

# Executive Summary

This report builds on and extends previous work presented in *Orthopaedic Surgery in Ontario in the Era of the Wait Time Strategy*<sup>1</sup> which showed that the number of encounters with orthopaedic surgeons in ambulatory settings far exceeded the number of procedures carried out by orthopaedic surgeons and that this varied by diagnostic groups. The objectives of the present study are to examine the proportion of individuals consulting orthopaedic surgeons in ambulatory settings who receive orthopaedic surgery, to describe sociodemographic and surgical visit factors associated with the use of orthopaedic surgery in this population, and to document geographic variation in the use of orthopaedic surgery across Local Health Integration Networks (LHIN) in the province.

- Ambulatory and hospital discharge databases were linked to examine the proportion of a cohort of individuals consulting orthopaedic surgeons in ambulatory settings (presumed eligible for orthopaedic surgery) who have orthopaedic surgery within 18 months of the initial visit.
- The study cohort was drawn from the 521,156 Ontarians who visited orthopaedic surgeons from October 1<sup>st</sup>, 2004 to September 30<sup>th</sup>, 2005. Individuals who had surgery without a prior ambulatory visit, and those who had orthopaedic surgery within six months prior to their initial ambulatory visit (where this was likely to be a post-surgical follow-up visit) were excluded. The final cohort consisted of 486,378 individuals, 93% of the total number of individuals who consulted with orthopaedic surgeons in ambulatory settings in the study year.
- Overall the age and gender pattern of individuals with at least one visit to orthopaedic surgeons were similar to those in our previous report. This is not surprising as our cohort represents over 90% of all individuals with orthopaedic encounters in Ontario in 2005. Approximately two fifths of visits to orthopaedic surgeons were for arthritis and related disorders, with a similar proportion visiting for trauma and related conditions.
- Only a small proportion of individuals consulting orthopaedic surgeons had orthopaedic surgery during the 18 months follow-up period. The proportion ranged from 14.2% (surgery was attributed to a prior ambulatory visit because of a similar diagnostic code) to 22.7% (any surgery)<sup>1</sup>. The proportion varied according to the diagnostic groupings studied; between 18.5% and 24.1% of those with bone disorders (mainly foot and ankle surgery), between 18.6% and 29.2% of those with joint derangement (mainly arthroscopic surgery), and between 28.2% and 34.7% of those with osteoarthritis (predominantly total joint replacement surgery).
- The proportion of individuals having surgery (attributed to a prior ambulatory visit) within 18 months of the initial ambulatory visit to orthopaedic surgeons varied with age according to diagnostic groups. Middle aged women were more likely to have surgery for bone disorders, younger men surgery for a joint derangement, and older individuals had surgery for osteoarthritis.

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<sup>1</sup> Two methods were used to estimate the proportion of individuals having orthopaedic surgery. The first one was stringent where the surgery was attributed to a prior ambulatory visit based on the diagnostic group (both the ambulatory visit and the surgery had to have similar diagnostic group). The second one was liberal where the surgery was not attributed to a prior ambulatory visit.

- Neighbourhood income quintile of residence was related to the proportion of individuals having orthopaedic surgery during follow-up for osteoarthritis and joint derangement. The proportion of individuals having surgery was higher for those living in neighbourhoods in the highest income quintile as compared to those in the lowest income quintile (28.8% vs. 26.8% for osteoarthritis and 20.7% vs. 16.4% for joint derangement). For the remaining conditions studied no differences were seen.
- Less than one in ten Ontarians (8%) visiting orthopaedic surgeons consulted two or more orthopaedic surgeons. Those consulting two or more surgeons were more likely to have surgery during the follow-up period for every diagnostic group studied.
- For every condition studied, the time from the initial ambulatory visit in the study period to orthopaedic surgery was shorter for day surgeries than for elective surgeries carried out on an inpatient basis. Overall, the median time to surgery was 97 days ranging from 1 day for trauma and related conditions to 120 days for arthritis and related conditions. Within the arthritis group, the shortest median wait time was 79 days, for surgery for joint derangement and the longest wait time was 147 days for surgery for osteoarthritis.
- Greater variation across LHINs was seen in the number per 100,000 population of individuals having ambulatory orthopaedic visits for the conditions studied than in the proportion of individuals having orthopaedic surgery for the corresponding conditions.
- This study used a defined cohort of individuals in Ontario visiting orthopaedic surgeons in 2005, who were presumably eligible for orthopaedic surgery, and followed them from 18 months from their initial visit to orthopaedic surgeons within that year. The findings show that only between 14.2% and 22.7% received surgery within 18 months of their initial visit. The relatively low proportion of patients getting surgery raises issues about the organization of care for musculoskeletal conditions, especially when there are pressures on waiting times for elective procedures such as total joint replacement surgery. These analyses point to the important role that orthopaedic surgeons play in the management of musculoskeletal disorders in general. It also raises questions about alternative models of care to enhance efficiency in the health care system, to optimise the availability of orthopaedic surgeons for needed surgery, and to ensure the best possible care for individuals with musculoskeletal conditions.