

## Hip and knee surgery

Hip and knee replacement surgeries can be effective treatments for patients with chronic conditions such as osteoarthritis (OA). Surgeries to repair hip fractures are also common and effective. Ageing and a loss of skeletal strength from osteoporosis are the main risk factors associated with a hip fracture, typically sustained during a fall. In most instances, surgical intervention is required to repair or replace the fractured hip joint.

Treatment of patients with hip and knee OA aims to reduce the patient's joint pain and improve their function, mobility and quality of life (QoL). Surgery is generally recommended if symptoms substantially affecting QoL persist after exhausting non-surgical treatment (NICE, 2014[1]). Age-standardised hip and knee replacement rates have risen over the past decade, and vary up to five-fold within and between countries (OECD, 2014[2]).

Figure 6.21 shows the crude mean scores submitted by patients before and at 6 or 12 months after elective hip replacement surgery for OA in a set of national or sub-national joint replacement programmes using the Oxford Hip Score and HOOS-PS, which are validated patient-reported outcome measures (PROMs) that have been developed specifically for hip and knee pain. In all programmes, the average patient reported a higher score following surgery, suggesting a positive outcome on average.

Figure 6.22 shows the crude mean scores submitted by patients before and 6 or 12 months after elective knee replacement surgery for OA in national and sub-national programmes using the Oxford Knee Score and KOOS-PS instruments. On average, knee replacement patients also reported improvement after surgery in all programmes. The amount of improvement for knee replacement was, on average, more modest than that reported by hip replacement patients. However, patients recovering from knee arthroplasty may take longer to recover. Further results and analysis of these measures are provided in Chapter 2.

While a hip replacement for OA is an elective procedure, hip fracture repair is usually an emergency procedure. Evidence suggests that early surgical intervention improves patient outcomes and minimises the risk of complication. There is general agreement that surgery should occur within two days (48 hours) of hospital admission (National Clinical Guideline Centre, 2011[3]).

Time-to-surgery (TTS) is considered a clinically meaningful process indicator of the quality of acute care for patients with hip fracture. However, TTS is influenced by many factors, including hospitals' surgical theatre capacity, flow and access, and targeted policy interventions, including public reporting and monitoring of performance (Siciliani, Borowitz and Moran, 2013[4]).

In 2017, on average across OECD countries, over 80% of patients admitted for hip fracture underwent surgery within two days (Figure 6.23) This represents a modest increase of 2.7 percentage points (from 78.2% to 80.9%) since 2012.

The biggest improvement was observed in Israel (from 68% to 89%). Targeted policies that effectively incentivise timely surgery following hip fracture admission could partly explain this result. Iceland, the Czech Republic, Portugal and Latvia reported a decline in the proportion over this period, suggesting a need for policy interventions.

### Definition and comparability

The PROM results are based on data from adult patients undergoing elective hip or knee replacement with a principal diagnosis of OA, who completed an Oxford Hip/Knee Score and/or H/KOOS questionnaire pre- and post-operatively (OECD, forthcoming[5]). On both scales, a higher score denotes better outcomes. Data collection at 6 months versus 12 months influences the results. The size of participating programmes varied from entire countries to single hospitals. For further details of the methodological approach and issues regarding comparability, refer to Chapter 2.

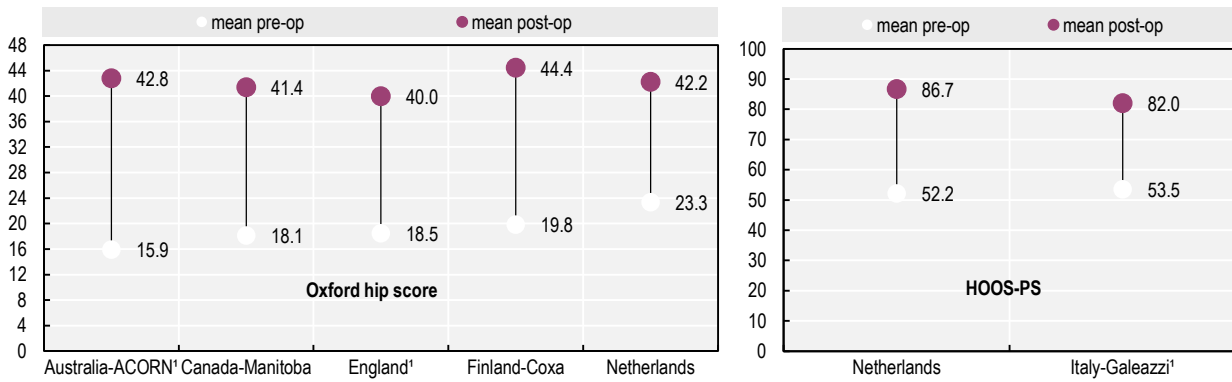
Hip fracture indicator is defined as the proportion of patients aged 65 years and over admitted to hospital in a specified year with a diagnosis of upper femur fracture, who had surgery initiated within two calendar days of their admission to hospital. The capacity to capture time of admission and surgery in hospital administrative data varies across countries, resulting in the inability to precisely record surgery within 48 hours in some countries.

While cases where the hip fractures occurred during the admission to hospital should be excluded, not all countries have a 'present on admission' flag in their datasets to enable them to identify such cases accurately.

### References

- [3] National Clinical Guideline Centre (2011), *The management of hip fracture in adults*, National Clinical Guideline Centre, London, <http://www.ncgc.ac.uk>.
- [1] NICE (2014), *Osteoarthritis: care and management*, The National Institute for Health and Care Excellence.
- [2] OECD (2014), *Geographic Variations in Health Care: What Do We Know and What Can Be Done to Improve Health System Performance?*, OECD Health Policy Studies, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264216594-en>.
- [5] OECD (forthcoming), "Patient-reported outcome indicators in joint replacement and breast cancer surgery", *OECD Health Working Papers*, OECD Publishing, Paris.
- [4] Siciliani, L., M. Borowitz and V. Moran (eds.) (2013), *Waiting Time Policies in the Health Sector: What Works?*, OECD Health Policy Studies, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264179080-en>.

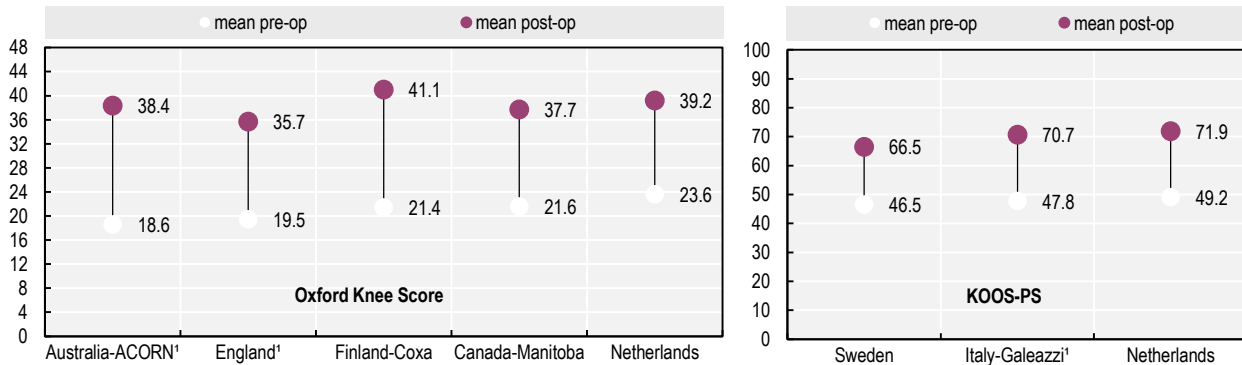
Figure 6.21. Crude mean pre- and post-operative Oxford Hip Score and HOOS-PS, 2013-16 (or nearest year)



1. Post-operative measurement at six months.  
Source: PaRIS Hip/Knee Replacement Pilot Data Collection.

StatLink <https://doi.org/10.1787/888934016341>

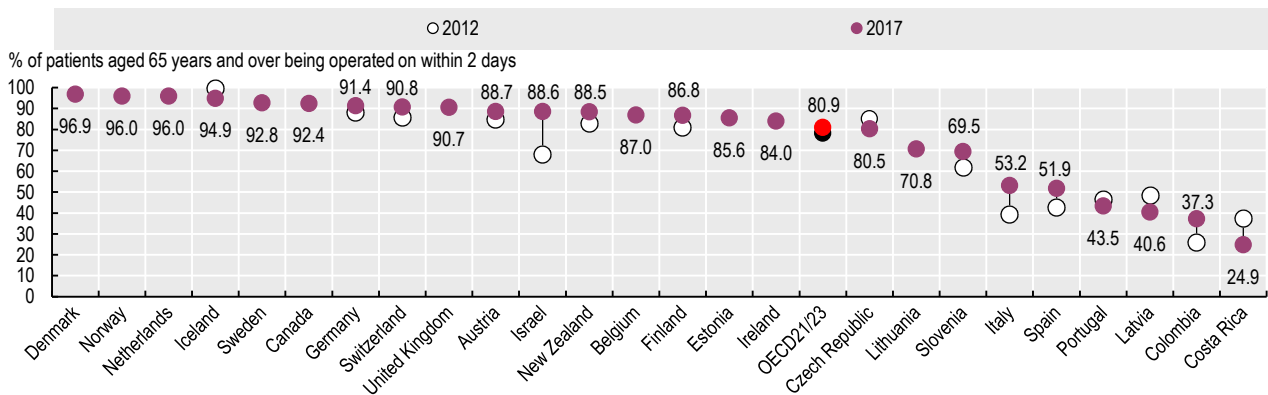
Figure 6.22. Crude mean pre- and post-operative Oxford Knee Score and KOOS-PS, 2013-16 (or nearest year)



1. Post-operative measurement at six months.  
Source: PaRIS Hip/Knee Replacement Pilot Data Collection.

StatLink <https://doi.org/10.1787/888934016360>

Figure 6.23. Hip fracture surgery initiation within two days of admission to hospital, 2012 and 2017 (or nearest year)



Source: OECD Health Statistics 2019.

StatLink <https://doi.org/10.1787/888934016379>



**From:**  
**Health at a Glance 2019**  
OECD Indicators

**Access the complete publication at:**  
<https://doi.org/10.1787/4dd50c09-en>

**Please cite this chapter as:**

OECD (2019), "Hip and knee surgery", in *Health at a Glance 2019: OECD Indicators*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/e7af69ca-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area. Extracts from publications may be subject to additional disclaimers, which are set out in the complete version of the publication, available at the link provided.

The use of this work, whether digital or print, is governed by the Terms and Conditions to be found at <http://www.oecd.org/termsandconditions>.