

# Waiting lists: waiting for the evidence!

Owen M Bradfield

## Abstract

On 26 February 2008, Victorian State Opposition Leader Ted Baillieu described as a "blow out" the increase in average elective surgery waiting times from 202 days in September 2007 to 235 days in February 2008. Likewise, the Australian Medical Association is concerned that 800 000 Australians will leave private health insurance now that the federal government has increased the income threshold for the Medicare levy. They warn of "further pressure" on public hospital waiting lists. Public hospital waiting lists are frequently used for political point scoring and are portrayed by the media and politicians as indicators of health system performance. Alarming, governments often develop policies in response. This paper presents the current evidence to see whether waiting lists are valid indicators of health system performance and presents some advice for policymakers.

*Aust Health Rev* 2008; 32(4): 589–592

## Health performance indicators and waiting lists

Health services must operate within fixed budgets. Performance indicators are essential to ensure that quality and access is not compromised by cost control.<sup>1</sup> Despite a proliferation in performance indicators over the last 20 years,<sup>2</sup> problems exist with their use:<sup>3</sup> they cannot detect all problems, but when a problem is found, they neither attribute a cause, nor guarantee a solution. Moreover, they can engender defensiveness among professional staff, which may paradoxically compromise quality.<sup>4</sup> Hence, evidence must guide and

inform their ongoing use.<sup>3</sup> This is also true of waiting lists.

A waiting list is a register of patients waiting for surgery, often categorised according to surgical specialty, surgeon or procedure. Demand for public hospital elective surgery usually exceeds the supply of beds and staff, so hospital administrators use waiting lists to manage backlogs and to contain costs.<sup>5</sup> Access is therefore prioritised according to need:<sup>6</sup> patients are added to a list in chronological order, but are moved up or down the queue depending on clinical urgency. Given that waiting lists are primarily created to support internal management and to assist surgeons in clinical decisions, care should be exercised when using them as indicators of performance. Waiting times must be clearly defined, measured and categorised and must contain sufficient additional information to support any conclusions drawn.<sup>7</sup>

## Considerations when analysing waiting list information

To know why patients wait for surgery, waiting lists must include surgical activity data:<sup>7</sup> long waiting times may be due to an influx of patients added to the list, reflecting the popularity of an experienced surgeon with expertise in a procedure.<sup>8</sup> Alternatively, they may be due to a decrease in the number of patients admitted for surgery, due to under-funding or shortages in operating time, inpatient beds, surgeons, anaesthetists or nurses. Without this basic information, root causes of long waiting times cannot be addressed.

Methods of collecting waiting time data also influence the comparability of waiting list statistics. Census data provide a snapshot of people waiting for surgery at a single point in time. Since surgical activity changes daily, census data is poor at predicting future waiting time.<sup>9</sup> Therefore, Ted

---

Owen M Bradfield, MB BS(Hons), BMedSc(Hons), LLB, MBA Student

Correspondence: Dr Owen M Bradfield, PO Box 2085, Preston, VIC 3072. [owenbrad@yahoo.com.au](mailto:owenbrad@yahoo.com.au)

Baillieu's report of a waiting list "blow out" seems ill-informed given that the assumption is based on only two discrete time points. On the other hand, throughput data track the number of patients added and removed from a waiting list over time and are more useful because they can be used to predict future waiting time.

Not all waiting lists measure waiting time in the same way. Most use "median waiting time", but others use "expected waiting time", "longest expected waiting time", "number of patients in each waiting-category" and "nintieth centile waiting time".<sup>10</sup> Subtly, each is different and must be clearly defined before different waiting lists can be interpreted and compared.

Waiting list categorisation also needs to be considered. Data for a particular operation performed by a particular surgeon at a particular unit is too specific and would contain small patient numbers, making it difficult to reliably compare waiting times between surgeons or locations. On the other hand, if the information is too general (for instance, all orthopaedic surgery performed within a health care service across multiple locations and involving multiple surgeons), problems associated with particular units, operations or surgeons may be concealed.

Waiting lists do not disclose other "hidden" waiting times: before being added to a waiting list, patients must wait to see a general practitioner for a referral, before waiting for an appointment with a surgeon and then for further investigations. Furthermore, surgeons sometimes manipulate their waiting lists in response to administrative pressures. Some surgeons refuse to accept new referrals once their waiting list reaches 6 weeks, whereas others might accept waiting lists of up to 12 weeks.<sup>11</sup> Similarly, surgeons may delay notifying hospitals of new additions to a waiting list if their lists are expanding.<sup>12</sup> If two surgeons on the same surgical unit respectively limit their inpatient and outpatient waiting times, a bottleneck is produced that significantly restricts access to timely surgery. Other surgeons exclude sicker patients requiring complex surgery in an effort to reduce waiting time.<sup>7</sup> These differences in the inclusion or exclusion criteria of patients on wait-

ing lists and the failure to report some information can hinder interpretation and comparison of data. Interestingly, some governments have provided health services with additional funding to help counter long waiting lists, which counter-intuitively means that it is financially lucrative to have longer waiting lists. A single national body responsible for uniform data creation and collation practices might overcome some of these problems.

### **Waiting time or clinical priority?**

Many surgeons lament the focus of politicians on waiting list length because it overlooks the more important concept of "clinical priority".<sup>13</sup> For instance, waiting more than 6 months for a hip replacement has a significant impact on physical disability and psychosocial functioning.<sup>14</sup> Although the risk of surgery being overdue increases with longer waiting lists,<sup>15</sup> long waiting times are not necessarily clinically unsafe. Thus, waiting lists should always report the proportion of patients who undergo surgery outside of clinically safe and acceptable time limits because this would allow cases to be redistributed across hospitals to reduce the proportion of late surgeries. Future research needs to focus on defining these time limits.

Ill-considered policies to rapidly reduce waiting list length can lead to people with equal need having unequal access to surgery because easier and shorter operations are scheduled first. Patients left remaining are usually the most complicated cases that have already waited the longest. By way of illustration, patient charters in the United Kingdom stating that "no patient should wait more than 18 months" meant that patients nearing 18 months overtook patients with greater clinical need simply to satisfy the indicators. This can jeopardise patient safety.<sup>9,16-18</sup> Indeed, although UK waiting lists are longer now than in the 1960s, surgical activity has also increased and overall waiting time is largely unchanged. Some therefore strongly question the motivation to reduce elective surgery waiting lists.<sup>19</sup> Ergo, long waiting lists do not equate to long waiting times, inadequate resources or even poor performance.<sup>16</sup>

As a result, countries such as Canada, the UK and New Zealand have replaced absolute waiting time limits with “priority grading systems” to improve consistency in accessing elective surgery. New Zealand’s scoring system considers clinical need for surgery, as well as patient age and “threat to independence, care of dependents and ability to work”.<sup>20,21</sup> Funding for elective surgery is only provided to health services where priority assessment criteria are in place. However, some question the validity of this model, as few grading systems have been formally tested and may be no better than clinical judgement alone.<sup>22-24</sup> Australia is yet to follow the New Zealand model.

### How does Australia report waiting time information?

Since 1995, the Australian Institute of Health and Welfare has published national elective surgery waiting times. The most recent report,<sup>25</sup> *Waiting times for elective surgery in Australia 2005–2006*, shows throughput data over 12 months for waiting times categorised according to patient age, gender, surgical specialty, diagnosis, procedure and mode of removal from the waiting list. Multiple measures of waiting time are reported and defined (such as median waiting time and percentage waiting more than 365 days), allowing comparison between hospitals of different size in different states. Importantly, the numbers of patients added to and removed from the waiting lists in each jurisdiction are reported, including the reason for removal (elective or emergency admission or transfer). This allows waiting time to be reliably compared with surgical activity over time. At length, the AIHW data is detailed, reliable and useful for governments and policymakers wanting to draw meaningful conclusions about the performance of public hospital surgical units across Australia.

### Conclusions

In the race to deliver health care performance indicators, the need for precision and validity is sometimes overlooked. Surgical waiting times can

be interpreted in many ways “like customers looking at long queues in front of a restaurant”.<sup>11</sup> To equate waiting time with quality of care, waiting time data must include surgical activity and clinical urgency, and must employ common definitions, measures of waiting time and collection methods. Only then can jurisdictions, hospitals, surgical units and surgeons be reliably compared. To achieve this, the Australian Council on Healthcare Standards must continue to develop and refine standards in health care data collection and performance reporting and consider a national waiting list data collection agency to avoid the problems of data manipulation at the level of the individual health service.

Even if these critical factors are satisfied, waiting lists can never represent definitive judgements about the quality or safety of health services because that is not their primary purpose. Instead, they are tools to prompt and guide additional inquiry and investigation. This must be recognised by politicians, patients, health professionals and policymakers.

### References

- 1 Boyce NW. Potential pitfalls of healthcare performance indicators. *Med J Aust* 2002; 177: 229-30.
- 2 Freeman T. Using performance indicators to improve health care quality in the public sector: a review of the literature. *Health Serv Manage Res* 2002; 15: 126-37.
- 3 Davies HT, Lampel J. Trust in performance indicators? *Qual Health Care* 1998; 7: 159-62.
- 4 Hofer TP, Berstein SJ, Hayward RA, DeMonner S. Validating quality indicators for hospital care. *Jt Comm J Qual Improve* 1997; 23: 455-67.
- 5 Mullen PM. Waiting lists in the post-review NHS. *Health Serv Manage Res* 1994; 7: 131-45.
- 6 Light D. NHS waiting lists: the hidden agenda. *Consumer Policy Rev* 2000; 10: 126.
- 7 Cromwell DA, Mays L. Waiting list statistics as performance indicators: observations on their use in hospital management. *Aust Health Rev* 1998; 21(4): 15-27. Available at: [http://www.aushealthreview.com.au/publications/articles/issues/ahr\\_21\\_4\\_011098/ahr\\_21\\_4\\_15-27.asp](http://www.aushealthreview.com.au/publications/articles/issues/ahr_21_4_011098/ahr_21_4_15-27.asp) (accessed Sep 2008).
- 8 Jennett B. Waiting lists: a surgeon's response. *Lancet* 1987; 1(8536): 796-7.
- 9 Cromwell DA, Griffiths DA. Waiting time information services: how well do different statistics forecast a

- patient's wait? *Aust Health Rev* 2002; 25(6): 75-85. Available at: [http://www.aushealthreview.com.au/publications/articles/issues/ahr\\_25\\_6\\_031202/ahr\\_25\\_6\\_75-85.asp](http://www.aushealthreview.com.au/publications/articles/issues/ahr_25_6_031202/ahr_25_6_75-85.asp) (accessed Sep 2008).
- 10 Cromwell DA, Griffiths DA, Kreis IA. Surgery dot.com: the quality of information disseminated by Web-based waiting time information services. *Med J Aust* 2002; 177: 253-5.
  - 11 Stoop AP, Vrangbæk K, Berg M. Theory and practice of waiting time data as a performance indicator in health care: a case study from The Netherlands. *Health Policy* 2005; 73: 41-51.
  - 12 Kent H. Waiting-list Website "inaccurate" and "misleading", BC doctors complain. *CMAJ* 1999; 161: 181-2.
  - 13 British Medical Association. Waiting list prioritisation scoring systems: discussion paper no.6. London: BMA Health Policy and Economic Research Unit, 1998. Available at: <http://www.bma.org.uk/ap.nsf/Content/Waiting+list+prioritisation+scoring+systems> (accessed Apr 2008).
  - 14 Davis AM, Agnidis Z, Badley E, et al. Waiting for hip revision surgery: the impact on patient disability. *Can J Surg* 2008; 51: 92-6.
  - 15 Sobolev BG, Levy AR, Kuramoto L, Hayden R. Chances of late surgery in relation to length of wait lists. *BMC Health Serv Res* 2005; 5: 63-70.
  - 16 Cromwell D, Griffiths D. Waiting time information services: what are the implications of waiting list behaviour for their design? *Aust Health Rev* 2002; 25(4): 40-9. Available at: [http://www.aushealthreview.com.au/publications/articles/issues/ahr\\_25\\_4\\_120802/ahr\\_25\\_4\\_40-49.asp](http://www.aushealthreview.com.au/publications/articles/issues/ahr_25_4_120802/ahr_25_4_40-49.asp) (accessed Sep 2008).
  - 17 McKee M. Indicators of clinical performance. *BMJ* 1997; 315: 142.
  - 18 Worthington DJ. Queuing model for hospital waiting lists. *J Opt Res Soc* 1987; 38: 413-22.
  - 19 Hamblin R, Harrison A, Boyle S. Waiting lists. The wrong target. *Health Serv J* 1998; 108(5598): 28-31.
  - 20 Fraser G, Alley P, Morris R. Waiting lists and waiting times: their nature and management: a report to the National Advisory Committee on Core Health and Disability Support Services. Wellington: National Advisory Committee on Core Health and Disability Support Services, 1993.
  - 21 Hadorn DC, Holmes AC. The New Zealand priority criteria project. Part 1: Overview. *BMJ* 1997; 314: 131-4.
  - 22 Allepuz A, Espallargues M, Moharra M, et al; Research Group on Support Instruments — IRYSS Network. Prioritization of patients on waiting lists for hip and knee arthroplasties and cataract surgery: instruments validation. *BMC Health Serv Res* 2008; 8: 76.
  - 23 Doughty C, MacCormick A, Roake J, et al. Prioritisation of elective surgery in New Zealand: The Reliability Study. *N Z Med J* 2005; 118: U1590.
  - 24 Seddon ME, French JK, Amos DJ, et al. Waiting times and prioritization for coronary artery bypass surgery in New Zealand. *Heart* 1999; 81: 586-92.
  - 25 Australian Institute of Health and Welfare. Australian hospital statistics 2004-05. Waiting times for elective surgery. Health Services Series No. 26. Canberra: AIHW, 2006. (AIHW Cat. No. HSE 41.)

(Received 26/06/08, accepted 3/08/08)

□