



Diagnostic & Surgery Pandemic Backlog

New Estimates & Progress

June 28, 2022



Summary

One year ago, Doctors Manitoba released our first estimate of the massive pandemic backlog of diagnostic and surgical procedures.

Now that we are more than two years into the pandemic, this report provides a new forward-looking estimate, along with detailed information about wait lists and wait times.

Our new backlog estimate is 102,000 and 128,447 surgical and diagnostic procedures, including:

- **Between 31,664 and 39,674 surgical procedures**
- **Between 12,346 and 17,039 diagnostic imaging tests**
- **Between 58,129 and 71,734 other procedures, such as endoscopies, allergy testing and mammograms**

Those familiar with our monthly reporting will recognize that our new estimate is lower than what we reported last month (166,903 cases). While we are confident that number estimates how many fewer surgeries and tests were performed during the pandemic, after more than two years a new approach is needed to better estimate the size of the remaining backlog.

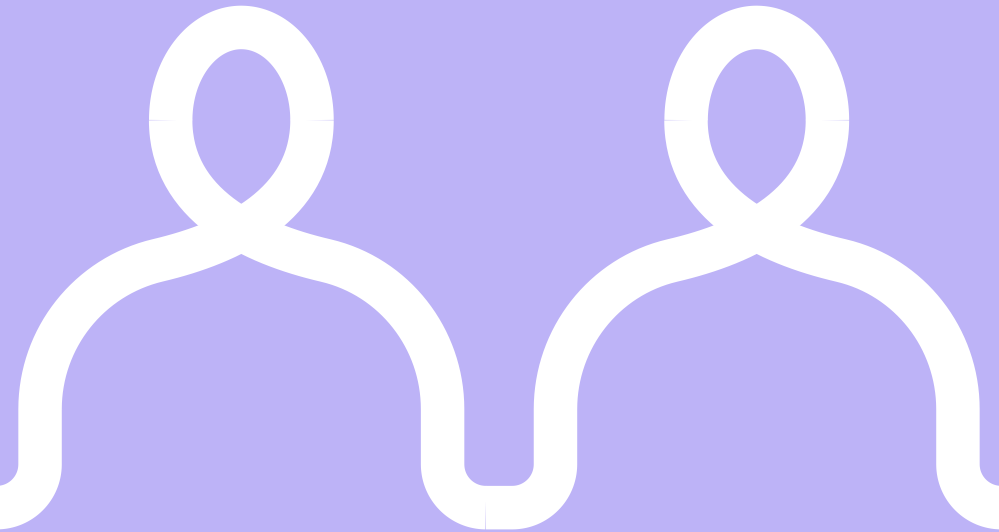
This report also reviews the status of the recommendations we made one year ago, which included setting a target date to clear the backlog, creating a task force to oversee that work, and providing monthly public reporting.

We find progress on two of the recommended actions, and we continue to recommend action on the third.

We also add a fourth recommendation:

- **In addition to the focus on *catching up* to clear the backlog, there also needs to be a focus on keeping up with a growing population and advances in medical practice. There should be an ongoing assessment of increasing demand for surgery and diagnostic volumes with annual increases when needed.**

New Estimates Needed



Improving Backlog Estimates

For a year, Doctors Manitoba has estimated the backlog that accumulated during the pandemic by calculating the reduced volume of procedures delivered since the pandemic began in March 2020, compared to pre-pandemic volumes.

As Dr. Kristjan Thompson explained in March 2022, “after two long years of repeated disruptions to surgeries and diagnostic procedures, it’s important to gauge how much capacity is needed to clear the backlog and ensure that Manitobans get the care they need.”

A proportion of these missed procedures may no longer be required by the patients who would have, and should have, received them. There are several reasons for this:

- Some tests are used for regular monitoring, so a test missed in the first year of the pandemic may have been caught during the second year.

- Some patients no longer need a test or procedure, perhaps because their condition either improved or deteriorated, because they moved away, or because they died while waiting.
- Alternative and sometimes less ideal tests or treatments were used instead.

Doctors Manitoba has assembled more data, consulted physicians and worked with health system leaders to refine our estimates of the pandemic backlog.

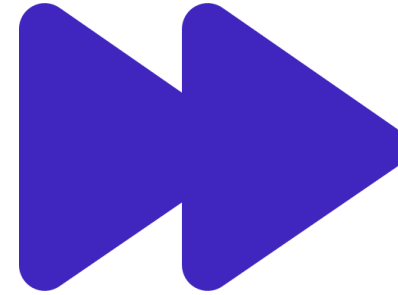
Improving Backlog Estimates

Existing Approach



Volume-based approach, looked back at missed procedures that did not occur during the pandemic

New Approach



Blended approach looks forward, using the best-available data to estimate the procedures patients are still waiting for and the volume of work required to catch up.

Methods to Estimate the Pandemic Backlog

The following methods were used to estimate the backlog. They are presented in order of reliability and accessibility of data, recognizing the significant gaps Manitoba has compared to other provinces in reporting wait time information ([see for example this CMAJ article comparing reporting by province](#)).

A blended approach is used to estimate the backlog, using wait list and wait time data where available, supplemented with decreased volume data and other reports as needed.

1. Change in wait time and change in wait list

- A longer wait time and/or a longer wait list demonstrate a backlog has accumulated during the pandemic. Wait lists and wait times from validated centralized wait lists are preferred when available.

2. Missed procedures (e.g. lower than normal volumes, also called “case loss”)

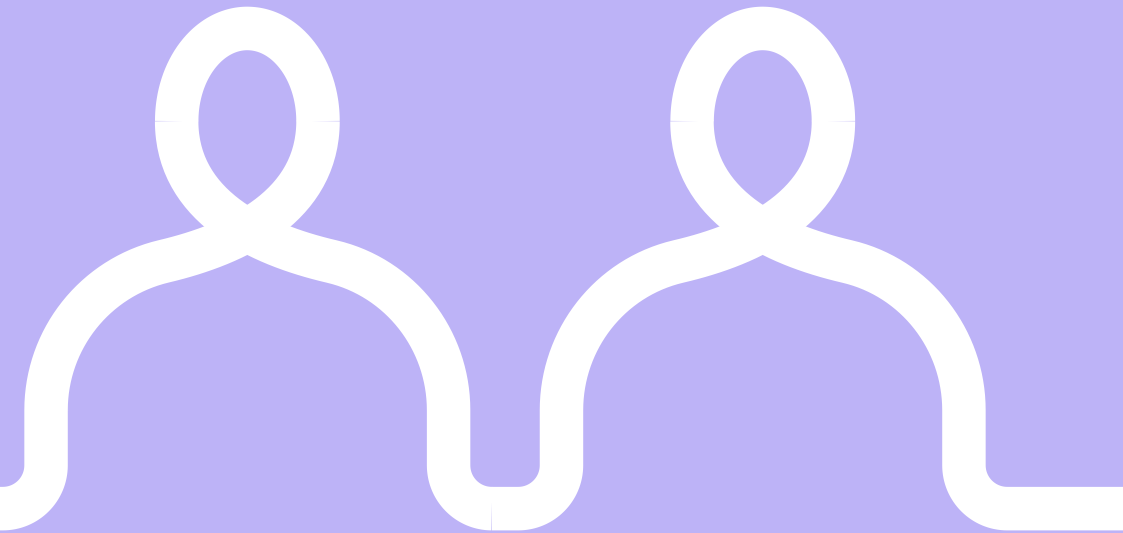
- When reliable wait time or wait list data are not available, consider changes in procedure volumes during the pandemic compared to pre-pandemic “baseline” volumes.

3. Estimates from providers or non-centralized referral trackers

- Where wait time, wait list and volume data is not reliably available, consider alternative sources of data.

In some cases, it may be appropriate to estimate delayed or deferred referrals and consultations.

New Estimates of the Pandemic Backlog





Estimated Pandemic Backlog for Diagnostic & Surgical Procedures

102,139 to 128,447

Surgery 31,664 to 39,674

Diagnostic Imaging 12,346 to 17,039

Other Diagnostic Procedures 58,129 to 71,734



Estimated Pandemic Backlog for Surgery

Procedure	Backlog		Wait Time		
	Estimated Range		Pre-Pandemic	Current	Trend
Cardiac	136	to 146	14-18 days	17 days	~
Cataract	1,247	to 2,747	10-14 weeks	21 weeks	↑
Hip/Knee	1,631	to 3,131	20-30 weeks	35 weeks	↑
Other Surgeries	28,650	to 33,650	N/A	N/A	
TOTAL	31,664	to 39,674			

Cardiac, Cataract and Hip/Knee were estimated using change in wait list. Other surgeries reflects estimates of missed procedures. Wait times are median based on Manitoba Health reporting. For cardiac, the waits represent all procedures. For cataract, the waits are for Misericordia. For Hip/Knee, a province-wide estimate is available. See appendix for detail.



Estimated Pandemic Backlog for Diagnostic Imaging

Procedure	Backlog		Wait Time		
	Estimated Range		Pre-Pandemic	Current	Trend
MRI	6 to 2,015		15-16 weeks	23 weeks	↑
CT	7,972 to 9,168		5-6 weeks	15 weeks	↑
Myocardial Perfusion	Cleared to 297		11-12 weeks	11 weeks	~
Ultrasound	2,585 to 2,973		12-13 weeks	25 weeks	↑
Bone Density	1,783 to 2,586		11-13 weeks	34 weeks	↑
TOTAL		12,346 to 17,039			

Backlog for all procedures is based on changes in the wait list. Wait times for all procedures are prospective (i.e. next available appointment). See appendix for detail.



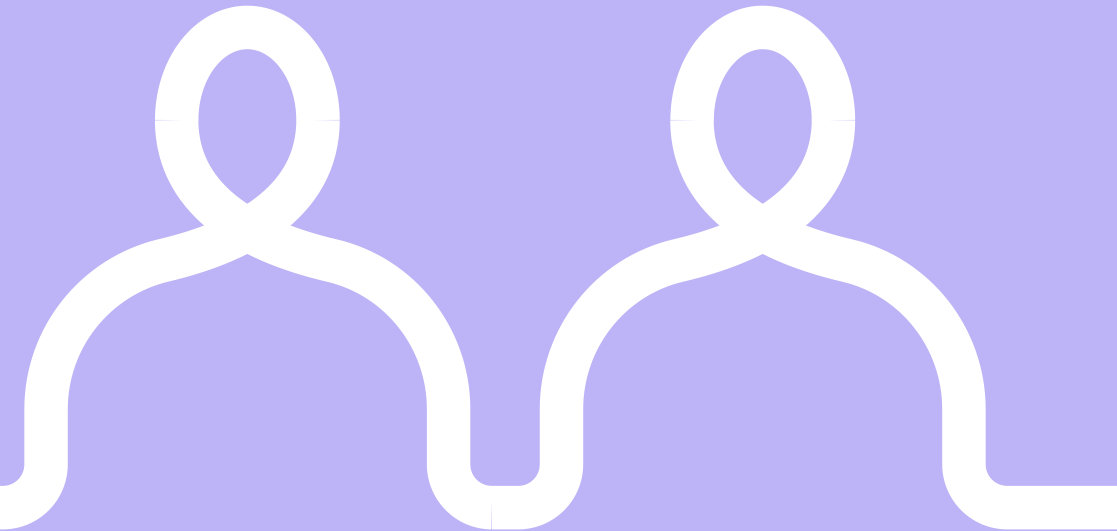
Estimated Pandemic Backlog for Other Diagnostic Procedures

Procedure	Backlog		Wait Time		
	Estimated Range		Pre-Pandemic	Current	Trend
Allergy Testing	3,373	to 4,060	N/A	N/A	
Endoscopy	11,450	to 14,950	73 days	290 days	↑
Mammography	29,817	to 35,079	41 days	31 days	↓
Sleep Disorder Studies	4,600	to 7,000	37 weeks	52 weeks	↑
Lung Function	7,979	to 9,235	N/A	N/A	
Chronic Pain Assessments	910	to 1,410	20 months	30-40 months	↑
TOTAL	58,129	to 71,734			

The backlog estimates for endoscopy, sleep disorder studies and pain clinic are based on wait list estimates. Estimates for allergy, mammography and lung function tests reflect estimates of missed procedures. Mammography wait times could increase if demand for screening rises. See appendix for details.



Catching Up Keeping Up



Catching Up

Surgical and diagnostic procedures have been disrupted several times during the pandemic.

After the Diagnostic and Surgical Renewal Task Force was announced in December 2021 to focus on clearing the backlog. However, the Omicron wave resulted in significant disruptions once again. This meant the priorities shifted:

- First, the focus had to be on returning the health system to pre-pandemic volumes. This would stop the backlog from growing even larger. It appears the backlog peaked in March as most parts of the system returned to pre-pandemic capacity.
- Next, the health system needs to find ways of adding capacity to clear the backlog and catch up to where the system was before the pandemic.

It must be noted that long wait times existed before the pandemic, and [CIHI reporting has found that Manitoba lagged behind many other provinces](#) in meeting recommended benchmarks.

Catching up means not only returning to pre-pandemic performance, but also decreasing wait times to medically-recommended benchmarks to ensure patients receive timely testing and surgery.



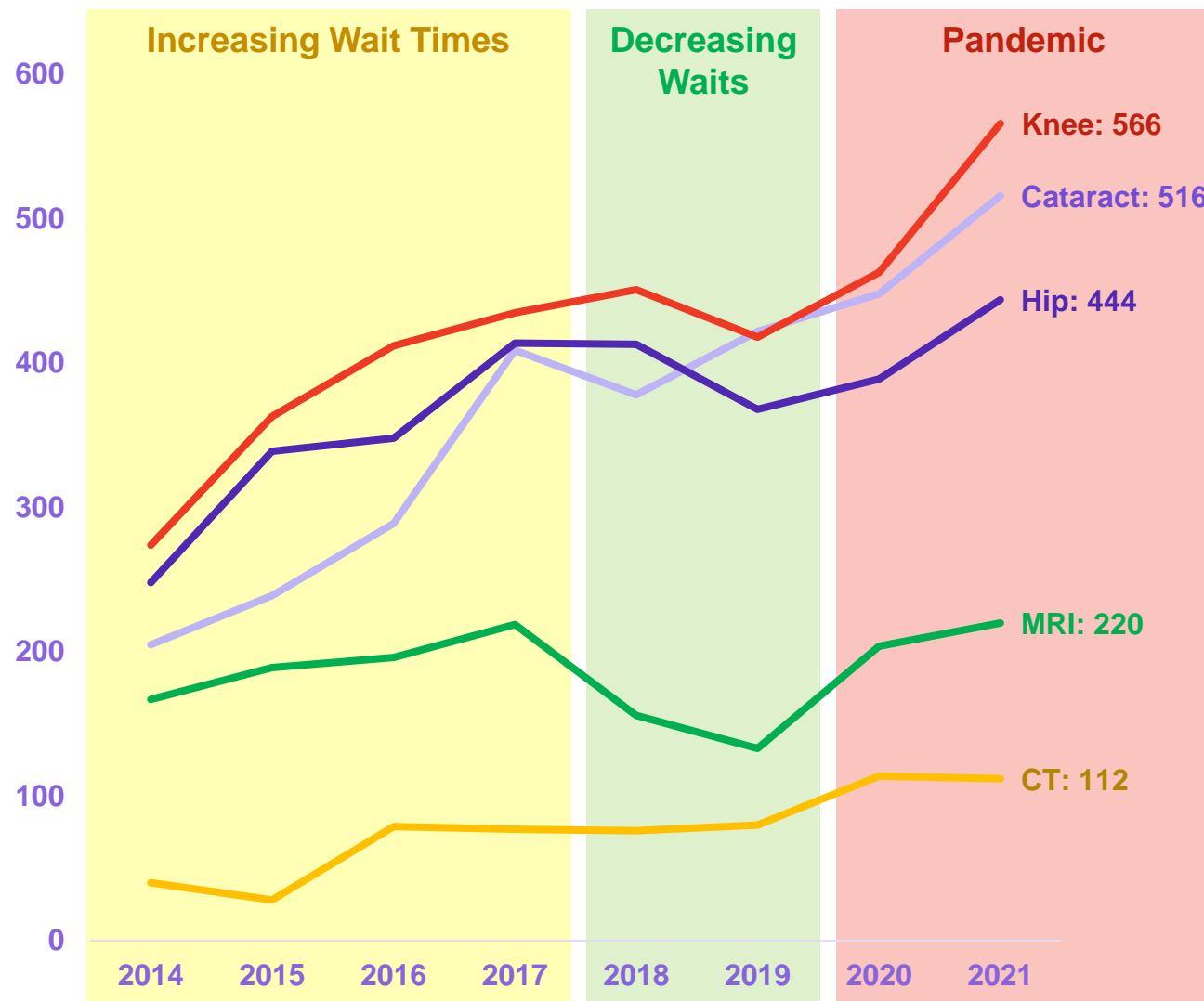
Keeping Up

While *catching up* is a significant task, doctors want to see the health system also focus on *keeping up* with Manitoba’s growing population and advances in medical practice.

This means planning for annual increases in volumes for diagnostic and surgical procedures.

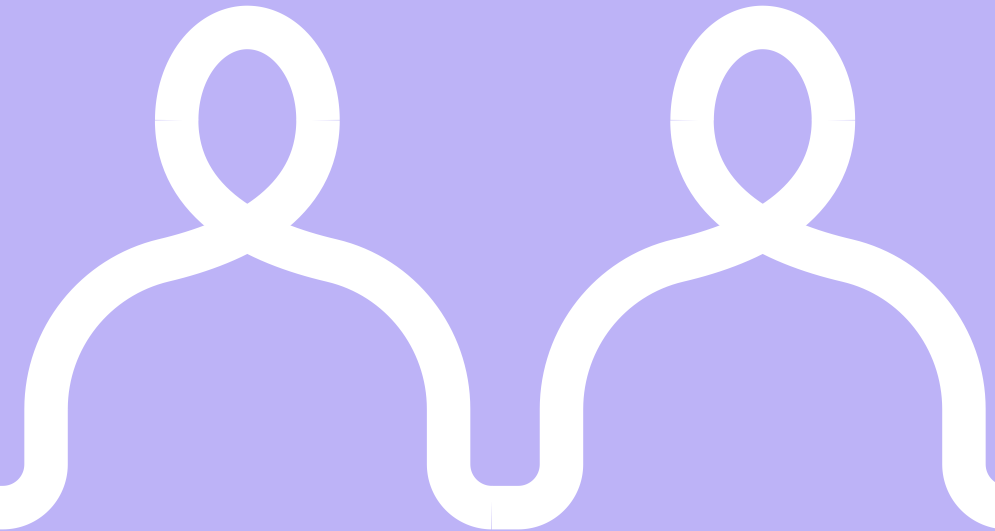
The [Wait Time Reduction Task Force](#) noted in its 2017 report the need to keep up with increasing demand. The government funded increased volumes in 2018 and 2019, resulting in improved wait times in several areas. Unfortunately, the pandemic disruptions erased this progress.

Priority Procedures: 90th Percentile Wait Times



Source: [CIHI Report Wait Times for Priority Procedures](#)

Monitoring Progress





One Year Later

Progress on our Recommendations

Doctors Manitoba [released its first backlog estimate in June 2021](#). We made three recommendations, and progress is being made in some areas:

Recommendation	Status	Note
Create a Surgical and Diagnostic Recovery Task Force	Complete	Task Force was created in December 2021
Provide monthly reports on progress, including size of backlog by procedure and details on progress to clear backlog	In progress	Monthly Task Force briefings have started. We understand work is underway to begin monthly reporting on the backlog.
Establish target date to clear backlog	Incomplete	While it is difficult to set a target date without reliable data available and the potential for future pandemic-related disruptions, Doctors Manitoba maintains that a target date will emphasize the priority for health system leaders and provide patients with more certainty about their wait.

Going Forward: Monitoring Progress

Doctors Manitoba recommended monthly reporting in our initial report last year, and we are optimistic the province will begin monthly reporting very soon.

As work unfolds to reduce and clear the backlog, it will be important to monitor progress using several indicators:

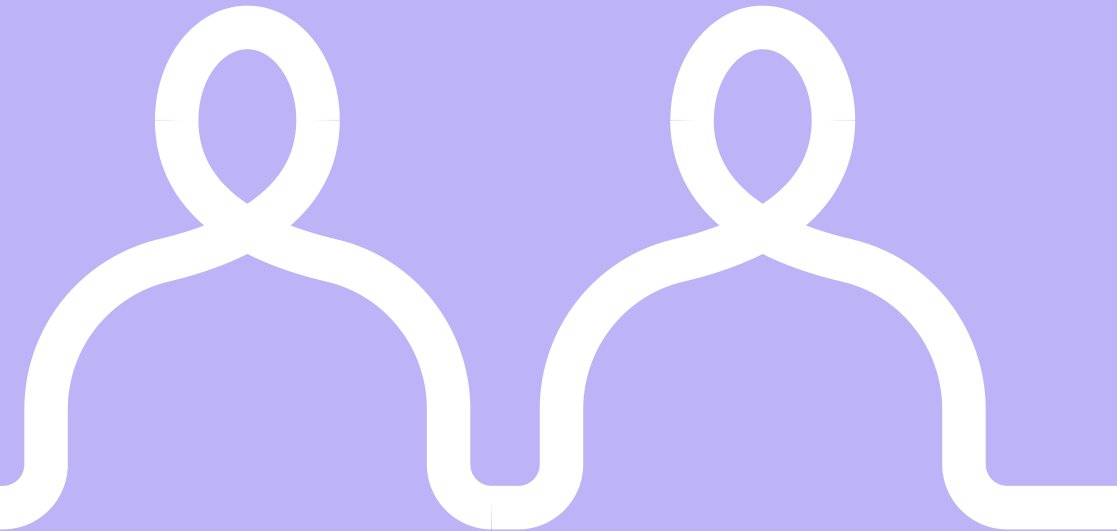
- **Volumes:** To clear the backlog, the volume of procedures must increase above the volumes completed before the pandemic. This will likely be the first measurable indicator of progress.
- **Wait Lists:** In most areas, wait lists grew longer during the pandemic. As volumes increase, wait lists should decrease. In the short term, however, some wait lists could increase should the referrals and consultations delayed during the pandemic return.

- **Wait Times:** Most important from a patient perspective, wait times should begin to decrease as volumes increase. Like wait lists, however, wait times could increase in the short term. Some wait time reporting reflects the wait for patients who received a procedure during a specific time period, which means as the system catches up and provides care to those who have been waiting the longest, wait times could appear longer at first before improving.

It is important to understand what is being reported, as wait times may be reported as a median, a 90th percentile, or the % completed within benchmark. Wait times may also be reported retrospectively (e.g. the median wait for patients who received their surgery last month) and prospectively (e.g. the next available date).

Appendix

Detailed Estimates





Surgery Cardiac

METHODOLOGICAL NOTES

Cardiac surgery is tracked using a centralized wait list. The backlog estimate now relies on wait list reporting.

Data Sources:

- Wait time and volume of procedures are reported publicly by Manitoba Health
- Wait list data was obtained through a Freedom of Information request and from health system officials.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to Apr 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list pre-pandemic is an average of the 6 months prior to the pandemic (Sep 2019 to Feb 2020).
- Wait times are the median wait for patients who had their surgery during that period (retrospective median wait time).

Procedure Volume

Pre-pandemic	Pandemic	Change
89 cases Monthly	79 cases Monthly	Volume ↓ 11% (260 cases missed)

Wait List

Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (<i>Est.</i>)
38 patients	174 patients	136 patients	146 patients

Wait Times

Category	Pre-pandemic	Current	Trend
Emergent/urgent CABG	5-9 days	4 days	~
Semi-urgent CABG	17-34 days	17 days	~
Elective CABG	29-67 days	66 days	~
All Cardiac	14-18 days	17 days	~

CABG: Coronary Artery Bypass Graft surgery



Surgery Cataract

METHODOLOGICAL NOTES

Cataract surgery is tracked using a centralized wait list. The backlog estimate now relies on wait list reporting. This reporting represents patients, but it is important to note that patients generally require two surgeries (one for each eye). Waits for the first eye are generally longer.

Data Sources:

- Wait time and volume of procedures are reported publicly by Manitoba Health
- Wait list data was obtained through a Freedom of Information request and from health system officials.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to Apr 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list pre-pandemic is an average of the 6 months prior to the pandemic (Sep 2019 to Feb 2020).
- Wait times are the median wait for patients who had their surgery during that period (retrospective median wait time).

Procedure Volume

Pre-pandemic	Pandemic	Change
1,231 cases Monthly	1,029 cases Monthly	Volume ↓ 16% (5,248 cases missed)

Wait List (patient list, most require 2 procedures)

Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (Est.)
5,749 patients	6,996 patients	1,247 patients	2,747 patients

Wait Times (Both Eyes – Wait for First Eye Longer)

Category	Pre-pandemic	Current	Trend
Misericordia	10-14 weeks	21 weeks	↑
Western Surgical	4-9 weeks	10 weeks	↑
Portage la Prairie	16-23 weeks	30 weeks	↑
Brandon	3-8 weeks	20 weeks	↑
Swan Valley	27-28 weeks	46 weeks	↑
Minnedosa	5-11 weeks	6 weeks	↓



Surgery Hip/Knee

METHODOLOGICAL NOTES

Hip/knee replacement surgery is tracked using a centralized wait list. The backlog estimate now relies on wait list reporting.

Data Sources:

- Wait time and volume of procedures are reported publicly by Manitoba Health
- Wait list data was obtained through a Freedom of Information request and from health system officials.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to Apr 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list pre-pandemic is an average of the 6 months prior to the pandemic (Sep 2019 to Feb 2020).
- Wait times are the median wait for patients who had their surgery during that period (retrospective median wait time).

Procedure Volume

Pre-pandemic	Pandemic	Change
424 cases Monthly	329 cases Monthly	Volume ↓ 22% (2,470 cases missed)

Wait List

Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (<i>Est.</i>)
1,870 patients	3,501 patients	1,631 patients	3,131 patients

Wait Times

Category	Pre-pandemic	Current	Trend
Hip/Knee Overall	20-30 weeks	35 weeks	↑



Surgery Other Procedures

METHODOLOGICAL NOTES

There is no centralized wait list data reliably available for surgical procedures other than cardiac, cataract and hip/knee.

Data Sources:

- CIHI Reporting for surgical procedure volumes
- Reports and insights from physicians and health system leaders

Method:

- Procedure volumes compare the pandemic (Mar 2020 to Apr 2022) with the year before the pandemic (Jan 2019 to Dec 2019).
- The volumes for cardiac, cataract and hip/knee reported by Manitoba Health are subtracted from CIHI's estimates.
- Based on review of other volume information and insights from providers, a range was created to account for potential delayed referrals and accumulating consultations of -5% to +20%, resulting in the estimated backlog of 31,664 to 39,674 for other surgical procedures.

Procedure Volume

Pre-pandemic	Pandemic	Change
6,692 cases Monthly	5,415 cases Monthly	Volume ↓ 19% (33,139 cases missed)



Diagnostic Imaging

METHODOLOGICAL NOTES

All diagnostic imaging procedures are tracked using a centralized wait list. The backlog estimate now relies on wait list reporting, and recent volumes compared to pre-pandemic were used to estimate potential delayed referrals.

Data Sources:

- Wait time and volume of procedures are reported publicly by Manitoba Health
- Wait list data was obtained through a Freedom of Information request and from health system officials.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to Apr 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list pre-pandemic is an average of the 6 months prior to the pandemic (Sep 2019 to Feb 2020).
- Wait times are the median wait for patients who had their surgery during that period (retrospective median wait time).

Procedure Volume

Modality	Pre-pandemic (monthly)	Pandemic (monthly)	Change During Pandemic
MRI	7,929	7,218	Volume ↓ 9% (18,469 fewer tests)
CT	19,789	20,224	Volume ↑ 2% (11,324 more tests)
Myocardial Perfusion	473	399	Volume ↓ 16% (1,925 fewer tests)
Ultrasound	17,146	15,936	Volume ↓ 7% (31,457 fewer tests)
Bone Density	811	609	Volume ↓ 25% (5,261 fewer tests)



Wait List

Modality	Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (Est.)
MRI	16,014	16,020	6	2,015
CT	8,671	16,643	7,972	9,168
Myocardial Perfusion	1,062	399	Cleared	297
Ultrasound	16,625	19,210	2,585	2,973
Bone Density	1,297	3,080	1,783	2,586

Wait Time (Prospective)

Category	Pre-pandemic	Current	Trend	Note
MRI	15-16 weeks	23 weeks	↑	Peaked at 37 weeks in July 2020
CT	5-6 weeks	15 weeks	↑	Peaked at 34 weeks in Nov/Dec 2020
Myocardial Perfusion	11-12 weeks	11 weeks	~	Peaked at 32 weeks in May 2020
Ultrasound	12-13 weeks	25 weeks	↑	Peaked at 30 weeks in Jul 2020
Bone Density	11-13 weeks	34 weeks	↑	Peaked at 34 weeks (current)



Other Diagnostics Allergy Testing

METHODOLOGICAL NOTES

There is no central wait list or wait time data available for allergy testing. Volumes are used to estimate the accumulated backlog during the pandemic.

Data Sources:

- Estimated volume is obtained through physician billing data.
- This is supplemented with insights and reports from physicians.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to May 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- A range is derived by estimating potential delayed referrals based on data from physicians, Statistics Canada and trends in other areas.

Procedure Volume

Pre-pandemic	Pandemic	Change
1,189 cases Monthly	1,033 cases Monthly	<p>Volume ↓ 13% (4,060 fewer tests)</p> <p>Estimated backlog range of 3,373 to 4,060</p>



Other Diagnostics

Endoscopy

METHODOLOGICAL NOTES

Endoscopy is tracked in Winnipeg using a centralized wait list, but outside of Winnipeg wait list reporting is decentralized. A blended approach is used to estimate the backlog

Data Sources:

- Estimated volume is obtained through physician billing data.
- Wait list and wait time data was obtained from health system officials and supplemented with insights and reports from physicians.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to May 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list and wait times are reported for pre-pandemic (as close to Feb 2020 as possible) and most recent available for current.
- A range is created based on decreased referral trends during the pandemic.

Procedure Volume

Pre-pandemic	Pandemic	Change
3,419 cases Monthly	2,943 cases Monthly	Volume ↓ 14% (12,373 cases missed)

Wait List

Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (Est.)
6,226 patients	17,676 patients	11,450 patients	14,950 patients

Wait Times (Winnipeg Only)

Category	Pre-pandemic	Current	Trend
Urgent	12 days	12 days	~
Semi-Urgent	33 days	65 days	↑
Elective	73 days	290 days	↑



Other Diagnostics Mammography

METHODOLOGICAL NOTES

Screening and diagnostic mammography does not have a central wait list. Volumes are used to estimate the backlog.

Data Sources:

- Estimated volume is obtained through physician billing data.
- Wait time reflects only screening mammography through Breast Check in Winnipeg, and is prospective (next available appointment)

Method:

- Procedure volumes compare the pandemic (Mar 2020 to May 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- A range is derived by estimating potential delayed referrals based on data from physicians, Statistics Canada and trends in other areas.

Procedure Volume

Pre-pandemic	Pandemic	Change
8,974 cases Monthly	7,624 cases Monthly	Volume ↓ 15% (35,079 cases missed) Estimated backlog range of 29,817 to 35,079

Wait Times (Winnipeg Only)

Category	Pre-pandemic	Current	Trend
Screening (Breast Check - Wpg)	41 days	31 days	↓

Note: The decreased wait times are likely due to screening returning to normal volumes but demand for screening not yet returning to pre-pandemic levels. Wait times would grow if demand increases and patients who missed their mammogram during the pandemic return to catch up.



Other Diagnostics Sleep Testing

METHODOLOGICAL NOTES

Sleep disorder testing is tracked in Winnipeg using a program wait list system, This is used primarily to estimate the backlog.

Data Sources:

- Estimated volume is obtained through physician billing data.
- Wait list and wait time data was obtained from health system officials and supplemented with insights and reports from physicians.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to May 2022) with the year before the pandemic (Mar 2019 to Feb 2020).
- Wait list and wait times are reported for pre-pandemic (as close to Feb 2020 as possible) and most recent available for current.
- A range is created based on decreased referral trends during the pandemic.

Procedure Volume

Pre-pandemic	Pandemic	Change
368 cases Monthly	169 cases Monthly	Volume ↓ 54% (5,173 cases missed)

Wait List

Pre-pandemic	Current (April 2022)	Backlog (Change)	With Delayed Referrals (<i>Est.</i>)
5,400 patients	10,000 patients	4,600 patients	7,000 patients

Wait Times (Winnipeg Only)

Category	Pre-pandemic	Current	Trend
All	37 weeks	52 weeks	↑



Other Diagnostics Lung Function Tests

METHODOLOGICAL NOTES

There is no central wait list or wait time data available for lung function testing. Volumes are used to estimate the accumulated backlog during the pandemic.

Data Sources:

- Estimated volume is obtained through physician billing data.
- For specialized lung function tests, this also includes related respiratory tests such as pulmonary provocations, gas exchanges and six minute walk tests.
- This is supplemented with insights and reports from physicians.

Method:

- Procedure volumes compare the pandemic (Mar 2020 to May 2022) with normal volumes the year before the pandemic (Mar 2019 to Feb 2020).
- Only the backlog for the last six to seven months is included to estimate the backlog range.

Procedure Volume

Pre-pandemic	Pandemic	Change
3,510 cases Monthly	2,180 cases (average last 6 months)	Volume ↓ 38% (7,979 fewer tests)
	2,191 cases (average last 7 months)	Estimated backlog range of 7,979 to 9,235



Other Diagnostics

Chronic Pain Assessments

METHODOLOGICAL NOTES

Waits for chronic pain assessments are tracked in Winnipeg using a program wait list system. This is used primarily to estimate the backlog.

Data Sources:

- Wait list and wait time data was obtained from health system officials and supplemented with insights and reports from physicians.

Method:

- Wait list and wait times are reported for pre-pandemic (as close to Feb 2020 as possible) and most recent available for current.
- A range is created based on decreased referral trends during the pandemic.

Wait List

Pre-pandemic	Current	Backlog (Change)	With Delayed Referrals (Est.)
3,197 patients	4,107 patients	910 patients	1,410 patients

Wait Times

Category	Pre-pandemic	Current	Trend
Chronic Pain Assessments	20 months	30-40 months	↑