Safe acute care – surgical complications and obstetric trauma

"First, do no harm" is a fundamental principle of the practice of medicine. Even so, patient safety remains one of the most pressing health issues for public education and further policy action. Over 15% of hospital expenditure and activity in OECD countries can be attributed to treating patients who experience a safety event, many of which are preventable (Slawomirski, Auraaen and Klazinga, 2017[33]). COVID-19 has made evident the continued vulnerability of health care delivery systems and the real risk of patient harm – particularly the risk of hospital-acquired infections (G20 Health & Development Partnership, 2021[34]). In 2021, the World Health Assembly endorsed the Global Patient Safety Action Plan 2021-30 to provide a strategic direction for concrete action to be taken by countries, partner organisations, health care facilities and international organisations to ensure safer health care systems (WHO, 2021[35]).

Patient safety "sentinel" or "never" events are events that should never or very rarely occur; "adverse" events are those that cannot be fully avoided, but whose incidence could be considerably reduced. Figure 6.22 illustrates rates for a never event – a foreign body left in during a procedure – using both linked and unlinked data (see the "Definition and comparability" box).

Figure 6.23 shows rates for two related adverse events – pulmonary embolism (PE) and deep vein thrombosis (DVT) after hip or knee replacement surgery – using both linked and unlinked data. PE and DVT cause unnecessary pain, reduced mobility and in some cases death, but they can be prevented by anticoagulants and other measures. The wide variations observed – including an over 35-fold variation in DVT rates – may be explained in part by differences in diagnostic practices, treatment guidelines, and coding practices across countries. Many countries postponed non-emergency surgery in 2020 as a COVID-19 response measure, leading to reductions in surgical volumes, which may explain changes for countries able to report 2020 data.

A woman's safety during childbirth can be assessed by looking at potentially avoidable severe tearing of the perineum during vaginal delivery. Surgery may be required, and complications include perineal pain and incontinence. It is not possible to prevent these types of tear in all cases, but they can be reduced by appropriate labour management and high-quality obstetric care.

Figure 6.24 shows rates of severe obstetric trauma (third- and fourth-degree tearing) after vaginal delivery with instrument (referring to deliveries using forceps or vacuum extraction) and without instrument. 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. High variation in rates of obstetric trauma is evident across countries. Reported rates of obstetric trauma with instrument vary from below 2 per 100 deliveries in Israel, Poland, Lithuania and Colombia to more than 10 per 100 deliveries in Denmark, the United States and Canada. The rates of obstetric trauma after vaginal delivery without instrument vary from below 0.5 per 100 deliveries in Colombia, Poland, Lithuania and Latvia to over 3 per 100 deliveries in Denmark and Canada. As with other patient safety indicators, findings may also be indicative of better coding and reporting practices, rather than less safe care.

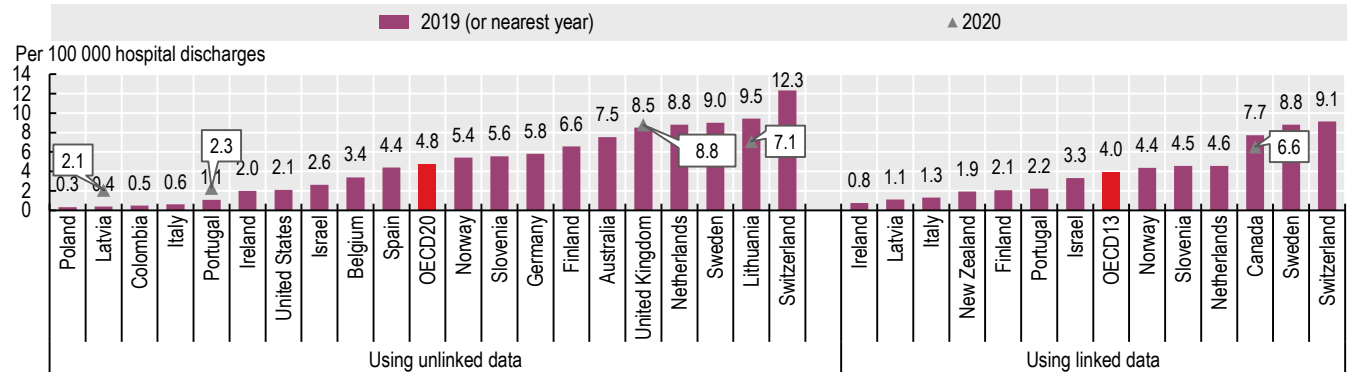
When interpreting 2020 data, the impact of COVID-19 on obstetric safety outcomes requires further study. Rates of obstetric trauma may be influenced by potential changes in caesarean section rates; reduced lengths of hospitalisation and changes to hospital processes and staffing levels; ability of patients to receive routine prenatal care; and other factors affected by COVID-19.

Definition and comparability

Indicators using unlinked data rely on information from a patient's admission to the hospital where surgery occurred to calculate rates. The number of discharges with ICD-10 codes for the relevant complication in any secondary diagnosis field is divided by the total number of discharges for patients aged 15 and over. The linked data approach expands beyond the surgical admission to include all subsequent related readmissions to any hospital within 30 days after surgery. Variations in definitions and medical recording practices between countries can affect calculation of rates and limit data comparability in some cases. Higher adverse event rates may signal more developed patient safety monitoring systems and a stronger patient safety culture rather than worse care.

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 (ICD-10 codes O70.2-O70.3) in any diagnosis and procedure field. Several differences in data reporting across countries may influence the calculated rates of obstetric patient safety indicators. These relate primarily to differences in coding practices and data sources. Some countries report obstetric trauma rates based on administrative hospital data, others based on obstetric register data. Careful interpretation of obstetric trauma for instrument-assisted delivery rates over time is required, since the very low number of trauma cases in some countries is likely to give rise to significant year-on-year variation.

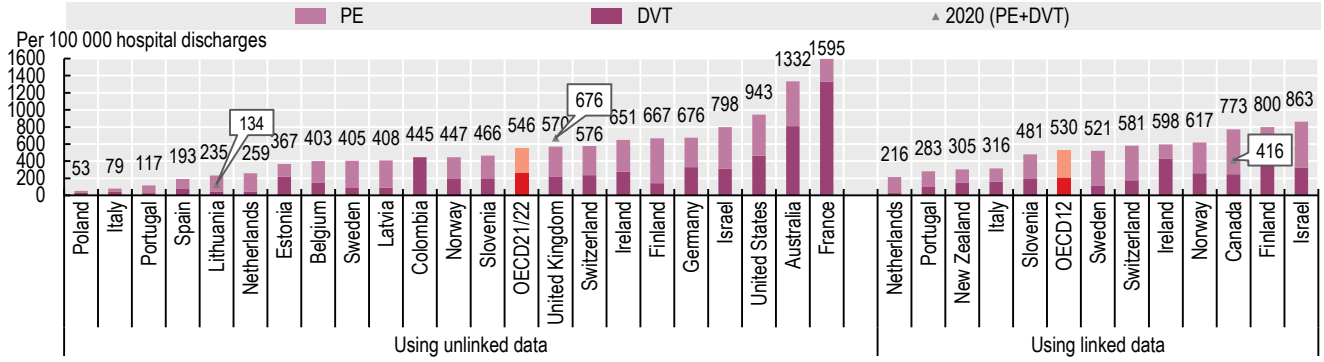
Figure 6.22. **Foreign body left in during procedure, 2019 (or nearest year) and 2020**



Note: 2020 data for the United Kingdom are provisional and include England only. For Canada, 2020 estimate is based on provisional 1 April to 30 September data from all jurisdictions except Quebec.
Source: OECD Health Statistics 2021.

StatLink https://stat.link/7qtf59

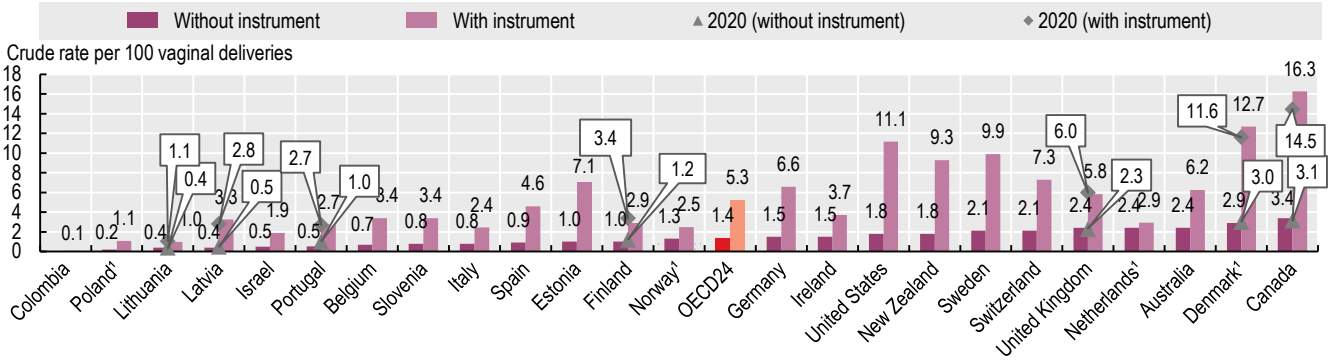
Figure 6.23. **Adverse events in hip and knee surgeries: postoperative pulmonary embolism or deep vein thrombosis in hip and knee surgeries, 2019 (or nearest year) and 2020**



Note: 2020 data for the United Kingdom are provisional and includes England only. For Canada, 2020 estimate is based on provisional 1 April to 30 September 2020 data from all jurisdictions except Quebec.
Source: OECD Health Statistics 2021.

StatLink https://stat.link/il7m5s

Figure 6.24. **Obstetric trauma, vaginal delivery with and without instrument, 2019 (or nearest year) and 2020**



Note: 2020 data for the United Kingdom are provisional and include England only. For Canada, 2020 estimate is based on provisional 1 April to 30 September data from all jurisdictions except Quebec. 1. Based on registry data.
Source: OECD Health Statistics 2021.

StatLink https://stat.link/v9gfm0