



**Queensland
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Queensland Health

Sepsis in mothers following births in Public and Private sector facilities in Queensland 2007/2008

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Maternal mortality has traditionally been used as an indicator of the quality of health care. However, maternal deaths have declined in industrialised countries to the point that they are now quite rare. Thus, maternal morbidity has been suggested as a better indicator of quality of care. The rates of sepsis following birth in the public and private sectors in Queensland for the 2007/2008 financial year are summarised in this publication.

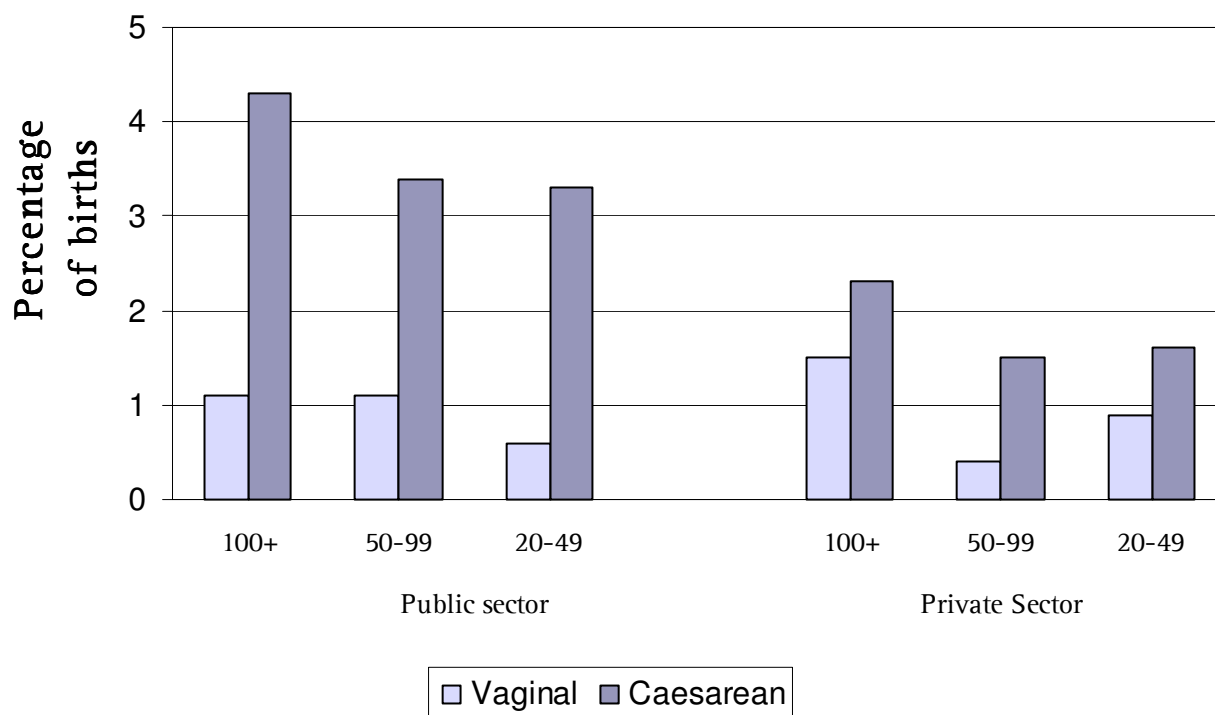
The data were accessed from the Queensland Hospital Admitted Patient Data Collection (2007/2008), since infection often followed the birth episode and required readmission of the mother. Probabilistic linkage was applied to the data to capture mothers who were admitted to a hospital that differed from where the birth episode took place. Public and private sectors were defined according to the facility of the birth episode. Facility size was defined according to the number of births per month (BPM) as follows: 100+, 100-199, 50-99 and 20-49. The outcomes were the rates of sepsis during the birth episode and sepsis requiring readmission within 30 days of discharge from the birth event. Sepsis was defined using the following ICD-10-AM codes: Puerperal sepsis (O85), Infection of obstetric surgical wound (O86.0), Pyrexia of unknown origin (O86.4), and Other specified puerperal infections (O86.8). Preliminary analysis (data not shown) indicated that rates of sepsis at 30 days post birth did not differ from those at 90 days.

In total, there were 59,408 birth events in Queensland during the 2007/2008 financial year. Of these, 624 resulted in an infection during the birth episode of care (1.1%) and 441 resulted in an infection that required readmission in the 30 days following separation from the birth episode (0.7%). Thus, sepsis infection occurred in 1.8% of all births in Queensland during the 2007/2008 financial year. Overall, total sepsis infections (i.e.: during the birth episode plus readmission within 30 days of discharge: Figure 1) were more common in larger facilities (i.e.: 100+ BPM) and in caesarean section births regardless of facility size. In general, sepsis infection occurred more frequently in public sector facilities and following caesarean section delivery.

Sepsis infections during the birth episode of care were in general, more common than those requiring readmission in the 30 days following. The trends for sepsis infections during the birth episode (Figure 2) were similar to those reported above for all sepsis infections. For sepsis infections requiring readmission (Figure 3), rates were higher in public facilities compared to private facilities; the highest rate occurred in mid-sized facilities (i.e.: 50-99 BPM) in the public sector, while the lowest rate was in small facilities (i.e.: 20-49 BPM) in the private sector

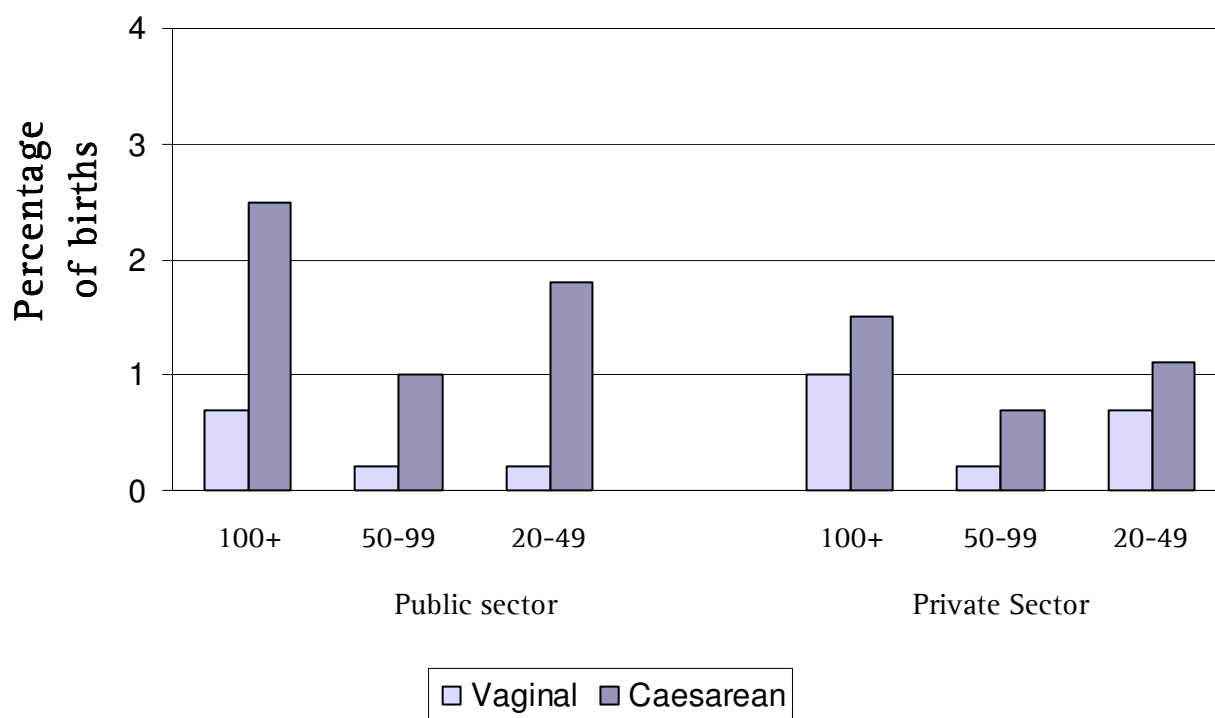
These data indicate that more cases of sepsis were recorded during the birth episode than were recorded as requiring readmission during the 30 days following discharge from the birth episode of care. Further analysis has revealed that on average, a sepsis infection adds 2.2 days to the length of stay for the birth event. This was higher in public sector facilities than private sector facilities (2.5 days versus 1.9 days). The average length of stay for treatment of sepsis infections requiring readmission was 3.1 days; average length of stay was 2.9 and 3.8 days in public and private sector facilities, respectively.

Figure 1: Proportion of birth events resulting in sepsis occurring during the birth episode and in the 30-days post-discharge by sector and method of delivery (Queensland 2007/2008)



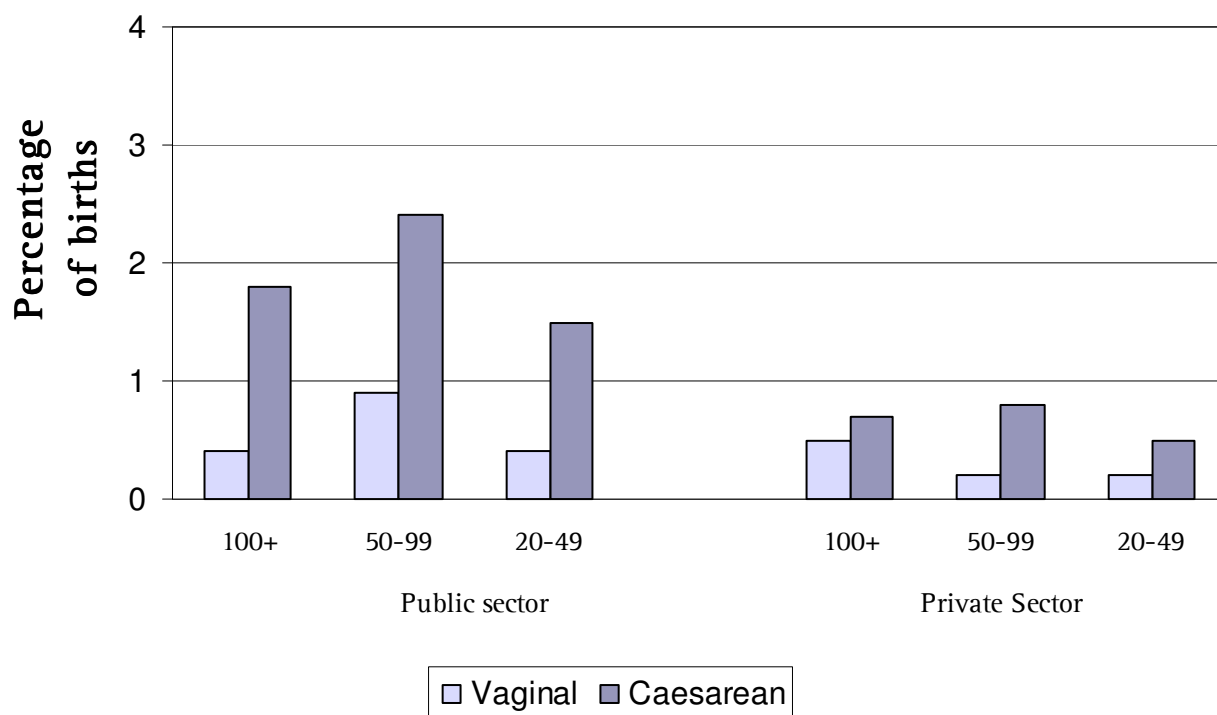
Source: Queensland Admitted Patient Data Collection, Queensland Health (extracted February 2009)
 Data for hospitals less than 20 births is not shown due to concerns over the reliability of the estimates

Figure 2: Proportion of births resulting in sepsis during the birth episode of care by sector and method of delivery (Queensland 2007/2008)



Source: Queensland Admitted Patient Data Collection, Queensland Health (extracted February 2009)
 Data for hospitals less than 20 births is not shown due to concerns over the reliability of the estimates

Figure 3: Proportion of births requiring readmission for sepsis within 30 days of discharge from the birth episode of care by sector and method of delivery (Queensland 2007/2008)



Source: Queensland Admitted Patient Data Collection, Queensland Health (extracted February 2009)
 Data for hospitals less than 20 births is not shown due to concerns over the reliability of the estimates