RESEARCH PAPER

Patient and Surgeon Views on Maximum Acceptable Waiting Times for Joint Replacement

Point de vue des patients et des chirurgiens sur le temps d'attente maximum acceptable pour le remplacement d'une articulation

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Abstract

Objective: To assess patient and surgeon views on maximum acceptable waiting times (MAWT) for hip and knee replacement, their determinants and their relationship to levels of urgency based on the Western Canada Waiting List Priority Criteria Score (PCS).
Methods: At the decision date for surgery, orthopaedic surgeons assessed consecutive patients with the PCS and MAWT. Patients were surveyed 3–12 months post-surgery for MAWT and potential determinants.
Results: The patient sample of 208 was 56% female, mean age 69 years (SD 11). Mean MAWT for patients was 18 weeks (SD 11) and for surgeons, 17 weeks (SD 11). Median MAWT for three levels of urgency (PCS) ranged from 13–17 weeks (patients) and 9–26 weeks (surgeons). Patient MAWT was unrelated to the surgeon-rated measures: MAWT (r=.05) and the PCS (r=–.10). Multiple regression analysis showed that males, knee vs. hip replacement, a longer waiting time and a perception of fairness in regard to waiting time were significant predictors of longer patient MAWT. Knee replacement, a better ability to walk without significant pain and less potential for progression of the disease were significant predictors of longer surgeon MAWT.
Conclusions: Patient and surgeon perspectives on MAWT are important to the development of waiting time benchmarks. Benchmarks based on levels of urgency ensure a more transparent and fair process for waiting time management. Knowledge of determinants of MAWT should inform better management of waiting time and access, by understanding the basis of patient and physician views on acceptable waiting times.

Résumé

Objectif : Évaluer le point de vue des patients et celui des chirurgiens sur le temps d'attente maximum acceptable (TAMA) pour l'arthroplastie de la hanche et du genou, les facteurs qui déterminent ce temps d'attente et la relation entre celui-ci et différents degrés d'urgence, selon un système de cote fondé sur des critères de priorité (CCP) élaborés par la *Western Canada Waiting List*.
Méthodes : À la date de la décision, les chirurgiens orthopédiques ont évalué des patients consécutifs au moyen de la CCP et du TAMA. On a interrogé les patients entre 3 et 12 mois après la chirurgie relativement au TAMA et à ses facteurs déterminants potentiels.
Résultats : L'échantillon de 208 patients était composé à 56 % de femmes dont la moyenne d'âge était de 69 ans (écart-type de 11). Chez les patients, le temps médian du TAMA était de 18 semaines (écart-type de 11) et chez les chirurgiens, de 17 semaines (écart-type de 11). Le temps médian du TAMA pour trois degrés d'urgence (CCP) allait de 13 à 17 semaines (patients) et de 9 à 26 semaines (chirurgiens). Chez les patients, le TAMA n'était pas lié aux mesures évaluées par les chirurgiens : TAMA (r = 0,05) et le CCP (r = −0,10). De multiples analyses de régression ont révélé que chez les hommes, pour l'arthroplastie du genou par rapport à la hanche, un temps d'attente plus long et un sentiment d'équité relativement au temps d'attente étaient des indices importants d'un TAMA plus long chez les patients. L'arthroplastie du genou, une meilleure capacité de marcher sans douleur importante et une moins grande possibilité de progression de la maladie étaient des indices importants du TAMA plus long chez les chirurgiens.
Conclusions : Les points de vue des patients et des chirurgiens sur le TAMA sont importants pour l'établissement de temps d'attente de référence. La référence fondée sur le degré d'urgence assure un processus de gestion des temps d'attente beaucoup plus transparent et équitable. La connaissance des facteurs déterminants du TAMA devrait documenter une meilleure gestion du temps d'attente et un meilleur accès en comprenant la base des points de vue des patients et des médecins sur les temps d'attente acceptables.

Timely access to elective healthcare is a major issue in Canada and other countries with publicly funded health systems (Noseworthy et al. 2003; Hanning 1996). Hip and knee replacement are two of the most common scheduled procedures with typically long waiting times (WTs).

In an attempt to manage waiting lists for scheduled surgical services, a number of strategies have been proposed or implemented in Canada and other OECD countries (Siciliani and Hurst 2005). These include prioritization of patients, WT guarantees

or benchmarks, booking systems, performance indicators and increasing the capacity of hospitals and staff. Priority setting is increasingly being considered to manage wait lists for scheduled surgical services (MacCormick et al. 2003; Noseworthy et al. 2003). The Health Council of Canada (2007) has recommended that the urgency of a patient's condition be factored into a patient's wait list placement. The Western Canada Waiting List (WCWL) Project Hip and Knee Replacement Priority Criteria Score (PCS) is intended to improve fairness of access by providing a standardized method to assess patient priority for surgery based on the relative urgency for patients waiting for surgery (Arnett et al. 2003). A key feature of this approach is to link the PCS to a maximum acceptable waiting time (MAWT) for surgery.

In 2004, Canada's First Ministers agreed to establish benchmarks for WTs for five priority areas, including arthroplasty. Benchmarks used in other countries have generally been based on consensus with clinical input, but there is little published literature on the rationale and evidence used in their formulation. There is increasing recognition that patient views should be taken into account (Woolhead et al. 2002), but there is little understanding of patient and physician perspectives of MAWT and the factors that affect them. Identifying the determinants of patients' acceptance of WTs has been identified as necessary to provide guidelines for prioritizing access to healthcare services (Ho et al. 1994). Longer WTs, older age, worse pain and function and dissatisfaction with the surgical outcome have been associated with less patient acceptance of WTs for joint replacement (Ho et al. 1994; Coyte et al. 1994; Llewellyn-Thomas et al. 1998; Conner-Spady et al. 2005; Sanmartin et al. 2007). Other factors that may influence patient views on acceptable WTs are perceived equity and patient information. Equity includes the perception that both the process and outcome are fair. Notifying patients of their expected WT in an urgent care department increased patient perception of fairness and satisfaction (Naumann and Miles 2001). In a survey of the general public, Edwards et al. (2003) found that 83% accepted that their WT depended on the medical and social circumstances of others. In patients waiting for an arthroplasty in the United Kingdom, the main information they would have liked was certainty about an admission date (Rigge 1994).

This study was designed to assess patient and surgeon perspectives on MAWT and to link MAWT to levels of urgency based on the PCS. We also built explanatory models to assess the possible determinants of patient and surgeon MAWT. Although long WTs were found to be a significant predictor of acceptability in other studies, we hypothesized that other variables would also be significant predictors. We hypothesized that, in addition to their actual WT, patient MAWT would be influenced by factors such as prior knowledge of their expected WT and their perception of fairness. We also hypothesized that surgeons' MAWT would be influenced by their assessment of patient urgency based on priority criteria.

Methods

Four hundred and thirty-two consecutive patients were surveyed by a mailed questionnaire in November 2004 following arthroplasty. Inclusion criteria were individuals 18 years and older who had undergone a scheduled hip or knee replacement within the preceding three to 12 months in one of three health regions in Saskatchewan and who had been assessed with a PCS. With the 2003 implementation of the Saskatchewan Surgical Registry, surgeons routinely assess each patient's urgency at the decision date for surgery (Glynn et al. 2003). The three health regions provide approximately 70% of joint replacements in the province, with one of the three health regions serving the majority of these patients. The three regions have five hospitals, and all 16 orthopaedic surgeons who do joint arthroplasty in these regions were included in the study.

Patients could return their survey anonymously or they could consent to link their responses to the PCS in the Surgical Registry. Two reminder letters and surveys were sent to all potential respondents at six and 12 weeks following the initial mailing. This paper is based on the 208 patients who agreed to the link. Ethics approval was obtained from the University of Saskatchewan Research Ethics Board. A parallel qualitative paper reports on patient views on waiting (Conner-Spady et al. 2007).

The survey was designed to assess patient views on acceptable WTs and included questions that were potential determinants of MAWT. These questions were based on prior WCWL research and a review of the literature on patient acceptability of WTs in clinical populations. The survey items were pre-tested by three individuals who had joint replacement and involved completion of the questionnaire followed by an interview to probe their comprehension and interpretation of the items.

Patient measures

Patients were asked their perspectives on MAWT, ideal WT and the acceptability of their actual WT (Figure 1). A MAWT is the maximum length of time that an individual perceives that he or she should wait for surgery, while an ideal WT is a desired WT. We included as potential determinants of patient MAWT variables that had been shown to be associated with shorter MAWT or less acceptability of WTs for arthroplasty. These included age, actual WT, dissatisfaction with the surgical outcome, health-related quality of life (HRQL) and the perception that their HRQL had deteriorated while waiting. Based on research in other clinical populations (Naumann et al. 2001; Rigge 1994), we hypothesized that patients would be more tolerant of longer WTs if they felt that they were being treated fairly, if they were satisfied with their surgical outcome and if they had knowledge of their expected wait. Finally, we included other socio-economic variables (sex, marital status, education), joint (hip or knee), first or second replacement and the time interval between surgery and the survey as it may affect patient recall of the waiting experience. HRQL was assessed with the

EuroQol (EQ-5D index and EQ VAS), which has been tested in arthroplasty patients (Ostendorf et al. 2004).

FIGURE 1. Patient questionnaire items

1. In your view, what should be the maximum acceptable waiting time for you or a person like yourself to wait for hip or knee replacement surgery?
2. In the best of all possible worlds, what would be the ideal length of time that you would choose to wait for surgery once you and your surgeon decided to go ahead with your surgery?
3. How acceptable is the length of time that you actually waited for your most recent surgery? (4-point scale)
4. Did your surgeon, or another healthcare worker, tell you how long you should expect to wait for surgery? (yes/no)
5. How fairly did you feel you were treated in regard to the length of time that you waited for your most recent joint replacement surgery? (5-point scale)
6. During the time that you waited for surgery, how did your quality of life change as it related to your hip or knee? (5-point scale)
7. How satisfied are you with your hip or knee replacement? (5-point scale)

Surgeon measures

At the decision date for surgery, surgeons assessed each of their patients with the seven priority criteria, a visual analogue scale (VAS urgency) and a MAWT (Figure 2). The PCS is the summative score of the seven priority criteria. Potential independent variables for the MAWT surgeon model included patient age, sex, joint (hip or knee) and the seven priority criteria. Actual WT was the length of time from the booking date to surgery as recorded in the Surgical Registry minus patient-initiated delays for a non-clinical reason (four cases). With the implementation of the Surgical Registry, the booking date is typically close to the decision date for surgery.

Data analysis

Patient and surgeon MAWTs were compared for three urgency groups that represent clinically distinct groups of patients based on the PCS: 0–30 (least urgent), 31–74 and 75–100 (most urgent) (WCWL 2005). The Spearman correlation coefficient was used to assess the relationships between patient and surgeon measures of urgency.

Multiple linear regression analysis was used to determine the independent effects of each predictor variable adjusting for the other variables in the model. We first performed separate simple linear regression of MAWT on each of the potential predictor variables (Stevens 1986). The significant variables were entered into the multiple regression analysis. The final explanatory model included the significant predictors, adjusted for age and sex.

FIGURE 2. Surgeon measures

Priority Criteria (number of response options/coding)[1]
1. Pain on motion (3): 1=none/mild; 3=severe
2. Pain at rest (4): 1=none; 4=severe
3. Ability to walk without significant pain (4): 1=over 5 blocks; 4=household ambulator
4. Functional limitations (4): 1=no limitations; 4=severe limitations
5. Abnormal findings on physical exam related to affected joint (3): 1=none/mild; 3=severe
6. Potential for progression of the disease documented by radiographic findings (4): 1=none; 4=severe
7. Threat to role and independence (3): 1=not threatened; 3=immediately threatened

VAS Urgency[2] – All things considered, how would you rate the urgency or relative priority of this patient?
MAWT[3] – In your clinical judgment, what should be the maximum acceptable waiting time for this patient?

1 The WCWL Hip and Knee Replacement priority criteria are each scaled with three to four response options, with higher numbers indicating more urgency. The Priority Criteria Score (PCS) is the weighted summative score of the seven criteria. The tool and user guide are available at www.wcwl.ca.
2 Visual Analogue Scale of Urgency scaled 0 (least urgent) to 100 (most urgent)
3 Maximum acceptable waiting time

Results

Three hundred and three patients returned surveys (70% response rate) and of these, 208 patients (69%) consented to linking their survey answers to the Surgical Registry data. The sample of 208 was 56% female (mean age 69 years, SD 11). Seventy percent were married and 75% had a high school education or better. Fifty-one percent had knee surgery, 49% hip surgery and 31% reported a previous arthroplasty. There were no significant differences in demographic variables between individuals who did and did not agree to data linkage. The sample was similar in demographics to the 432 eligible individuals (59% female, mean age 70 years, SD 12). The mean PCS for individuals who consented to the link (60.03) was similar to the mean for those who were sent the survey but did not consent to the link (61.44). The average interval from the surgery date to the survey mail-out was 32 weeks (SD 7).

Sixteen surgeons were included with a mean number of patients of 13 (SD 9). Eighty percent of the patients had surgery in the largest of the three health regions.

Table 1 compares patient and surgeon variables for those individuals who agreed to data linkage. Patients had an average MAWT of 17.97 weeks compared to an average surgeon MAWT of 17.23 weeks. Ideal WT was shorter than patient MAWT. Seventy-eight percent of patients found their WT acceptable and 22% unacceptable. The median WT for those who found their WT acceptable was 16 weeks, compared to 20 weeks for those who found it unacceptable. Twenty-six patients reported that their surgery had been cancelled because of either hospital or physician-related reasons. The actual WT did not take these delays into account, as these data were not available from the Surgical Registry. There was no significant difference in patient MAWT based on self-reported surgery cancellations.

TABLE 1. Measures of urgency and waiting times in weeks

		Patient MAWT[1]	Patient Ideal WT	Surgeon MAWT[1]	Waiting Time[2]	VAS Urgency[3]	PCS[4]	EQ-5D index[5]	EQ VAS[6]
Mean		17.97	11.77	17.23	19.52	64.65	60.03	0.75	77.01
SD		11.03	10.03	10.64	17.89	19.42	20.05	0.17	13.89
Percentiles	25	8.60	4.30	8.60	9.57	50.00	47.00	0.62	70.00
	50 (Median)	17.20	8.60	12.90	17.57	70.00	55.00	0.76	80.00
	75	25.80	17.20	25.80	24.79	80.00	69.75	0.85	86.50

Note: Sample includes individuals who agreed to data linkage (n=208).
1 Maximum Acceptable Waiting Time
2 Actual waiting time
3 Surgeon-rated Visual Analogue Scale of Patient Urgency 0 (least urgent) to 100 (most urgent)
4 Surgeon-rated Priority Criteria Score 0 (least urgent) to 100 (most urgent)
5 Euroqol index scaled from –0.59 (health state worse than death) to 1.00 (full health)
6 Euroqol Visual Analogue Scale scaled from 0 (worst imaginable health state) to 100 (best imaginable health state)

There was no significant relationship between patient MAWT and surgeon-rated measures, including surgeon MAWT (r=.05), VAS Urgency (r=–.10) and the PCS (r=–.10). The PCS was significantly related to the VAS urgency (r=.64) and surgeon MAWT (r=–.50) and weakly correlated with actual WT (r=–.27).

Table 2 shows the descriptive statistics for patient and physician urgency measures for each of the three urgency categories. Median patient MAWT ranged from 13 to 17 weeks and surgeon MAWT from 9 to 26 weeks.

For the patient model, significant univariate predictors of MAWT were type of joint, waiting time and fairness. Table 3 summarizes the findings from the patient MAWT multiple regression model. Adjusting for the other variables in the model, sex, type of joint, waiting time and perception of fairness were significant predictors of MAWT. Males had a significantly longer predicted MAWT by 2.8 weeks; for an increase of one week of actual WT, the predicted patient MAWT increased by 1.4 days (0.20 weeks); for one level of increase in patient perception of fairness, the predicted MAWT increased by 2.5 weeks; and knee replacement patients had a predicted MAWT of 2.8 weeks longer than hip replacement patients. The multiple regression model with all the predictor variables explained 14% of the variance in patient MAWT.

For the surgeon MAWT model, type of joint, ability to walk without significant pain and potential for progression of the disease documented by radiographic findings were significant predictors (Table 4). Adjusting for age, sex, joint and the other priority criteria, for a deterioration of one level in the ability to walk without significant pain (for example, from one to five blocks to less than one block), the predicted surgeon MAWT was shorter by five weeks. Adjusting for the other variables, for an increase of one level in the severity of potential for progression of the disease (e.g.,

from mild to moderate), the predicted surgeon MAWT was shorter by 4.8 weeks. For knee replacement patients, the predicted surgeon MAWT was longer by 3.2 weeks.

TABLE 2. Patient and surgeon urgency measures for three levels of urgency based on the Priority Criteria Score

PCS[1] in 3 groups		MAWT[2] Surgeon	MAWT[2] Patient	Ideal Wait Time	Actual Wait Time	VAS Urgency Surgeon[3]
0–30	Mean	30.10	18.63	7.90	16.00	46.25
	SD	9.19	15.10	6.30	11.79	13.02
	Median	25.80	17.20	6.45	14.07	45.00
31–74	Mean	18.66	18.47	12.30	20.32	60.75
	SD	11.66	10.75	10.80	18.35	17.93
	Median	12.90	17.20	8.60	18.00	60.00
75–100	Mean	12.28	15.52	10.48	13.54	79.75
	SD	8.65	11.17	8.93	11.54	16.09
	Median	8.60	12.90	8.60	8.14	80.00

1 PCS (Priority Criteria Score): 0–30 (n=9) least urgent; 31–74 (n=153); 75–100 (n=46) most urgent
2 MAWT (Maximum Acceptable Waiting Time)
3 Surgeon-rated Visual Analogue Scale of Patient Urgency 0 (least urgent) to 100 (most urgent)
MAWT, ideal and actual wait times are reported in weeks.

Discussion

In conditions with non–life-threatening implications, patient and physician perspectives of MAWT are important inputs to establishing benchmarks for acceptable WTs. The MAWT provides information for an outer bound, whereas the ideal WT may inform an inner bound of a range of acceptable WTs. Our findings show that, although patients' perceptions of an ideal WT are generally less than a MAWT, patients would prefer to wait on average about three months before undergoing arthroplasty.

An average patient MAWT of four months was comparable to acceptable WTs from three to six months in other clinical studies (Ho et al. 1994; Conner-Spady, Estey et al. 2004; Lofvendahl et al. 2005; Derrett et al. 1999; Snider et al. 2005), while surgeon MAWT was slightly longer than that reported in a different province (Conner-Spady et al. 2005). Study differences could be due to such factors as the timing and method of assessment, severity of the condition and local area conditions, such as actual WT and patient and surgeon expectations of WT. Compared to an average survey assessment time of 32 weeks post-surgery in our study, other study

assessment times ranged from pre-surgery (Conner-Spady et al. 2005) to two to seven years post-surgery (Coyte et al. 1994). Other studies of physician MAWT that used standardized cases reported similar values for the most urgent and least urgent groups (Conner-Spady, Arnett et al. 2004; Naylor and Williams 1996).

TABLE 3. Multiple regression model for determinants of patient maximum acceptable waiting times

	Coefficient	Std. Err.	*p*
Age	–0.05	0.06	0.38
Sex	2.79	1.31	0.04
Joint	2.79	1.31	0.04
Waiting time (weeks)	0.20	0.06	0.00
Fairness	2.46	0.59	0.00
Constant	16.87	4.19	0.00

The dependent variable is patient-rated maximum acceptable waiting time (MAWT).
Sex (male=1; female=0)
Joint (knee=1; hip=0)
Fairness (1=very unfairly; 5=very fairly)
Adjusted R^2 = 0.14

TABLE 4. Multiple regression coefficients for the determinants of surgeon maximum acceptable waiting times

	Coefficient	Std. Err.	*p*
Age	0.07	0.06	0.28
Sex	1.24	1.39	0.37
Joint	3.20	1.38	0.02
Ability to walk without significant pain	–4.99	0.99	0.00
Potential for progression (radiographic)	–4.82	0.86	0.00
Constant	39.45	5.21	0.00

The dependent variable is surgeon-rated maximum acceptable waiting time (MAWT).
Sex (male=1; female=0)
Joint (knee=1; hip=0)
Ability to walk: 1=over 5 blocks; 5=household ambulatory
Potential for progression of disease based on radiographic findings: 1=none; 4=severe
Adjusted R^2 = 0.28

For use as an input to benchmarks for WTs based on urgency, MAWT must be assessed for patients with different levels of urgency. As expected, the length of MAWT for physicians generally increased as the level of urgency (PCS) lessened.

However, patient MAWTs changed very little across urgency levels. Surgeon MAWTs were longer than patient MAWTs in the less urgent levels and shorter in the more urgent levels. Ideal WTs showed no consistent pattern across the urgency groups, suggesting that the desired wait is unrelated to urgency as assessed by the surgeon. Although the majority of both patients and surgeons rated their MAWT at six months or less, there was no linear relationship between patient and surgeon MAWT.

Several possible explanations may account for these findings. First, the proportion of patients in the least urgent category is small compared to the proportions in the middle and highly urgent categories; thus, estimates are less stable. Second, patient MAWT was unrelated to the other surgeon-rated measures of urgency (PCS and VAS urgency). Differences in patient and physician perceptions of pain and urgency have been reported in other studies (Suarez-Almazor et al. 2001). The surgeon's frame of reference is different from that of the patient who experiences the problem and its impact on the patient's quality of life. The surgeon's assessment of patient urgency includes not only pain and function but also radiographic and physical findings. Third, surgeon MAWTs were assessed pre-surgery, while patient MAWTs were assessed post-surgery. Differences in timing of assessment and patient recall could affect perceptions of urgency. Post-operatively, much of the anxiety of the wait, which may have influenced attitudes, would have been removed. Finally, in addition to patient urgency, other factors may influence patient and physician perceptions of MAWT. Our study showed that patient perception of fairness is a significant predictor of patient MAWT. Patient expectation of the length of wait, certainty of a scheduled date and preference for a health provider (Burge et al. 2004) are other factors that may affect the maximum length of wait acceptable to patients.

The surgeon's frame of reference is different from that of the patient who experiences the problem and its impact on the patient's quality of life.

Determinants of patient and surgeon MAWTs

Although other studies have shown that a longer WT is associated with a perception that the WT is unacceptable (Lofvendahl et al. 2005; Coyte et al. 1994), few studies have examined other factors that influence patient MAWT or patient acceptance of waits. Similar to our study, Lofvendahl et al. (2005) found no association between

acceptance of the wait and the EQ-5D, socio-economic variables or patient opinion of the overall surgical outcome. Our study showed that the longer patients waited for surgery, the longer was their maximum acceptable waiting time. Willingness to wait may be influenced by expectation of the wait. For example, in a study of patients waiting for joint arthroplasty, the longer that surgeons estimated a patient would be likely to wait in their practice, the longer the patient-rated MAWT (Conner-Spady et al. 2005). Additionally, patients who waited longer may have tended to have less pain and dysfunction and thus may have been willing to wait longer.

To our knowledge, determinants of patient MAWT, such as perception of fairness and prior knowledge of the expected wait, have not been previously assessed. Patients who felt that they were treated fairly in regard to their WT were willing to wait longer. Strategies to increase a perception of fairness, such as giving patients certainty of a surgical date or keeping them informed about their status on the waiting list, may increase acceptability of the wait.

… in a study of patients waiting for joint arthroplasty, the longer that surgeons estimated a patient would be likely to wait in their practice, the longer the patient-rated MAWT.

In both patient and surgeon models, knee replacement vs. hip replacement was predictive of a longer MAWT. This finding is consistent with typically longer waiting times for knee replacement patients across Canada (Health Council of Canada 2007). Similar to findings in another clinical population of patients waiting for joint replacement, our study showed an association between increased potential for progression of the disease documented by radiographic findings and a shorter surgeon-rated MAWT (Conner-Spady et al. 2005).

Our study suggests that in addition to the length of WT, other factors influence patient and surgeon perceptions of MAWT and may help to explain the lack of association between patient and surgeon MAWTs. A better understanding of these factors is important in managing waiting lists and developing benchmarks for WTs that are acceptable to patients, surgeons and the public.

Limitations

A study limitation is that not all patients returned the questionnaire or agreed to data linkage. Patient characteristics and urgency, however, were similar for those who

agreed to the linkage versus those who did not. Another limitation is that although the target sample included all consecutive patients who met the study criteria, it did not include those who waited over one year. As the Surgical Registry was recently implemented, patients who were already on the waiting list at the time of implementation were not assessed with a PCS and therefore were not included in the study. Finally, although physician, hospital and system factors may influence MAWT and actual WTs, these factors were beyond the scope of this paper.

Conclusions

Patient and surgeon perspectives on MAWT are important inputs to the development of benchmarks for acceptable WTs. An upper limit of six months for the least urgent patients is consistent with many of the benchmarks in OECD countries (Siciliani et al. 2005; Bourne et al. 2005; WCWL 2005). Although there is some consensus on overall WT, patients enter the queue at different levels of urgency. Thus, benchmarks based on levels of urgency should ensure a more transparent and fair process of access to care. Various models have been proposed to implement prioritization systems and deal with issues such as the inclusion of time waiting to ensure that low-urgency cases receive treatment (Mullen 2003). Evaluation of these systems in practice is essential to assess the effects of implementation on access to care and patient outcomes.

In addition to the level of urgency, differences in surgeon and patient perspectives of MAWT may be due to such factors as a perception of fairness and local area conditions, such as actual WT and timing of assessment. It is therefore important to ensure that patient and surgeon inputs are representative of the population to which the benchmarks will apply. It is also important that patients perceive that they are being treated fairly. Our ongoing research is examining the perspectives of representative samples of patients who are waiting and those who have had surgery. We will also be able to determine whether there is a difference in patient perspectives of MAWT based on the timing of assessment.

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ACKNOWLEDGMENTS

The authors acknowledge the support of the Health Regions and the orthopaedic surgeons in Saskatchewan and support for the Western Canada Waiting List Project by Manitoba Health, Saskatchewan Health, Alberta Health and Wellness, the British Columbia Ministry of Health Services and Health Canada.

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