1 | 24.1 | 20.1 | 22.8 | 19.9 | 21.4 | 19.7 | 21.2 | 20.8      |
| WestView                        | 26.0 | 30.6 | 26.9 | 23.3 | 21.9 | 19.2 | 18.9 | 21.9 | 20.1      |
| Sturgeon County                 | 28.1 | 25.2 | 25.8 | 22.3 | 23.4 | 20.9 | 24.5 | 25.1 | 23.6      |
| Fort Saskatchewan               | 17.5 | 23.4 | 16.7 | 20.4 | 16.8 | 21.8 | 17.0 | 21.9 | 20.1      |
| Edmonton Area                   | 23.4 | 22.2 | 21.7 | 20.3 | 18.2 | 17.9 | 17.2 | 18.1 | 17.7      |

 Table 5.3.4
 Maternal prenatal smoking rate by public health service area, 1999 to 2006

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

# Table 5.3.5Standard errors for maternal prenatal smoking rate by public health service area, Alberta Health<br/>Services (Edmonton Area), 1999 to 2006 and 2004-2006 combined

| Standard Error    | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2004-2006 |
|-------------------|------|------|------|------|------|------|------|------|-----------|
| St. Albert        | 1.78 | 1.63 | 1.37 | 1.45 | 1.14 | 1.30 | 1.19 | 1.40 | 0.75      |
| Castle Downs      | 1.99 | 1.87 | 1.87 | 1.72 | 1.57 | 1.37 | 1.45 | 1.31 | 0.79      |
| Woodcroft         | 1.55 | 1.57 | 1.53 | 1.46 | 1.47 | 1.47 | 1.53 | 1.48 | 0.86      |
| Eastwood          | 1.83 | 1.83 | 1.79 | 1.81 | 1.71 | 1.83 | 1.77 | 1.68 | 1.01      |
| North Central     | 1.69 | 1.59 | 1.53 | 1.55 | 1.35 | 1.46 | 1.36 | 1.32 | 0.80      |
| North East        | 1.58 | 1.59 | 1.54 | 1.54 | 1.48 | 1.47 | 1.43 | 1.34 | 0.81      |
| West Jasper Place | 1.21 | 1.32 | 1.20 | 1.14 | 1.11 | 1.03 | 1.08 | 1.04 | 0.61      |
| Twin Brooks       | 1.16 | 1.09 | 1.04 | 1.05 | 0.89 | 0.85 | 0.83 | 0.75 | 0.46      |
| Bonnie Doon       | 1.30 | 1.32 | 1.31 | 1.20 | 1.28 | 1.20 | 1.18 | 1.19 | 0.69      |
| Mill Woods        | 1.14 | 1.11 | 1.14 | 1.04 | 1.01 | 0.97 | 0.91 | 0.89 | 0.53      |
| Strathcona County | 1.27 | 1.27 | 1.14 | 1.12 | 1.10 | 1.12 | 0.96 | 1.01 | 0.59      |
| Leduc County      | 2.14 | 2.30 | 2.00 | 2.00 | 1.93 | 1.93 | 1.86 | 1.83 | 1.08      |
| WestView          | 1.66 | 1.83 | 1.66 | 1.50 | 1.44 | 1.37 | 1.30 | 1.34 | 0.77      |
| Sturgeon County   | 2.69 | 2.40 | 2.41 | 2.24 | 2.26 | 2.15 | 2.23 | 2.12 | 1.25      |
| Fort Saskatchewan | 3.38 | 3.57 | 3.32 | 3.12 | 3.13 | 3.31 | 2.79 | 3.18 | 1.78      |
| Edmonton Area     | 0.41 | 0.41 | 0.40 | 0.38 | 0.36 | 0.35 | 0.35 | 0.34 | 0.20      |

Source: (1) Alberta Perinatal Health Program, Provincial Data Repository (PeriLink).

## 6.1 Poverty and perinatal health in the City of Edmonton

Neighbourhoods in the City of Edmonton were categorized into three socio-economic (SES) groups: Low SES, Average SES, and High SES. Selected perinatal health indicators are presented by the three groups.

The methodology used in the categorization of neighbourhoods can be found, in detail, in the recently released report titled "*Poverty and health in Edmonton*". The report is available on the Alberta Health Services (Edmonton Area) website www. capitalhealth.ca

### Summary of Methodology

The Deprivation Index (published by Robert Pampalon and Guy Raymond from the Institut national de santé publique du Quebec) was chosen because the data are available at a small geographic area and also because it takes into account both material factors and social factors. The index was developed using six variables from the Federal Census 2001 that are related to a high number of health and social concerns. The six census variables include the following:

- > The proportion of people who have not graduated from high school;
- > The ratio of employment to population;
- Average income;
- Proportion of persons who are separated, divorced or widowed;
- Proportion of single-parent families; and
- Proportion of people living alone.

An overall material score and an overall social score were then calculated for each neighbourhood by weighting each DA (dissemination area) score by its population and combining it with the other DAs from that neighbourhood. Once each neighbourhood had a material and a social score, the neighbourhoods were plotted onto a deprivation matrix, with the material quintiles dividing the Y axis and the social quintiles dividing the X axis.

Neighbourhoods that were within the top left corner of the matrix were considered High SES, since they were in the top quintile of both the material and social dimensions of the index. Neighbourhoods in the bottom right corner of the matrix were considered Low SES, as they fell within the bottom quintiles on both dimensions. Neighbourhoods within the City of Edmonton were classified into one of three socio-economic status (SES) groups: High SES, Average SES, and Low SES. This resulted in about 16% of the population residing in the High SES group and about 24% of the population in the Low SES group (Figure 2).



Figure 2: Distribution of neighbourhoods in Edmonton by socio-economic groups

#### Low birth weight (Data table 6.1.1)

- Over the last 5 years, the low birth weight rate in the Low SES group has increased from 7.3 per 100 live births in 1997-1999 to 9.0 in 2004-2006. The trend line for the Average SES group has stayed steady while the rate for the High SES group has recently increased with the low birth weight rate increasing from 5.5 per 100 live births in 2001-2003 to 6.3 in 2004-2006.
- For the three year combined rate 2004-2006, the low birth weight rate in the Low SES group was significantly higher



Low birth weight rate by socio-economic status

than the rate in both the Average and High SES groups. Overall, the difference in the low birth weight rate between the Low SES group and the higher SES groups has widened over the last 5 years.

#### Preterm birth (Data table 6.1.2)

- For all three SES groups, the preterm birth rate has increased over the last 10 years. However, the increase is most notable in the Low SES group since 2001-2003.
- The preterm birth rate in 2004-2006 for the Low SES group was significantly higher than both the Average and High SES groups -11.6 per 100 live births compared to 9.2 in the High SES group and 9.4 in the Average SES group.

Preterm birth rate by socio-economic status group, City of Edmonton, 3 year moving average, 1997-1999 to 2004-2006



#### Multiple birth rate

(Data table 6.1.3)

Contrary to the previous two graphs, it is the High SES group that has consistently had higher multiple birth rates than the other two SES groups. The rate in 2004-2006 for the High SES group, 4.2 per 100 live births, was significantly higher than the rate in the Low SES group (2.9 per 100 live births).

### Teen birth rate

(Data table 6.1.4)

- Although there is an overall decreasing trend in the teen birth rate for all SES groups, the rate in the Low SES group is ten times the rate in the High SES group in 2004-2006 (41.3 per 1,000 versus 4.0 per 1,000).
- For all years, 1997-1999 through 2004-2006, the teen birth rate in the Low SES group is significantly higher than the rate in the Average SES group, which is significantly higher than the rate in the High SES group.

#### Age-specific birth rate for women 35-39 years old

(Data table 6.1.5)

- While the trend lines for the Low and Average SES group showed a slight increase in the 35-39 year old birth rate, the rate in the High SES group has increased dramatically since 1997-1999, from 46.7 per 1,000 to 68.4 per 1,000 women aged 35-39 years.
- For 2004-2006, the birth rate for women 35-39 years old in the SES group is significantly higher at 68.4 per 1,000 than the rate in the Average SES group (40.1 per 1,000) and the Low SES group (34.1 per 1,000).









Women 35-39 years birth rate by socio-economic status group, City of Edmonton, 3 year moving average, 1997-1999 to 2004-2006



Perinatal health status in Alberta Health Services (Edmonton Area), December 2008

| Low birth weight births        | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| High SES                       | 114           | 116           | 127           | 130           | 155           | 171           | 223           | 236           |
| Average SES                    | 845           | 846           | 848           | 883           | 905           | 912           | 892           | 931           |
| Low SES                        | 450           | 462           | 450           | 477           | 493           | 508           | 535           | 565           |
| LBW Rate (per 100 live births) | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                       | 4.9           | 4.9           | 5.0           | 5.0           | 5.5           | 5.6           | 6.5           | 6.3           |
| Average SES                    | 6.0           | 6.1           | 6.1           | 6.4           | 6.5           | 6.4           | 6.3           | 6.5           |
| Low SES                        | 7.3           | 7.3           | 6.9           | 7.3           | 7.4           | 7.9           | 8.6           | 9.0           |
| Standard Error                 | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                       | 0.44          | 0.44          | 0.44          | 0.43          | 0.43          | 0.41          | 0.42          | 0.40          |
| Average SES                    | 0.20          | 0.20          | 0.20          | 0.21          | 0.21          | 0.20          | 0.20          | 0.21          |
| Low SES                        | 0.33          | 0.33          | 0.32          | 0.32          | 0.32          | 0.34          | 0.35          | 0.36          |

Table 6.1.1Low birth weight (LBW) rate by socio-economic status group, City of Edmonton, 1997-1999 to2004-2006 (3 year moving average)

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Table 6.1.2 | Preterm birth (PTB) rate by socio-economic status group, City of Edmonton, 1997-1999 to 2004- |
|-------------|-----------------------------------------------------------------------------------------------|
|             | 2006 (3 year moving average)                                                                  |

| # Preterm births                  | 1997-1999 | 1998-2000 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| High SES                          | 166       | 183       | 203       | 213       | 239       | 271       | 324       | 345       |
| Average SES                       | 1,126     | 1,198     | 1,243     | 1,281     | 1,313     | 1,362     | 1,361     | 1,351     |
| Low SES                           | 580       | 620       | 630       | 633       | 645       | 666       | 715       | 728       |
| PTB rate (per 100<br>live births) | 1997-1999 | 1998-2000 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
| High SES                          | 7.1       | 7.7       | 8.1       | 8.2       | 8.4       | 8.8       | 9.4       | 9.2       |
| Average SES                       | 8.0       | 8.6       | 9.0       | 9.3       | 9.4       | 9.6       | 9.6       | 9.4       |
| Low SES                           | 9.4       | 9.8       | 9.7       | 9.7       | 9.7       | 10.4      | 11.4      | 11.6      |
| Standard error                    | 1997-1999 | 1998-2000 | 1999-2001 | 2000-2002 | 2001-2003 | 2002-2004 | 2003-2005 | 2004-2006 |
| High SES                          | 0.53      | 0.55      | 0.54      | 0.54      | 00.52     | 0.51      | 0.50      | 0.47      |
| Average SES                       | 0.23      | 0.24      | 0.24      | 0.25      | 0.25      | 0.25      | 0.25      | 0.24      |
| Low SES                           | 0.37      | 0.37      | 0.37      | 0.36      | 0.36      | 0.38      | 0.40      | 0.40      |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

| Multiple births                           | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
|-------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| High SES                                  | 65            | 77            | 96            | 99            | 98            | 124           | 141           | 157           |
| Average SES                               | 368           | 382           | 379           | 419           | 402           | 428           | 420           | 496           |
| Low SES                                   | 134           | 152           | 144           | 136           | 164           | 164           | 179           | 179           |
| Multiple birth rate (per 100 live births) | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                  | 2.8           | 3.2           | 3.8           | 3.8           | 3.5           | 4.0           | 4.1           | 4.2           |
| Average SES                               | 2.6           | 2.7           | 2.7           | 3.0           | 2.9           | 3.0           | 3.0           | 3.5           |
| Low SES                                   | 2.2           | 2.4           | 2.2           | 2.1           | 2.2           | 2.6           | 2.9           | 2.9           |
| Standard Error                            | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                  | 0.34          | 0.36          | 0.38          | 0.38          | 0.34          | 0.36          | 0.34          | 0.33          |
| Average SES                               | 0.13          | 0.14          | 0.14          | 0.15          | 0.14          | 0.14          | 0.14          | 0.15          |
| Low SES                                   | 0.19          | 0.19          | 0.18          | 0.18          | 0.18          | 0.20          | 0.21          | 0.21          |

# Table 6.1.3Multiple birth rate by socio-economic status group, City of Edmonton, 1997-1999 to 2004-2006<br/>(3 year moving average)

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006).

# Table 6.1.4Teen birth rate by socio-economic status group, City of Edmonton, 1997-1999 to<br/>2004-2006 (3 year moving average)

| Live births teens (females, 15-19 years) | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
|------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| High SES                                 | 46            | 42            | 47            | 35            | 38            | 33            | 45            | 45            |
| Average SES                              | 739           | 728           | 700           | 663           | 642           | 625           | 649           | 668           |
| Low SES                                  | 674           | 692           | 676           | 653           | 644           | 616           | 602           | 615           |
| Teen birth rate (per 1,000 population)   | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                 | 5.5           | 4.7           | 5.0           | 3.6           | 3.8           | 3.1           | 4.1           | 4.0           |
| Average SES                              | 19.5          | 18.6          | 17.5          | 16.3          | 15.6          | 15.2          | 15.8          | 16.3          |
| Low SES                                  | 47.0          | 47.3          | 45.5          | 43.6          | 42.7          | 40.8          | 40.2          | 41.3          |
| Standard Error                           | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                 | 0.08          | 0.07          | 0.07          | 0.06          | 0.06          | 0.05          | 0.06          | 0.06          |
| Average SES                              | 0.07          | 0.07          | 0.07          | 0.06          | 0.06          | 0.06          | 0.06          | 0.06          |
| Low SES                                  | 0.18          | 0.18          | 0.17          | 0.17          | 0.16          | 0.16          | 0.16          | 0.16          |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year.

# Table 6.1.5Fertility rate for women aged 35-39 years by socio-economic status group, City of Edmonton,<br/>1997-1999 to 2004-2006 (3 year moving average)

| Live births to women 35-39 years                                 | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
|------------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| High SES                                                         | 491           | 502           | 554           | 572           | 627           | 650           | 705           | 755           |
| Average SES                                                      | 1,767         | 1,833         | 1,864         | 1,869         | 1,870         | 1,862         | 1,761         | 1,811         |
| Low SES                                                          | 636           | 669           | 688           | 676           | 646           | 624           | 592           | 606           |
| 35-39 years age specific<br>birth rate (per 1,000<br>population) | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                                         | 46.7          | 48.2          | 53.7          | 55.9          | 61.3          | 62.7          | 66.3          | 68.4          |
| Average SES                                                      | 32.3          | 33.7          | 35.0          | 36.0          | 37.3          | 38.5          | 37.8          | 40.1          |
| Low SES                                                          | 29.6          | 30.8          | 31.8          | 31.9          | 31.7          | 32.2          | 32.1          | 34.1          |
| Standard Error                                                   | 1997-<br>1999 | 1998-<br>2000 | 1999-<br>2001 | 2000-<br>2002 | 2001-<br>2003 | 2002-<br>2004 | 2003-<br>2005 | 2004-<br>2006 |
| High SES                                                         | 0.21          | 0.21          | 0.22          | 0.23          | 0.24          | 0.24          | 0.24          | 0.24          |
| Average SES                                                      | 0.08          | 0.08          | 0.08          | 0.08          | 0.08          | 0.09          | 0.09          | 0.09          |
| Low SES                                                          | 0.12          | 0.12          | 0.12          | 0.12          | 0.12          | 0.13          | 0.13          | 0.14          |

Source: (1) Vital Statistics, Municipal Affairs, Service Alberta (1997-2006). (2) Population data values are for June 30. Values up to March 31, 2007 are interpolations of actual population values from the Alberta Health Care Insurance Plan (AHCIP) Registration File as of March 31 for each year.

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## Suggested citation:

Predy GN, Fraser-Lee N, Edwards J, Lightfoot P. Perinatal health status in Alberta Health Services (Edmonton Area). Edmonton, Alberta: Public Health Division, Alberta Health Services (2008).

