The British Columbia Nephrologists’ Access Study (BCNAS) – Waiting for Initial Specialist Assessment of Chronic Disease: A Systematic Approach to Developing Benchmarks

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Introduction

Wait time for out-patient specialist assessment is a critical measure of quality in healthcare. In Canada, the initial delay in gaining access to expert management of chronic disease sequelae, like hypertension, diabetes, and chronic kidney disease (CKD), occurs outside of the publicly accountable domain, all the way up the chain of primary care. At the time of last clinical assessment of a patient with chronic kidney disease (GFR < 60 ml/min/m²) by a primary care physician, the median GFR 37 ml/min/m² (p<0.0001). The median GFR increased more for urgents +2.5 (-1.5-14.7) compared to non urgents +0.55 (-0.37-1.9) (p=0.09) which may facilitate inter-regional patient flow; and Form 3 was used for new referrals that were seen at the office for the first time. New referrals were used as they are patients not previously clinically assessed by a specialist, nor then later re-accessed. In Phase 2, BC nephrologists were asked to indicate their estimate of maximal appropriate wait time for 11 common referral categories. They were asked to provide their responses when asked to shift their perspective to that of the patient. Nephrologists revised their maximal appropriate wait time downward 39% in the first time overall when asked to assume the patient’s perspective.

Methods

The BCNAS was an investigator-initiated, prospective cohort, continuous quality improvement design, approved by the University of British Columbia Ethics Review Board (see study flow diagram, Figure 1). The study had a 2-phase design incuding: 1. Measurement of current wait time in nephrology. 2. Assessment of nephrologists’ opinions regarding appropriate wait times, and 3. Measurement of expectations among the General Practitioner referral base.

In Phase 1, all BC adult nephrologists were sent data-collection forms on which their private office Medical Office Access Systems (MOAS) were asked to record patient data. Physician and patient population were anonymized. Data collection occurred during the 2-week period spanning Jan 18-28, 2010. A form contained questions about nephrologists practice pattern and availability. Data was collected at the time of referral for the third time overall when asked to assume the patient’s perspective.

Statistical Methods

The underlying distributions of continuous variables were assessed using the Shapiro-Wilk test for normality. None of the continuous variables were normally distributed, hence they are presented as median with interquartile range. Comparisons were made via the Wilcoxon rank-sum test. Statistical software used was SAS, version 9.1 (SAS Institute, Cary, NC, USA).

Results

New Patient Wait Times: Findings of the MDA’s wait time analysis are presented in Table 1, which shows characteristics of patients seen and those referred newly referred patients had a median (IQR) of 80 days. New patients seen had a median wait time at 93 days. 14% of new consults seen were characterized as urgent.

Urgency vs Non-urgent: The median wait time among urgent patients was 11 (3-18) versus 109 days (72-164) (p<0.001) for non-urgents. Similarly, patients classified as urgent had a lower median GFR 37 versus 46 ml/min/m² (p<0.001). The median GFR increased more for urgent +2.5 (-1.5-14.7) compared to non-urgent +0.55 (-0.37-1.9) (p<0.03) during the waiting period.

Nephrologists’ Practice Patterns: Nephrologists looked at an average of 17 (±6.95) hours in the office per week. New consults were allotted a median of 60 (45-60) minutes, and follows a median 22.5 (15-30) minutes. There was a trend toward shorter waiting median 63 days versus 88 days (p=0.06) for nephrologists with smaller practices (<100 active patients) versus larger (>500 active patients), but the majority (70%) of Provincial practices were large.

Regional Variability: There was marked regional variability when data were examined by Health Authority (HA). Table 2 shows the referral wait time was approximately double in region A, B and E compared to regions C and D. Likewise, regions C and D were referred slightly higher GFRs and had longer wait times. Of note, the median wait was shortest in region B at 71 days and longest in region C at 267 days.

Conclusions

• To our knowledge, this is the first study to prospectively quantify waiting for medical sub-specialties offered outside of a hospital setting.

• The number of new referrals (251) was comparable to the number of new patients seen (267) during the study period, which suggests that demand for, and supply of, consultaive services is in equilibrium.

• Current queues for out-patient nephrology assessment are medically safe. Glomerular filtration rates did not decline while waiting, and appointments for patients identified as urgent were expedited.

• Regional variability in access to nephrology outpatient assessment is another important finding. These data suggest that health regions should consider patient demand when planning future nephrology service capacities.

• The BCNAS initiative used systematic methodology to weight medical safety along selecting patients and offering physician’s expectations to propose the first condition-specific wait time benchmarks for nephrology.

• Our conclusions are limited by the potential for data-entry error by participating MOAS. In addition, the definition of urgent was subjective and independent nephrologists undoubtedly maintain variable definitions. A further limitation involves the failure to obtain information on proteinuria, which was felt to be too numerous and time-consuming for MOAS.

• Future areas to explore include the use of electronic medical records with advanced planning scheduling functionality, enhanced support for tele-health by collective nephrologists, continued investment in shared care initiatives, and working toward publicly available wait time data, which may facilitate inter-regional patient movement to optimize waiting.

References


