

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, 2018[1]). The World Health Assembly recently endorsed the establishment of an annual World Patient Safety Day to further strengthen awareness and galvanise concerted action for safer care.

Patient safety problems may be categorised as “sentinel” or “never” events: events that should never or very rarely occur; and “adverse” events: events that cannot be fully avoided, but whose incidence could be considerably reduced.

Figure 6.4 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). The most common risk factors for this never event are emergencies, unplanned changes in procedure, patient obesity and changes in the surgical team. Preventive measures include checklists, counting instruments, methodical wound exploration and effective communication among the surgical team.

Figure 6.5 illustrates rates for an adverse event – the percentage of hospital inpatients with health care-associated infections (HAIs) – in OECD countries, together with the proportion of bacteria causing these infections that are resistant to antibiotics. HAIs are the single most deadly and costly adverse event, representing up to 6% of public hospital budgets (Slawomirski, Auraaen and Klazinga, 2018[1]). This impact is increased by antibiotic-resistant bacteria, which can make HAIs difficult or even impossible to treat.

On average, across OECD countries, just under 4.9% of hospital patients had an HAI in 2015-17. This proportion was 5.2% in 2011-12. The observed proportion of patients was lowest in Lithuania, Latvia and Germany (around 3%) and highest in Portugal, Greece and Iceland (more than 7%). Antibiotic resistance rates ranged from 0% in Iceland to nearly 70% in Latvia, although these rates should be interpreted with caution due to small sample sizes in some cases.

Figure 6.6 shows rates for two related adverse events – pulmonary embolism (PE) and deep vein thrombosis (DVT) after hip or knee replacement surgery – using both unlinked and linked data definitions (see the “Definition and comparability” box). PE and DVT cause unnecessary pain and in some cases death, but they can be prevented by anticoagulants and other measures. The large variations observed, including an over 25-fold variation in DVT rates, may be explained in part by differences in diagnostic practices across countries.

### 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 International Classification of Diseases (ICD) codes for the relevant complication in any secondary diagnosis field is divided by the total number of discharges for patients aged 15 and older. The linked data approach expands beyond the surgical admission to include all subsequent related re-admissions 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.

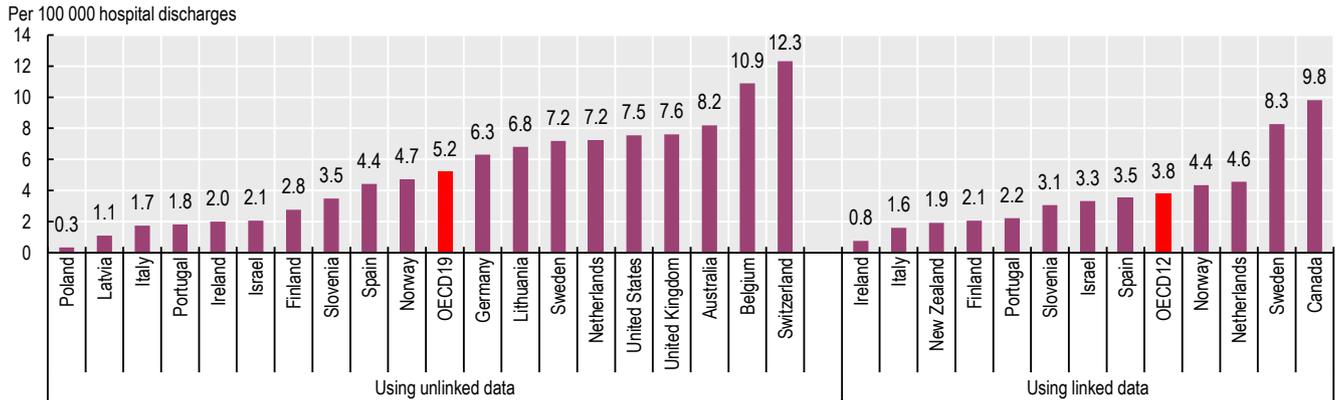
HAI data are based on results of point prevalence studies conducted by the Centers for Disease Control and Prevention (CDC) and the European Centre for Disease Prevention and Control (ECDC) between 2015 and 2017 (Magill et al., 2018[2]; Suetens et al., 2018[3]). HAI rates are unadjusted and may not reflect rates published elsewhere owing to differences in the infections included. See Suetens et al. (2018[3]) and Magill et al. (2018[2]) for more details regarding specific inclusions and exclusions. Country estimates may reflect different levels of variability based on sampling differences. The HAI rate is presented, along with the proportion of patients recruited from intensive care units (ICUs). ICU patients may be at greater risk of developing an HAI. Antibiotic resistance data are based on a composite antibiotic resistance indicator developed by the ECDC (Suetens et al., 2018[3]).

### References

- [2] Magill, SS. et al. (2018), “Changes in Prevalence of Health Care-Associated Infections in U.S. Hospitals.” *New England Journal of Medicine*, 1;379(18):1732-1744. doi: <http://dx.doi.org/10.1056/NEJMoa1801550>.
- [1] Slawomirski, L., A. Auraaen and N. Klazinga (2018), “The Economics of Patient Safety: Strengthening a value-based approach to reducing patient harm at national level,” *OECD Health Working Papers*, No. 96, OECD Publishing, Paris, <https://doi.org/10.1787/5a9858cd-en>.
- [3] Suetens, C. et al. (2018), “Prevalence of healthcare-associated infections, estimated incidence and composite antimicrobial resistance index in acute care hospitals and long-term care facilities: results from two European point prevalence surveys, 2016 to 2017”, *Eurosurveillance*, <http://dx.doi.org/10.2807/1560-7917.es.2018.23.46.1800516>.

Safe acute care – surgical complications and health care-associated infections

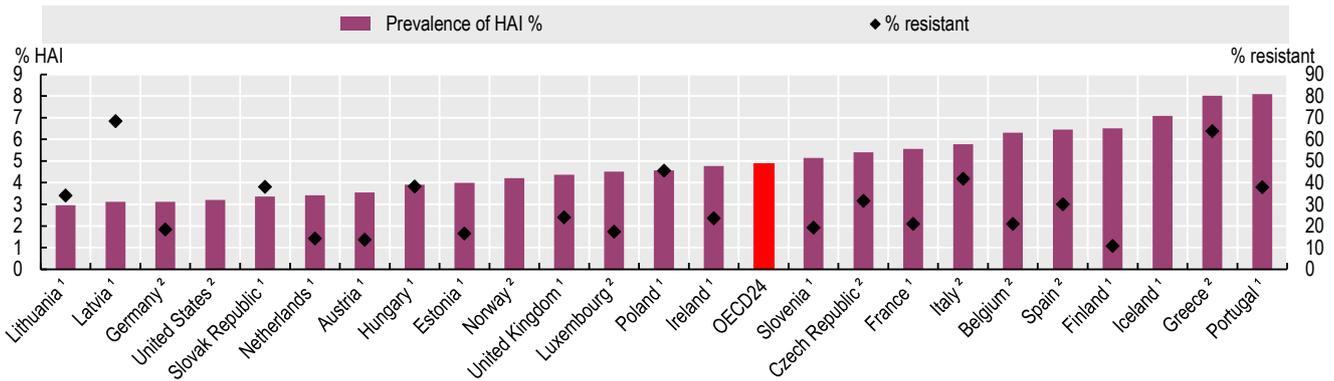
Figure 6.4. Foreign body left in during procedure, 2017 (or nearest year)



Source: OECD Health Statistics 2019.

StatLink <https://doi.org/10.1787/888934016018>

Figure 6.5. Percentage of hospitalised patients with at least one health care-associated infection and proportion of bacteria isolated from these infections resistant to antibiotics, 2015-17



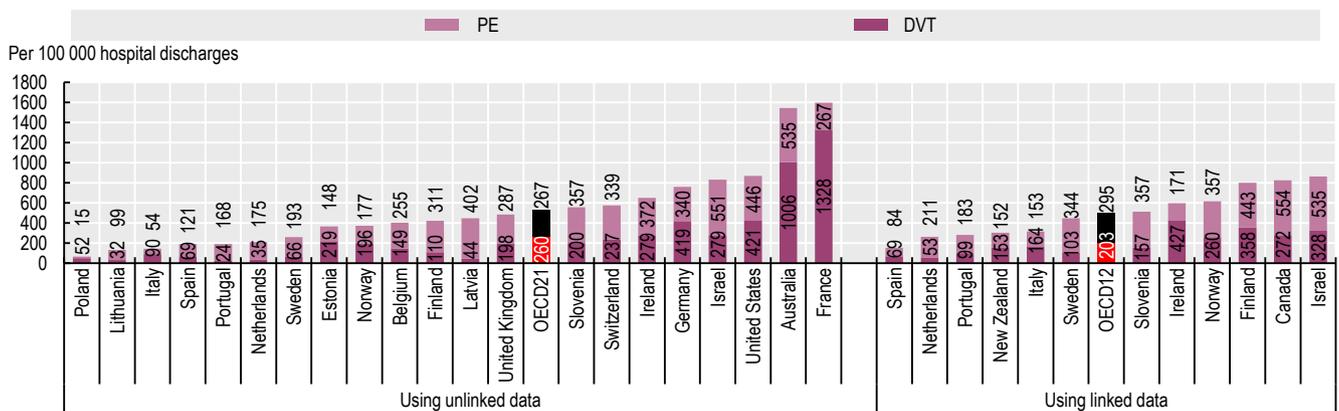
Note: No resistance data available for Iceland, Norway and the United States.

1. Under 5% of patients from ICUs. 2. Over 5% of patients from ICUs.

Source: ECDC 2016-17 Point prevalence survey. CDC 2015 point prevalence study.

StatLink <https://doi.org/10.1787/888934016037>

Figure 6.6. Adverse events in hip and knee surgeries: post-operative pulmonary embolism (PE) or deep vein thrombosis (DVT), 2017 (or nearest year)



Source: OECD Health Statistics 2019.

StatLink <https://doi.org/10.1787/888934016056>



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