




Backlog could mean up to seven-year wait for orthopedic operations in Scotland

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Predicted Waiting Times for Orthopaedic Surgery: An Urgent Need to Address the Deficit in Capacity

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Aims

-  Examine predicted waiting times for orthopaedic surgery
-  Assess how this may change in the future, including impact of additional capacity
-  Determine the feasibility of achieving the current government targets of a 1 year wait for surgery by September 2024

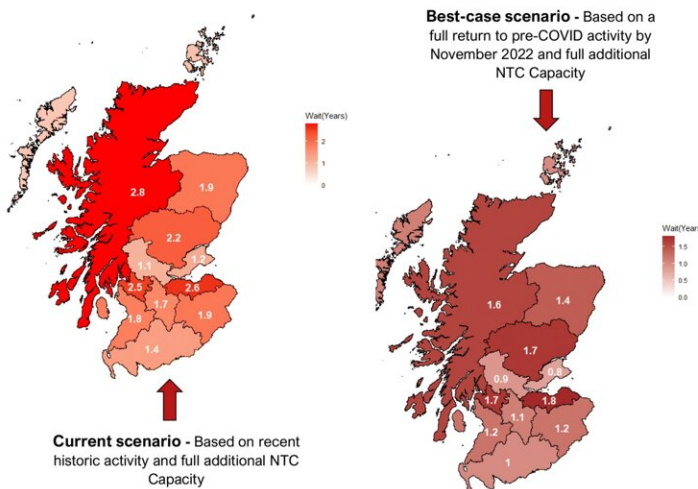
Methods

- Publicly available Public Health Scotland data from <https://bit.ly/3RWASs2> - September 2022
- Calculations based on:
 - previous 1 year surgical activity for routine (FSSA P3 & P4 patients).
 - currently waiting patients as of June 2022.
 - number of patients added to the waiting list over 1 year.
- Full details of the methodology (including adjustment for upcoming National Treatment Centre [NTC] capacity) are available in the attached supplementary material

Results

Predicted waiting time for a routine (P3/P4) patient listed July 2022 (average wait in years)




*Weighted distribution of NTC Capacity based on current predicted waiting time (waiting list size and recent historical operative activity)

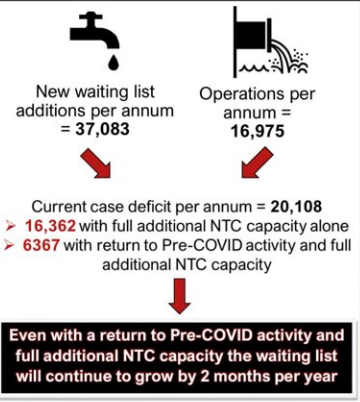


Scotland-wide sensitivity estimates for wait-time of new routine patient July 2022

Best-case scenario	Current scenario	Cautious scenario	Worst-case scenario
Return to pre-COVID activity and full NTC capacity	Recent historic activity and full NTC capacity	Recent historic activity and half NTC capacity	Some extra NTC capacity but deterioration in other activity. No overall increase
1.3 years (longest individual Health board wait = 1.8 years)	2 years (longest individual Health Board wait = 2.8 years)	2.2 years (longest individual Health Board wait = 3.8 years)	2.3 years (longest individual Health board wait = 7 years)

Conclusions

-  Current predicted orthopaedic surgery waiting times for a patient listed in July 2022 are approximately 2 years. If full NTC capacity is not achieved waits in some health boards will exceed 3 years.
-  Wait list additions and admissions for treatment remain significantly below 2019 levels. Even with a prompt full return to pre-COVID activity and additional NTC capacity waiting times will continue to deteriorate.
-  Current targets of a 1-year maximum wait by September 2024 need urgent and intense action if they are to be achieved



Impact of future operative activity on ability to achieve Scottish Government target of 1 year wait by September 2024

Wait (years) for patient listed in September 2023 (to achieve 1 year wait by Sept 2024)

Current Activity	3.8
25% ↑ Activity	2.8
50% ↑ Activity	2.1
75% ↑ Activity	1.8
100% ↑ Activity	1.3
Pre-COVID Activity + Full NTC Capacity	1.4

Red denotes failure to meet target

% of 2019 routine (P3/P4) activity:
 Wait list additions = **87%**
 Admissions for treatment = **52.2%**



Credit: *Bone & Joint Research* (2022). DOI: 10.1302/2046-3758.1112.BJR-2022-0404

According to new research from the University of Aberdeen, if surgical rates do not increase in Scotland, orthopedic patients listed in July 2022 will have up to a seven year wait in one health board area, with the average wait across all Scottish health boards climbing to more than two years and three months.

The study, published in *Bone & Joint Research*, predicts the average waiting time for [orthopedic surgery](#) in Scottish regions according to current and forecasted factors.

Luke Farrow, clinical research fellow at the University of Aberdeen worked alongside clinical and academic colleagues across Scotland to calculate the predicted waiting times for [surgery](#), determine the mismatch between current supply and demand, and assess the feasibility of the Scottish Government target of one year wait time by 2024.

The team calculated four possible different scenarios, ranging from "[worst-case scenario](#)," where activity remains at current levels for the foreseeable future, to "best-case scenario" where activity returns to pre-pandemic volumes by November 2022 bolstered by proposed additional National Treatment Center capacity.

According to the calculations there would be significant variation in national service provision in the worst-case scenario, with an almost six-year difference in potential waits between the health boards with the longest and shortest projected times to surgery.

Since the cessation of routine surgical activity during the pandemic, a substantial backlog of patients waiting for orthopedic surgery has accumulated. Evidence shows such delays are associated with negative short and long-term consequences in the health and well-being of patients.

Using publicly available data from Public Health Scotland, the team calculated predicted waiting times for all 14 health boards in Scotland, including Scotland-wide averages for the different activity scenarios. A break-down by health board has been provided as supplementary information so individual regions can see how their predicted wait compares to the national average.

The calculations were based on the previous year's activity for routine orthopedic surgery, the number of currently waiting patients as of June 2022 and the number of patients added to the waiting list over one year. The figure also accounts for potential changes in future operative activity, for example additional capacity provided through the proposed launch of National Treatment Centers in 2023.

Farrow explains, "Our key findings suggest that there is a significant current annual case deficit that will not be resolved even in 'best-case scenario' conditions, which specify a return to pre-pandemic activity coupled with a 22% uplift in capacity should the full additional planned National Treatment Centers' capability be applied. Waiting lists are therefore anticipated to continue to grow annually, further adding to the significant backlog already present."

Scotland-wide averages determine that in the "best-case scenario," the average predicted wait across Scotland for a patient listed for surgery in July 2022 would be almost one year and four months, compared to more than two years and three months for the "worst-case scenario."

Farrow adds, "Current admissions for routine treatment are only 52.2% of 2019 activity so a return to a pre-pandemic level of operative output will require a significant change from [current practice](#), with return of core operative capacity that has been significantly curtailed by financial limitations, staffing shortages, access to private healthcare infrastructure, and urgent-care pressures."

This, the authors say is even before consideration of increased future demand for hip and knee arthroplasty services which anticipate a rise from pre-COVID levels by up to 28% and 34% in 2038 respectively.

The study also highlights the extensive challenges in meeting the current Scottish Government targets, with an immediate "more than doubling" of current activity required to achieve a one-year wait by September 2024.

Farrow explains, "Prolonged waits for certain orthopedic procedures can have a major negative impact on patient health. This occurs both in terms of deterioration in quality of life whilst awaiting surgery, as well as potential negative connotations for post-operative recovery and longer-term health in addition to reduced independence and increased social care needs.

"As the rate that patients are being added to waiting lists exceeds the rate they are being taken off it, any delay results in an associated rise in the waiting times. Based on current activity for every month of delay in providing this necessary surgical capacity, there is more than a one month increase in a new patient's waiting time.

"This study highlights the significant challenges facing recovery of planned orthopedic surgery following the pandemic. If the barriers to significant expansion of current activity are not addressed urgently, then waiting lists will continue to deteriorate and patients will continue to come to harm as a result."

More information: Luke Farrow et al, Predicted waiting times for orthopaedic surgery, *Bone & Joint Research* (2022). [DOI: 10.1302/2046-3758.1112.BJR-2022-0404](https://doi.org/10.1302/2046-3758.1112.BJR-2022-0404)

Provided by University of Aberdeen

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