Demand for and Access to Hip and Knee Joint Replacements in the Eastern Health Zones

Objective

To evaluate the utilization and timeliness of access for referral to an orthopaedic surgeon for osteoarthritis (OA), and the time from consult to hip or knee joint replacement (JRs) in Eastern health zones in Newfoundland and Labrador (NL).

Guidelines from the Canadian Orthopedic Association

1. A patient should wait no more than 90 days from the time of referral by the family doctor or primary care practitioner to the time of the initial orthopedic consult.

2. A patient should wait no more than 182 days once the decision to have a hip or knee replacement is made.

Practice Points

1. Timely provision of JRs is a federal priority.

2. Capacity for JR in NL is less than demand.

3. The COVID-19 pandemic has contributed to a JRs backlog and an aging population has increased the prevalence of OA requiring JRs.

Methods

1. Data were collected and analyzed by NL Health Services from orthopaedics central intake (Eastern Health Zones).

2. Metrics for demand, access, timeliness, and appropriateness were evaluated and broken down into two different wait times:

    - Wait 1 – the length of time from when a patient is referred to see a specialist to when they are first seen (90 day benchmark).

    - Wait 2 – the length of time a patient waits from when they and their surgeon agree to a procedure to when the procedure is completed (182 day benchmark).

3. Modified Access Times – to measure the system's function appropriately, external delays and periods of inactivity were removed when calculating wait times. These are delays that are outside of the system and include medical reasons, patient re-scheduling, unforeseen shutdowns, etc.

WAIT 1 RESULTS

Priority Levels (Wait 1) as defined by orthopaedics central intake (Eastern Health Zones):

P1 – Highest priority for routine referral – 45-day benchmark

- End stage pathology or complex musculoskeletal (MSK) issue, high level of dysfunction, conservative treatment options failed.

- High probability patient will require immediate surgical intervention.

P2 – Moderate priority for routine referral – 90-day benchmark

- Moderate to end-stage pathology or complex MSK issue, moderate to high functional impairment despite best conservative management or unresponsive to therapy over several weeks.

- Moderate probability patient will require surgical intervention.

P3 – Lowest priority for routine referral – 182-day benchmark

- Early to moderate-stage pathology, moderate functional impairment, minimal evidence of conservative management trialed or currently managing with conservative interventions.

- Surgeon recommends continued conservative treatment by the primary care physician while waiting for consultation.

- Minimum to moderate probability patient will require surgical intervention.

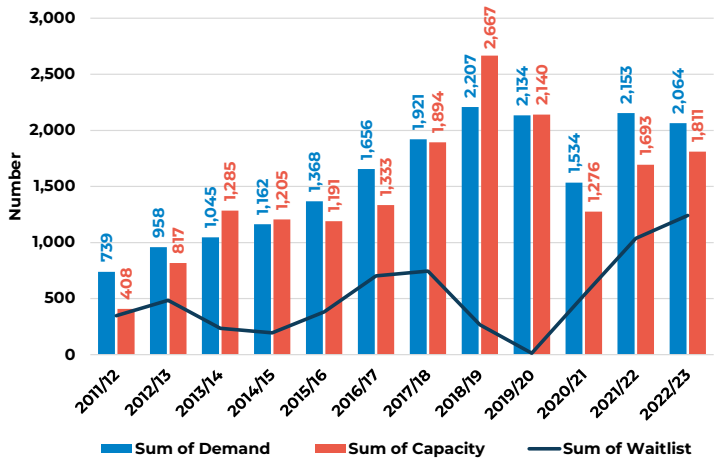

Figure 1. OA Hip and Knee Referrals Made, Referrals Seen and Waitlist, 2011/2012–2022/23 (fiscal years)

- There was no waitlist in 2019/20 caused by a surplus of capacity the prior year.
- The rebounding waitlist has been mostly caused by a reduction in capacity as demand has remained relatively consistent for five years (excluding the first year of the COVID-19 pandemic in 2020/21).
- At the end of 2022/23, the waitlist was 1,241 people.

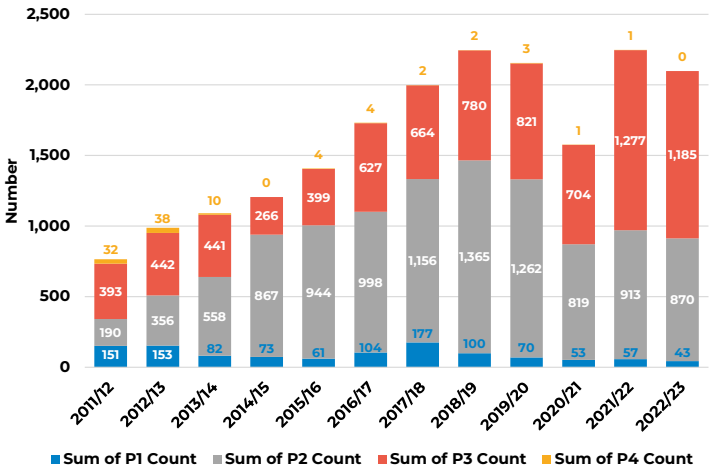

Figure 2. Total OA Hip and Knee Referral Demand by Priority and Fiscal Year

- Demand has been relatively stable for five years (excluding COVID-19 year 2020/21).
- Ratio of P2s and P3s have shifted.
- P3s now account for 56% of all referrals as opposed to 33–38% prior to 2020/21.

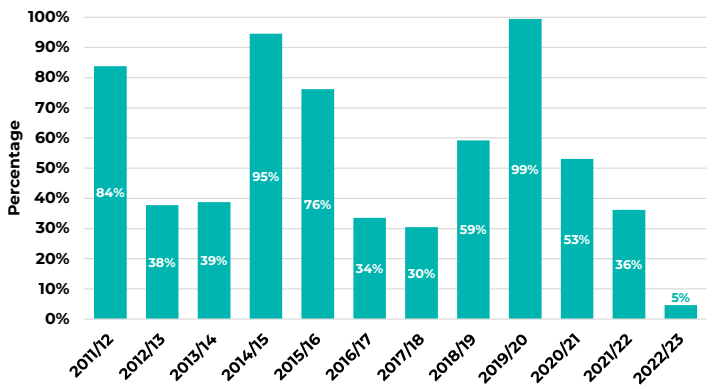

Figure 3. Percent of OA Hip and Knee First Available Consultation within 182-Day Benchmark (P3) by Fiscal Year

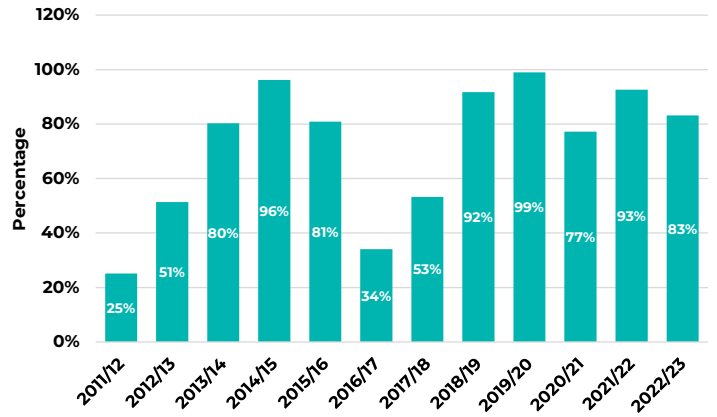

Figure 4. Percent of OA Hip and Knee First Available Consultation within 90-Day National Benchmark (P1 and P2) by Fiscal Year

- P1 and P2 are hitting their benchmarks with an acceptable rate in the past five years.
- P3s are not hitting national or local benchmarks at an acceptable level and are now the most common priority level. This is the group that needs to be addressed to reduce the waitlist and wait times.

WAIT 2 RESULTS

- Priority classifications for Wait 2 are different than Wait 1.
- Wait 2 Priority classification is documented in the Operating Room Booking Package and is determined by the surgeon. There are six priorities.

- For NL, P1–3 (Wait 2) have an internal benchmark of 45-days because they are urgent. They were 10% (87) of the 2022/23 JRs completed (914).
- P4 (Wait 2) had an internal benchmark of 90 days. They were 45% of the 2022/23 JRs completed (413).
- P5–6 (Wait 2) followed the national guidelines of 182 days. They were also 45% of the 2022/23 JRs completed (414).

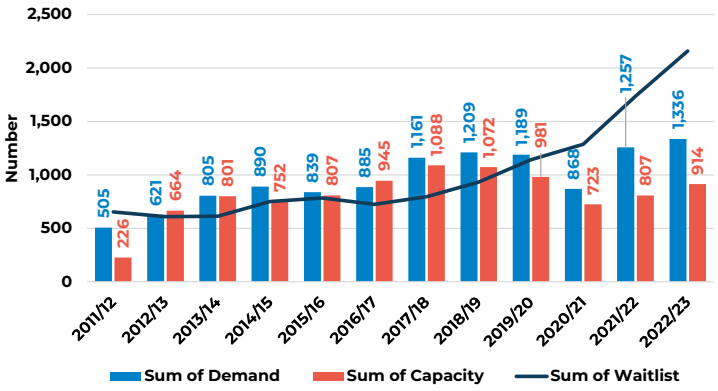

Figure 5. OA Hip and Knee JRs Booked and Completed with Waitlist, 2011/12–2022/23

- From 2018/19 to 2022/23, demand for JRs increased 10.5%, capacity decreased 14.7%, and the waitlist increased 131%.
- At the end of 2022/23, the waitlist for JRs was 2,158 patients.

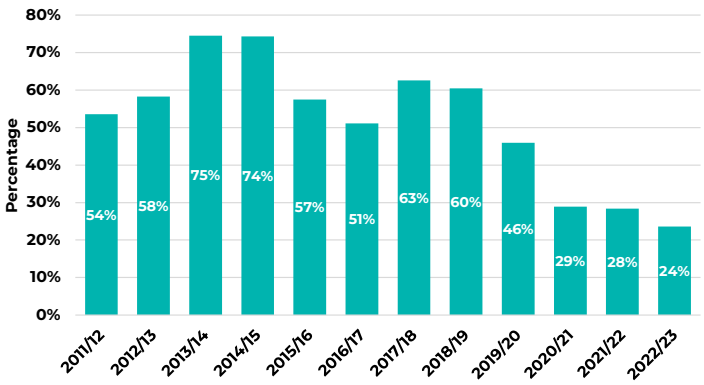

Figure 6. OA Hip and Knee JRs Completed Within 182-Day Benchmark (All Wait 2 Priorities) by Fiscal Year

- In 2022/23, 698 (76%) patients undergoing hip and knee JRs were waiting longer than six months.

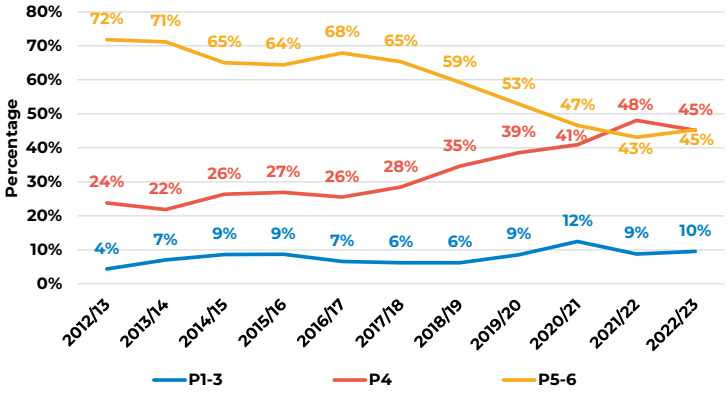

Figure 7. Percentage of OA Hip and Knee JRs Completed by Priority (Wait 2) in Fiscal Year

Conclusions

1. A reduced capacity to see referrals has caused the waitlist for OA hip and knee JR consults to climb to 1,241 by the end of 2022/23.
2. It is not clear whether access to primary care is affecting demand, as judged by referral numbers.
3. Capacity is influenced by availability of operating room, number of JRs done during OR availability, and number of cancellations.
4. Priority 3 (Wait 1) patients are most impacted by a growing waitlist as only 5% of that group achieved the benchmark of 182 days for Wait 1 in 2022/23.
5. The waitlist for JRs has risen to 2,158 by the end of 2022/23.
6. Only 24% of JRs were completed within 182 days for Wait 2.
7. The ratio of P4s has increased compared to P5–6.
8. There are fewer JRs being completed than before 2020/21.
9. Capacity for JRs must be increased if there is to be timely provision of JRs.