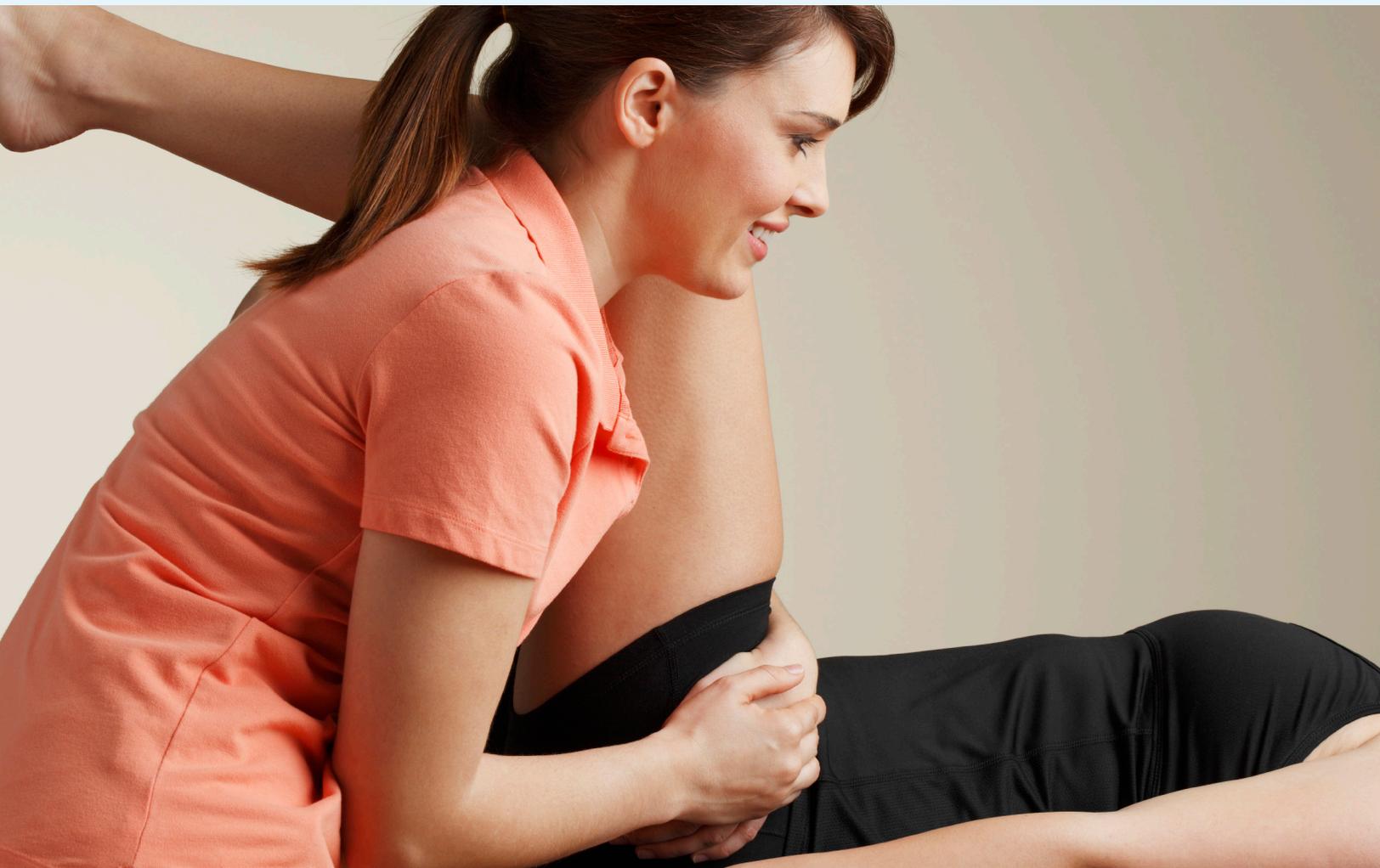


PHYSIO CAN HELP

Physiotherapy Can Reduce Orthopaedic Surgery Wait Times



January 2017



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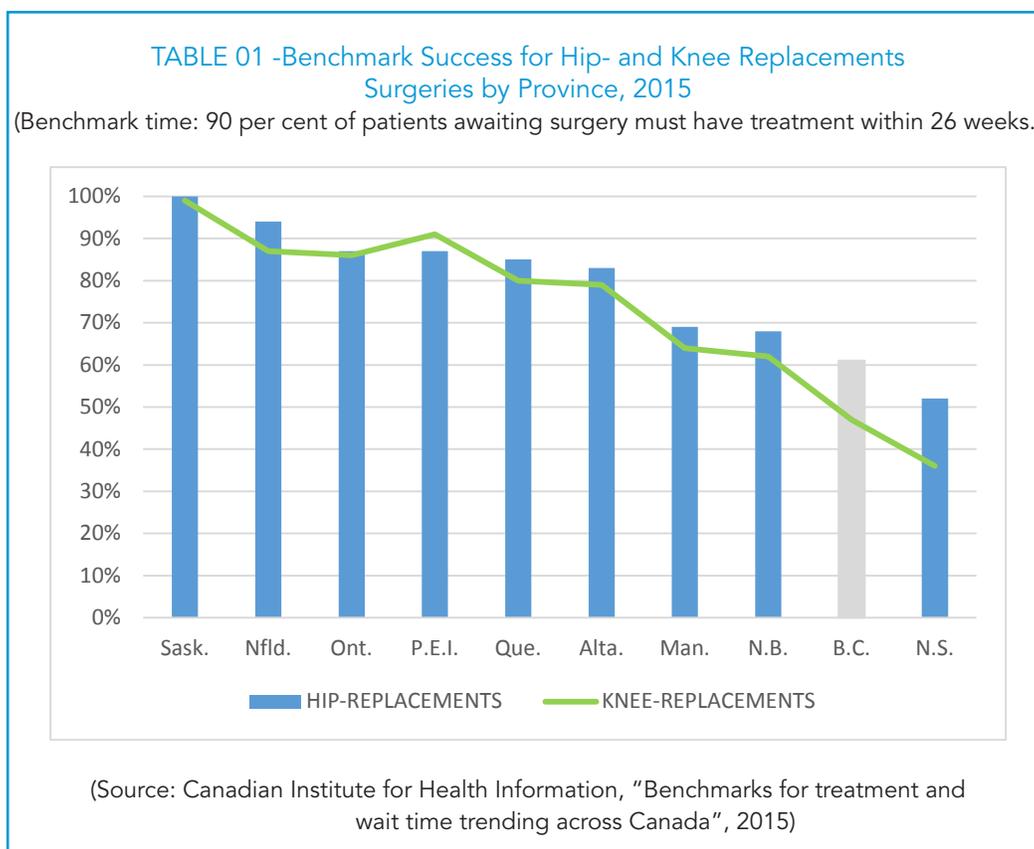
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Executive Summary

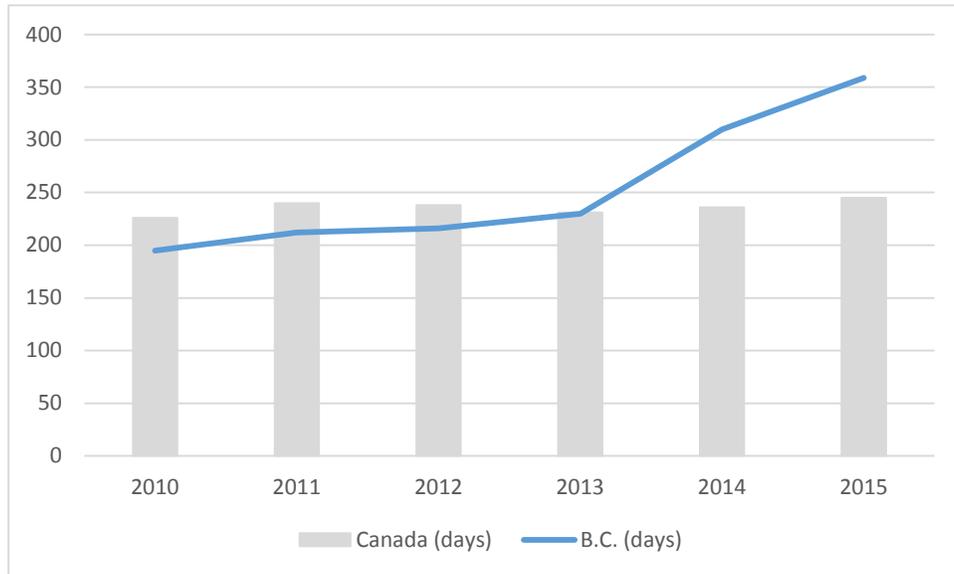
- Wait times for priority hip- and knee-replacement surgeries in British Columbia are among the longest in Canada – and getting longer. The national wait time benchmark for orthopaedic surgery requires that 90 per cent of patients be treated within six months of a surgical appointment.
- The proportion of BC patients whose hip-replacement surgery met the benchmark in 2015 was just 61 per cent, and for knee-replacements a only 47 per cent. BC placed ninth amongst all provinces in terms of wait times for hip- and knee-replacements.¹



- BC's orthopaedic surgery wait times have deteriorated significantly in recent years. In 2010, 90 per cent of all patients waiting for hip-replacement surgery received treatment within 195 days; by 2015, the comparable number had soared to 359 days.
- For knee-replacements, the average number of days required for 90 per cent of patients to receive treatment in 2010 was 236, and in 2015, it had grown to 382.²
- The number of orthopaedic surgeries performed in BC each year is growing exponentially. Between 2001/02 and 2012/13, the number of hospitalizations for hip-replacement surgeries grew by 153.1 per cent – from 2,736 to 6,926.
- Over the same time period, the number for knee-replacements leaped by 152.1 per cent – from 2,903 to 7,318.³

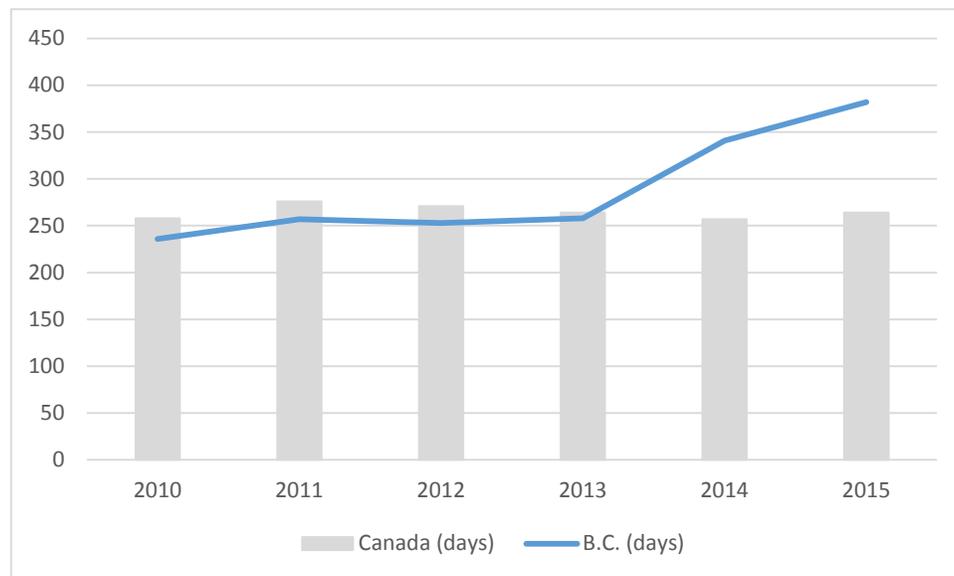
- The increase in orthopaedic surgeries is attributed largely to our aging population. In 2013/14, the average age of females receiving hip-replacement surgery in Canada was 72.3 years and for males, 67.6 years.
- The average age of knee-replacement recipients that same year was 67.3 years for females, and 67.4 for males.⁴
- British Columbia's population of elderly residents is rising – and the trend suggests an inexorable increase in the number of hip- and knee-replacement surgeries to be performed in the foreseeable future.
- Three decades ago, in 1986, the number of British Columbians age 65 years and older was 358,100 – which represented 11.9 per cent of the total population. Last year, in 2016, the number of BC seniors was estimated at 853,400 – or, 18.0 per cent of all residents.
- By 2036, the number of British Columbians who are 65 and older is forecast to exceed 1.5 million – or 25.3 per cent of the total population.⁵
- Wait times represent a significant financial cost for individual British Columbians, the provincial government and BC's economy as a whole.
- An analysis undertaken in 2008 for the Canadian Medical Association calculated that the cost to BC's economy for excess waits for orthopaedic surgery – total joint (hip and knee) replacement – was \$23,608 annually for each individual patient.⁶
- Physiotherapists can provide an important and cost-effective role in reducing orthopaedic-surgery wait times by performing pre-surgery triage, meaning assessing or screening patients recommended for hip- or knee-replacement surgeries.
- In 1996, academic researchers in the United Kingdom found that one-third – 32.7 per cent – of candidates for orthopaedic surgery, recommended by a general-practitioner physician to a specialist surgeon, were "inappropriate."⁷
- Similarly, a recent Canadian study at a hospital in Kingston, Ontario, found "only 66 per cent of the people referred to the orthopaedic surgeons actually required surgery. The other 34 per cent were correctly identified [as not in need of surgery] by the physiotherapist"⁸
- In 2013, an analysis conducted in BC at hospitals in Squamish and Whistler concluded: "That between one-third and three-quarters of patients referred by primary-care physicians [GPs] did not need to see a surgeon and were able to be managed by an experienced orthopaedic physiotherapist."
- The study concluded: "The triage system ... has the potential to reduce the wait time for patients who need to see an orthopaedic surgeon by screening out those who do not."⁹
- The Physiotherapy Association of British Columbia urges provincial policy makers and health-care officials to implement a pre-surgery triage system in BC, whereby experienced physiotherapists screen candidates for hip- and knee-replacements with the aim of reducing our province's growing wait times.

TABLE 02 - Wait Times for Hip-Replacements
 Days Required to Meet 90% Benchmark
 (Surgery Within Six Months in BC and Canada in 2015)



(Source: Canadian Institute for Health Information, "Benchmarks for treatment and wait time trending across Canada", 2015)

TABLE 03 - Wait Times for Knee-Replacements
 Days Required to Meet 90% Benchmark
 (Surgery Within Six Months in BC and Canada in 2015)



(Source: Canadian Institute for Health Information, "Benchmarks for treatment and wait time trending across Canada", 2015)

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Introduction

Wait times are the result of an imbalance between the demand and supply for healthcare services. “If demand exceeds supply,” a team of European researchers succinctly wrote in 2003, “a queue forms.”¹

Viewed in this light, policy makers seeking to reduce wait times have two choices:

- **One** is to increase the supply of health services by providing additional financial resources – that is, public tax-dollars – to the healthcare system.
- **Two** is to have physiotherapists involved in the assessment and triage of patients.

One of the world’s pre-eminent wait time researchers, Professor Luigi Siciliani of England’s University of York, recently told a lecture audience, “my key policy message is that supply policies – putting more money into the system – are no guarantee of success.”²

The reason: the allocation of new or additional resources to increase the supply of healthcare services often serves only to increase the demand for those same services, with no overall reduction in wait times.

Beginning at the turn of the century, Canada’s federal and provincial governments set out to reduce wait times by significantly increasing the amount of funding for the country’s public healthcare system.

In 2004, the country’s First Ministers signed a 10-Year Plan to Strengthen Health Care, which committed Ottawa to increase health transfers to the provinces over a decade by more than \$41 billion, of which \$5.5 billion was earmarked for a Wait Time Reduction Fund. As part of the Plan, the federal government’s Canada Health Transfers were set to grow at six per cent annually between 2006/07 and 2016/17.

Importantly, the Canada’s First Ministers identified **five** priority areas for health treatment – one of which was orthopaedic (joint-replacement) surgery – and established benchmark wait times. The benchmark for hip- and knee-replacements was set at six months (aka 26 weeks or 182 days) and success was measured at 90 per cent. (The benchmark for orthopaedic surgeries simply calls for 90 per cent of all patients to receive treatment within six-months of their specialist visit.)

In British Columbia, increased funding intended to reduce orthopaedic surgery wait times has had little effect, **as the time required to complete 90 per cent of hip-replacement surgeries between 2010 and 2015 exploded from 195 days to 359 days.**

For knee-replacement patients, the average time in BC for 90 per cent of patients to receive treatment also increased dramatically between 2010 and 2015, rising from 236 days to 382 days.

Clearly, the allocation of new financial resources intended to reduce wait times in BC for surgery – notably through increased federal transfers from Ottawa to the provinces – has not had the intended impact.

Now, with expiration of the 10-Year Plan – and its escalator of six per cent annual increases to the Canada Health Transfer – it is time for a new approach. (The federal government intends to replace the six per cent annual hike with a yearly lift of only three per cent.)

The Physiotherapy Association of British Columbia (PABC) recommends that provincial policy makers and healthcare officials implement an orthopaedic surgery triage system in our province.

This innovative proposal will enable experienced physiotherapists to assess candidates for hip- and knee-replacement surgery before they see a surgeon, to determine which patients need surgery, and which do not.

Academic studies undertaken in the United Kingdom and Canada have found that between one-third and three-fourths of patients who are referred to an orthopaedic surgeon by a general practitioner physician (GP) actually do not require surgery.

By screening out those patients who do not need surgery, and providing alternate treatment, physiotherapists serve to reduce the workload – that is, demand – on orthopaedic surgeons, thereby allowing them to focus on treatment for those in need and reduce wait times.

Physiotherapy triage is an affordable, easy to implement policy innovation that holds the promise of significantly reducing hip- and knee-replacement wait times in British Columbia.

The evidence is clear: when it comes to reducing orthopaedic wait times, [Physio Can Help](#).

British Columbia's Wait Times For Orthopaedic Surgery Among The Longest In Canada

The observation, by Professor Luigi Siciliani of the University of York (mentioned earlier), that additional funding is ineffective in reducing healthcare wait times, seems especially apt for BC.

From 2001/02 to 2015/16, the province's annual health expenditures have grown from \$10.4 billion to \$19.2 billion. (See Table 04.)

On a per capita basis, health spending over the same period grew from \$2,554 to \$4,100, and as a share of the provincial government's annual GAAP (generally accepted accounting principles) Budget, from 34.0 per cent to 41.0 per cent.¹

Some of BC's new, additional spending on healthcare – supported by increased Canada Health Transfer (CHT) monies from Ottawa – was intended to reduce the province's wait times.

All available evidence, however, confirms that wait times in British Columbia, especially those for orthopaedic (hip- and knee-replacement) surgeries have grown longer over time. Indeed, BC's wait times are among the longest in Canada.

—

Concern in BC over healthcare wait times dates back nearly three decades. In the early 1980s, British Columbia joined Alberta, Saskatchewan and Ontario in becoming one of the first provinces to set up "data tracking for surgical waits."²

In 1990, a provincial Royal Commission on Health Care and Costs, chaired by Justice Peter Seaton, issued two recommendations on the topic.

- The first called on the province to "Establish standards for waiting times for procedures [and] use them as a measure of performance and publish the results."³

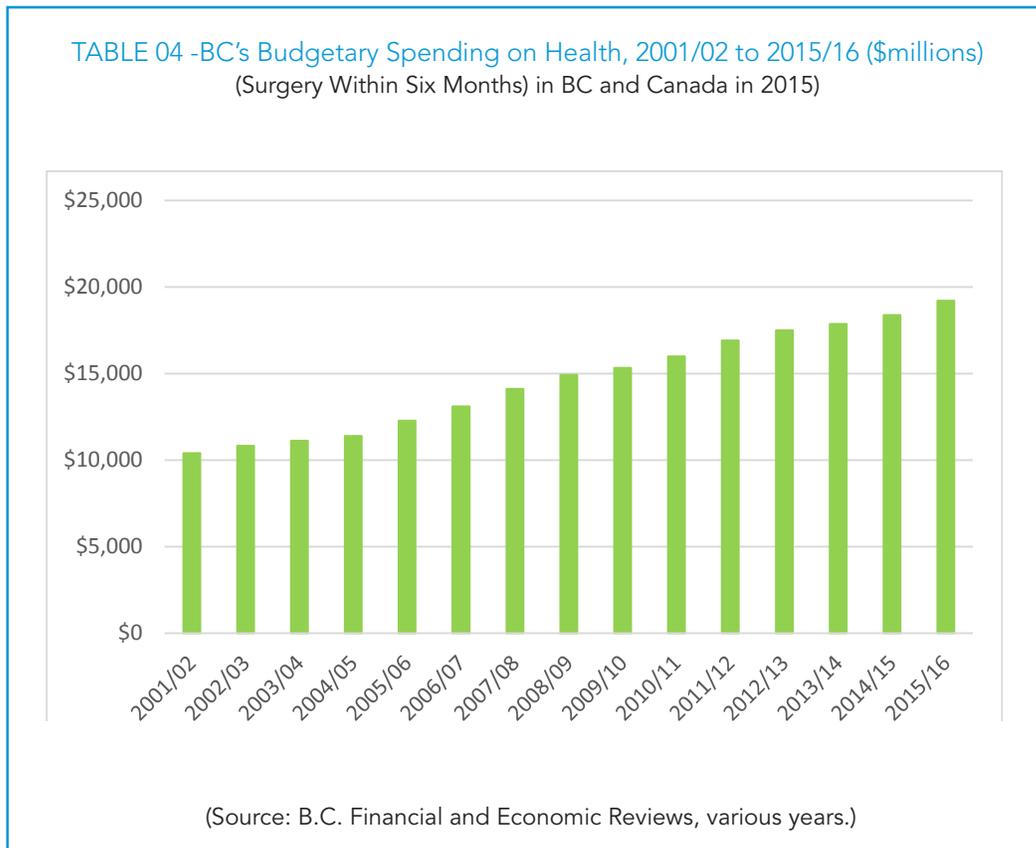
- The second urged Victoria to: “Expand the new Provincial Surgical Registry and make it into a surgical and diagnostic registry. This should include a computerized waitlist showing the availability of hospitals and specialists and the waiting time for procedures.”

No immediate action was taken on either proposal.

British Columbia fully participated in the meetings of Canada’s First Ministers in 2003 and 2004 that led to signing of the Accord on Health Care Renewal and adoption of the 10-Year Plan to Strengthen Health Care.

As part of the 10-Year Plan, BC agreed to adopt national benchmarks for wait times in five priority areas, one of which was orthopaedic surgery – specifically, hip- and knee-replacements. In 2005, the province allocated \$60.5 million to a new wait-time strategy, one component of which was creation of a new Centre for Surgical Innovation.

Two years later, the BC Surgical Patient Registry was established. The SPR is a database that tracks patients waiting for surgery throughout the province, and attempts to ensure that patients are prioritized in a standardized way.

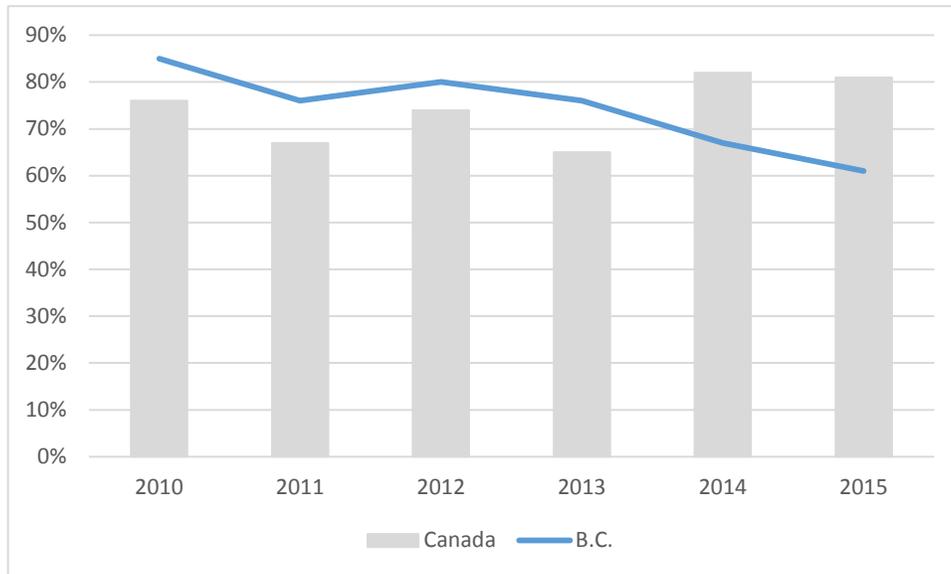


A news release issued in 2007 stated that the registry was “a key component of the government’s wait time strategy as the province continues to increase the number of surgeries performed.”⁴

One criticism of the SPR is that it calculates average wait times “using the date of booking [for a surgery] to the date of operation. This methodology **understates the overall wait time**”⁵

TABLE 05 - Hip Replacements, BC and Canada
Success in Meeting Benchmark, 2010–2015

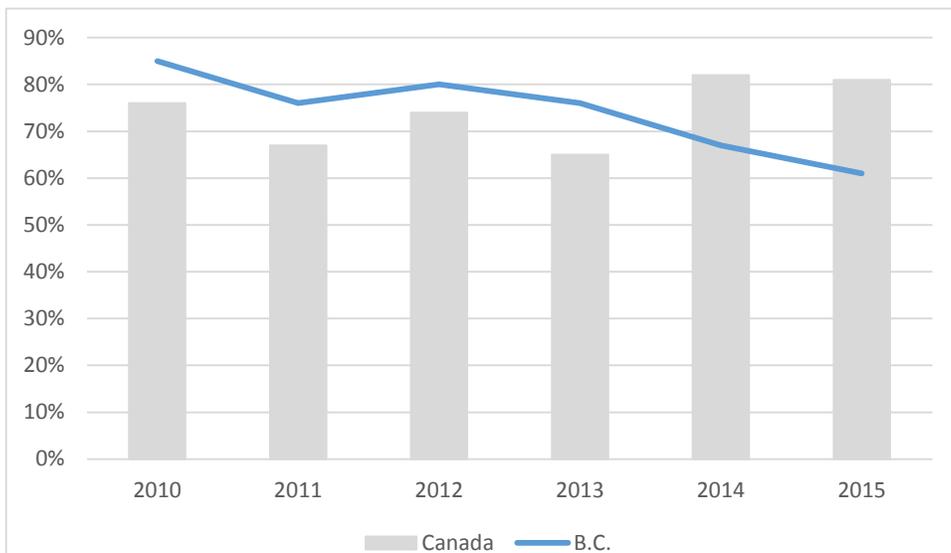
(Benchmark – 90 per cent of patients awaiting surgery must have treatment within 26 weeks.)



(Source: Canadian Institute for Health Information, "Benchmarks for treatment and wait time trending across Canada", 2015.)

TABLE 06 - Knee Replacements, BC and Canada
Success in Meeting Benchmark, 2010-2015

(Benchmark – 90 per cent of patients awaiting surgery must have treatment within 26 weeks.)



(Source: Canadian Institute for Health Information, "Benchmarks for treatment and wait time trending across Canada", 2015.)

A meeting of Canada's First Ministers in 2004 tasked the independent, non-profit Canadian Institute for Health Information (CIHI) with reporting annually on progress in reducing wait times across the country.⁶

The latest CIHI report on the topic, *Wait Times for Priority Procedures in Canada, 2016*, offers discouraging data for British Columbians. Rather than being reduced, wait times for priority hip- and knee-replacement surgeries in BC are among the longest in Canada.⁷

The national wait time benchmark for orthopaedic surgery – established by the country's First Ministers in 2004's 10-Year Plan to Strengthen Health Care – calls for 90 per cent of patients to be treated within six months of a surgical appointment for a hip- or knee-replacement.

In BC in 2015, however, the proportion who met that benchmark for hip-replacement was just 61 per cent, and for knee-replacement, just 47 per cent. In both categories of orthopaedic surgery, BC in 2015 placed ninth amongst all ten Canadian provinces.

Wait times in BC for orthopaedic surgery have gone up significantly in recent years. In 2010, 90 per cent of all hip-replacement patients received treatment within 195 days; by 2015, the comparable number had escalated to 359 days.

For knee-replacements, the average number of days required for 90 per cent of patients to receive treatment in 2010 was 236, and in 2015, it had grown to 382.

BC's Aging Population

There is every reason to expect that the number of orthopaedic surgeries in British Columbia for hip- and knee-replacements will continue to rise in the future.

This is because joint-replacement surgery is most often performed on elderly residents.

In 2013/14, the average age of Canadian females who had hip-replacement surgery was 72.3 years, and for Canadian males, 67.6 years¹. The average age of knee-replacement recipients during that same year was 67.3 years for females, and 67.4 for males.

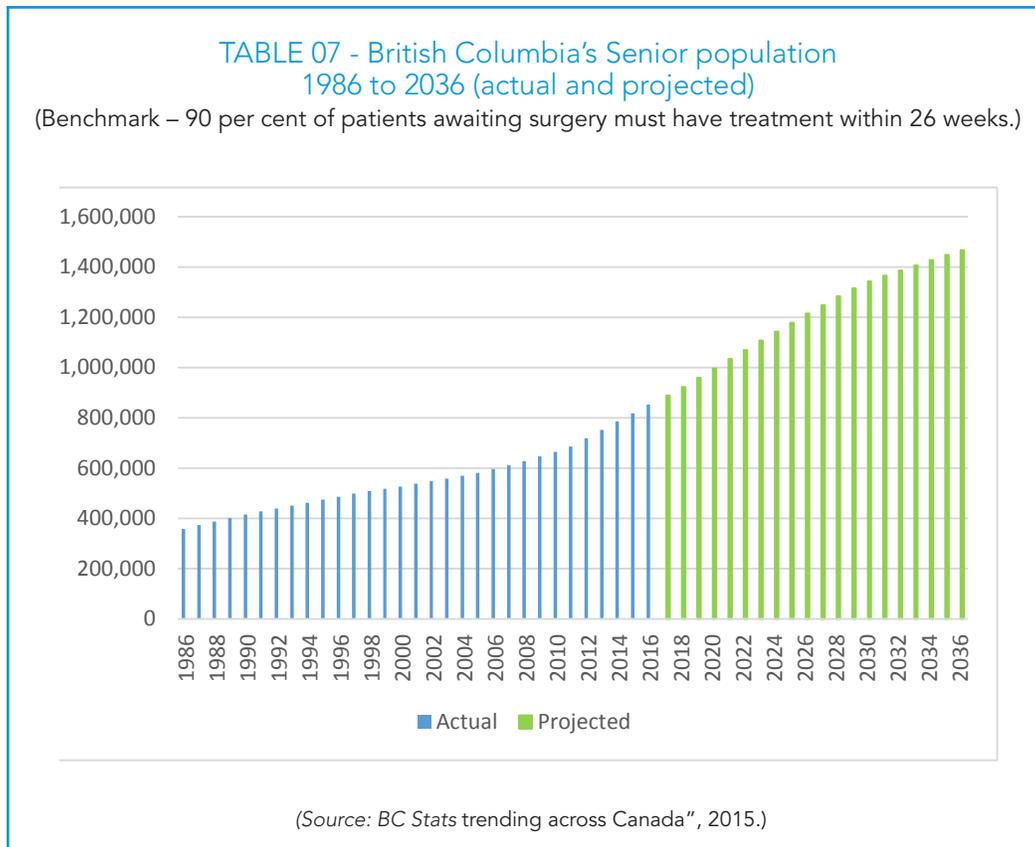
Importantly, British Columbia's senior population – individuals age 65 and older – is rising dramatically.²

In 1986, the number of British Columbians age 65 years and older was 358,100 – which represented 11.9 per cent of the total population. Last year, in 2016, the number of BC seniors was estimated at 853,400 – or, 18.0 per cent of all residents.

By 2036, the number of British Columbians who are 65 and older is forecast to exceed 1.5 million – or 25.3 per cent of the total population.

The demographic trend suggests an unrelenting increase in the foreseeable future in the annual number of hip- and knee-replacement surgeries performed in British Columbia. Indeed, the number of orthopaedic surgeries performed in the province each year already is growing rapidly.

In 2001/02, the number of hospitalizations for hip-replacement surgeries in BC was 2,736. By 2012/13, that number stood at 6,926 – an increase of 153.1 per cent.³



Over the same time period, from 2001/02 to 2012/13, the number of hospitalizations for knee-replacement surgeries rose from 2,903 to 7,318 – an increase of 152.1 per cent.⁴

It is evident not only that an increasing number of orthopaedic surgeries are being performed each year in BC, but patients on average also are waiting much longer for their treatment.

The Cost Of Orthopaedic Surgery Wait Times

Wait times for healthcare represent a significant financial cost for individual British Columbians, the provincial government and BC's economy as a whole.

An analysis undertaken in 2008 for the Canadian Medical Association calculated that the cost to BC's economy for excess waits for orthopaedic surgery – total joint (hip and knee) replacement – was \$23,608 annually for each individual patient.¹ The total yearly cost to our provincial economy for these excess waits was estimated at \$88 million.

The analysis also estimated that the annual, per-patient cost to the provincial government for excess waits for orthopaedic surgery was \$3,606.

Less easy to measure, but no less real, is the cost of lengthy wait times on the well-being of individual British Columbians and their families.

"Patients who wait exceedingly long [for surgery] may suffer exacerbation of symptoms," an October 2015 article in the BC Medical Journal stated, "requiring emergent or expedited surgery with downshifting of others still waiting."²

Reducing BC's Orthopaedic Surgery Wait Times: Physio Can Help

Physiotherapy can play an important and cost-effective role in reducing wait times for orthopaedic surgery – and especially for hip- and knee-replacements – according to a growing number of academic researchers.

In the 1990s, physiotherapists in the United Kingdom began to perform pre-surgery triage (assessing or screening candidates recommended by GPs) for hip- or knee-replacement surgeries.¹

A study published in 1996 on the U.K. experience reported that **“Scarce resources are often wasted by ... inappropriate GP referral patterns...**In one hospital audit, orthopaedic consultants have judged that 32.7 per cent of GP referrals were inappropriate.”

With physiotherapists screening orthopaedic-surgery candidates, patients who did not require surgery were provided alternate treatments, while those assessed as in need were moved up for surgery.

“The potential for patients and GPs includes a reduction in hospital outpatient waiting times because the throughput is increased,” the study concluded.

A similar Canadian study at a hospital in Kingston, Ontario, determined that **“only 66 per cent of the people referred to the orthopaedic surgeons actually required surgery.** The other 34 per cent were correctly identified [as not needing surgery] by the physiotherapist”²

The Kingston analysis, reported in 2008, noted that a healthcare model which has physiotherapists provide **surgical screening “can potentially increase the time the surgeons have available to spend in the operating room** by decreasing the amount of time they have to spend in clinics seeing patients who do not require surgery. **In this way, the model may also serve to decrease wait lists.”**

And a study performed in British Columbia in 2013 observed that, “More than three-fourths of patients referred by primary-care physicians [GPs] did not need to see a surgeon and were able to be managed by an experienced orthopaedic physiotherapist.”³

The analysis, undertaken at hospitals in Squamish and Whistler, concluded: **“The triage system ... has the potential to reduce the wait time for patients who need to see an orthopaedic surgeon by screening out those who do not.”**

The Physiotherapy Association of British Columbia believes that a pre-surgery triage system for hip- and knee-replacements could effectively reduce growing wait times in our province.

The utilization of experienced physiotherapists to screen candidates for joint-replacement treatment could provide considerable relief for orthopaedic surgeons, freeing them from dealing with GP referrals of patients who do not require surgical treatment.

In this manner, surgeons could focus more of their time and resources providing surgeries to patients truly in need of a hip- or knee-replacement, thereby significantly reduce BC's lengthening wait times.

Conclusion

More than a decade ago, Canada's First Ministers agreed to a 10-Year Plan intended to establish benchmarks under which priority procedures were to be completed. They also committed to the additional expenditure of billions of dollars to ensure timely treatment.

All Canadian provinces now have wait time registries, and many jurisdictions report progress on reducing waiting lists.

In British Columbia, however, wait times for orthopaedic surgery – specifically, hip- and knee-replacements – have grown to become among the longest in the country.

Healthcare expenditures by the provincial government continue to grow ever higher, and the number of joint-replacement surgeries – fueled largely by our aging population – continue to increase year-by-year.

Importantly, the annual growth rate of the federal government's Canada Health Transfer is scheduled to be significantly reduced in 2017 – from six to three per cent.

The international experience is that new or additional monies allocated to health-care are ineffective in reducing wait times, and that certainly appears to be the case in BC.

It is time to consider a new way to reduce British Columbia's orthopaedic surgery wait times, specifically by addressing the demand side of the equation through diagnosis and non-surgical treatment by highly-trained physiotherapists.

As a growing number of academic studies have found, the early utilization of physiotherapy in treating patients is a proven mechanism to reduce wait-times.

The evidence is clear: when it comes to reducing health-care wait times, Physio Can Help.

Recommendation

That British Columbia's policy makers and healthcare administrators implement a triage system that includes physiotherapists to screen patients recommended for orthopaedic surgery – specifically hip- and knee-replacements.

Notes

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THE COSTS OF ORTHOPAEDIC WAIT TIMES

1. Stokes, et al, op. cit.
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PHYSIO CAN HELP

1. Durrell, op. cit.
2. Aiken, et al, op. cit.
3. Napier, et al, op. cit.



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