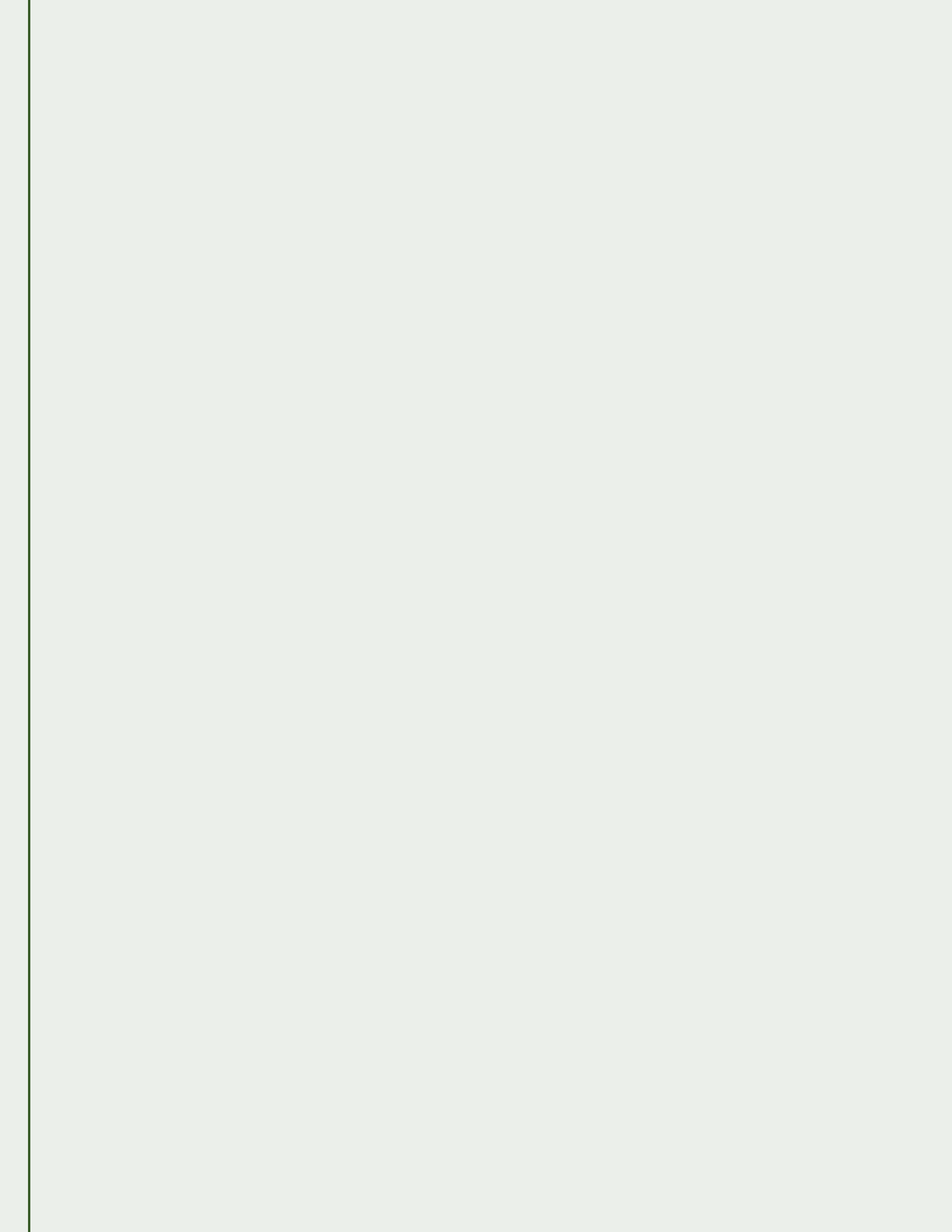


SECTION FOUR

Maternal Health Outcomes



*Optimizing Neonatal, Maternal
and Fetal Health*



Section Four: Maternal Health Outcomes

Maternal health outcomes include both life-threatening and non-life-threatening conditions that may affect a woman's health and wellbeing. These are conditions that may arise during pregnancy, labour, and delivery; however, maternal health outcomes also encompass chronic conditions that may be affected by pregnancy and giving birth.

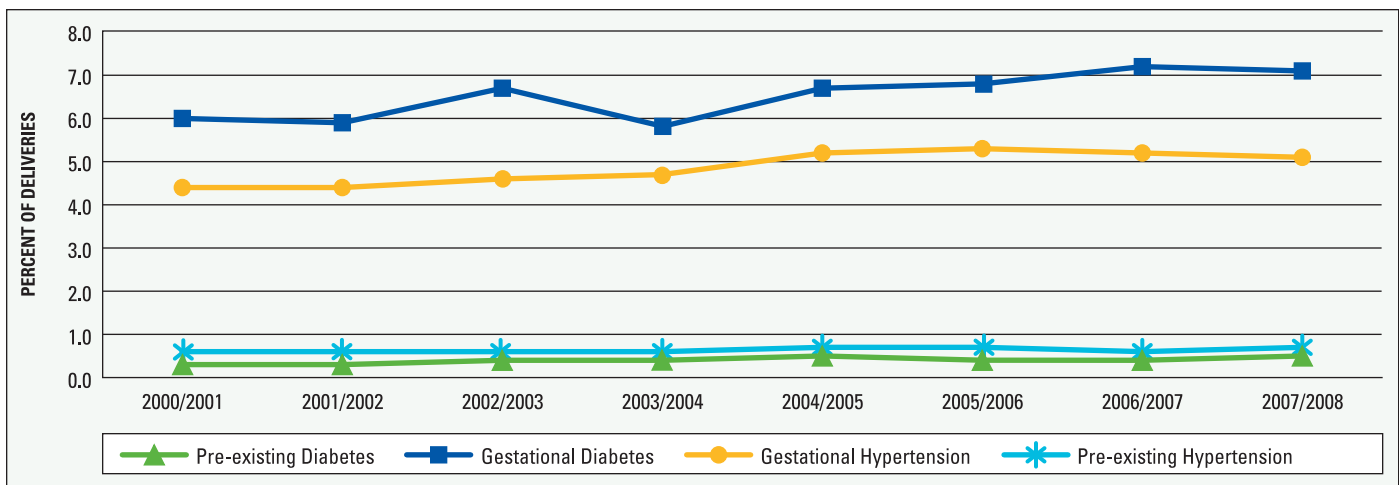
There are many maternal health outcomes of interest, but some health outcomes can be difficult to measure through the use of administrative data. In this report, the maternal health outcomes that are reported are diabetes, hypertension, severe maternal morbidity, antepartum and postpartum length of stay in hospital, and maternal postpartum readmission.

4.1 Diabetes and Hypertension

Diabetes and hypertension are chronic conditions that can be exacerbated by pregnancy. As well, both conditions have sub-types that specifically develop during pregnancy and gradually resolve after delivery. Additionally, developing sub-types of these conditions during pregnancy greatly increases a woman's risk of later developing non-gestational sub-types of either disease. Diabetes and hypertension are linked with increased disability and mortality as women age, making early diagnosis of these conditions very important.

Both gestational diabetes and gestational hypertension rates have been increasing over the last eight years (Figure 4.1.0). Gestational diabetes increased from 6.0% to 7.1%, a 20% increase, while gestational hypertension increased from 4.4% to 5.1% (also a 20% increase) between 2000/2001 and 2007/2008. Although the rates were much smaller, pre-existing diabetes and hypertension also increased during that time.

Figure 4.1.0 Diabetes and hypertension rates, British Columbia, 2000/2001 to 2007/2008



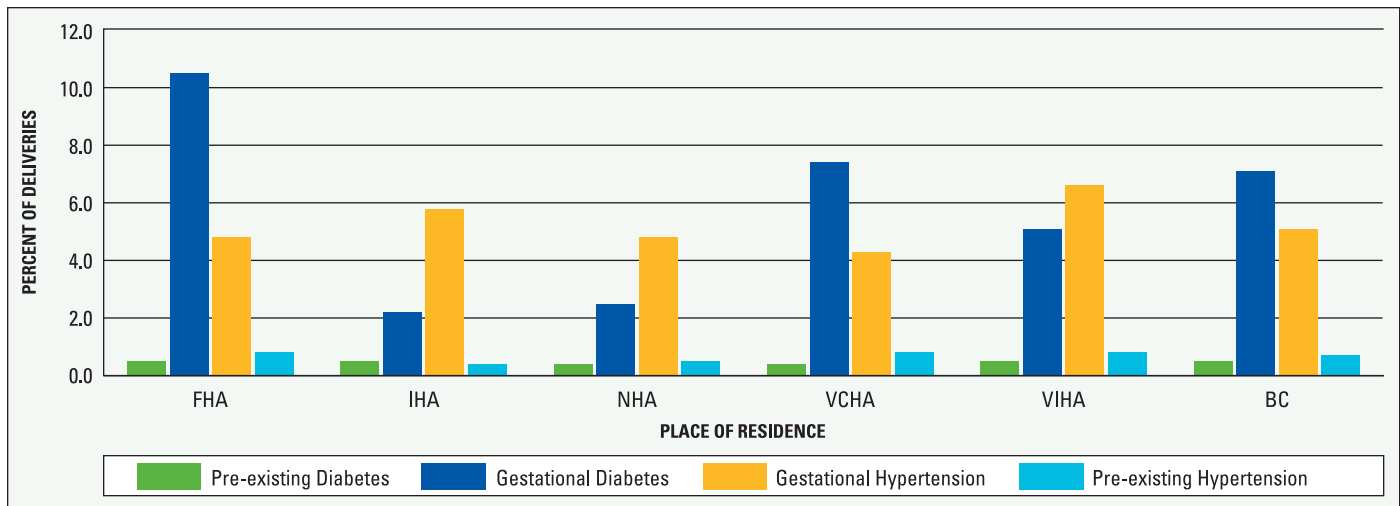
Source: BC Perinatal Database Registry
Note: Indicator definitions are listed in Appendix 1.

Section Four

There was some variation in the diabetes and hypertension rates among resident health authorities (Figure 4.1.1). Most notably, gestational diabetes rates among women residing in the FHA and the VCHA were considerably higher (at **10.5%** and **7.4%**, respectively, for 2007/2008) than elsewhere in the province.

Gestational hypertension, on the other hand, was highest in VIHA and IHA, at **6.6%** and **5.8%**, respectively, compared to a provincial average of **5.1%**. However, IHA had the lowest rate of pre-existing hypertension in the province at **0.4%**. The rate of pre-existing hypertension was also low in NHA at **0.5%**; in all other health authorities, the rate was **0.8%** in 2007/2008.

Figure 4.1.1 Diabetes and hypertension rates by resident Health Authority and British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

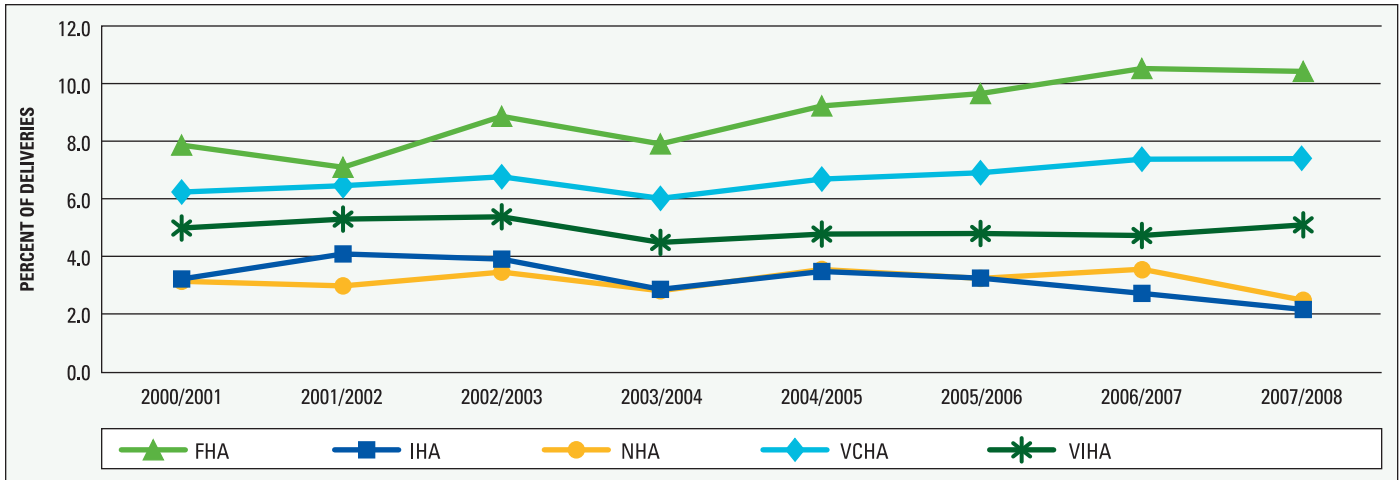
Please refer to the inside back cover for legend of Health Authorities.

Examining trends over time showed that the incidence of gestational diabetes is increasing in three health authorities and decreasing in two (Figure 4.1.2). Between 2000/2001 and 2007/2008, the gestational diabetes rate in FHA increased **32%** from **7.9%** of **10.5%**. In VCHA, the rate

increased **18%** in the same time period, while VIHA saw a modest increase of **2%**. The latter may be due to normal variation. In contrast, the rate of gestational diabetes decreased in IHA and NHA, by **33%** and **21%** respectively over eight years (Figure 4.1.2).

Maternal Health Outcomes

Figure 4.1.2 Gestational diabetes rates by resident Health Authority, 2000/2001 to 2007/2008



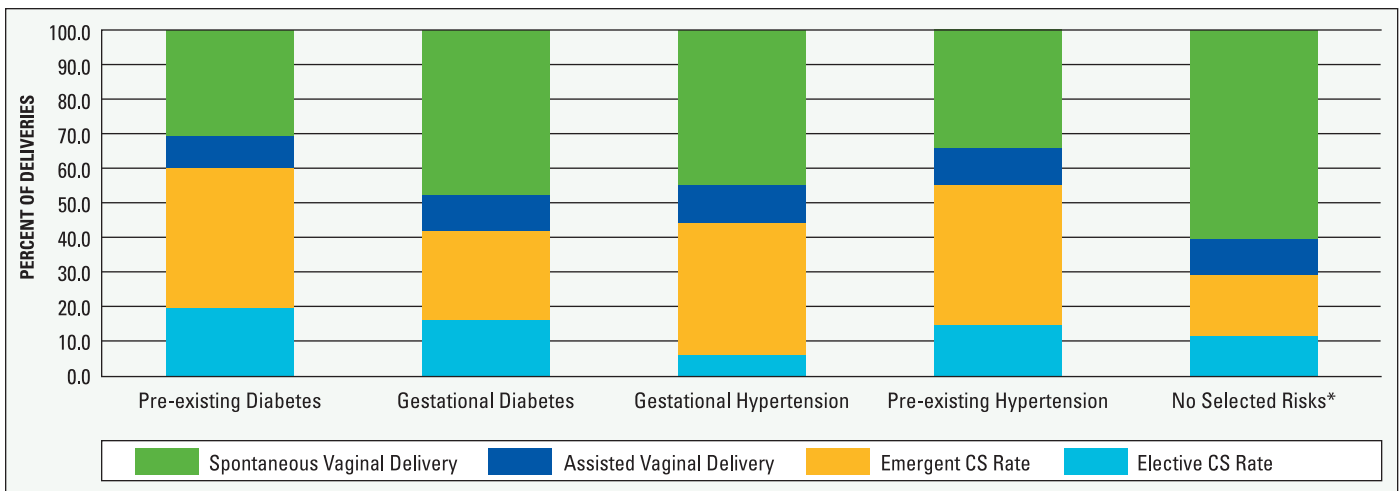
Source: BC Perinatal Database Registry
 Notes: Indicator definitions are listed in Appendix 1.
 Please refer to the inside back cover for legend of Health Authorities.

Because chronic diseases can complicate pregnancy and delivery, women with hypertension or diabetes are more likely to deliver via c-section (Figure 4.1.3). In 2007/2008, only **30.6%** of mothers with pre-existing diabetes, **47.5%** of mothers with gestational diabetes, **34.3%** of mothers with pre-existing hypertension, and **44.7%** of mothers with gestational hypertension had spontaneous vaginal births, compared with **60.3%** of women without diabetes or hypertension (pre-existing or gestational). Conversely, **40.8%** and **40.3%** of mothers with pre-existing diabetes and pre-existing hyper-

tension, respectively, delivered via emergent caesarean section that year. Although, the emergent caesarean rates for gestational diabetes and hypertension were lower in comparison, at **26.0%** and **38.2%**, the rate was still substantially higher than that for women with neither condition (**17.4%**).

Interestingly, the elective caesarean rate for women with gestational diabetes was lower than for women who had neither condition. Rates for assisted vaginal deliveries were roughly equivalent for all groups.

Figure 4.1.3 Method of delivery rates by diabetes and hypertension categories, British Columbia, 2007/2008



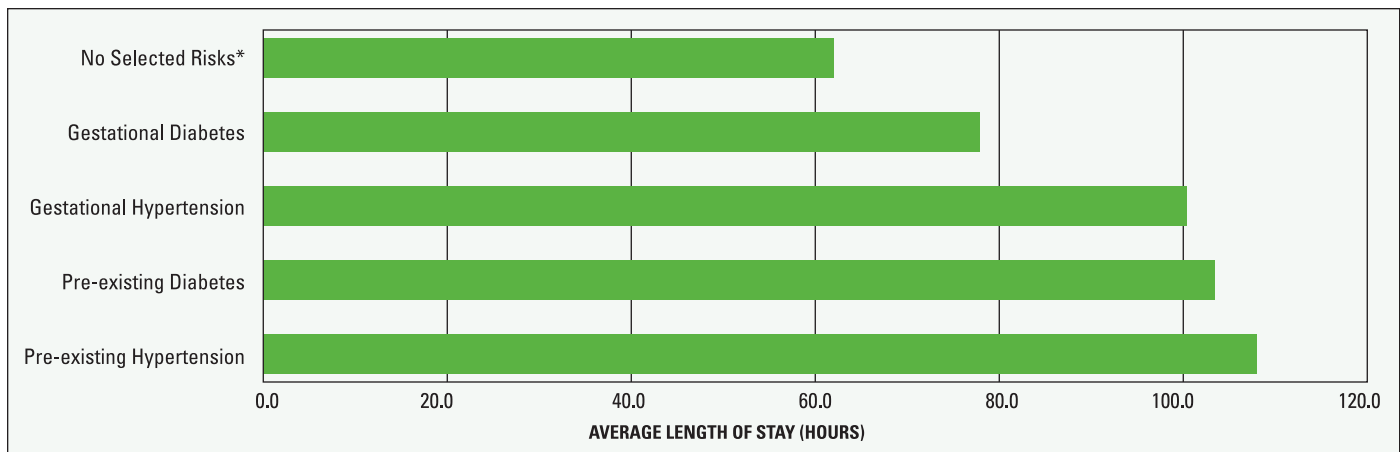
Source: BC Perinatal Database Registry
 Notes: Indicator definitions are listed in Appendix 1.
 *No selected risks = mothers without diabetes or hypertension (gestational or pre-existing) in pregnancy.

Section Four

The presence of chronic illnesses like diabetes and hypertension may cause complications throughout labour, delivery and postpartum, including a higher likelihood of caesarean section delivery, resulting in longer than average hospital stays than women without chronic illnesses (Figure 4.1.4). Mothers with diabetes or hypertension, whether

gestational or pre-existing, had longer lengths of stay than mothers with neither condition. However, those with pre-existing conditions experienced longer lengths of stay than mothers with gestational conditions. Mothers with pre-existing hypertension had the longest hospital stays, at an average of **108.0** hours (Figure 4.1.4).

Figure 4.1.4 Average length of stay (hours) for diabetes and hypertension categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

Includes only hospital admissions.

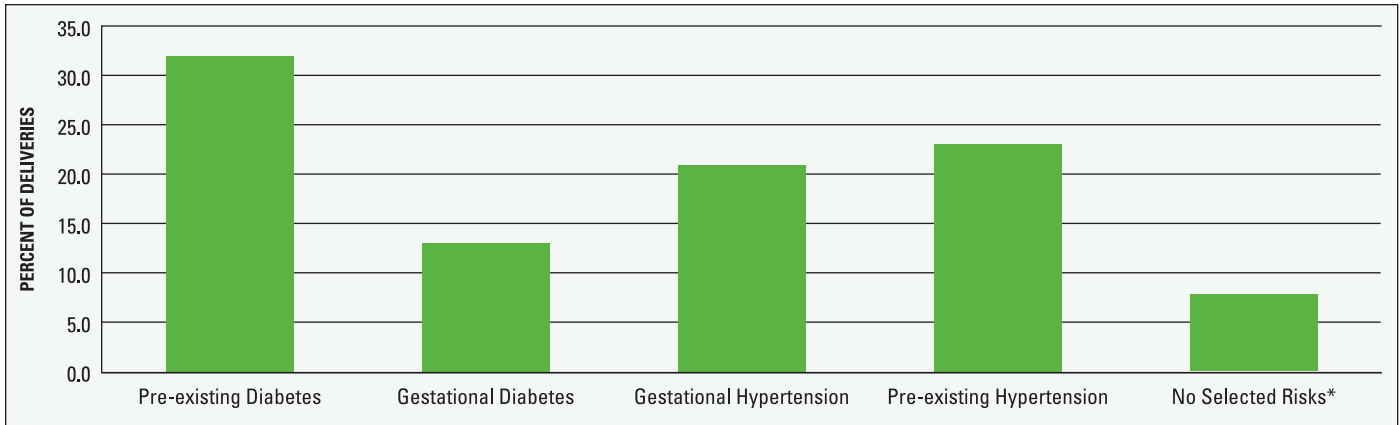
*No selected risks = mothers without diabetes or hypertension (gestational or pre-existing) in pregnancy.

The relationship between chronic disease and infant health outcomes was also examined. Mothers with pre-existing diabetes or hypertension were more likely to give birth prematurely compared to mothers who developed the diseases during pregnancy (Figure 4.1.5). For instance, in 2007/2008, **32.0%** of mothers with pre-existing diabetes experienced a preterm birth, compared to only **13.0%** of mothers with gestational diabetes.

The differences for hypertension were not as severe (**23.0%** of mothers with pre-existing hypertension compared to **20.0%** of mothers with gestational hypertension gave birth prematurely). The presence of chronic disease, regardless of whether it was pre-existing or developed during pregnancy, increased the risk of preterm birth – the rate for mothers with neither condition was only **7.8%**.

Maternal Health Outcomes

Figure 4.1.5 Preterm birth rates by diabetes and hypertension categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

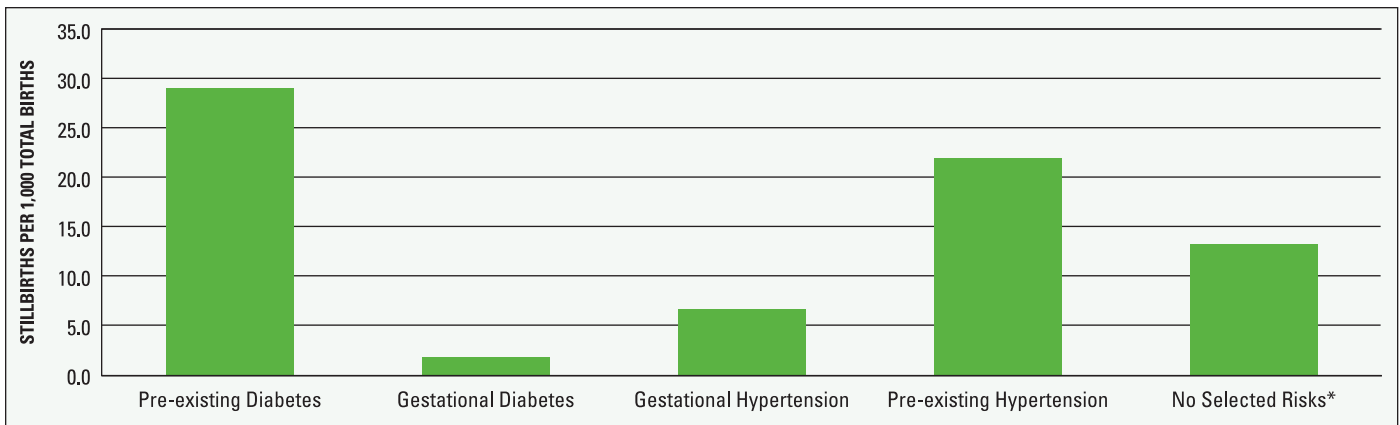
Notes: Indicator definitions are listed in Appendix 1.

*No selected risks = mothers without diabetes or hypertension (gestational or pre-existing) in pregnancy.

Pre-existing hypertension and diabetes were also associated with substantially higher stillbirth rates (Figure 4.1.6). In 2007/2008, women with pre-existing diabetes had a stillbirth rate of **29.1** per 1,000 births, more than twice the rate of women who had neither condition (**13.3** per 1,000 births). Women with pre-existing hypertension had a stillbirth rate of **22.0** per 1,000 births. Women with gestational diabetes or hypertension actually experienced lower stillbirth rates than women with neither chronic disease.

Although this analysis demonstrated a relationship between chronic disease status and stillbirth rates, it is important to acknowledge that other factors, such as maternal age, may contribute to this finding. With increasing maternal age, risk of developing conditions such as hypertension and diabetes increases. It is therefore important to realize that chronic disease may contribute to stillbirth rates, but is not necessarily directly causal.

Figure 4.1.6 Stillbirth rates by diabetes and hypertension categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

*No selected risks = mothers without diabetes or hypertension (gestational or pre-existing) in pregnancy. Late terminations have been excluded.

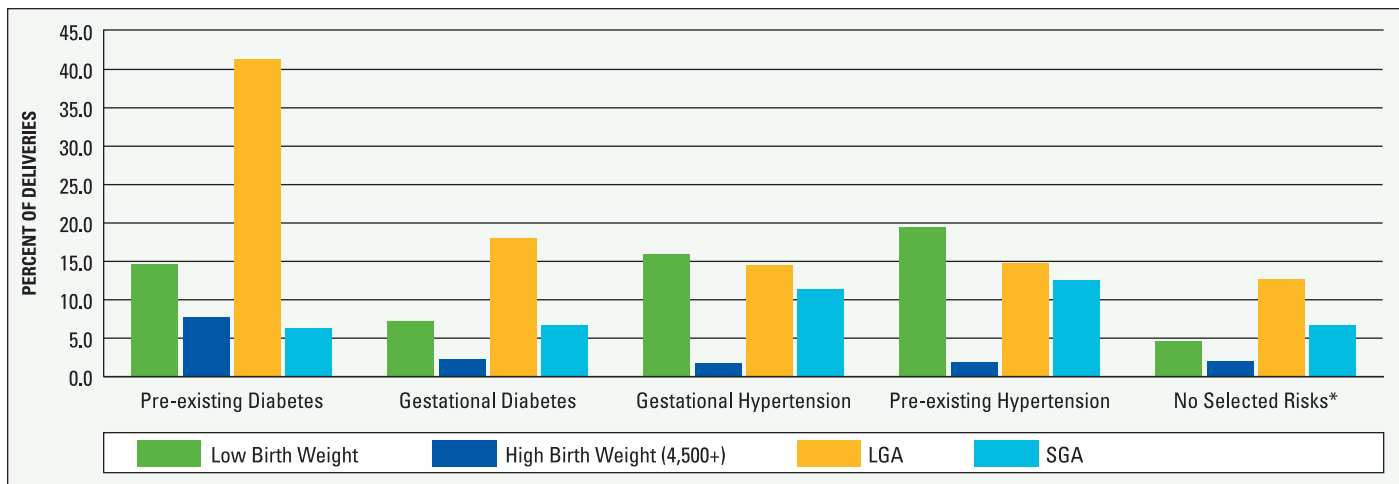
Section Four

Finally, birth weight was examined in conjunction with the presence of chronic disease in mothers (Figure 4.1.7). The most significant finding was the strong relationship between pre-existing diabetes in mothers and large-for-gestational-age infants (41.3% in 2007/2008). Mothers with pre-existing diabetes also had the largest proportion of high birth weight babies (7.8%).

On the other hand, mothers with pre-existing hypertension had the largest proportion of small-for-gestational-age and low birth weight babies (12.9% and 19.5% respectively).

Although the rates were lower, the birth weight and size outcomes for babies born to mothers with gestational diabetes and hypertension tended to follow the same patterns as were identified for pre-existing conditions.

Figure 4.1.7 Low birth weight, high birth weight, LGA and SGA by diabetes and hypertension categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

*No selected risks = mothers without diabetes or hypertension (gestational or pre-existing) in pregnancy.

4.2 Severe Maternal Morbidity

Severe maternal morbidity refers to a variety of severe, life-threatening conditions that may affect mothers as a consequence of labour and delivery. In industrialized countries where maternal mortality is rare, examining severe morbidity provides a measure of the burden of illness that may result from rare but serious conditions that can arise during labour and delivery.

While there is no universally recognized list of such conditions, the Canadian Perinatal Surveillance System (CPSS)¹⁹ has developed a list of morbidities that may represent the illnesses of most concern. Not all conditions that are identified by the CPSS can be monitored on a population level through the data available in British Columbia. Further, some conditions occur so rarely that they may not have occurred at all in the province during the four year period from 2004/2005 to 2007/2008 for which data on severe maternal morbidity is available. Information on rare but severe maternal morbidity such as maternal mortality has been reported separately through the BC Perinatal Health Program.²⁰

This report focuses on severe maternal morbidities diagnosed during delivery admissions occurring during fiscal years 2004/2005 to 2007/2008. A change in coding practices, beginning with

2004/2005 data, precludes a comparison with older data. These conditions include (specific ICD-10 codes used to identify these conditions are listed in Appendix 1):

- Anesthetic complications
- Postpartum hemorrhage (PPH)
 - With transfusion
 - With hysterectomy
- Antepartum hemorrhage (APH) with transfusion
- Eclampsia
- Pulmonary embolism
- Shock
- Stroke

Table 4.2.0 summarizes the rate per 100 deliveries for each of these conditions in the last four years. With the exception of anesthetic complications, less than half a percentage of women per year experienced any of these morbidities in BC. Moreover, for nearly all conditions, the rate per 100 has remained relatively stable over time. The exception to this is anesthetic complications, which saw an increase from **0.35%** in 2004/2005 to **0.56%** in 2006/2007. Because of the extreme variability associated with rare conditions, several more years' of data will be required before any definitive trend over time can be identified.

Section Four

Table 4.2.0 Severe maternal morbidity rates per 100 deliveries, British Columbia, 2004/2005 to 2007/2008

Morbidity	2004/2005		2005/2006		2006/2007		2007/2008	
	#	%	#	%	#	%	#	%
Anesthetic complications	141	0.35	219	0.54	234	0.56	232	0.53
PPH with transfusion	134	0.33	163	0.40	141	0.34	169	0.39
APH with transfusion	41	0.10	45	0.11	42	0.10	47	0.11
PPH with hysterectomy	30	0.07	28	0.07	17	0.04	27	0.06
Eclampsia	27	0.07	31	0.08	14	0.03	23	0.05
Pulmonary embolism	8	0.02	10	0.02	11	0.03	12	0.03
Shock	14	0.03	9	0.02	10	0.02	9	0.02

Source: BC Perinatal Database Registry

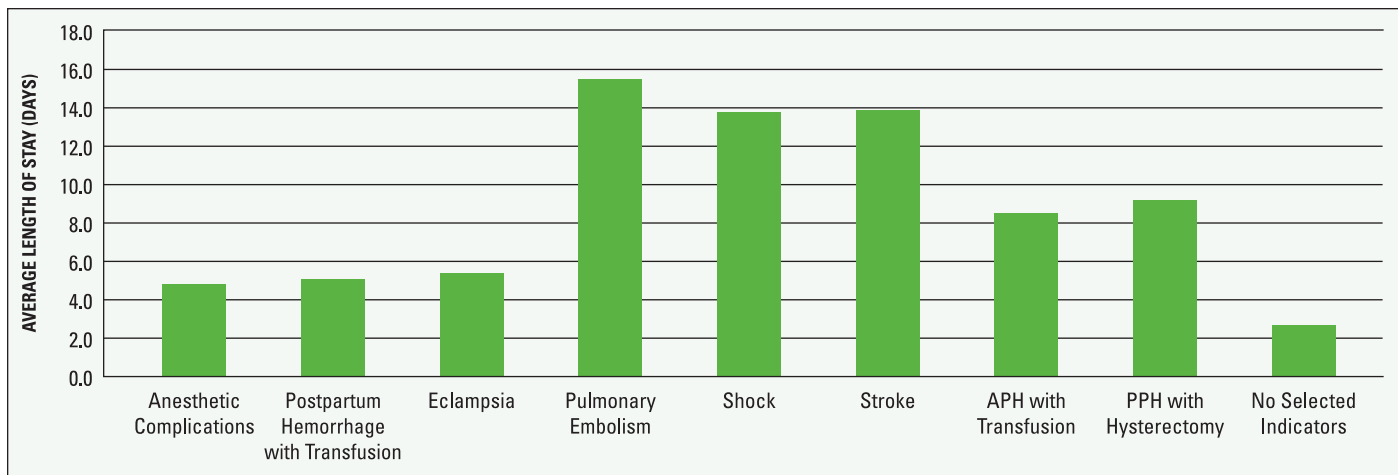
Notes: Indicator definitions are listed in Appendix 1.

The number of women having 'stroke' diagnosed during delivery admission was ≤ 5 per fiscal year; thus, the number of incidence of stroke per year has been omitted in the table to protect privacy.

While anesthetic complications and PPH with transfusion were the most commonly experienced morbidities, they did not make a corresponding impact on maternal length of stay in hospital (Figure 4.2.0). Compared to mothers who experienced no severe maternal morbidity, who had an average length of stay of **2.7** days, anesthetic

complications resulted in an average length of stay of **4.8** days; for PPH with transfusion, this figure was **5.1**. In comparison, the longest average length of stay was associated with pulmonary embolism at **15.5** days, while stroke (**13.9** days) and shock (**13.8**) were also quite high.

Figure 4.2.0 Average length of stay (days) by severe maternal morbidity categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

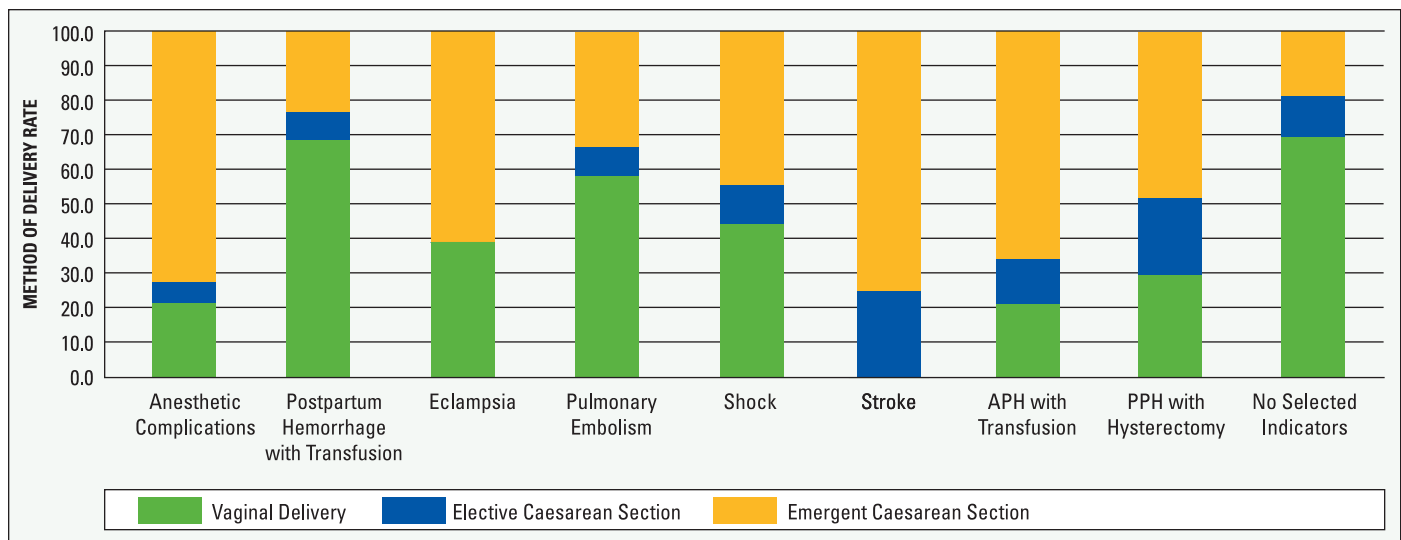
No Selected Indicators = none of the listed severe maternal morbidity categories were diagnosed during the delivery admission.

Maternal Health Outcomes

As evidenced in Table 4.2.0, the incidence of various severe maternal morbidities is very low in BC. Figure 4.2.1 shows the method of delivery type where these maternal morbidities are present. With the exception of postpartum hemorrhage with transfusion, the other severe maternal morbidities show a different distribution of method of delivery than those women with no selected indicators. For example, women with anesthetic complications are much more likely to have had an emergent caesarean delivery (72.4%) than a vaginal delivery (21.6%). As well, women experiencing antepartum hemorrhage with transfusion

during delivery are more likely to deliver via emergent caesarean delivery (66.0%) than via vaginal delivery (21.3%). The lowest caesarean rate among women with maternal morbidity was for those who experienced postpartum hemorrhage with transfusion; at 31.4% (8.3% elective and 23.1% emergent), this rate did not differ much from the rate for women with no maternal morbidities, which was 30.4% (11.8% elective and 18.6% emergent). Again, it should be noted that the incidence of these morbidities over the entire population of delivering women was very low; these rates should be interpreted with caution.

Figure 4.2.1 Method of delivery by severe maternal morbidity categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

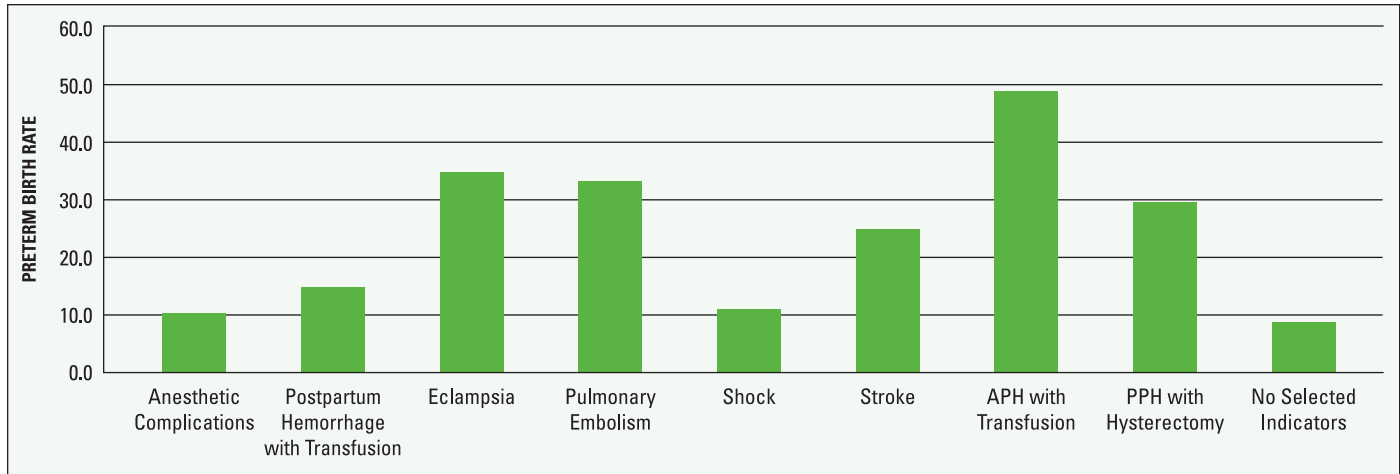
No Selected Indicators = none of the listed severe maternal morbidity categories were diagnosed during the delivery admission.

Maternal morbidity and gestational age at birth was also analyzed (Figure 4.2.2). Nearly one-half (48.9%) of mothers who experienced antepartum hemorrhage with a transfusion delivered prematurely in 2007/2008, as did 34.8% of those who experienced eclampsia, 33.3% of mothers who experienced pulmonary embolism, and 29.6% of

mothers who experienced postpartum hemorrhage with hysterectomy. In comparison, only 11.1% of mothers who experienced shock and 10.3% of mothers who experienced anesthetic complications gave birth prematurely. The preterm birth rate for mothers who experienced no maternal morbidity was 8.7%.

Section Four

Figure 4.2.2 Preterm birth rate by severe maternal morbidity categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

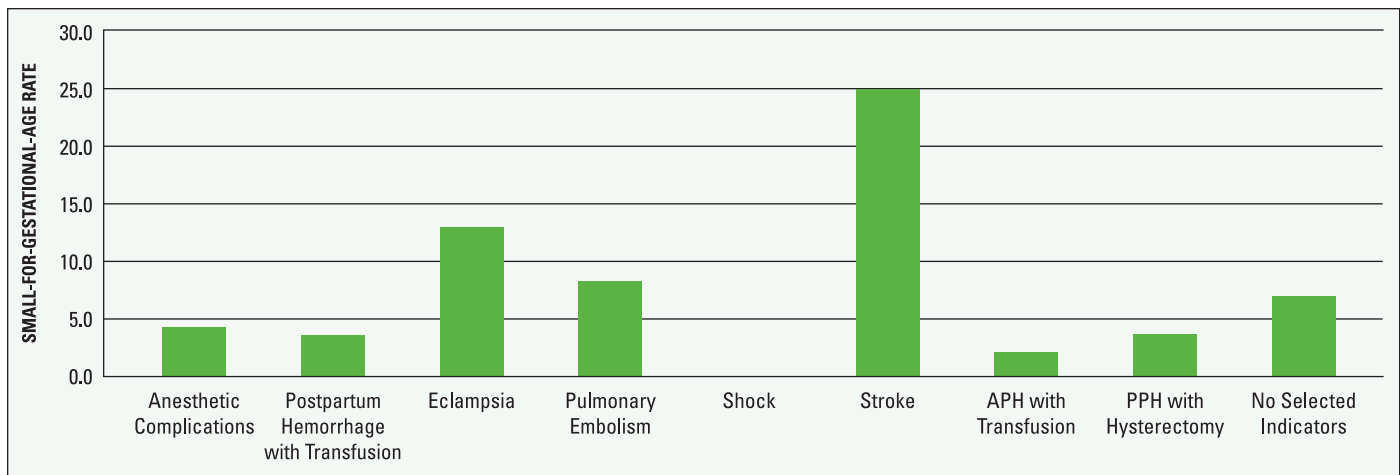
Notes: Indicator definitions are listed in Appendix 1.

No Selected Indicators = none of the listed severe maternal morbidity categories were diagnosed during the delivery admission.

Finally, the effects of maternal morbidity of infant birth weight were considered (Figure 4.2.3). In 2007/2008, one-quarter (**25.0%**) of women who experienced a stroke gave birth to a small-for-gestational-age infant compared to **13.0%** of women who experienced eclampsia and **8.3%** of women who experienced pulmonary embolism. In comparison, women who experienced no maternal morbidity had a small-for-gestational-age

birth rate of **7.0%**. Thus women who experienced anesthetic complications, antepartum hemorrhage with transfusion, and postpartum hemorrhage (both with transfusion and with hysterectomy), had lower rates of small-for-gestational-age births than women with no maternal morbidity, ranging from **2.1%** to **4.3%** among these categories. Caution should be used, however, as these rates are influenced by small sample sizes.

Figure 4.2.3 Small-for-gestational-age rate by severe maternal morbidity categories, British Columbia, 2007/2008



Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

No Selected Indicators = none of the listed severe maternal morbidity categories were diagnosed during the delivery admission.

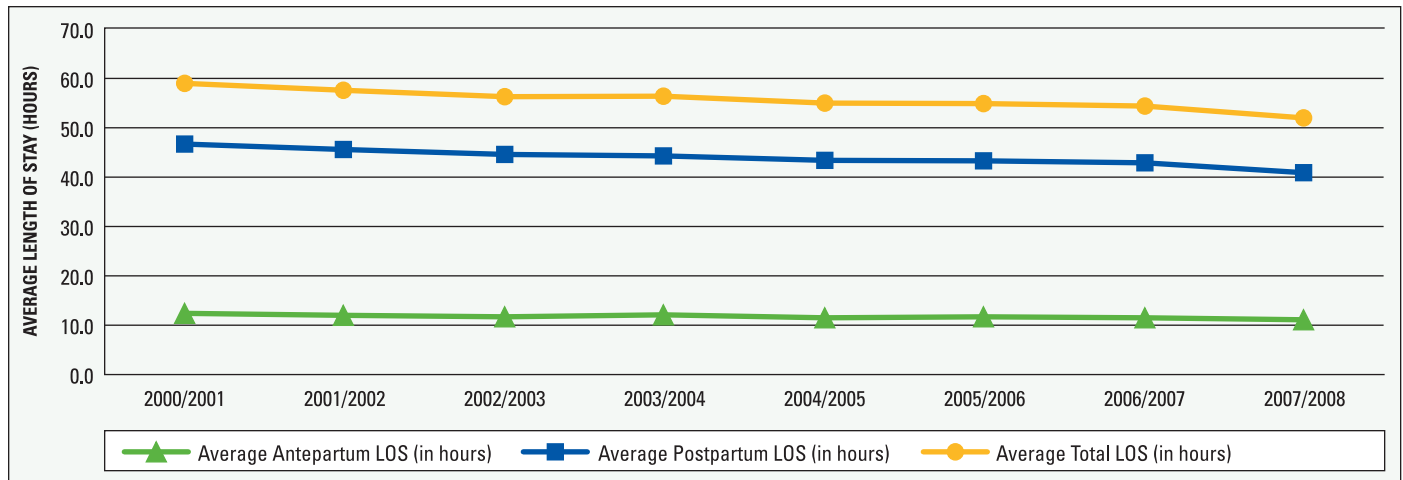
There were no cases of "Shock" in relation to small-for-gestational-age and severe maternal morbidity in 2007/2008.

4.3 Antepartum and Postpartum Length of Stay

Length of stay in hospital can serve as an indicator of overall maternal health. Antepartum length of stay refers to the number of hours that a mother stayed in hospital prior to delivery, while postpartum length of stay refers to the number of hours that a mother stayed in hospital after delivery. It should be noted that mothers' postpartum length of stay does not always correspond to the length of time that infants stay in hospital, which is reported in a separate section.

Among women who experienced a vaginal birth in British Columbia there has been a moderate decrease in the average total length of stay in hospital from **59.0** hours in 2000/2001 to **52.0** hours in 2007/2008 (Figure 4.3.0). Antepartum length of stay decreased from an average of **12.4** hours in 2000/2001 to **11.1** hours in 2007/2008; a difference of **1.3** hours. The decrease in postpartum length of stay has been more significant from **46.7** hours in 2000/2001 to **40.9** hours in 2007/2008; a difference of **5.7** hours.

Figure 4.3.0 Average length of stay (hours) for vaginal births in British Columbia, 2000/2001 to 2007/2008



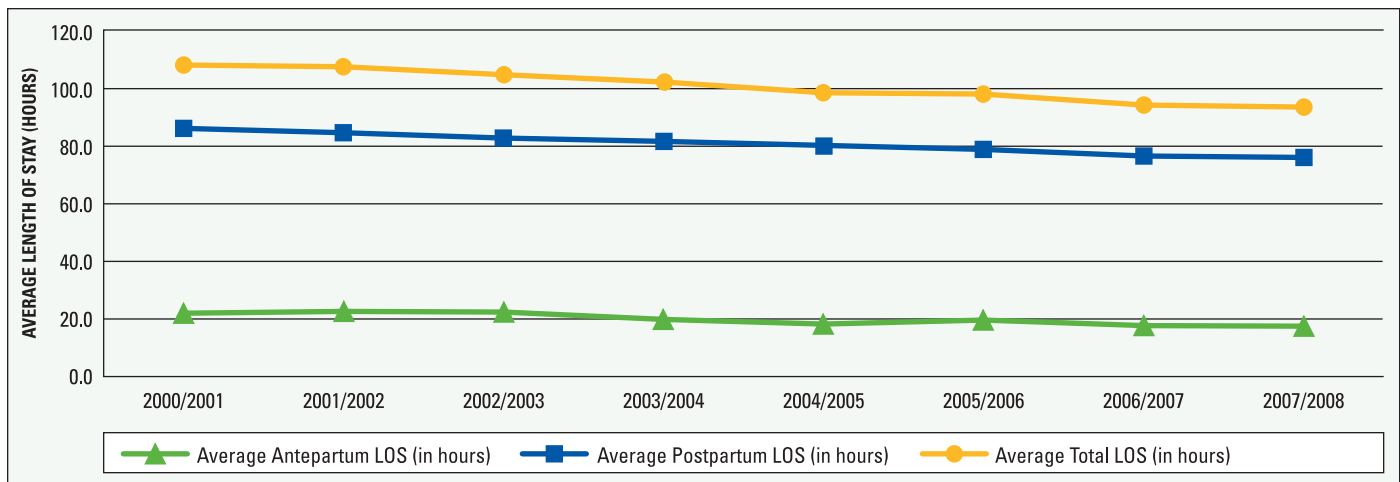
Source: BC Perinatal Database Registry
 Notes: Indicator definitions are listed in Appendix 1.
 Only deliveries occurring in hospital were included.

Section Four

As expected, the average length of stay among women who gave birth via caesarean section was considerably longer compared to vaginal births (Figure 4.3.1). However, although there was also a decrease in the total length of stay among those who gave birth via caesarean section, the decrease was sharper than that seen among those who gave birth vaginally. Average total length of stay for caesarean section births decreased from **108.2** hours in 2000/2001 to **93.6** hours in 2007/2008; a difference of **14.6** hours. As above, the majority of the

total time spent in hospital among caesarean section births occurred postpartum. Postpartum average length of stay decreased from **86.2** hours in 2000/2001 to **76.1** hours in 2007/2008. Antepartum average length of stay decreased from **22.0** hours in 2000/2001 to **17.5** hours in 2007/2008. In 2000/2001 women who gave birth via caesarean section stayed in hospital an average of **49.1** hours longer compared to those who gave birth vaginally, whereas by 2007/2008 this difference had dropped to **41.6** hours.

Figure 4.3.1 Average length of stay (hours) for caesarean section births in British Columbia, 2000/2001 to 2007/2008



Source: BC Perinatal Database Registry
 Notes: Indicator definitions are listed in Appendix 1.
 Only deliveries occurring in hospital were included.

In British Columbia in 2007/2008, the average total length of stay in hospital among women who gave birth vaginally was **52.0** hours (Table 4.3.0). This ranged from a high of **65.2** hours in PHSA to a low of **45.2** hours in FHA. Average antepartum

length of stay was lowest in NHA at **7.8** hours and highest in PHSA at **15.1** hours. Average postpartum length of stay was lowest in FHA at **35.1** hours and highest again in PHSA at **50.0** hours.

Maternal Health Outcomes

Table 4.3.0 Average length of stay (hours) by method of delivery by delivery Health Authority and British Columbia, 2007/2008

	Average Antepartum LOS	Average Postpartum LOS	Average Total LOS
Vaginal Delivery			
FHA	10.2	35.1	45.2
IHA	9.0	42.3	51.4
NHA	7.8	40.9	48.7
PHSA	15.1	50.0	65.2
VCHA	12.3	40.1	52.4
VIHA	11.6	43.8	55.4
BC	11.1	40.9	52.0
Caesarean Section Delivery			
FHA	16.3	71.8	88.1
IHA	13.5	76.8	90.3
NHA	13.6	74.5	88.1
PHSA	25.4	80.8	106.2
VCHA	15.1	74.0	89.1
VIHA	19.0	82.1	101.1
BC	17.5	76.1	93.6

Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

PHSA refers to BC Women's Hospital patients only.

Only deliveries occurring in hospital were included.

In 2007/2008, the average total length of stay in hospital among all British Columbia women who gave birth via caesarean section was **93.6** hours (Table 4.3.0). This ranged from a high of **106.2** hours in PHSA to a low of **88.1** hours for both FHA and NHA. Average antepartum stay was lowest in IHA at **13.5** hours and highest in PHSA at **25.4** hours. Average postpartum length of stay was lowest in FHA at **71.8** hours and highest in VIHA at **82.1** hours.

Among nulliparous women in British Columbia giving birth vaginally in 2007/2008, the average total

length of stay in hospital was **62.3** hours (Table 4.3.1). This was comprised of an average of **14.2** hours antepartum and **48.1** hours postpartum. Among women with parity ≥ 1 who gave birth vaginally in 2007/2008, the average total length of stay in hospital was **43.5** hours, including an average of **8.5** hours antepartum and **35.0** hours postpartum. Overall, nulliparous women spent an average of **18.8** hours more in hospital compared to women with parity ≥ 1 , including an average of **5.7** hours more antepartum and **13.0** hours more postpartum.

Section Four

Table 4.3.1 Average length of stay (hours) by method of delivery and parity, British Columbia, 2007/2008

	Average Antepartum LOS	Average Postpartum LOS	Average Total LOS
Vaginal Delivery			
Nulliparous	14.2	48.1	62.3
Parity ≥ 1	8.5	35.0	43.5
Total	11.1	40.9	52.0
Caesarean Section Delivery			
Nulliparous	22.5	80.5	103.0
Parity ≥ 1	12.5	71.7	84.2
Total	17.5	76.1	93.6

Source: BC Perinatal Database Registry

Notes: Indicator definitions are listed in Appendix 1.

Only deliveries occurring in hospital were included.

Nulliparous British Columbia women who gave birth via caesarean section during 2007/2008 spent an average of **103.0** hours in hospital in total, including **22.5** hours antepartum and **80.5** hours postpartum (Table 4.3.0). Women with parity ≥ 1 who gave birth via caesarean section in the same year spent an average of **84.2** hours in hospital in total, including **12.5** hours antepartum and **71.7** hours postpartum. The difference in the average total length of hospital stay between nulli-

parous women and women with parity ≥ 1 who gave birth via caesarean section was identical to that discussed above between women who gave birth vaginally. Nulliparous women who gave birth via caesarean section spent an average of **18.8** hours more in hospital compared to women with parity ≥ 1 ; however, on average more of the difference in hours was attributed to antepartum (**10.0**) hours as opposed to postpartum (**8.8**) hours.

4.4 Readmission to Hospital Post-Discharge

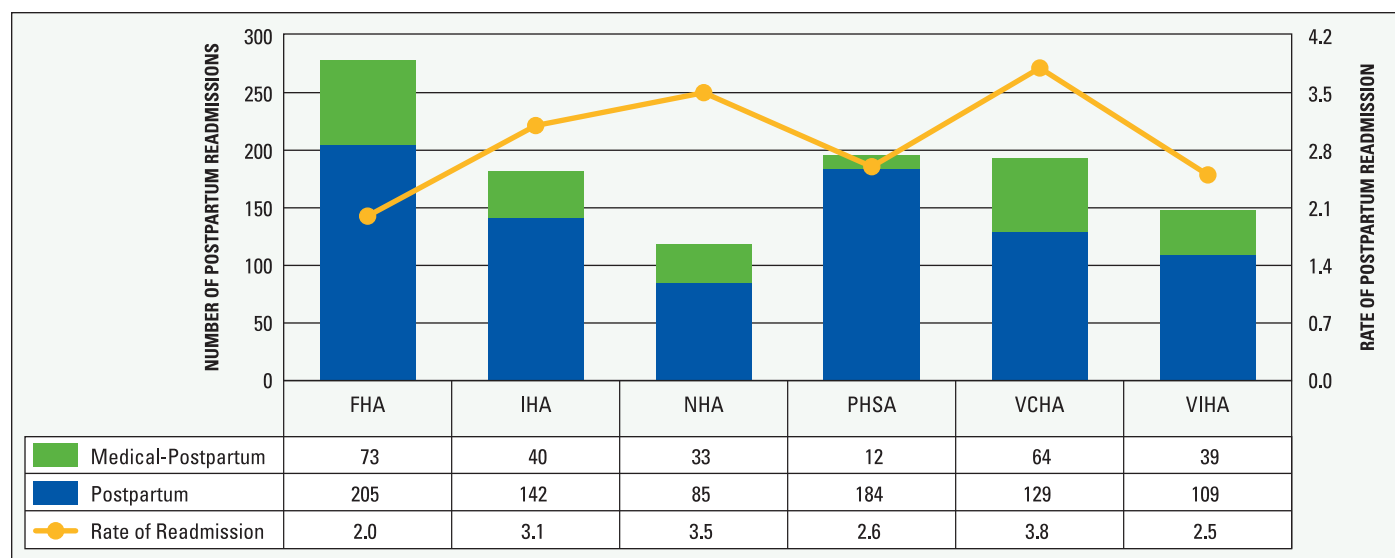
Readmission to hospital post-discharge is defined as any mother who is readmitted to hospital, as an inpatient or surgical day care patient, within 42 days of delivery. The most recent data available were for readmissions occurring during fiscal 2006/2007. Because data is reported by fiscal year, some readmissions at the beginning of the time period will be for births that occurred in the previous (i.e. 2005/2006) fiscal year.

For the purposes of this report, maternal postpartum readmission was categorized as postpartum (PP) and medical-postpartum (M) by reviewing each individual coding diagnosis. Postpartum (PP) was defined as any reason for readmission that could be directly attributed to a woman being in a postpartum state. Anything that appeared to be indirectly related to the postpartum period, such as a medical condition that was pre-existing but possibly exacerbated by a woman being in a

postpartum state was subsequently classified as Medical-Postpartum (M). This process was used to best reflect the level of morbidity directly related to the pregnancy, and therefore potentially preventable, and what morbidity is more closely related to another condition.

While the overall number of mothers readmitted to hospital post-discharge was highest in FHA in 2006/2007, the rate per 100 delivering mothers was actually lowest in this area, at **2.0** per 100 (Figure 4.4.0). The highest rate of readmission was seen in VCHA (**3.8** per 100). The readmission rate was highest in VCHA for both postpartum and medical-postpartum readmissions. Like the overall rate, the rate of postpartum readmissions was lowest in FHA, but medical-postpartum rates were lowest in PHSA (at **0.2** per 100 delivering mothers). The overall readmission rate for BC was **2.7** per 100 delivering mothers.

Figure 4.4.0 Maternal postpartum readmission by Health Authority, 2006/2007



Source: BC Ministry of Health Services

Notes: Indicator definitions are listed in Appendix 1.

Please refer to the inside back cover for legend of Health Authorities.

Each individual coding diagnosis was reviewed to derive the postpartum and medical-postpartum categories. Postpartum (PP) is defined as any reason for readmission that could be directly attributed to a woman being in a postpartum state. Anything that appeared to be indirectly related to the postpartum period, such as a medical condition that was pre-existing but possibly exacerbated by a woman being in a postpartum state was subsequently classified as Medical-Postpartum (M).

PHSA refers to BC Women's Hospital patients only.

Readmissions were classified according to the Health Authority where the mother was readmitted (not necessarily the Health Authority where she delivered).

Section Four

Mothers were readmitted to hospital for a variety of reasons (Table 4.4.0). Postpartum hemorrhage was the most common reason for readmission, representing nearly one-third (30.3%) of all postpartum (excluding medical-postpartum) readmissions

overall in 2006/2007. Postpartum puerperal sepsis represented 16.1% of all readmissions, while an additional 13.8% of readmissions were for postpartum care and examination after delivery.

Table 4.4.0 Top 10 most responsible diagnoses for postpartum readmission, British Columbia, 2006/2007

Top 10 Readmission Diagnoses	# of Readmissions	% of Readmissions
Postpartum hemorrhage	260	30.3%
Postpartum puerperal sepsis	138	16.1%
Postpartum care and exam after delivery	118	13.8%
Infection of surgical wound/postpartum	66	7.7%
Routine postpartum follow-up	39	4.6%
Hypertension	39	4.6%
Other specified surgical follow-up care	29	3.4%
Other specified diseases/conditions complicating pregnancy, childbirth postpartum	22	2.6%
Spinal/epidural headache	22	2.6%
Retained placenta/portions without postpartum hemorrhage	19	2.2%

Source: BC Ministry of Health Services

Notes: Indicator definitions are listed in Appendix 1.

Postpartum puerperal sepsis includes – other urinary tract infection following delivery postpartum, other infections of the urinary tract following delivery, pyrexia of unknown origin following delivery.

Medical-postpartum readmissions are not included in this data.

Similar to the BCPHP data reported in this section, the Canadian Perinatal Health Report also indicates that postpartum hemorrhage was the most common reason for readmission among

Canadian women who delivered vaginally.⁵ For women who delivered via caesarean, however, the most common reason for readmission was puerperal infections or complications.