

1. Waiting for Scheduled Services in Canada: Development of Priority-Setting Scoring Systems

Tom Noseworthy, John McGurran, David Hadorn and the Steering Committee of the Western Canada Waiting List Project. *Journal of Evaluation in Clinical Practice*. 2003; 9(1), 23-31.

Abstract

An Achilles' heel of Medicare is long waits for elective services. The Western Canada Waiting List (WCWL) Project is a collaboration of nineteen partner organizations committed to addressing this issue and influencing the way waiting lists are structured and managed. The focus of the WCWL Project has been to develop and refine practical tools for prioritizing patients on elective waiting lists. Scoring tools for setting priority were developed through extensive clinical input and highly iterative exchange by clinical panels constituted in five clinical areas: cataract surgery; general surgery procedures; hip and knee replacement; magnetic resonance imaging (MRI) scanning and children's mental health. Several stages of empirical work were conducted to formulate and refine criteria and to assess and improve their reliability and validity. To assess acceptability and usability of the priority-setting tools and to identify issues pertaining to implementation, key personnel in the seven regional health authorities participated in structured interviews. Public opinion focus groups were conducted in the seven western cities. Point-count scoring systems were constructed in each of the clinical areas. Participating clinicians confirmed that the tools offered face validity and that the scoring systems appeared practical for implementation and use in clinical settings. Reliability was strongest for the general surgery and hip and knee criteria, and weakest for the diagnostic MRI criteria. Public opinion focus groups wholeheartedly endorsed the application of point-count priority measures. Regional health authorities were generally supportive, though cautiously optimistic towards implementation. While the WCWL Project has not 'solved' the problem of waiting lists and times in Canada, having a standardized, reliable means of assigning priority for services is an important step towards improved management.

Commentary

This article reports on the work of the first phase of the WCWL project which focused on the development and refinement of tools for prioritizing patients on scheduled waiting lists. Development of the tools, which incorporate clinical contribution and highly iterative exchange by clinical panels, involved several stages of input and empirical assessment of reliability and validity. A limitation of the project is that the views of the public are not embedded explicitly in the original scoring systems and the tools model clinical judgment which is amorphous, multidimensional and may not always reflect best practice.

2. Setting Priorities on Waiting Lists: Point-Count Systems as Linear Models

David Hadorn and the Steering Committee of the Western Canada Waiting List Project. *Journal of Health Services Research & Policy*. 2003; 18(1), 48-54.

Abstract

The Western Canada Waiting List Project (WCWL) is a federally funded initiative designed to develop tools for managing waiting lists. The principal tools developed by WCWL are point-count measures that assess the severity of patients' conditions and the extent of benefit expected from wait-listed services. Points are assigned according to the severity of patients' symptoms and clinical findings. Points on each factor are added and the total score is considered indicative of relative clinical urgency. Such point-count measures function as linear models from a statistical perspective. This paper describes the relevance of this functional relationship for the development and validation of priority criteria.

Commentary

Western Canada Waiting List Project Publication List

Revised: October 2009

The WCWL method for assessing and comparing patients' relative urgency on waiting lists is explained in this paper. This method operates by assigning points to patients based on relevant priority-setting criteria, including severity of clinical condition and considerations of expected treatment benefit. Ultimate validation of the criteria has not yet occurred, and must come through large-scale studies that determine the outcomes of patients.

3. Setting Priorities for Waiting Lists: Defining Our Terms

David C. Hadorn and the Steering Committee of the Western Canada Waiting List Project. *Canadian Medical Association Journal*. 2000; 163(7), 857-60.

Abstract

In order to develop standardized measures to assess patients' relative priority for services for which there are waiting lists, it is essential that key terms be clearly defined. We propose: that severity be defined as the degree or extent of suffering, limits to activities or risk of death; that urgency be defined as severity combined with considerations of the expected benefit and the natural history of the condition; that need be considered equivalent to urgency; and that priority be defined in terms of urgency (or need) with or without consideration of social factors.

Commentary

This article advocates the use of standardized key terms regarding waiting times. The terms defined in this article are: severity, urgency, relative priority, need and expected benefit. The manner in which severity, urgency, need and expected benefit relate to relative priority is also explained. These key terms are assigned standard meanings in order to facilitate the development of measures for assessing patients' relative priority for scheduled services.

4. Toward Standard Definitions of Waiting Times for Health Care Services

Claudia Sanmartin and the Steering Committee of the Western Canada Waiting List Project. *Healthcare Management Forum*. 2003; June, 49-53.

Abstract

There are currently no standard and universally accepted definitions for waiting times in Canada for general surgery, hip and knee replacement, cataract surgery, MRIs and children's mental health. The Western Canada Waiting List Project (WCWL) has recognized the need to establish such standard definitions to improve the accuracy and comparability of waiting time information as well as to make such standardized comparative information available to physicians and their patients. Specifically, this report strives to provide a comprehensive review of the definitions and measures of waiting times currently used across procedure groups and jurisdictions, identify and define a comprehensive range of waiting times for the above named procedures and discuss the key issues and implementation challenges facing the establishment of standard definitions for waits in Canada.

Commentary

Standard definitions of waiting times for surgery and magnetic resonance imaging are proposed in this article. Four distinct waiting times throughout the path to care are defined: waiting time for primary care; waiting time for initial specialist/surgical consultation; waiting time for the decision to treat; and waiting time for surgery. The major issues and challenges facing the implementation and operationalization of standard definitions for waiting times are also discussed and recommendations are proposed regarding future efforts in this area.

5. Developing Priority Criteria for Hip and Knee Replacement Surgery: Results from the Western Canada Waiting List Project

Gordon Arnett, David Hadorn, and the Steering Committee of the Western Canada Waiting List Project. *Canadian Journal of Surgery* 2003; 46(4):290-296.

Abstract

The Western Canada Waiting List Project (WCWL) is a federally funded partnership of 19 organizations, including medical associations, health authorities, ministries of health, and research organizations, that was created to develop tools to assist in the management of waiting lists. The WCWL panel on hip and knee replacement surgery was one of five panels constituted under this project. The panel developed and tested a set of standardized clinical criteria for setting priorities among patients awaiting hip and knee replacement surgery. The criteria were applied to 406 patients in four provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' overall urgency ratings. Inter-rater and test-retest reliability was assessed using six videotaped patient interviews, scored by orthopaedic surgeons, related professionals, and general practitioners. The priority criteria accounted for over two-thirds of the observed variance in overall urgency ratings ($\text{adj.R}^2 = 67.6\%$). The panel modified the criteria and weights based on the empirical findings and clinical judgment. The reliability of the priority criteria for the hip and knee replacement tool was among the strongest of the five instruments developed in the WCWL project. The panel considered the criteria easy to use and reasonably reflective of expert surgical judgment regarding clinical urgency for hip and knee replacement. Further development and testing of the tool appears warranted.

Commentary

This paper explains the development and testing of clinician-scored priority criteria capable of assessing and comparing the relative urgency for surgery on patients waiting for hip and knee replacement surgery. The priority criteria score is able to be used for primary and revision arthroplasties. Several operational challenges with the use of priority criteria are identified and discussed, including "gaming" of the system and patients with low scores never reaching the top of the list.

6. Developing Cataract Surgery Priority Criteria: Results from the Western Canada Waiting List Project

Ken Romanchuk, Suren Sanmugasunderam, David Hadorn and the Steering Committee of the Western Canada Waiting List Project. *Canadian Journal of Ophthalmology*. 2002; 37(3), 145-154.

Abstract

The Western Canada Waiting List Project (WCWL) is a federally funded partnership of 19 organizations, including medical associations, health authorities, ministries of health and research organizations created to develop tools to assist in the management of waiting lists. The WCWL cataract surgery panel, one of five panels constituted under this project, developed and tested a set of standardized clinical criteria for prioritizing among patients awaiting cataract surgery. The cataract surgery panel was composed of seven academic and community ophthalmologists, two family physicians, an optometrist, a health care services researcher and a health information specialist. The panel met three times between October 1999 and June 2000. The priority criteria were applied to 563 patients in the four western provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' overall ratings of urgency. Inter-rater and test-retest reliability were assessed, based on clinicians' ratings of videotaped interviews with six hypothetical patients. The resulting criteria accounted for about one-third of the observed variance in clinicians' ratings of overall clinical urgency ($R^2 = 31.2\%$). The panel modified the original criteria and weights based on empirical results and clinical judgment. Reliability of the revised criteria items was mixed, with the lowest reliability observed for items dealing with glare and social role. Participating

Western Canada Waiting List Project Publication List

Revised: October 2009

clinicians considered the criteria easy to use and reasonably reflective of expert surgical judgment regarding clinical urgency. Further development and testing of the tool appear warranted.

Commentary

This article describes the development and testing of clinician-scored priority criteria capable of assessing and comparing the relative urgency for surgery among patients on waiting lists for cataract removal. The priority criteria score is meant to include consideration of both the operative and non-operative eye. Several operational challenges with the use of priority criteria are identified and discussed such as “gaming” of the system and patients with low scores never reaching the top of the list.

7. Developing Priority Criteria for Magnetic Resonance Imaging: Results from the Western Canada Waiting List Project

David C. Hadorn, MD, PhD, and the Steering Committee of the Western Canada Waiting List Project. *Canadian Association of Radiologists Journal*. 2002; 53(4), 210-218.

Abstract:

The Western Canada Waiting List (WCWL) Project is a federally funded partnership of 19 organizations, including medical associations, health authorities, ministries of health and research organizations, that was created to develop tools to assist in assessing the relative urgency and priority of patients on waiting lists. The WCWL panel on magnetic resonance imaging (MRI) was 1 of 5 panels constituted under this project. Methods: The panel developed and tested a set of standardized clinical criteria for setting priorities among patients awaiting MRI. The criteria were applied to 407 patients in the 4 western provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' overall ratings of patients' urgency for MRI. Reliability was assessed using clinicians' ratings of 6 hypothetical paper cases. Results: The resulting weighted criteria accounted for about two-fifths of the observed variance in overall urgency ratings ($R^2 = 39.9\%$). The panel then modified the criteria on the basis of regression results and clinical judgment. Most of the revised criteria items showed poor inter-rater reliability, but test-retest reliability (over a 2-month interval) was relatively good. Conclusion: Criteria items requiring probability judgments were a challenge for clinicians. Further development and testing of the tool appears warranted, although considerable question remains concerning the utility of priority criteria for MRI and other diagnostic services.

Commentary

The development and testing of clinician-scored priority criteria for assessing and comparing the relative urgency of patients on MRI waiting lists is explained in this paper. The priority criteria score is meant to include all cases booked for MRI. A WCWL clinical panel found that the criteria items requiring probability judgments were difficult to estimate. It was felt that this concern was serious enough to jeopardize the overall validity and utility of the criteria set and deter implementation, as constructed.

8. Lining Up for Children’s Mental Health Services: A Tool for Prioritizing Waiting Lists

Derryck Smith, David Hadorn, and the Steering Committee of the Western Canada Waiting List Project. *Journal of the American Academy of Child and Adolescent Psychiatry*. 2002; 41(4), 367-376.

Abstract

The Western Canada Waiting List Project (WCWL) is a federally funded partnership of 19 health-related organizations that was created to develop tools to manage waiting lists for five types of health services. The children’s mental health (CMH) panel developed and tested a set of standardized clinical criteria for setting

Western Canada Waiting List Project Publication List

Revised: October 2009

priorities among patients awaiting CMH services. The criteria were applied to 817 patients by 92 mental health professionals in three western provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' global urgency ratings. To assess reliability, raters used the criteria to score six standardized "paper cases." The criteria accounted for about 40 percent of the observed variance in overall urgency ratings ($R^2 = 41.7\%$). The panel modified the criteria based on the initial empirical work. Reliability assessment of the revised tool indicated that one-half of the items had excellent or fair/good inter-rater agreement; test-retest reliability was good. Priority criteria were able to capture clinicians' judgments of relative urgency in the CMH setting. A number of operational challenges remain with the use of priority criteria for scheduling CMH services. Further development and testing of the tool appears warranted.

Commentary

This paper explains the development and testing of clinician-scored priority criteria capable of assessing and comparing the relative urgency of patients on waiting lists for children's mental health (CMH) services. A number of operational challenges remain with the use of priority criteria for scheduling CMH services particularly given the broad case mix and wide spectrum of interventions. The priority criteria score appears to work best as an assessment tool for intake.

9. Developing Priority Criteria for General Surgery: Results from the Western Canada Waiting List Project

Mark Taylor, David Hadorn, and the Steering Committee of the Western Canada Waiting List Project. *Canadian Journal of Surgery*. 2002; 45(5), 351-257.

Abstract:

The Western Canada Waiting List Project (WCWL) is a federally funded partnership of 19 organizations, including medical associations, health authorities, ministries of health, and research organizations created to develop tools for improving the management of waiting lists. The WCWL general surgery panel was 1 of 5 panels constituted under this project. The panel developed and tested a set of standardized clinical criteria for setting priorities among patients awaiting elective general surgery of all kinds. The criteria were applied to 561 patients in 3 western provinces. Regression analysis was used to determine the set of criteria weights that collectively best predicted clinicians' overall urgency ratings. The priority criteria accounted for almost two-thirds of the observed variance in clinicians' urgency ratings (adjusted $R^2 = 64.1\%$) for a mixed group of patients. The panel modified the criteria and weights based on empiric findings and clinical judgment. Inter-rater and test-retest reliability of criteria items appeared to be good, based on clinicians' ratings of 6 videotaped, standardized patient interviews. The panel considered the criteria easy to use and reasonably reflective of expert surgical judgment regarding clinical urgency. Further development and testing of the tool appears warranted.

Commentary

The development and testing of clinician-scored priority criteria for assessing and comparing the relative urgency of patients on waiting lists for general surgery is explained in this paper. All cases done by a general surgeon, booked in an operating room are included (cancer and non-cancer). Several operational challenges with the use of priority criteria are identified and discussed. These include "gaming" of the system, patients with low scores never reaching the top of the list and the broad case mix and wide spectrum of interventions.

10. Improving the Management of Waiting Lists for Elective Healthcare Services: Public Perspectives on Proposed Solutions

John McGurran, Tom Noseworthy and the Steering Committee of the Western Canada Waiting List Project. *Hospital Quarterly* Spring 2002, 28-32.

Abstract

The Western Canada Waiting List Project (WCWL) has developed waiting list prioritization tools in five problematic clinical areas: hip and knee joint replacement; cataract removal surgery; general surgery; children's mental health services; and MRI scanning. Public opinion about these was solicited through focus group sessions in the seven large Western Canadian cities. Participants reported that they were unaware of how waiting lists are actually created and managed; their views on access to care were consistently and strongly negative. Lists were described as too long, inconsistently managed, and subjective. Waiting lists were seen as necessary, but at the same time concern was expressed about queue jumping and cancellations rendering the process unfair. The standardized approach to waiting list management developed by the Western Canadian Waiting List project was judged to be appropriate and acceptable.

Commentary

This article portrays the public's perspectives on several issues including: the present situation regarding access and waiting lists; current methods of setting priority; and the WCWL approach to prioritization. Public focus groups were convened in seven western cities and provided consistent messages that the existing system is flawed, priority-setting is necessary, and that the WCWL tools, presented for their consideration, were appropriate and acceptable. A limitation of the methodology is that the focus groups were not the subject of "scientific" sampling and cannot necessarily be assumed to be representative of the general population.

11. Prioritization of Patients on Scheduled Wait Lists: Validation of a Scoring System for Hip and Knee Arthroplasty

Barbara Conner-Spady, Gordon Arnett, John McGurran, Tom Noseworthy, and the Steering Committee of the Western Canada Waiting List Project. *Canadian Journal of Surgery*. 2004, 47(1), 39-46.

Abstract:

The hip and knee replacement priority criteria tool (HKPT) is one of five tools developed by The Western Canada Waiting List Project (WCWL) for setting priorities among patients awaiting elective procedures. This paper assesses validity of the HKPT priority criteria score (PCS) and maps acceptable maximum waiting times to levels of urgency. Two studies were used to assess convergent and discriminant validity. 1. Consecutive patients on a waiting list for arthroplasty were assessed by their orthopedic surgeons in six centres in Western Canada. 2. Six patients were interviewed and taped during a consultation with their surgeon and assessed by a group of experts. 394 patients were assessed in study 1 and 17 raters assessed six patients in study 2. Correlations between the PCS and other measures of physician-rated urgency were strong ranging from .78 to .89. For a subgroup of patients (n=90) correlations between the PCS and WOMAC function were .48 and correlations were greater (.45 to .56) between items measuring similar constructs (e.g., pain at rest) than those measuring different constructs (.21 to .39). In study 2 median maximum waiting times ranged from 4 to 24 weeks for five levels of urgency based on PCS percentiles. Results show support for the validity of the PCS as a measure of surgeon-rated urgency. Evaluative studies are needed to assess the validity and acceptability of the tools and the establishment of acceptable wait times in clinical practice.

Commentary

The validity of the WCWL hip and knee replacement priority criteria score (PCS) is examined in this paper. In addition, an attempt was made to map patients' maximum acceptable waiting times (MAWTs) to levels of physician-rated urgency. Convergent validity was measured by comparing the PCS to other methods of physician judgment, including urgency measured on a visual analogue scale (VAS) and urgency relative to average patients in their practice. A potential limitation is the variation in the range of the VAS for different surgeons' practices against which each patient is assessed and the limited number of patients assessed for MAWT estimates in the simulated clinical situations.

12. Prioritization of Patients on Waiting Lists for Hip and Knee Replacement: Validation of a Priority Criteria Tool

Barbara Conner-Spady, Angela Estey, Gordon Arnett, Kathy Ness, John McGurran, Robert Bear, Tom Noseworthy, and the Steering Committee of the Western Canada Waiting List Project. *International Journal of Technology Assessment in Health Care*. 2004, 20(4) 509-515.

Abstract

This study tested the validity of the WCWL priority tool for hip and knee arthroplasty. Surgeons assessed urgency and maximum acceptable waiting times (MAWT) of 233 consecutive patients. Patients rated urgency, the WOMAC, EQ-5D, and MAWT. Convergent validity between the priority score and surgeon urgency was strong ($r = 0.8$) and weaker between patient and surgeon measures. For decreasing levels of urgency, median MAWT ranged from 10-12 (surgeons) and 4-12 (patients) weeks. Results support the validity of the PCS as a measure of surgeon-rated urgency. Patients might be ranked differently with different prioritization measures.

Commentary

An assessment of the reliability and validity of the WCWL hip and knee replacement priority criteria tool is explained in this paper. The study tests the priority criteria tool against other measures of surgeon and patient urgency and health-related quality of life (HRQL). Maximum acceptable waiting time (MAWT) estimates were one of the measures of urgency against which the priority criteria tool was tested. These estimates were made by both surgeons and patients. These MAWTs were then mapped onto levels of urgency based on the priority criteria score. A limitation of the study is that the results may not be generalizable as the sample was based on consecutive patients; validity studies should be completed with different populations.

13. Determinants of Patient and Surgeon Perspectives on Maximum Acceptable Waiting Times for Hip and Knee Arthroplasty

Barbara Conner-Spady, Angela Estey, Gordon Arnett, Kathy Ness, John McGurran, Robert Bear, Tom Noseworthy, and the Steering Committee of the Western Canada Waiting List Project (WCWL). *Journal of Health Services Research and Policy*. 2005; 10(2):84-90.

Abstract

Lengthy waiting times (WT) for hip and knee arthroplasty have raised concerns about equitable and timely access to care. The Western Canada Waiting List (WCWL) project has developed priority criteria scores (PCS) linked to maximum acceptable waiting times (MAWT) for different levels of priority. Our study purpose was to assess the determinants of patient- and surgeon-rated MAWT, and to test whether anticipated WT in practice has independent influence after adjusting for age, sex, and patient urgency. A second aim was to compare MAWT, WT, and anticipated WT across levels of the PCS. Orthopedic surgeons assessed 233 consecutive patients waitlisted for arthroplasty. Data included a PCS, a visual analogue scale (VAS) of patient urgency, MAWT, and anticipated WT. Patient data included a VAS, MAWT, and the Western Ontario McMaster Osteoarthritis index (WOMAC). We used hierarchical linear regression to test the models. After adjusting for age and sex, the PCS, VAS, and anticipated WT accounted for 40% of the variance in surgeon MAWT. The patient model accounted for 30% of the variance in patient MAWT. Older patients preferred significantly shorter MAWTs ($p < .05$). Anticipated WT added significantly to both the surgeon and patient MAWT models (R^2 change .11 and .09, respectively). Actual WT was weakly correlated with the PCS ($r = -0.25$, $p = .000$). Patient and physician views are critical to a fair process of establishing MAWT for

Western Canada Waiting List Project Publication List

Revised: October 2009

scheduled procedures. Anticipated WT may influence perspectives on MAWT and must be considered in their interpretation.

Commentary

The main purpose of this study was to assess the determinants of surgeon and patient perspectives on maximum acceptable waiting times (MAWTs) for hip and knee arthroplasty. There was no significant difference between actual and expected waiting times or surgeon and patient perspectives on MAWTs. Patient urgency had an independent effect on both patient and surgeon MAWT, and older patients generally wished to have shorter MAWTs than other patients. A limitation of the study was the inability to document the numbers or characteristics of patients who did not participate. Priority Criteria Scores (PCS) based on urgency were related to surgeon perspectives on MAWT.

14. Determinants of Patient Satisfaction with Cataract Surgery and Length of Time on the Waiting List.

Barbara Conner-Spady, Suren Sanmugasunderam, Paul Courtright, John McGurran, Tom Noseworthy, & the Steering Committee of the Western Canada Waiting List Project. *British Journal of Ophthalmology*. 2004, 88, 1305-1309.

Abstract

The aims of this article were to assess determinants of patient satisfaction with their waiting time (WT) and cataract surgery outcome. A prospective cohort of consecutive patients waitlisted for cataract surgery was assessed by their ophthalmologist. Satisfaction, maximum acceptable waiting time (MAWT), urgency, visual function, visual acuity (VA), and health-related quality of life were assessed using mailed questionnaires pre- and 8-10 weeks post-surgery. Ordinal logistic regression was used to build explanatory models. 166 patients (61.9% female, mean age 73.4 years) had a mean WT of 16 weeks. Patients whose actual WT was shorter than their MAWT had greater odds of being satisfied with their WT than those whose WT was longer (Adjusted OR 3.86, 95% CI 1.38 – 10.74). Improvement in visual function (OR 3.19, 95% CI 1.78 – 5.73) and VA (OR 4.27, 95% CI 1.70 – 10.68) significantly predicted satisfaction with surgery. Models were adjusted for age and sex. Patient perspectives on MAWT and satisfaction with WT are important inputs to the process of determining WT standards for levels of patient priority. Patient expectation of WT may mediate satisfaction with actual WT.

Commentary

The determinants of patient satisfaction with the length of wait for cataract surgery, and with cataract surgery itself are assessed in this article. The majority of patients were satisfied with their waiting time, and with the surgery itself. Both actual waiting time and estimates of maximum acceptable waiting time (MAWT) were shown to have a significant effect on satisfaction with waiting time. In other words, satisfaction with waiting is linked to expectations. A limitation of the study is that it was not known whether patients were informed of their expected waiting time at the time of assessment and if this knowledge affected their perception of MAWT and satisfaction with waiting time.

15. Waiting Lists: Management, Legalities and Ethics

Dennis Pitt, Tom Noseworthy, Jacques Guilbert and John Williams. *Canadian Journal of Surgery*. 2003; 46(3), 170-175.

16. The Prioritization of Patients on Waiting Lists for Cataract Surgery: Validation of the WCWL Cataract Priority Criteria Tool

Western Canada Waiting List Project Publication List

Revised: October 2009

Barbara Conner-Spady, Suren Sanmugasunderam, Paul Courtright, Drew Mildon, John McGurran, Tom Noseworthy, & the Steering Committee of the Western Canada Waiting List Project. *Ophthalmic Epidemiology*. 2005; 12:81-90.

Abstract

The Cataract Priority Criteria Tool was developed by the Western Canada Waiting List (WCWL) project to provide a standardized and transparent method to assess patient urgency for patients waiting for cataract surgery. This study assessed the validity of the Cataract Priority Criteria Score (PCS) in a clinical setting. The design was a prospective study of patients undergoing cataract surgery. Twelve ophthalmologists at eight sites in Vancouver, Canada assessed 253 consecutive patients at consultation for cataract surgery. Patients were mailed questionnaires pre- and 8-10 weeks post-surgery. Patient urgency on a visual analogue scale (VAS urgency) and maximum acceptable waiting times (MAWT) were assessed pre-operatively from patient and surgeon perspectives. Patients completed the Visual Function Assessment (VFA) scale and the EQ-5D, a health-related quality of life (HRQL) tool. Patient perception of improvement in visual function and HRQL was compared to change in the VFA, EQ-5D, and visual acuity. The sample of 253 patients was 61.9% female (mean age, 73.4 years); 166 completed both pre-and post-surgery questionnaires. The priority criteria explained 50% of the variance in surgeon-rated VAS urgency, with ability to work, live independently, or care for dependents as the strongest predictor. The PCS significantly predicted change in the VFA (p .021). Patient and surgeon VAS urgency and MAWT were weakly related, 0.26 and 0.14, respectively. HRQL improved significantly more for patients under 65 years (0.10) than those 65 and older (0.01). Median MAWTs for levels of urgency, based on percentiles of the PCS, ranged from 12-20 weeks for surgeons and 4-8 weeks for patients. Results support the validity of the Cataract PCS as a measure of surgeon-rated patient urgency. Low correlations between surgeon and patient measures of urgency have implications for priority setting. Multiple outcomes are important in assessing improvement in visual function following cataract surgery. Age and co-morbidity are important factors to adjust for in interpreting the effect of cataract surgery on HRQL. The use of standardized explicit criteria should help to create more equitable waiting times, thereby improving access to care.

Commentary

WCWL_1 was primarily about the creation of priority criteria scoring (PCS) tools, that could be used to help health care providers structure waiting lists on the basis of urgency. WCWL_2 involved refining these tools and assessing their validity, in order to ensure that they could help rank patient urgency. This study details the comparisons and validation studies carried out with the cataract PCS, and supports convergent and predictive validity of the tool.

17. Innovative Collaboration, Formative Research and Action: Western Canada Waiting List Project

Tom Noseworthy and John McGurran. *Canadian Healthcare Manager*. October 2004, 43-45.

18. Patient and Physician Perspectives of Maximum Acceptable Waiting Times for Cataract Surgery

Barbara Conner-Spady, Suren Sanmugasunderam, Paul Courtright, Drew Mildon, John McGurran, Tom Noseworthy, & the Steering Committee of the Western Canada Waiting List Project. *Canadian Journal of Ophthalmology*. 2005; 40:439-447.

Western Canada Waiting List Project Publication List

Revised: October 2009

Abstract

Lengthy waiting times for cataract surgery are important issues in countries with publicly funded health care systems. The Western Canada Waiting List Project (WCWL) has developed priority criteria scores (PCS) related to urgency and linked to maximum acceptable waiting times (MAWT) to improve the fairness, timeliness, and certainty of waiting time management. Our study purpose was to compare patient and physician perspectives of MAWT for different levels of urgency. A second aim was to assess the determinants of patient and surgeon perspectives on MAWT. Ophthalmologists assessed consecutive patients waitlisted for cataract surgery. Data included a MAWT, a visual analogue scale of urgency (VAS urgency), and the cataract PCS. Mailed questionnaires to patients assessed patients' perspectives of MAWT and VAS urgency, and a measure of visual function, the Visual Function Assessment (VFA). We used hierarchical linear regression to assess the determinants of MAWT. The sample of 213 patients was 56.8% female, 71.8% were booked for first eye surgery, and the mean age was 73.9 years. Physician-rated MAWT was significantly longer than patient-rated MAWT (mean 15.1 vs. 9.9 weeks). Median physician MAWTs ranged from 12 (most urgent) to 20 (least urgent) weeks, and patient MAWTs, from 4 to 8 weeks, respectively. Adjusting for age and sex, the priority criteria and VAS urgency accounted for 42% of surgeon MAWT. The patient model accounted for 14% of the variance in patient MAWT. Male respondents rated their MAWT to be 3 weeks shorter than females. Patient and physician views on MAWT differ, yet both are critical to a fair process for developing standardized waiting times for levels of urgency. Results from this study provide initial inputs to the formulation of benchmark waiting times for different levels of the cataract surgery PCS.

Commentary

This paper deals with physicians' and patients views on maximum acceptable waiting times (MAWT) for cataract surgery taking into account patient urgency. It examines the perspectives that underlie MAWT, from physical symptoms to potential to benefit, and how these determinants fit with priority criteria scores (PCS), in addition to how they affect patient and physician estimation of MAWT.

19. Establishing Waiting Time Targets and Not Meeting Them

Tom Noseworthy. *Canadian Journal of Cardiology*. November 2005;21(13), 1211.

Commentary

This is an editorial response to Adler et al's (2005) study, in which it was reported that up to 18.5 deaths per 10,000 cardiac patients are preventable with timely treatment. The paper discusses the process of establishing realistic and clinically relevant waiting time benchmarks, through a blend of clinical consensus, public and patient participation, and political initiative. The assertion is that only within the framework of rigorous patient prioritization may the implementation of appropriate benchmarks hope to avoid exceeding wait time targets and the oft-disastrous consequences of treatment delay upon patient outcome.

20. The Priority Referral Score for Hip and Knee Arthroplasty

Carolyn De Coster, Stewart McMillan, Rollin Brant, John McGurran, Tom Noseworthy, & the Primary Care Panel of the Western Canada Waiting List Project. *Journal of Evaluation in Clinical Practice*. On-Line www.blackwell-synergy.com. June 2006.

Abstract

Recognizing the concerns about long waiting times to see specialists, and the burden this places on both primary care and specialist clinicians, the Western Canada Waiting List (WCWL) undertook the Primary Care Project. The goal was to develop a valid, reliable, standardized prioritization tool for use by primary care providers in making referrals to specialists. WCWL is a collaboration among 20 partner organizations committed to addressing the issues of long waiting times to access scheduled health care services. This was a mixed-methods design, incorporating both expert opinion and quantitative measures of urgency. The setting was four western Canadian provinces. The participants were a convenience sample comprising primary care

physicians and providers (n=25), and orthopaedic surgeons (n=6). A previously-developed prioritization tool for hip/knee replacement was adapted for use by family physicians, based on expert feedback from a clinical panel of primary care providers and from orthopaedic surgeons. Rater assessments of standardized paper cases were used to generate weights for criteria items in the Priority Referral Score (PRS). Intra-class correlations (ICCs) were calculated to assess reproducibility, and weights were estimated using a mixed-effects model. The weights and criteria-items were modified following feedback of these results to the panel. The resulting PRS was reliability-tested with a different set of standardized case descriptions. The hip/knee PCS was modified by removing one item on the potential for disease progression and adding two items concerning mobility aids and medication therapy. The resulting eight-item PRS had a test-retest ICC of 0.84. The mean intra-rater ICC was 0.79. An eight-item priority-setting tool has been developed to assist in queuing patients in order of urgency when they are referred to an orthopaedic surgeon for possible hip or knee arthroplasty. The tool had excellent inter- and intra-rater reliability and was seen to have face validity by a panel of primary care providers who advised on the project.

Commentary

This paper reports on the WCWL's development of the Priority Referral Score for Knee and Hip Arthroplasty. The Referral tool consists of physician-scored criteria designed for the purpose of ordering the queue for hip/knee arthroplasty referrals on the basis of relative urgency. Guided by primary care physician and specialist feedback, adaptation of the WCWL's previously-developed Hip and Knee Surgery Priority Criteria Score to the referral process entailed wording revisions, criteria amendments, and re-weighting of the amended criteria. Inter- and intra-rater validity was tested and deemed excellent. Face value was affirmed by an expert primary care panel. Further pilot-testing to assess the tool's generalizability is recommended.

21. Waiting Time Care Guarantees: Necessity or Nemesis?

Nikhil Joshi, Fraser Noseworthy, Tom Noseworthy. *Healthcare Management Forum*. 2006 Summer; 19(2):35-9.

Abstract

One of the priorities of governments in Canada is to reduce long waiting times for health services. This has raised the prospect of introducing waiting time care guarantees. Such guarantees affirm the healthcare system's social contract with the public and provide an entitlement to Canadians to receive timely care. There are clinical, legal and political implications, which must be considered and well managed before introduction. Other countries have ventured down this path. They teach us that waiting time care guarantees are good policy and make good sense. Correspondingly, they remind us not to make a promise we are not ready to keep.

Commentary

This paper outlines the pros and cons of waiting time guarantees and recommends a cautious approach for Canada, which includes the use of priority setting tools and development of operating research techniques to develop scheduling systems.

22. Priority-Setting for Children's Mental Health: Clinical Usefulness and Validity of the Priority Criteria Score

David Cawthorpe; Chris R. Wilkes; Abdul Rahman; Derryck H. Smith; Barbara Conner-Spady; John J. McGurran; Tom W. Noseworthy. *J Can Acad Child Adolesc Psychiatry* 16:1 February 2007

Abstract

The validity of the Children's Mental Health (CMH) Priority Criteria Score (PCS), developed by the Western Canada Waiting List Project (WCWL), is assessed in this paper. The 17-item PCS was designed to prioritize children and adolescents referred for mental health services. Intake workers completed a PCS for consecutive patients, 13 years of age and older, referred to three clinical mental health settings: community, day, and inpatient services. Clinical urgency, represented on a visual analogue scale (VAS urgency), and maximum acceptable waiting times (MAWT) were estimated. Actual wait times were recorded from the regional access and intake system. The sample included 497 (56% male) patients ranging in age from 13 to 20 years (mean 15.8). Adjusting for age, there was a significant mean difference in the PCS, between community, day, and inpatient referrals (mean 36.8, 46.6, 55.4, respectively; $p < .00001$). There was a good correlation between the PCS and VAS urgency (Pearson Product Moment $r = 0.67$). Mean MAWT ranged from 8 days, for the 20% most urgent, to 63 days for the 20% least urgent cases. There was a significant relationship between the PCS and actual waiting times experienced. Results support the validity of the PCS as a measure of clinical urgency for use in prioritizing patients for children's mental health services.

23. A Bird Can't Fly on One Wing: Patient Views on Waiting for Hip and Knee Replacement Surgery

Barbara Conner-Spady, Geoff Johnston, Claudia Sanmartin, John McGurran, Dawn Campbell, Tom Noseworthy. *Health Expectations*. 10(2):108-116, June 2007.

Abstract

The study purpose was to obtain patients' perspectives on acceptable waiting times for hip or knee replacement surgery. A questionnaire with both open- and close-ended items was mailed to 432 consecutive patients who had hip or knee replacement surgery 3 to 12 months previously in Saskatchewan, Canada. A content analysis was used to analyze the text data from the open-ended questions. The sample of 303 (response rate 70%) was 59% female with a mean age of 70 years (SD 11). The median waiting time from the decision date to surgery was 17 weeks. Individuals who rated their waiting time very acceptable (48%) had a median waiting time of 13 weeks compared to a median waiting time of 22 weeks for those who rated it unacceptable (23%). The two most common determinants of acceptability were patient expectations and pain and its impact on patient quality of life. The median maximum acceptable waiting time was 13 weeks and median ideal waiting time, 8.6 weeks. 79% felt that those in greater need (higher severity) should go before them on the waiting list. Patient ratings of maximum acceptable waiting time were based on: pain and loss of mobility, time needed to prepare for surgery, and severity at the time of seeing the surgeon. In consideration of changing their surgeon to one with a shorter waiting list, 68% would not. Patient views on waiting times are not only related to quality of life issues, but also to prior expectations and notions of fairness and priority. Understanding patient views on waiting for surgery have implications for better management of waiting times.

24. A Systematic Literature Review of Evidence Towards Cataract Surgery Waiting Time Benchmarks

Barbara Conner-Spady, Claudia Sanmartin, Tom Noseworthy, John McGurran, Suren Sanmugasunderam, Carolyn DeCoster, Diane Lorenzetti, Lindsay McLaren. *Can J Ophthalmol*, 42(4), July 2007.

Abstract

This work offered critical input to inform the work of Canadian federal/provincial/territorial Deputy Ministers of Health on establishing evidence-based benchmarks for waiting times (WT) for cataract surgery. The study purpose was to synthesize the evidence regarding the relationships between patient characteristics, waiting time (WT), and health outcomes for patients on waiting lists for cataract surgery. A systematic literature

review was conducted using the Cochrane Methodology. Seventeen studies were included. The studies varied in their quality, study design, sample characteristics, and outcome measures. Due to the heterogeneity in studies, a qualitative analysis was used. Key findings were: 1. Individuals with cataracts are at an increased risk of falls, hip fractures, and motor vehicle crashes; 2. The absence of pre-existing eye disease, better baseline visual acuity and visual function are associated with better outcomes; 3. Average WTs of 6-12 months are associated with a decline in visual acuity in patients while waiting. Although the evidence does not inform a precise benchmark, it does support timely access to surgery for individuals undergoing cataract surgery. In December 2005, health ministers set a goal to provide cataract surgery within 16 weeks for patients at high risk.

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

Conner-Spady BL, Johnston G, Sanmartin C, McGurran J, Noseworthy T, and the Saskatchewan Surgical Care Network/Western Canada Waiting List Project Research and Evaluation Working Group Committees. *Healthcare Policy*, 3(2) December 2007.

26. Priority-Setting Tools for Rheumatology Disease Referrals: A Review of the Literature

DeCoster C, Fitzgerald A, Cepoiu, and Investigators of the Western Canada Waiting List Project. *Clinical Rheumatology*, 27(5), May 2008.

27. Appropriateness of Health Care Interventions: Concepts and Scoping of the Published Literature

Sanmartin C, Murphy K, Choptain N, Conner-Spady B, McLaren L, Bohm E, Dunbar E, Sanmugasunderam S, DeCoster C, McGurran J, Lorenzetti D, Noseworthy T. 24:3, June 2008, 342-349. *International Journal of Technology in Health Care*.

28. Willingness of Patients to Change Surgeons for a Shorter Waiting Time for Joint Arthroplasty.

Conner-Spady B, Sanmartin C, Johnston G, McGurran J, Kehler M, Noseworthy T. *CMAJ*. 179(4) August 2008, 327-332.

29. ‘There are too many of us to fix.’ Patients’ views of acceptable waiting times for hip and knee replacement.

Conner-Spady B, Sanmartin C, Johnston G, McGurran J, Kehler M, Noseworthy T. *JHSRP*. 14(4): September 2009, 212-218.

Western Canada Waiting List Project Publication List

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