

Access to orthopaedic spinal specialists in the Canterbury public health system: quantifying the unmet need

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ABSTRACT

AIM: The aim of this project was to determine the unmet need within the public health system for patients referred for elective Orthopaedic Specialist Spinal assessment and treatment in the Canterbury District Health Board (CDHB) region.¹

METHODS: Between January 2014 and January 2015 data was collected from all elective referrals to the CDHB Orthopaedic Spinal Service. During this period, the number of available outpatient appointments was set by the CDHB. Within this clinical capacity, patients were triaged by the four consultant surgeons into those of most need based on the referral letter and available radiological imaging. Those unable to be provided with a clinical appointment were discharged back to their GP for ongoing conservative care. Of those patients that received specialist assessment and were considered in need of elective surgical intervention, a proportion were denied treatment if the surgery was unable to be performed within the government determined four-month waiting time threshold.

RESULTS: During the study period, 707 patients were referred to the CDHB orthopaedic spinal team for elective specialist assessment. Of these, 522 (74%) were declined an outpatient appointment due to a lack of available clinical time. Of the 185 patients given a specialist assessment, 158 (85%) were recommended for elective surgery. Ninety-one (58%) were denied surgery and referred back for ongoing GP care due to unavailable operating capacity within the four-month waiting list threshold. Within this group of 91 patients, 16 patients were declined on multiple occasions (14 patients twice and two patients on three occasions).

CONCLUSIONS: This study quantifies the unmet need for both Spinal Orthopaedic Specialist assessment and, if warranted, surgical management of elective spine conditions within the Canterbury public health system. It highlights the degree of rationing within the public health system and its failure to adequately provide for the Canterbury Public.

The CDHB is the second largest district health board in New Zealand. It provides public health care to a population of over 500,000 people and provides orthopaedic services to the West Coast region through a clinical partnership. It is also the tertiary referral centre for elective spinal surgery in the South Island and manages acute spinal cord injuries occurring throughout the South Island and the lower half of the North Island.

Locally, elective orthopaedic spinal referrals are largely dominated by degenerative conditions such as lumbar spinal stenosis. Spinal stenosis involves

narrowing of the spinal canal by bone and soft tissue with subsequent pressure on the neural structures. This leads to symptoms characterised by debilitating pain in the buttocks and legs when walking or standing.^{2,3} In this setting, surgical decompression with or without stabilisation ('fusion') has been shown to be clinically effective and superior to non-operative management.³

The population within Canterbury is aging. By 2026 one in every five people in Canterbury will be over 65 and the number of people aged over 85 will have doubled.¹

Spinal stenosis is the most common reason for both cervical and lumbar spine surgery in adults over 65.^{4,5} As the elderly proportion of our patient population grows we can expect demand on our service to increase accordingly.⁶

In recent years a key priority of the New Zealand Government has been to reduce the maximum waiting time to four months for patients requiring an initial consultation with a surgical hospital specialist (first specialist assessment (FSA)) or surgical treatment.⁷

Since its inception in January 2015, the introduction of a four-month maximum waiting time for elective FSA and surgery has raised concerns among medical providers. With the introduction of maximum waiting times, patients are required to be triaged so that they will receive their surgery within the expected time frame. Those patients unable to have their procedure within this time are returned to their GP for ongoing care, missing out on specialist care altogether. These patients represent the 'unmet need' within the medical system and currently this cohort has not been measured or monitored. In the past when the public demand for surgery exceeded supply, this was recorded via the hospital surgical waiting list with the length of waiting list reflecting the needs of the service.

The aim of this study was to quantify the "unmet need" within the CDHB in terms of patients referred to the Orthopaedic Spinal Service.

Methods

From the period of January 2014 to January 2015 the fate of every patient referred to the elective CDHB Orthopaedic Spinal Service was recorded.

Referrals were received from hospital specialists (frequently orthopaedic surgical colleagues) and general practitioners within the CDHB catchment region as well as tertiary referrals from around the South Island. All referrals were seeking advice on the management of patients with non-acute spinal pathology. Those patients with traumatic or oncologic pathology were managed within the acute service and were not included in this triaging process.

Within the CDHB the number of new spinal patients able to be seen by an Orthopaedic Spine Specialists in each clinic are limited. According to the new government imposed guidelines, only those people able to receive their surgery within a four-month time are given a place on the surgical waiting list.

While all referrals from GPs and other hospital specialists are deserving of clinical review, only a minority could be accommodated within the current resource allocation. At each triaging session the CDHB managers stated the number of FSA clinical appointments available. In order to identify those patients in most need of this limited resource, all referral letters to the Orthopaedic elective spinal service were reviewed by one of four fellowship trained Orthopaedic spine surgeons. The description of their presenting symptoms and clinical signs in the referral letter were critically assessed. All relevant radiological studies (plain x-rays and occasionally Computed-Tomography (CT) scans) were also reviewed. Almost universally an MRI scan was organised to assist with the triaging process. No specific clinical prioritisation scoring tool was utilised. Those considered by the spinal surgeons to have the most severe symptoms and pathology, and who were considered amenable to surgical treatment, were offered a first specialist assessment (FSA). The remainder are referred back to their GP. If indicated, a dictated letter is provided containing advice for further management or investigations prior to re-referral.

Information on the outcome of each referral was recorded including those referred patients who were denied a specialist assessment. For those patients who received a FSA their clinical records were analysed to determine if they were recommended for surgery or conservative management.

For those patients for whom surgical intervention was recommended, a second triaging process occurs based on the available operating capacity. Surgeons are required to determine which of those patients put forward for surgery will actually be able to have surgery performed within the now permitted four-month period as mandated by the CDHB. This is

done according to need; those who are the most incapacitated and would receive the most benefit from surgery are prioritised. Those patients who qualify are then effectively booked to receive their operative intervention within four months while those who are unable to be offered surgery within the time frame are returned to the care of their GP for ongoing management and re-referral to the service as required.

The number of patients who were operated on in the corresponding time period was determined from the clerical records.

Results

In the year from January 2014 to January 2015 a total of 707 patients were referred to the CDHB orthopaedic spinal team for specialist assessment from their general practitioner or other specialist services. Of these 707 patients, 522 (74%) were unable to be offered an outpatient appointment due to resource constraints. Of the 185 (26%) patients seen in clinic, 158 patients were recommended to have surgery (85%). Of these 158 surgically suitable patients, 91 (58%) were denied surgery and sent back to their general practitioner for ongoing care due to a lack of surgical resources. Within this cohort, 14 patients had been declined twice and two patients on three occasions.

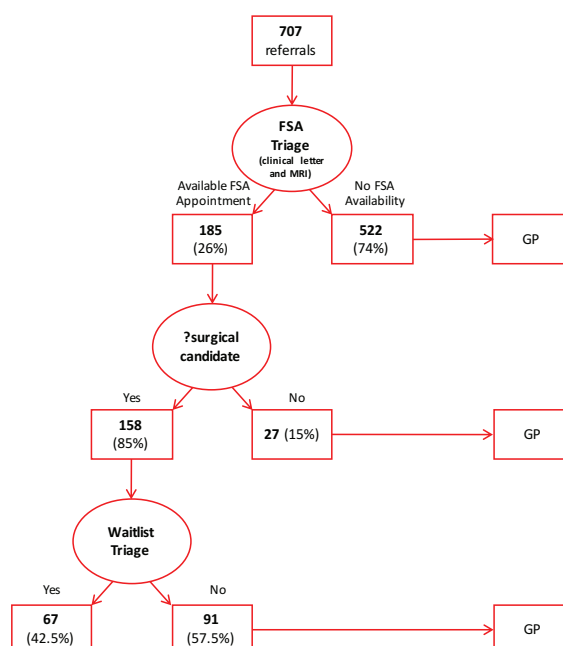
Almost exclusively only patients with symptoms and radiological findings consistent with severe spinal stenosis could be offered specialist assessment and surgical treatment. Other spinal pathology was unable to be accommodated within the constrained system.

On review of the surgical booking records, we were able to determine that the Canterbury Spinal Team performed 68 spinal procedures over this interval. Therefore, the database missed one patient who received surgery during the study period.

Discussion

This study has quantified the unmet need for Spinal Orthopaedic Specialist services in the Canterbury Public Health System. During a 12-month period beginning in January 2014, 522 (74%) patients referred to this service were declined a first specialist assessment. Of those patients who were assessed and surgical intervention recommended, 91 (58%) were denied access to this procedure and sent back to the care of their GP. Our figures likely underestimate the clinical need as it remains unknown what proportion of patients unable to be offered a FSA would have also benefited from spinal surgery.

Figure 1: Flowchart of the referral system.



Despite access to public health care being a critical issue to many New Zealanders, currently there is no accurate measure of the number of people unable to access the health care their doctors consider they require. As a consequence, a true assessment of how well the New Zealand public health system is functioning remains incomplete. Both the Ministry of Health and independent projects are underway to address this information void.

The health burden of spinal pathology is significant and on par or greater than other chronic conditions including diabetes, heart disease, stroke and arthritis.⁸ There exists abundant literature that demonstrates spinal surgery is beneficial in terms of clinical outcomes and cost-effectiveness compared with non-operative treatment for common degenerative spinal conditions.^{4,6,9,10,11} Currently, hip and knee arthroplasty surgery is considered a priority surgical service in most DHB due to its well-proven clinical and cost-effectiveness. The degree of post-operative health related quality of life (HRQoL) improvement seen in patients with spinal stenosis following surgery compares favourably to the benefits received following hip and knee arthroplasty^{13–16} and has a similar incremental cost-utility ratio.

This study demonstrates the degree of rationing occurring at two levels within our DHB. The first involves access to a FSA, a service afforded to one in four referrals. The second bottleneck involved patients considered to benefit from surgery by a specialist surgeon. Within this study period 57% of patients were denied an operation, as they were unable to be accommodated within the government specified four-month waiting period. Instead patients were referred back to their GP's care to continue less effective conservative treatments.

A high-level review performed in 2013 by an expert panel convened by the Director General of Health to determine if there were any unintended consequences for patient care¹⁷ concluded that there was “no evidence that the pursuit of elective waiting time goals has resulted in unintended consequences for patient care.” Our data demonstrates the contrary.

To address the goal of improving access to specialist spine services firstly requires a recognition that a significant unmet need exists. The Government and DHBs have been lacking in their willingness to quantify this and monitor the health consequences of those patients denied care.

Returning patients to the care of their GPs is unlikely to provide a clinical solution to these patients as most referrals come from the GPs themselves, citing failure of all non-operative strategies. This only promotes the repeated use of non-operative resources that have already proven to be ineffective (and therefore have negligible cost-utility) or the acceptance of persistent disability with significant impact on patients HRQoL.

Further development of GP referral pathways is similarly unlikely to significantly address this unmet need as inappropriate referrals were seldom noted. The referrers knowledge of the available non-operative treatments was of a high standard and the relevant clinical question asked were centred on diagnosis, prognosis and the suitability of surgery for these conditions, questions best addressed by specialists.

The public are currently unaware of the degree of rationing occurring and are thus not fully informed when they consider personal decisions about their future health. It is beyond the scope of this paper to determine the optimal way of improving access to specialist's spinal services. However, these options will not be explored until the current reality is recognised.

One criticism of the triaging system utilised during this study period was a lack of a prioritisation tool. However, the degree of pathology and limited number of resources meant that only severe spinal stenosis could be offered treatment. One guide to the effectiveness of our triaging process was that 85% of patients who were given an FSA were deemed appropriate surgical candidates. Also, the focus of this study remains the unmet need—those that missed out. While a different method of triaging may have selected a different cohort of patients for a FSA it would not have changed the proportion missing out on specialist assessment altogether. One

further concern is that occasionally patients with serious pathology, such as tumours, can present with relatively benign clinical features that may not reach the threshold for a FSA under the current conditions.

Subsequent to this study period, a prioritisation tool has been rolled out across New Zealand to help stratify patients already considered to benefit from orthopaedic surgery. This is expected to provide some quantifiable measure to assist with resource allocation of surgical services nationwide and within DHBs. However this tool has not been independently validated or its reliability tested. It also does not provide a framework for prioritising referrals. Those

patients unable to access a FSA remain unrecognised and unquantified. It is our hope that this study will prompt further analysis of the health consequences of this forgotten cohort.

Conclusion

This study quantifies the unmet need for both spinal orthopaedic specialist assessment and, if warranted, surgical management of spine conditions within the Canterbury public health system. It highlights the degree of rationing within the public health system and reveals the impact of the introduction of maximum waiting times for surgery within the CDHB.

Competing interests:

Authors are spine surgeons within the Canterbury District Health Board.

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