

**From Referral to Op Report: A Brief Insight into C.W. Wiebe Medical Centre
Elective Surgery Wait Time**

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INTRO

It is well known that with most surgery referrals, a significant wait time ensues. Elective surgery wait time is determined by a multitude of factors, varying from a health region's operating room and medical professional capacity to patient preference and readiness. The amount of time spent waiting can potentially influence patient health outcomes. For instance, a study in Quebec found that total knee replacement patients waiting for more than 9 months experienced a clinically significant negative impact on health-related quality of life and contralateral knee pain 6 months after surgery (Desmeules, Dionne, Belzile, Bourbonnais, & Fremont, 2012). Yet, waiting can also be viewed as part of high quality health care as outlined by the Province of Manitoba's website for Health, Seniors, and Active Living (2015). Waiting allows a condition to be monitored for change or improvement and gives the patient time to become healthier to increase chances of surgical success, e.g. by losing weight. Thus, it is imperative that there is an understanding of what a reasonable wait time is in comparison to an excessive wait time. In December 2005, Manitoba, alongside other provinces and territories, agreed to national wait time benchmarks developed by federal, provincial and territorial health ministers (Heath Council of Canada, 2007). Currently, Manitoba has enacted a wait time reduction strategy, complete with five main elements: more surgeries, more diagnostic testing, more health professionals, prevention and health promotion, and system innovation and better wait-list management. With continued research and strategy implementation, there is hope progress in reducing future wait times..

C.W. Wiebe Medical Centre of the Southern Health-Sante Sud Region provides general surgery, orthopaedic surgery, and obstetrics/gynecological surgery services to Southern Manitobans. As part of the Home for the Summer program, a brief chart review of the centre's recently performed surgeries was conducted in order to provide the center with direct wait time insight. Wait times were organized by surgical specialty, surgeon, and type of procedure performed. This will give the centre a general idea of how long patients who have recently undergone surgery have had to wait from the time of referral to op report.

METHODS

For each of the centre's 8 surgeons, approximately 15 patients were randomly selected for review using JonokeMed. A list of all surgeries performed by each surgeon was obtained that chronologically ordered the surgeries from most recent to oldest. Starting with most recent and moving back in time, every 5th surgery was reviewed for surgery wait time data collection. If a surgery was obviously non-elective in nature, it was disregarded. In addition, if the desired dates could not be found in the patient's chart, the surgery was disregarded. This process of reviewing every 5th patient was done until approximately 15 patients with elective surgeries had been collected. By reviewing "Images," dates for "Referral" and "Op Report" were collected for each patient surgery. For orthopaedic surgery, dates for "Slating Form" and "Pre Op Report" were also collected. The reason for only including these dates for orthopaedic surgery was due to being unable to consistently find "Slating Form" and "Pre Op Report" dates for the other surgical specialties.

After collecting all of the dates for all surgeries, the data was entered into Excel and the total number of days from “Referral” to “Op Report” was calculated and converted into number of months and remaining days for easier perception. Surgery times were then categorized per surgeon into procedure type. If multiple procedures of the same type were performed, a mean average for the wait time was calculated. For each surgeon, all average wait times, as well individual wait times for which an average could not be calculated, were compiled into a table.

RESULTS

Please see Tables 1 -8 on the following pages.

Table 1. Orthopaedic Surgery: Dr. Engel, Average surgery wait time and wait time distribution categorized by procedure type and calculated from 13 randomly selected patients with Op Reports dating between Jan 25th 2018 - Mar 22nd 2018.

PROCEDURE	AVG TOTAL WAIT TIME	AVG TIME FROM REFERRAL TO SLATING FORM	AVG TIME FROM SLATING FORM TO PREOP FORM	AVG TIME FROM PREOP FORM TO OP REPORT	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Rotator Cuff Repair	7 months, 14 days	3 months 7 days	15 days	3 months 21 days	6
Knee Scope	9 months 7 days	3 months	28 days	5 months 9 days	3
Carpal Tunnel	3 months 1 day				1
Shoulder Scope	6 months 4 days	2 months 28 days	6 days	3 months 1 day	1
Hip Arthroplasty	9 months 13 days	15 days	7 months 23 days	1 month 6 days	1
Trigger Finger Release	8 months	11 days	24 days	6 months 27 days	1

Table 2. Orthopaedic Surgery: Dr. Mazek, Average surgery wait time and wait time distribution categorized by procedure type and calculated from 13 randomly selected patients with Op Reports dating between Jun 19th 2017-Aug 28th 2017.

PROCEDURE	AVG TOTAL WAIT TIME	AVG TIME FROM REFERRAL TO SLATING FORM	AVG TIME FROM SLATING FORM TO PREOP FORM	AVG TIME FROM PREOP FORM TO OP REPORT	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Knee Arthroplasty	8 months 21 days	2 months 14 days	2 months 3 days	4 months 7 days	2
Knee Arthroscopy	10 months 28 days	5 months 7 days	1 month 1 day	4 months 20 days	2
Carpal Tunnel Release	7 months 13 days	2 months 12 days	4 months 3 days	15 days	2
Shoulder Scope	8 months 4 days	2 months 12 days	1 day	4 months 4 days	2
Rotator Cuff Repair	6 months 23 days	2 months 16 days	13 days	3 months 24 days	2
Toe Fusion	8 months 14 days				1
Elbow Bursitis Irrigation	1 year, 4 months, 15 days				1
Elbow Arthroscopy	8 months 28 days				1

Table 3. Orthopaedic Surgery: Dr. Asham, Average surgery wait time and wait time distribution categorized by procedure type and calculated from 14 randomly selected patients with Op Reports dating between Jan 17th 2018 – Mar 26th, 2018.

PROCEDURE	AVG TOTAL WAIT TIME	AVG TIME FROM REFERRAL TO SLATING FORM	AVG TIME FROM SLATING FORM TO PREOP FORM	AVG TIME FROM PREOP FORM TO OP REPORT	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Hip Arthroplasty	1 year 29 days	3 months 27 days	2 months 9 days	7 months 22 days	4
Knee Arthroscopy	7 months 7 days	2 months 2 days	21 days	4 months 5 days	4
Knee Arthroplasty	1 year 1 month, 1 day	4 months 2 days	5 months 4 days	4 months 19 days	2
MTP Fusion	7 months 28 days	2 months 7 days	10 days	5 months 11 days	2
Foot Mass Excision	4 months 20 days				1
Orif Ankle	1 year 2 months 3 days				1

Table 4. General Surgery: Dr. Thompson, Average surgery wait time categorized by procedure type and calculated from 14 randomly selected patients with Op Reports dating between Jun 1st 2017 – Aug 21st 2017. Note that wait time distribution, for example the wait period between referral to slating form, could not be calculated due to the lack of appropriate dates.

PROCEDURE	AVG TOTAL WAIT TIME	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Elective Colonoscopy	6 months 13 days	2
Semi-urgent Colonoscopy	1 month	2
Hernia	3 months 20 days	1
Urgent Breast Lumpectomy	19 days	1
Urgent ERCP	1 day	1
Breast Biopsy	1 month 1 day	1
Palliative PEG Insertion	1 month 21 days	1
Elective gastroscopy	6 months 11 days	2
Elective Varicose Veins	1 year 1 month 7 days	1
Elective Hemorrhoidectomy	8 months 28 days	1

Table 5. General Surgery: Dr. Jacob, Average surgery wait time categorized by procedure type and calculated from 14 randomly selected patients with Op Reports dating between Nov 24th 2017 – Mar 29th 2018. Note that wait time distribution, for example the wait period between referral to slating form, could not be calculated due to the lack of appropriate dates.

PROCEDURE	AVG TOTAL WAIT TIME	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Elective Colonoscopy	7 months 1 day	2
Semi-urgent Colonoscopy	23 days	2
Inguinal Hernia Repair	1 month 23 days	2
Cheek BCC Removal	29 days	1
Lipoma Excision	30 days	1
Vasectomy	14 days	1
Elbow Ganglion Excision	2 months 17 days	1
Mass Excision	2 months 4 days	1
Digit Repair	3 months 20 days	1
Bunionectomy	3 months 17 days	1
Varicose Veins	6 months 5 days	1

Table 6. General Surgery: Dr. Metcalfe, Average surgery wait time categorized by procedure type and calculated from 14 randomly selected patients with Op Reports dating between Jan 19th 2018 – April 4th 2018. Note that wait time distribution, for example the wait period between referral to slating form, could not be calculated due to the lack of appropriate dates.

PROCEDURE	AVG TOTAL WAIT TIME	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Elective Colonoscopy	5 months 5 days	6
Semi-urgent Colonoscopy	22 days	4
Inguinal Hernia Repair	4 months 13 days	1
Semi-urgent EGD	22 days	1
Elective EGD	4 months 9 days	1
Femoral Hernia	6 months 25 days	1

Table 7. Obs/Gyne: Dr. Alhayjaa, Average surgery wait time categorized by procedure type and calculated from 15 randomly selected patients with Op Reports dating between Oct 23rd 2017 – Mar 20th 2018. Note that wait time distribution, for example the wait period between referral to slating form, could not be calculated due to the lack of appropriate dates.

PROCEDURE	AVG TOTAL WAIT TIME	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Hysterectomy*	6 months 24 days	11
Tubal Ligation	25 days	1
Cystocele, Rectocele Repair	2 months 17 days	1
Laparotomy	8 months 29 days	1
Urgent Cytoscopy	1 month 10 days	1

*"Hysterectomy" includes hysterectomy +/- salpingoophorectomy +/- D&C +/- cystoscopy

Table 8. Obs/Gyne: Dr. Dyson, Average surgery wait time categorized by procedure type and calculated from 15 randomly selected patients with Op Reports dating between Jun 30th 2017 – Mar 22nd 2018. Note that wait time distribution, for example the wait period between referral to slating form, could not be calculated due to the lack of appropriate dates.

PROCEDURE	AVG TOTAL WAIT TIME	NUMBER OF PROCEDURES ACCOUNTED FOR IN CALCULATING AVG
Hysterectomy*	6 months 17 days	2
Hysteroscopy**	9 months 7 days	4
Tubal Ligation	7 months 19 days	3
Salpingectomy	1 year 2 months 1 day	2
Laparoscopy	6 months 10 days	2
Cystocele, Rectocele Repair	10 months 26 days	1
Oophorectomy	6 months 19 days	1

*"Hysterectomy" includes hysterectomy +/- salpingoophorectomy

**"Hysteroscopy" includes hysteroscopy +/- D&C +/- laparosc

DISCUSSION

The surgery wait time results will provide C.W. Wiebe Medical Centre with a general idea of how many months and days patients who have recently undergone elective surgery spent waiting. These wait times can be analyzed by the centre in many different ways. The wait times could be compared to the national benchmark targets, the centre's personal target goals, as well as to previous wait time chart reviews conducted by the centre. Furthermore, the wait times could be compared between specialties. Within each specialty, wait times could be compared between surgeons. And for each surgeon, wait times could be compared between procedure types. These comparisons may yield significant differences that warrant further investigation with more thorough future research.

Additionally, for orthopaedic surgery the results collected could be used to compare time between each step of the pre-operative process, as multiple appointment dates ("Slating Form" and "Pre Op") were collected. Thus, there is potential to uncover the rate limiting step, being a step where the vast majority of the total surgery wait time was spent. A quick review of the orthopaedic surgery tables reveals a wide range in the quantity of time spent at each step for all surgeries. For most surgeries, a single rate limiting step cannot be easily deciphered. However, a general pattern does emerge: for most orthopaedic surgeries, the time from "Slating Form" to "Pre Op" was the quickest in duration, while the time from "Referral" to "Slating Form" and from "Pre Op" to "Op Report" was usually considerably slower and nearly equal to one another in duration. This may be of use to the centre in informing specifically where future investigations should be done to best reduce wait time overall.

LIMITATIONS

It is important to recognize that this surgery wait time chart review is simply rudimentary in nature. The review is intended to provide C.W. Wiebe Medical Centre with a very brief overview of the centre's most recent surgery wait times. It is by no means formal research, but consequently, it acts to promote more comprehensive future investigations.

There are 2 major limitations of the chart review that mandate acknowledgement. The first limitation is the small sample size of surgeries randomly selected for review. Only approximately 15 surgeries were selected per surgeon, with most surgeries differing in procedure type. Thus, there was often only one patient's surgery representing the wait time for a certain type of procedure. This dramatically decreases the statistical power of the data collected. The number of patient surgeries used to calculate the mean wait time per procedure was included in each surgeon's table in order to best make readers aware of this significant bias. In future reviews, the method would be modified to include a larger sample size for only one surgical specialty, or even for only one surgeon. The second major limitation is the high number of surgeries that were disregarded during data collection. At least one third of the surgeries that were randomly selected had to be disregarded due to having lacked desired dates. If there is a confounding variable designating which patients have charts comprehensive with all desired dates vs. which patients lack desired dates, this would fault the review with significant bias. Additionally limitations exist in how the review was not conducted by a surgical professional: without expert knowledge of the field, it was difficult at times to determine whether a surgery

was elective or not. There also may be bias implied in the “random” selection of surgeries, as perhaps surgical schedules organize certain procedures to be at certain times of the day and every 5th surgery could have consistently been at that time of day with a certain type of surgery. Finally, a notable limitation exists within the time constraints of the project itself. Unfortunately, collecting dates from patient charts consumed more time than was expected. Had there been more time, actual comparisons to national wait time targets as well as to the centre’s previous wait time reviews could have been made, and more analysis could have been conducted.

CONCLUSION

The amount of time a patient spends waiting for surgery can impact their short-term and long-term health outlook. Nationally, benchmark targets exist to guide Canadian healthcare facilities on what length of time is reasonable to spend waiting for surgery. In Manitoba, governmental strategies are in place to reduce wait times by focusing on efforts such as health promotion and prevention and increasing the number of working surgical professionals. For a local perspective, a brief chart review of surgery wait times was conducted for the C. W. Wiebe Medical Centre. The review collected data from the centre’s 8 surgeons amongst 3 different surgical specialties. Although the review is brief, it serves to provide the centre with general insight into their own recent surgery wait times, allowing for comparison between surgical specialties, surgeons, and procedure types. Moreover, the review serves to catalyze more thorough research in the future.

References

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