Case Study

The Impact of Allocation of Additional Resources on the Waiting Time for Cataract Surgery

Lorne Bellan

Waiting lists and their management are a contentious issue for providers and patients in the Canadian healthcare system. It has been argued that there is a disturbing chasm between widely held views and research evidence (Sanmartin 2000). There is a need for more research and better reporting mechanisms about waiting list management to optimize future policy decisions (Sanmartin 2000). It has also been suggested that attempts to reduce waiting list lengths by adding resources do not succeed in the long term (Sanmartin 2000), based on indirect evidence from Manitoba cataract surgery (DeCoster 1998) that was interpreted as showing that additional resources can result in increased list length and waiting times.

In 2001, the ophthalmology community in Manitoba lobbied the regional health authority to allocate additional resources for cataract surgery because of unacceptably long waits. Approval was given in principle for a partial increase in resources, and this was implemented in March 2002. Cataract surgery in the region is monitored by a waiting list program (Bellan 2001) that tracks and prioritizes all patients waiting. This monitored increase in funding provided an opportunity to measure exactly what impact additional resources would have on a cataract waiting list.

Method

The Manitoba Cataract Waiting List Program database tracks all patients waiting for cataract surgery in the province except for cases done in Brandon. Monthly records between February 2001 and August 2003 from the MCWLP active database were reviewed to determine the number of booking requests and number of patients waiting per surgeon. Once surgery is completed or cancelled, the patient's record is transferred to the archive files. Records from the archive for surgery performed between January and March 2002 inclusive and between April and June 2003 inclusive were used to determine the average waiting time for surgery.

Results

Table 1 shows all of the booking requests and patients waiting in the active database as of the end of each month. The higher number of booking requests, as compared to patients, reflects the fact that for some patients, booking requests are made for both eyes at the same time. The ratio of booking requests to patients has essentially remained constant through the study period. While the number of booking requests varies from month to month, this number has dropped by approximately 1,000 since the increase in surgeries. Given the increased number of cases now done per month, this has also resulted in a decrease in average projected wait for surgery (based on the number of patients in the active database and the numbers of cases performed per month), from a peak of 35.3 weeks to 24.8 weeks. The actual wait determined from the archive database for surgery performed between January and March 2002 inclusive was 30.35 weeks, while the average wait for surgery performed from April to June 2003 was 25.4 weeks.

Table 1: Booking requests and patient waiting per month

Month	Booking Requests Waiting	Patients Waiting	Ratio Booking Requests to Patients	Projected Wait (weeks)
Feb-01	5,388	4,476	1.20	31.8
Mar-01	5,342	4,488	1.19	31.5
Apr-01	5,655	4,704	1.20	33.4
May-01	5,780	4,762	1.21	34.1
Jun-01	5,876	4,797	1.22	34.7
Jul-01	5,711	4,692	1.22	33.7
Aug-01	5,823	4,779	1.22	34.4
Sep-01	5,782	4,785	1.21	34.1
Oct-01	5,980	4,921	1.22	35.3
Nov-01	5,967	4,942	1.21	35.2
Dec-01	5,843	4,817	1.21	34.5
Jan-02	5,823	4,792	1.22	34.4
Feb-02	5,579	4,635	1.20	32.9
Mar-02	5,261	4,380	1.20	29.0
Apr-02	5,342	4,451	1.20	29.5
May-02	5,096	4,275	1.19	28.1
Jun-02	4,935	4,122	1.20	27.2
Jul-02	4,879	4,096	1.19	26.9
Aug-02	4,797	4,031	1.19	26.5
Sep-02	4,856	4,067	1.19	26.8
Oct-02	4,745	3,981	1.19	26.2
Nov-02	4,889	4,028	1.21	27.0
Dec-02	4,637	3,849	1.20	25.6
Jan-03	4,673	3,860	1.21	25.8
Feb-03	4,539	3,770	1.20	25.1
Mar-03	4,504	3,748	1.20	24.9
Apr-03	4,432	3,717	1.19	24.5
May-03	4,382	3,699	1.18	24.2
Jun-03	4,664	3,910	1.19	25.8
Jul-03	4,469	3,752	1.19	24.7
Aug-03	4,494	3,744	1.20	24.8

Projected wait = Booking requests/Cataract surgeries performed per week

Interpretation

The MCWLP (Bellan 2001) was introduced with the principal goal of providing an objective and reliable measure of the length of wait for cataract surgery in the province. It was decided at the outset to add a prioritization tool to the program to achieve several secondary goals. This would treat patients on the waiting list in a more equitable fashion by applying a uniform method of prioritization. It was anticipated that the database would help surgeons over time argue for more resources if the lists grew with either no change or a worsening of average visual functional impairment scores (Steinberg 1994). It was also anticipated that the database could provide reassurance to government, if and when additional resources were provided, that the waiting list actually contracted without changes by surgeons in their thresholds for booking surgery.

The data from the MCWLP were used by the Misericordia Health Centre to lobby the Winnipeg Regional Health Authority (WRHA) to increase the volume of surgery by adding an extra operating room devoted to cataract surgery. The WRHA agreed to fund a smaller increase, and this was accomplished by raising the cap of cataract surgeries per day in each ophthalmology operating room from 10 to 11 cases. This change was put into place in March 2002. Since that change was implemented, the waiting list has contracted from its peak by approximately 20%. This has brought the projected mean wait time down, although it remains significantly longer than the targeted three-month wait.

These results are exactly opposite to those reported by Sanmartin et al. (2000) in their review on waiting list management in Canada. Their conclusion – that additional resources resulted in longer waiting lists – appears to have been based on their interpretation of a claims-based study by DeCoster (1998). This study focused on the difference in waiting times for patients depending on whether their surgeon practised only in public institutions or in both public and private facilities (a situation that no longer exists in Manitoba since the government banned private cataract surgery in 1999). It did not track the number of patients waiting for surgery, nor did it directly look at changes in waiting time relative to the allocation of additional resources. While both that study and the MCWLP could accurately pinpoint the date surgery occurred, the claims-based study derived its estimate of waiting-time – the time from the decision to treat until surgery occurred (Sanmartin 2001) – on an inference as to when the decision to treat was made, by selecting the most probable preoperative billing claim. In contrast, the MCWLP directly obtained the decision-to-treat date from the surgeon and so is inherently more accurate. It is also possible that different results found in these two studies may have occurred because allocation of additional resources may have a different impact in a one-tiered vs. a two-tiered healthcare system.

In conclusion, it does appear that for cataract surgery in Manitoba, directing additional resources toward shortening waiting lists is successful. This information was available because of the existence of a centralized waiting list database. It is anticipated that waiting times will continue to change over time, based on changing demographics and possibly other variables such as changing technology. The MCWLP will therefore likely continue to be a useful tool in helping to make decisions about allocating resources for cataract surgery in the future.

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