

5.6. Procedural or postoperative complications

Efforts to improve patient safety have sparked interest in reporting sentinel and adverse events arising from health care. Sentinel events are rare but dramatic incidents where medical errors may lead to tangible harm to patients. These, sometimes referred to as “never events”, indicate failure of safeguards to protect patients during care delivery. Foreign body left in during procedure is such an occurrence that reflects serious process problems. The indicator captures errors relating to the failure to remove surgical instruments (i.e. needles, knife blades, gauze swabs) at the end of a procedure. The most common risk factors that might cause retained bodies after surgery are emergencies, unplanned changes in procedure, changes in the surgical team during the procedure and patient obesity (Gawande *et al.*, 2003). Preventive measures include counting procedures, a methodical wound exploration and effective communication among the surgical team.

Adverse events are unintended incidents caused by health care that could lead to harm to patients. Such complications can never be fully avoided, given the high-risk nature of some interventions and the underlying health problems of patients. Thus, in contrast to the sentinel events, isolated adverse events do not necessarily indicate a patient safety issue. While accidental puncture or laceration during a surgical procedure is a recognised risk, increased rates of such complications may indicate system problems, such as inadequate training or fatigued health staff. Postoperative pulmonary embolism and deep vein thrombosis cause unnecessary pain and death, but can be prevented through the appropriate use of anticoagulants and other preventive measures. Sepsis after elective surgery is a severe complication that can lead to multiple organ dysfunction and death. It usually results from less severe infections, which should be avoided or properly treated. Many cases of postoperative sepsis can be prevented through the appropriate use of prophylactic antibiotics, sterile surgical techniques and good postoperative care.

Figures 5.6.1 to 5.6.4 show reported complication rates related to surgical and medical care. There are considerable differences across countries for these four indicators. For example, Switzerland has the highest rate for reported foreign bodies left in during procedure, a very low rate for postoperative pulmonary embolism or deep vein thrombosis, and the lowest rate for postoperative sepsis. A similar variance in indicator results can be found for Canada, Spain and France. Some countries have consistently higher (Australia, New Zealand) or lower reporting rates (Denmark, Germany).

Differences in procedural or postoperative patient safety indicators may reflect differences in recording and reporting practices rather than safety of care. In countries where documentation and hospital billing are not directly related, hospitals and physicians have less incentive to report diagnoses accurately and completely. Although there may be reservations whether the current results accurately reflect patient safety performance at the national level and are internationally comparable, these indicators show that numerous patients certainly have been affected by patient safety events. International efforts to harmonise documentation and data systems, and the results of ongoing validation studies, will provide more information on validity and reliability of patient safety measures based on administrative hospital data in the future.

Definition and comparability

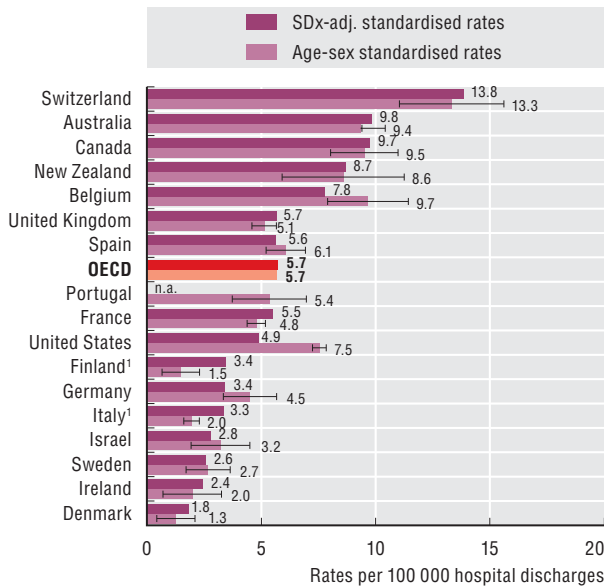
See Indicator 5.5 “Obstetric trauma” for definition, source and methodology underlying the patient safety rates. All procedural or postoperative complications are defined as the number of discharges with ICD codes for complication in any secondary diagnosis field, divided by the total number of discharges (medical and surgical or surgical only) for patients aged 15 and older. The rates have been age-sex standardised, apart from postoperative sepsis rate. This is due to the use of modified exclusion criteria within the algorithm for the calculation of this indicator. In addition, the patient safety rates have been adjusted by the average number of secondary diagnoses (SDx) (Drösler *et al.*, 2011) in order to improve inter-country comparability. Despite this adjustment, the results for the two countries (Finland and Italy) that are reporting less than 1.5 diagnoses per record may be under-estimated.

Other differences in data reporting across countries may influence the calculated rates of patient safety indicators. These include differences in coding practice, coding rules (*e.g.* definition of principal and secondary diagnoses), coding for billing purposes and the use of diagnosis type markers (*e.g.* “present at admission”).

Information on data for Israel: <http://dx.doi.org/10.1787/888932315602>.

5.6. Procedural or postoperative complications

5.6.1 Foreign body left in during procedure, 2009 (or nearest year)



Note: Some of the variations across countries are due to different classification systems and recording practices. 95% confidence intervals represented by I—I.

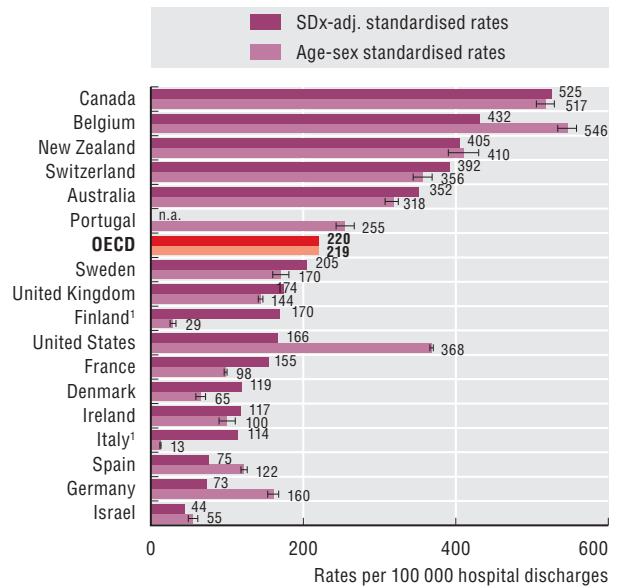
SDx: Secondary diagnoses adjustment.

1. The average number of secondary diagnoses is < 1.5.

Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525248>

5.6.2 Accidental puncture or laceration, 2009 (or nearest year)



Note: Some of the variations across countries are due to different classification systems and recording practices. 95% confidence intervals represented by I—I.

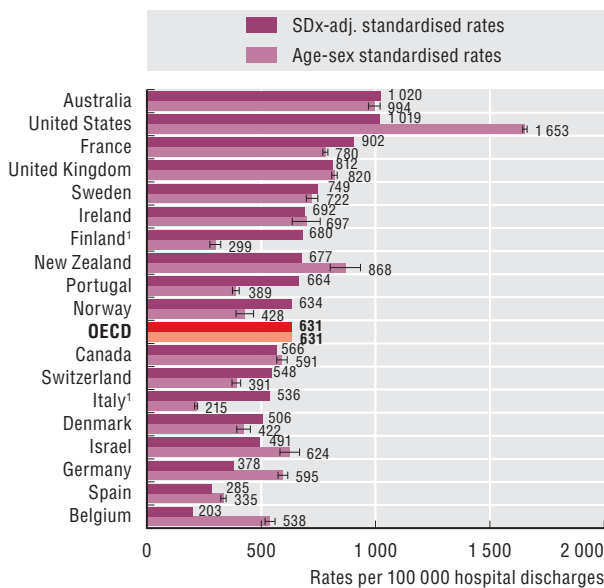
SDx: Secondary diagnoses adjustment.

1. The average number of secondary diagnoses is < 1.5.

Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525267>

5.6.3 Postoperative pulmonary embolism or deep vein thrombosis, 2009 (or nearest year)



Note: Some of the variations across countries are due to different classification systems and recording practices. 95% confidence intervals represented by I—I.

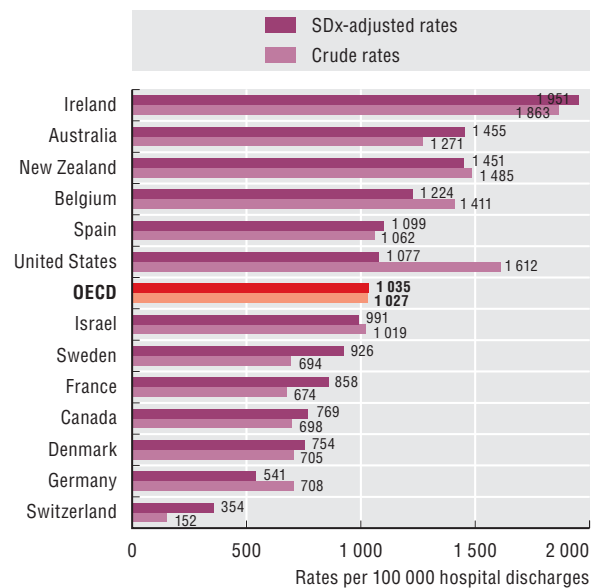
SDx: Secondary diagnoses adjustment.

1. The average number of secondary diagnoses is < 1.5.

Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525286>

5.6.4 Postoperative sepsis, 2009 (or nearest year)



Note: Some of the variations across countries are due to different classification systems and recording practices.

SDx: Secondary diagnoses adjustment.

Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932525305>



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