# Obstetric trauma

Patient safety during childbirth can be assessed by looking at potentially avoidable tearing of the perineum during vaginal delivery. Tears that extend to the perineal muscles and bowel wall require surgery. They are more likely to occur in the case of first vaginal delivery, high baby birth weight, labour induction, occiput posterior baby position, prolonged second stage of labour and instrumental delivery. Possible complications include continued perineal pain and incontinence.

These types of tears are not possible to prevent in all cases, but can be reduced by employing appropriate labour management and high quality obstetric care. Hence, the proportion of deliveries involving higher degree lacerations is a useful indicator of the quality of obstetric care. Obstetric trauma indicators have been used by the US Joint Commission as well as by different international quality initiatives seeking to assess and improve obstetric care (AHRQ, 2006).

Episiotomy is a surgical incision of the perineum performed to widen the vaginal opening for the delivery of an infant. Wide variation in the use of episiotomy during vaginal deliveries currently exists across Europe, ranging from around 70% of births in Portugal and Poland in 2010 to less than 10% in Sweden, Denmark and Iceland (Euro-Peristat, 2013). The selective use of episiotomy to decrease severe perineal lacerations during delivery is controversial, with claims that there are currently inadequate data to properly evaluate safety and effectiveness considerations (Lappen and Gossett, 2010).

Obstetric trauma indicators are considered relatively reliable and comparable across countries, particularly given they are less sensitive to variations in secondary diagnosis coding practices across countries. Nevertheless, differences in the consistency with which obstetric units report these complications may complicate international comparison. Fear of litigation, for example, may cause underreporting; conversely systems that rely on specially trained administrative staff to identify and code adverse events from patients' clinical records may produce more reliable data.

Obstetric trauma with instrument refers to deliveries using forceps or vacuum extraction. As the risk of a perineal laceration is significantly increased when instruments are used to assist the delivery, rates for this patient population are reported separately. The average rate of obstetric trauma *with* instrument (6.0 per 100 instrument-assisted vaginal delivery) across 21 OECD countries in 2013 was nearly 4 fold the rate *without* instrument (1.6 per 100 vaginal delivery without instrument assistance). The rate of obstetric trauma after vaginal delivery *with* instrument (Figure 8.19) shows high variation across countries. Reported rates vary from below 2% in Poland, Slovenia, Italy and Israel to more than 10% in the United States, Sweden, Denmark and Canada.

Rates of obstetric trauma after vaginal delivery *without* instrument (Figure 8.20) display equally large variation across countries, ranging from 0.3% or less in Poland and Slovenia to 2.8% or above in the United Kingdom, Sweden and Canada. There is a strong relationship between the two indicators, with Poland and Slovenia reporting the lowest rates and Sweden and Canada reporting amongst the highest rates for both indicators.

### *Definition and comparability*

The two obstetric trauma indicators are defined as the proportion of instrument assisted/non-assisted vaginal deliveries with third- and fourth-degree obstetric trauma codes in any diagnosis and procedure field. Therefore, any differences in the definition of principal and secondary diagnoses have no influence on the calculated rates. Several differences in data reporting across countries may influence the calculated rates of obstetric patient safety indicators. These relate primarily to differences in coding practice and data sources. Some countries report the obstetric trauma rates based on administrative hospital data and others based on obstetric register data. There is some evidence that registries produce higher quality data and report a greater number of obstetric trauma events compared to administrative datasets (Baghestan et al., 2007).

### *References*

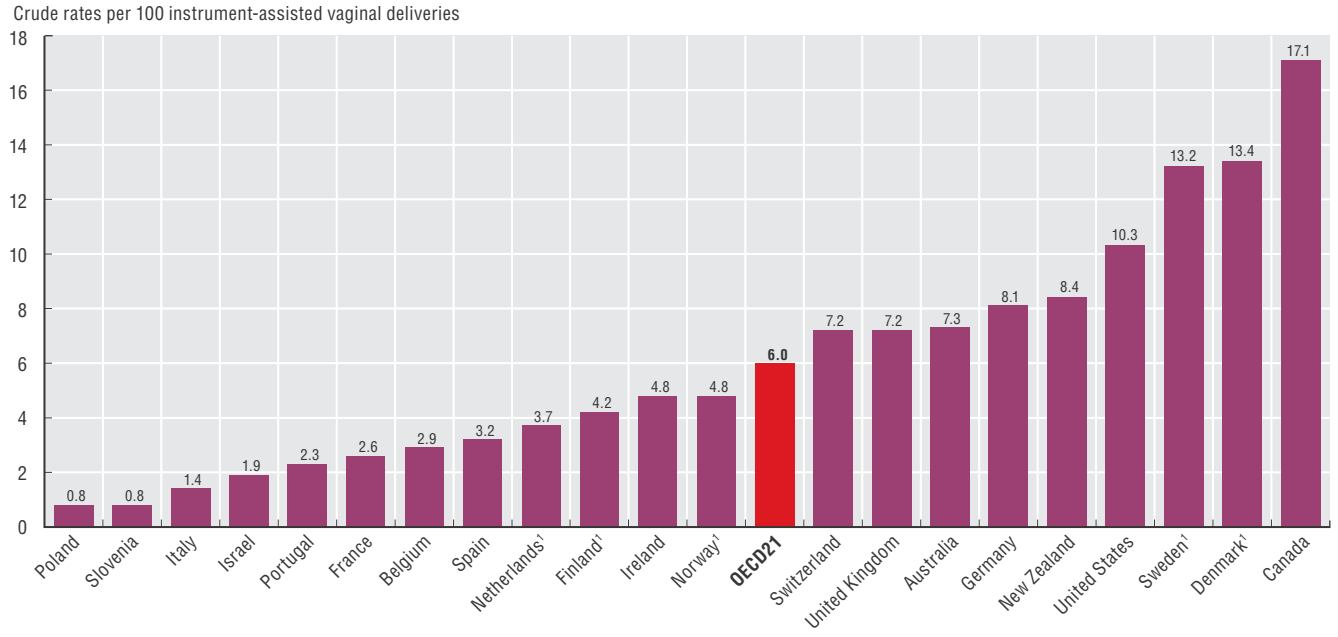
AHRQ – Agency for Health Research and Quality (2006), *Patient Safety Indicators Overview: AHRQ Quality Indicators – February 2006*, AHRQ, Rockville, United States.

Baghestan, E. et al. (2007), "A Validation of the Diagnosis of Obstetric Sphincter Tears in Two Norwegian Databases, the Medical Birth Registry and the Patient Administration System", *Acta Obstetricia et Gynecologica*, Vol. 86, pp. 205-209.

Euro-Peristat (2013), European Perinatal Health Report: Health and Care of Pregnant Women and Babies in Europe in 2010, INSERM, Paris.

Lappen, J.R. and D.R. Gossett (2010), "Changes in Episiotomy Practice: Evidence-based Medicine in Action", *Expert Review of Obstetrics and Gynecology*, Vol. 5, No. 3, pp. 301-309.

## 8.19. Obstetric trauma, vaginal delivery with instrument, 2013 (or nearest year)

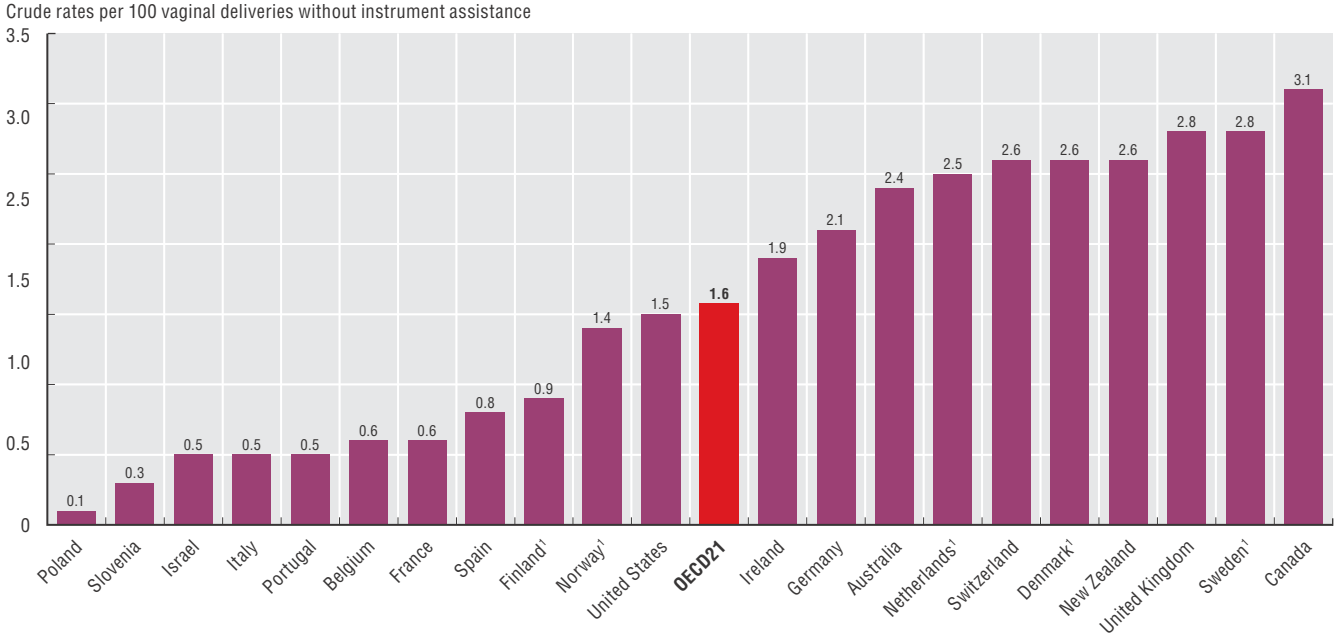



1. Based on registry data.

*Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.*

StatLink http://dx.doi.org/10.1787/888933281174

## 8.20. Obstetric trauma, vaginal delivery without instrument, 2013 (or nearest year)




1. Based on registry data.

*Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.*

StatLink http://dx.doi.org/10.1787/888933281174

Information on data for Israel: *http://oe.cd/israel-disclaimer*