

Patient safety remains one of the most prominent issues in health policy and public debate. The European Commission estimates that without any policy changes, there are likely to be 10 million adverse events related to hospitalisations (including infection-related ones) in the European Union per year, of which almost 4.4 million would be preventable (European Commission, 2008). The European Union Network for Patient Safety and Quality of Care, PaSQ Joint Action, was launched in 2012 to create a permanent platform for future co-operation between member states in the area of patient safety and quality of care.

Figures 4.5.1 and 4.5.2 show rates of two adverse events: post-operative pulmonary embolism (PE) or deep vein thrombosis (DVT) and post-operative sepsis. PE or DVT cause unnecessary pain and in some cases death, but can be prevented by anticoagulants and other measures before, during and after surgery. Likewise, sepsis after surgery, which may lead to organ failure and death, can in many cases be prevented by prophylactic antibiotics, sterile surgical techniques and good post-operative care. Figure 4.5.3 illustrates a sentinel event – rates of foreign body left in during procedure. 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 counting instruments, methodical wound exploration and effective communication among the surgical team.

Variation in post-operative PE or DVT rates (including all surgeries) varies more than 10-fold (Figure 4.5.1). Belgium, Portugal and Spain report the lowest rates, whilst Slovenia reports rates double the EU average. Rates following hip and knee replacement surgery are also shown. These are high risk procedures and higher rates would be expected, yet this pattern is observed in relatively few countries. Several explanations are possible, including more careful care after hip and knee surgery, differences in emergency/elective case mix across countries, in the mix of procedures across the public and private sectors if countries vary in the volume of hip and knee replacements undertaken in each sector, in how national databases link secondary complications back to the primary procedure, or in how secondary complications are reported to the national database, across surgical specialities within a country.

Variation in post-operative sepsis (including all surgeries) is also substantial, at around 5-fold (Figure 4.5.2). Rates following abdominal surgery, a high risk procedure, are higher, as expected, in almost all countries.

Variation in rates for the foreign body left in procedure is around 20-fold (Figure 4.5.3). Belgium, Denmark and Poland report the lowest rates and Switzerland and Portugal the highest rates. There is modest correlation in countries’ relative performance across the three indicators, with Belgium and Poland reporting consistently lower rates compared to other countries.

Caution is needed in interpreting the extent to which these indicators accurately reflect international differences in patient safety rather than differences in the way that countries report, code and calculate rates of adverse events (see box on “Definitions and comparability”). In some cases, higher adverse event rates may signal more developed patient safety monitoring systems rather than worse care.

Definitions and comparability

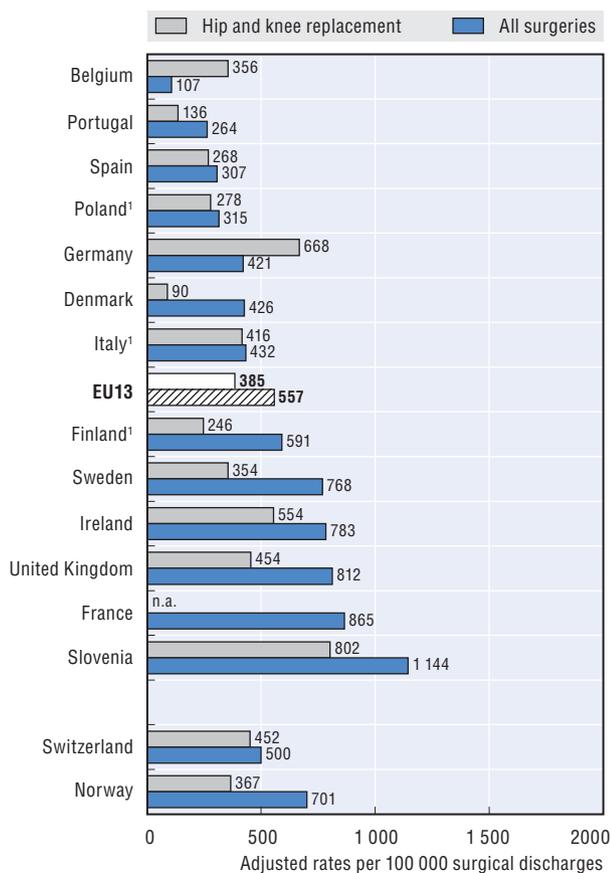
Surgical complications are defined as the number of discharges with ICD codes for complication in any secondary diagnosis field, divided by the total number of discharges for patients aged 15 and older. The rates have been adjusted by the average number of secondary diagnoses in order to improve cross-country comparability. Despite this adjustment, the results for three countries (Finland, Poland and Italy) that are reporting less than 1.5 diagnoses per record may be underestimated. Rates have not been age-sex standardised, since analyses find that this makes a marginal difference to countries’ reported rate or ranking relative to other countries.

A fundamental challenge in international comparison of patient safety indicators centres on the quality of the underlying data. The indicators are typically derived from administrative databases, rather than systems specifically designed to monitor adverse events, hence differences in how countries record diagnoses and procedures and define hospital episodes can affect calculation of rates. Countries which rely on clinicians to report adverse events may record them less completely than countries which employ specially trained administrative staff to identify and code adverse events from patients’ clinical records, for example. The extent to which national databases facilitate recording of secondary diagnoses or to which payments are determined by diagnosis or procedure lists may also influence recording. Differences in the use of a present on admission flag for diagnoses, and differences in disease classifications systems (for example between ICD-9-CM and ICD-10-AM) are also known to affect data comparability. Hence, differences in indicator rates are likely to reflect differences in coding and recording practices across countries to some extent, as well as true differences in the quality of care.

References

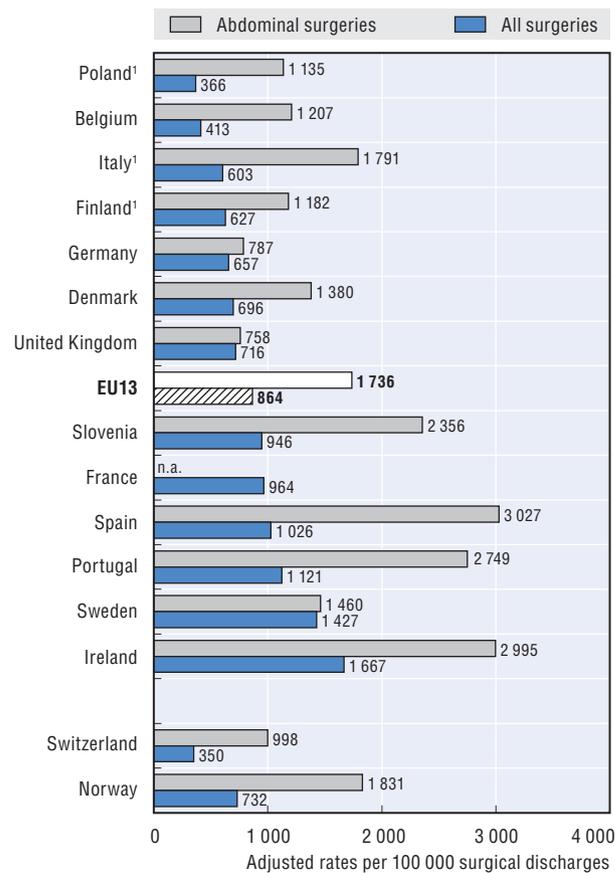
European Commission (2008), *Communication and Recommendation on Patient Safety, including the Prevention and Control of Healthcare-Associated Infections – Summary of the Impact Assessment*, European Commission, Brussels.

4.5.1. Postoperative pulmonary embolism or deep vein thrombosis in adults, 2011 (or nearest year)



1. The average number of secondary diagnoses is < 1.5.
Source: OECD Health Statistics 2014, <http://dx.doi.org/10.1787/health-data-en>.

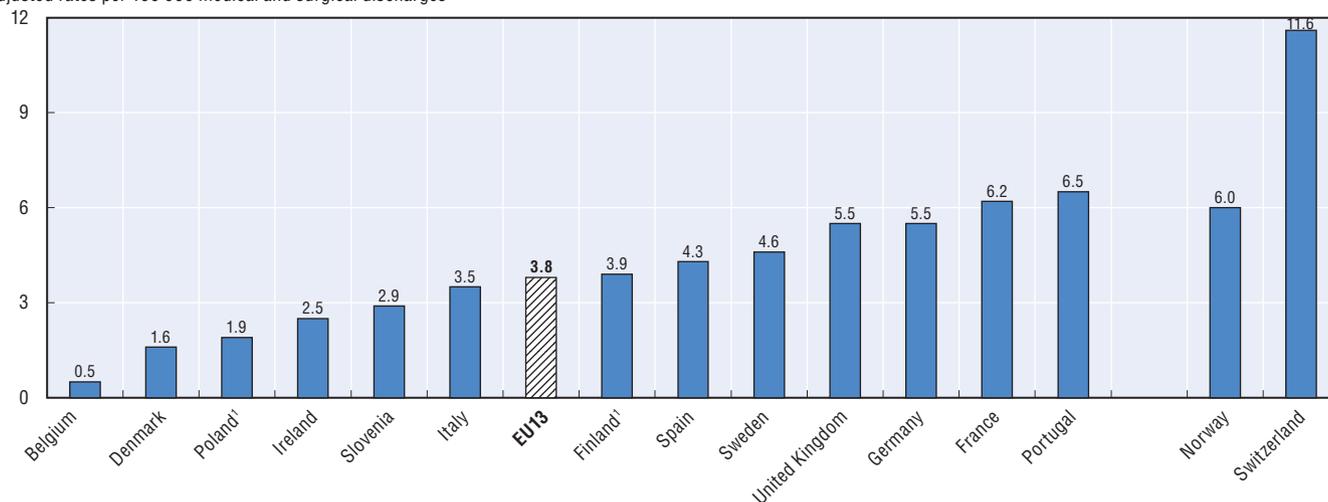
4.5.2. Postoperative sepsis in adults, 2011 (or nearest year)



1. The average number of secondary diagnoses is < 1.5.
Source: OECD Health Statistics 2014, <http://dx.doi.org/10.1787/health-data-en>.

4.5.3. Foreign body left in during procedure in adults, 2011 (or nearest year)

Adjusted rates per 100 000 medical and surgical discharges



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

1. The average number of secondary diagnoses is < 1.5.
Source: OECD Health Statistics 2014, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933155709>



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