

Chapter 2

Section 2.03

Ministry of Health

Follow-Up on 2020 Value-for-Money Audit:

COVID-19 Preparedness and Management Special Report Chapter 3: Laboratory Testing, Case Management and Contact Tracing

RECOMMENDATION STATUS OVERVIEW

| | # of Actions Recommended | Status of Actions Recommended | | | | |
|------------------|--------------------------|-------------------------------|-------------------------------------|-----------------------|-------------------------|----------------------|
| | | Fully Implemented | In the Process of Being Implemented | Little or No Progress | Will Not Be Implemented | No Longer Applicable |
| Recommendation 1 | 4 | 4 | | | | |
| Recommendation 2 | 2 | 1 | 1 | | | |
| Recommendation 3 | 2 | 2 | | | | |
| Recommendation 4 | 5 | 4 | 1 | | | |
| Recommendation 5 | 4 | 4 | | | | |
| Recommendation 6 | 5 | 5 | | | | |
| Recommendation 7 | 4 | 3 | 1 | | | |
| Total | 26 | 23 | 3 | 0 | 0 | 0 |
| % | 100 | 88 | 12 | 0 | 0 | 0 |

Overall Conclusion

The Ministry of Health (Ministry), as of October 26, 2022, has fully implemented 88% of the actions we recommended in Chapter 3: Laboratory Testing, Case Management and Contact Tracing of our 2020 Special Report. These actions include forecasting Ontario's COVID-19 testing needs to ensure additional laboratory capacity is available within the province to accommodate surges in testing demand; monitoring the timeliness of laboratory testing, case management and contact tracing against targets at the provincial and regional levels on a regular basis (daily or weekly); clearly communicating to the public who should and should not be tested for COVID-19, including

the reasons why asymptomatic Ontarians with no known exposure should not be prioritized for testing; collecting and confirming information from public health units on how they perform case management and contact tracing; providing updated guidance on case management and contact tracing to all key stakeholders; increasing public awareness around case management and contact tracing; and regularly reviewing both the appropriateness of different locations for specimen collection and who should be tested given the available laboratory capacity. Implementing these recommended actions on a timely basis is critical to help further control and reduce the spread of the virus in Ontario.

The Ministry has also made progress in implementing the other 12% of our recommended actions. These recommendations called for immediately reviewing Public Health Ontario’s Laboratory Modernization and Pressure Management Plan and consulting with Public Health Ontario to determine and provide the level of base funding it needs to fulfil its mandate; implementing electronic test ordering across all laboratories and assessment centres in Ontario; and investigating opportunities to collect additional information from individuals who seek a COVID-19 test as part of the appointment booking process for specimen collection at assessment centres and pharmacies.

The status of actions taken on each of our recommendations is described in this report.

Background

This report, Chapter 3: Laboratory Testing, Case Management and Contact Tracing, was one in a series of audits in our 2020 Special Report on the Province’s response to the COVID-19 pandemic. This report focused on the province’s COVID-19 laboratory testing, case management and contact tracing activities between January 2020 (when the first COVID-19 case in Canada was confirmed in Ontario) and August 2020.

At the time of our audit, three activities were key to containing the spread of COVID-19:

- Laboratory testing—collecting and testing specimens from individuals to identify whether they had contracted COVID-19;
- Case management—contacting individuals who tested positive to advise them regarding their condition and how long they should isolate, and to try to determine how they contracted COVID-19; and
- Contact tracing—identifying and contacting the close contacts of individuals who tested positive to advise them about testing and isolating.

As of August 31, 2020, 148 assessment centres in Ontario were collecting specimens, and 43 laboratories were testing them. These laboratories consisted of

seven public health laboratories, 33 hospital laboratories, and three private-sector laboratories (also known as “community” laboratories). As of that date, Ontario had performed almost 3 million COVID-19 laboratory tests, of which about 42,400 (or 1.4%) were positive. As of August 2020, these positive cases were managed and their contacts were traced, for the most part, by Ontario’s 34 public health units.

The Ministry of Health is the lead ministry involved in Ontario’s COVID-19 response. In addition, several stakeholders have been involved in laboratory testing, case management and contact tracing. They include Ontario Health, Public Health Ontario, hospitals (which operate assessment centres and laboratories), community laboratories and the public health units.

Overall, our audit found that laboratory testing, case management and contact tracing for COVID-19 were not all being performed quickly enough to contain the spread of the virus. In most cases, the Ministry’s targets for these activities were not met.

For example, the Ministry had a target that 60% of laboratory tests should be completed within 24 hours of a specimen being collected. But we found only 45% of laboratory tests, on average, were completed that quickly. Regionally, only Ottawa’s public health region had met the target as of August 31, 2020. No other public health region, including the heavily populated regions of Toronto, Peel Region and York Region (dubbed the province’s “hot spots”) met the target. These hot spot regions also did not meet the Ministry’s target of completing laboratory tests within two days of a specimen being collected 80% of the time.

For case management, the Ministry had a target of public health units contacting 90% of individuals who had tested positive within 24 hours of a public health unit receiving the test result. As of August 2020, in the province as a whole, an average of only about 80% of individuals who tested positive had been contacted that quickly. The target was missed mostly because it took the public health regions of Toronto, Ottawa, Peel Region and York Region more than a day to contact the infected individuals. The public health units in all other areas of the province either met or exceeded the 90% notification target.

When the COVID-19 pandemic began, the Ministry and other stakeholders took a number of actions to expedite and improve the testing-to-tracing process, such as expanding testing capacity, automating some specimen collection and laboratory testing processes, and implementing a new public health information system. Experts and others (including our Office) had identified the need for more testing capacity and better information systems years ago, but unfortunately little to no action was taken until the onset of the pandemic. If these long-standing concerns had been addressed earlier, the Ministry would have had better information to enable it to adjust testing eligibility criteria to the highest-risk Ontarians and probable cases, and Ontario could have responded to COVID-19 more efficiently.

In our 2020 audit, we made seven recommendations, consisting of 26 action items, to address our audit findings, and we received a commitment from the Ministry that it would take action to address our recommendations.

Status of Actions Taken on Recommendations

We conducted our assurance work for this report between April 2022 and August 2022. We obtained written representation from the Ministry of Health that effective October 26, 2022, it had provided us with a complete update of the status of the recommendations we made in the original audit two years ago.

Limited Laboratory Testing Capacity Has Been a Long-Standing Issue, But Never Addressed

Recommendation 1

To enable laboratories to effectively and efficiently test specimens to meet the needs of Ontarians during the COVID-19 pandemic and other potential outbreaks in the future, we recommend that the Ministry of Health, in collaboration with Ontario Health:

- *forecast COVID-19 testing needs, and identify new capacity opportunities within Ontario if further expansion is required;*

Status: Fully implemented.

Details

In our 2020 audit, we found that laboratory testing capacity did not always keep pace with demand. This led to backlogs that at times delayed the identification and reporting of positive cases. Between March and August 2020, the average number of tests that remained unresolved at the end of the day increased from more than 3,700 tests to more than 20,500.

In our follow-up, we found that Ontario Health, which operates the Provincial Diagnostic Network, has started forecasting testing needs, tracking laboratory capacity against provincial capacity targets, and monitoring laboratory network throughput and turnaround times.

Ontario Health has established a process to accommodate surges in testing demand and ensure additional laboratory capacity is available. Throughout the pandemic, Ontario Health also has continued to work with the Ministry to review forecasts and ensure appropriate surge options are in place.

In addition, Ontario Health discussed forecasted testing needs with laboratories on a weekly basis when there were capacity concerns. This work was particularly important when testing volumes increased at the end of 2020 and planning for the return to in-person education was a top priority. Ontario Health will continue to maintain readiness to increase capacity in the event of a surge in testing volumes.

- *continue to track each laboratory's capacity against the target of 100,000 tests per day by the end of December 2020 and identify and take corrective action where shortfalls are anticipated;*

Status: Fully implemented.

Details

In our 2020 audit, we noted that the Ministry initially set a target provincial COVID-19 laboratory test capacity of conducting 20,000 tests per day by the week of April 19, 2020. Subsequently, this testing capacity

target was increased by increments to 50,000, 65,000, 75,000 and then 100,000 tests per day. The provincial target of a daily capacity of 50,000 tests by July 2020 was not met. The Ministry then extended the 50,000-test target deadline to September 26, 2020, and targeted the end of 2020 for a capacity of 100,000 daily tests.

In our follow-up, we found that the Provincial Diagnostic Network (Network) has been validating laboratory testing capacity against targets every week. Through this process, all laboratories identify their current capacity, as well as their ability to increase capacity if needed. The Network plans to continue with this process.

On the week of January 24, 2021, the Network's laboratory testing capacity exceeded the target of 100,000 tests per day. Ontario Health's process to accommodate surges in testing demand remains in place. As of May 7, 2021, the Network was able to complete as many as 115,000 tests per day.

The Network's testing capacity has been tracked on an ongoing basis, with weekly reporting during the first half of 2021. As the Network's capacity has stabilized, reporting frequency has since changed to monthly. While the COVID-19 pandemic outlook had been improving during the time of our audit, Ontario continued to maintain appropriate testing base capacity (30,000 per day) and surge capacity (up to 50,000 per day).

- *forecast for periods where backlogs may exceed provincial (or regional) daily laboratory testing capacity while identifying ways to eliminate, reduce and avoid them;*

Status: Fully implemented.

Details

In our 2020 audit, we noted that laboratory testing capacity was expanding too slowly, despite warnings by Public Health Ontario and experts in February 2020. Ontario's testing capacity on January 11, 2020 was just 110 tests per day. By the end of February 2020, both Public Health Ontario and health-care experts had realized that the existing laboratory testing capacity would be insufficient to meet the demand for testing received

specimens and expressed their concerns to the Chief Medical Officer of Health. The Ministry only began acting to ramp up testing capacity in March 2020.

In our follow-up, we found that Ontario Health has been monitoring on a daily basis the number of tests currently in progress versus specimens received, as well as the turnaround time from test collection to results reported. Metrics have been identified to ensure early warnings of a potential backlog of this flow. Specifically, surge strategy indicators get triggered when laboratory volumes reach 75% of capacity, or when the assessment centres report they are unable to provide testing within 48 hours.

During the Omicron wave, Ontario revised guidance to prioritize diagnostic testing—including polymerase chain reaction (PCR) and rapid diagnostic testing—and testing for higher-risk populations, including those requiring diagnostic testing to facilitate treatment. This shift in guidance was a strategy to manage testing volumes in order to avoid backlogs given available laboratory capacity. Ontario Health and the Ministry will continue this strategy beyond the Omicron wave.

- *provide clear and timely communication to hospitals on funding related to COVID-19, including what laboratory equipment and supplies will be reimbursed.*

Status: Fully implemented.

Details

In our 2020 audit, we noted that hospitals did not aggressively increase their laboratory testing capacity because the Ministry was unclear about how quickly and how much it would boost funding to support expanding the testing capacity.

In our follow-up, we found that the Ministry has informed hospitals about its funding plans related to COVID-19, including what laboratory equipment and supplies will be reimbursed. For example, in May 2021, the Ministry sent a letter to hospitals promising funding for equipment and supplies to expand their capacity for COVID-19 PCR testing.

Ontario Health also has provided communications to laboratories on funding related to COVID-19. For example, Ontario Health has maintained a FAQ

document on funding for testing, which continues to be updated as needed. Ontario Health has also developed funding agreements with each laboratory to support operational costs (human resources and supplies), and ensure funding is provided monthly based on the number of tests performed.

Ministry Did Not Address Concerns Raised Years Ago About Improving Ontario's Laboratory Sector

Recommendation 2

To better co-ordinate activities and resources in Ontario's laboratory sector to meet the needs of Ontarians during the COVID-19 pandemic and future outbreaks, we recommend that the Ministry of Health:

- *immediately review Public Health Ontario's Laboratory Modernization and Pressure Management Plan and consult with Public Health Ontario to determine and provide the level of base funding that would allow Public Health Ontario to fulfil its mandate, which includes performing COVID-19 testing and regular studies to assess the prevalence of COVID-19 in Ontarians;*

Status: In the process of being implemented by March 31, 2024.

Details

Our 2020 audit found that Public Health Ontario's annual base funding of about \$148 million for its ongoing operations had remained flat since 2013/14. Public Health Ontario's 2017/18 to 2019/20 Annual Business Plan identified that its highest overall risk as an organization was a "lack of sustainable funding to continue to deliver on [its] mandate, including [its] ability to comprehensively respond to emerging public health threats." While Public Health Ontario repeatedly submitted plans (in 2017, 2018 and 2019) to modernize and achieve efficiencies in its operations, it did not receive any additional funding to modernize its laboratories.

In our follow-up, the Ministry informed us that the public health laboratory modernization plan approved as part of the 2019/20 Multi-year Planning Process has

been put on hold until 2023 because all public health laboratories run by Public Health Ontario have been busy dealing with the COVID-19 pandemic. The Ministry indicated that it will continue to work with Public Health Ontario to identify cost-mitigation strategies to ensure the best possible use of health-care resources.

The Ministry has provided additional one-time transition funding to enable Public Health Ontario to continue to fulfil its mandate during this critical time. In recognizing the unique circumstances of the public health response to COVID-19, since 2019/20 the Ministry has approved approximately \$580 million in additional one-time funding for Public Health Ontario to support extraordinary costs for timely laboratory testing, as well as monitoring, detecting and containing the virus.

- *collaborate with Ontario Health to work expediently and effectively with representatives from the different types of laboratories regularly through the Provincial Diagnostic Network (Network) to share information and best practices, understand concerns and challenges, collate laboratory statistics into reports to measure system performance, and resolve issues to help the Network operate sustainably.*

Status: Fully implemented.

Details

In our 2020 audit, we found that it was only part way through its COVID-19 response that the Ministry followed the recommendations on reforming Ontario's laboratory sector made by the Laboratory Services Expert in 2015 and in our Office's 2017 audit on Laboratory Services in the Health Sector. It was not until late March 2020, when COVID-19 was overwhelming Ontario's laboratory system, that the Provincial Diagnostic Network was established under Ontario Health to facilitate the co-ordination between different laboratories. Unlike Ontario, Alberta already had a laboratory network in place prior to COVID-19.

In our follow-up, we found that the Ministry has collaborated with Ontario Health through the Network to actively engage with laboratories across the province to build a strong and sustainable foundation for

laboratory operations. The Network now includes over 70 laboratories across Ontario. Public Health Ontario has been supporting the Network by providing scientific and technical leadership.

The Network's operations committee manual, which includes laboratory performance guidelines and best practices, has been regularly updated and made available to all Network members online.

The Network's members have met regularly (once or twice per week, or daily when capacity concerns were identified) to share information (such as best practices), collaborate and review data on laboratory statistics. Additional meetings have also taken place with laboratories that process and analyze large volumes of tests for the Network.

The laboratories within the Network report on operational data—such as the number of tests received, tests completed, turnaround times and status of testing supplies—on a daily basis, and compile and share this data with various stakeholders for performance and public health monitoring.

Test Results Slow to Reach Public Health Units, Resulting in Delays in Case Management and Contact Tracing

Recommendation 3

To curb the spread of COVID-19 and any future infectious diseases by quickly identifying cases and their contacts, and advising them to isolate from others while they are infectious, we recommend that the Ministry of Health, in collaboration with Ontario Health:

- *continue to monitor the timeliness of laboratory testing, case management and contact tracing against targets at the provincial and regional levels on a regular basis (daily or weekly);*

Status: Fully implemented.

Details

In our 2020 audit, we found that Ontario Health set targets for laboratory testing: 60% of laboratory tests should be completed and results reported within one day of specimen collection; and 80% of laboratory

tests should be completed and results reported within two days of specimen collection. The Ministry also set targets for case management: in 90% of cases, case managers should contact the infected person within 24 hours of the public health unit receiving the positive test result. However, the province overall did not meet these targets consistently.

In our follow-up, we found that Ontario Health has continued to monitor the timeliness of laboratory testing on a daily and weekly basis, and track performance against provincial targets for turnaround time (80% of tests should be turned around within two days, and 60% within one day) at provincial, regional, and public health unit levels. Additionally, in September 2021 the Ministry worked with Ontario Health to report a new metric that measures the ability of laboratories to provide an appointment for testing at assessment centres within 24 hours.

From January 24, 2021 to December 22, 2021, the Provincial Laboratory Network (Network) consistently met the turnaround targets. However, due to the highly transmissible Omicron variant, turnaround times increased (due to staffing shortages related to COVID-19 illness) during the peak of the Omicron wave—around late December 2021 and most of January 2022—and the Network missed the targets during that period. Since January 25, 2022, the Network has resumed meeting or exceeding both turnaround targets.

Regarding case management and contact tracing, Public Health Ontario provided regular reporting on the timeliness of public health units' case outreach and contact follow-ups. Data from these reports was used to regularly support the assessment of the public health units' case and contact management needs.

The Ministry also indicated that testing, as well as case, contact, and outbreak management in Ontario, remain focused on high-risk populations and settings. Rapid antigen tests remain widely available at no cost for the general public and those at lower risk of adverse effects from COVID-19.

- *take immediate action on a region-by-region basis to address the root causes (such as insufficient local equipment, human resources and supplies)*

contributing to the regional delays in meeting the established targets at a minimum.

Status: Fully implemented.

Details

In our 2020 audit, we found that for positive cases, only one of the 34 public health units (Ottawa) met the 60%-within-one-day laboratory testing target, and only four public health units (Hastings and Prince Edward Counties; Kingston, Frontenac, Lennox and Addington; Leeds, Grenville and Lanark District; and Ottawa) met the 80%-within-two-days target. As well, four of the 34 public health units (Ottawa, Peel Region, Toronto and York Region) did not meet the 90%-within-one-day case management target.

In our follow-up, we found that Ontario Health has analyzed the root causes that inhibited laboratories from reaching target turnaround times and capacity. The main reasons it identified included increased testing at long-term-care homes and limited testing capacity in the north. Ontario Health also has worked with all laboratories and regions to consider logistical and transportation improvements, which include:

- managing more strategically where specimens are sent across the Provincial Diagnostic Network (such as routing samples in the north to Toronto) to better balance laboratories' capacity and workload;
- analyzing staffing capacity on a weekly basis and comparing that to planned recruitment numbers to ensure laboratories are on track to hire the expected number of staff by specific dates;
- tracking testing turnaround targets by region and public health unit on an ongoing basis and reviewing mitigation actions weekly;
- meeting with Ornge to discuss flying COVID tests from Thunder Bay to Toronto when backlogs increase in the north; and
- exploring whether the use of courier services to send tests from long-term-care homes to laboratories can be started earlier than originally planned. As of January 2021, daily courier services to over 500 long-term-care homes were provided.

Regarding case management and contact tracing, the Ministry, in consultation with the Provincial Case and Contact Management Workforce (Provincial Workforce) and public health units, identified two main reasons why regions missed established targets:

- One root cause was regional staffing shortages. These were identified through consultations between the Ministry and public health units. To meet public health units' needs, the Provincial Workforce, which is a team managed by a third-party vendor to conduct case and contact management activities on behalf of the Ministry, provided additional staffing and the Public Health Ontario/Statistics Canada Contact Tracing Initiative provided contact tracing support.
- Another root cause was a mistrust of the testing and isolation requirements among vulnerable communities. The High Priority Community Strategy addressed this by building trust with these communities through the Community Ambassadors program. As of March 31, 2022, 432 Community Ambassadors were deployed to conduct outreach in a targeted and culturally appropriate manner and provide supports to individuals who tested positive.

Ministry Was Late to Implement Solutions that Would Have Sped Up Laboratory Testing and Improved Case Management and Contact Tracing

Recommendation 4

In order for laboratory testing, case management and contact tracing to be performed as quickly as possible to prevent and reduce transmission of COVID-19, we recommend the Ministry of Health (working collaboratively with Ontario Health as necessary) to expediently:

- *implement electronic test ordering across all laboratories and assessment centres in Ontario;*

Status: In the process of being implemented by December 1, 2022.

Details

In our 2020 audit, we found that many of the steps involved in the COVID-19 laboratory testing process in Ontario were paper-based and performed manually. This not only slowed laboratory testing but resulted in errors. Various experts and our Office's past audits for over a decade had recommended or referenced requesting laboratory tests via electronic ordering (e-ordering) instead of paper-based ordering. In July 2020, with data-entry bottlenecks increasing, Ontario Health contracted an IT company to automate data collection (including e-ordering) and streamline the data flow between assessment centres and laboratories.

In our follow-up, we found that a temporary electronic test ordering solution was implemented at 62 assessment centres to support those high-volume assessment centres with increased specimen collection demand. To support digitally enabled assessment centres, 12 laboratories with the highest volume of testing (processing more than 75% of all COVID-19 tests) were prioritized to receive electronic orders into their information systems.

As a long-term solution, Ontario Health developed a secure, mobile-friendly, web-enabled system for e-ordering. It was released in May 2021 and is currently available to all specimen collection points/health-care practitioners authorized to order COVID-19 laboratory tests.

All laboratories within the Provincial Laboratory Network have been integrated into the Ontario Laboratory Information System (OLIS) for the reporting of COVID-19 testing results. The implementation of e-ordering at all assessment centres and specimen collection sites is underway and will be expanded to other settings including pharmacies, long-term-care homes and clinical assessment centres. The target date to fully implement the provincial digital solutions into these settings' priority locations is December 1, 2022. This date has been extended from September 20, 2022 due to delays in onboarding pharmacy locations and a change in the planned approach to onboarding long-term-care homes.

- *act on expert advice, including advice on which Ontarians should be eligible for COVID-19 testing;*
Status: Fully implemented.

Details

In our 2020 audit, we found that enabling unconditional asymptomatic testing overwhelmed the assessment centres and lengthened the turnaround time on COVID-19 laboratory test results. The Testing Strategy Expert Panel, which was responsible for developing an evidence-based province-wide testing strategy for COVID-19, had never recommended that asymptomatic people be tested for the virus.

In our follow-up, we found that the Ministry has adjusted the testing strategy and guidance throughout the pandemic to be responsive to COVID-19 prevalence, risk and testing capacity. This was based on expert advice from Public Health Ontario, the Testing Strategy Expert Panel, and the Ontario Science Advisory Table, which informed policy decisions, including eligibility criteria for polymerase chain reaction (PCR) testing and use of rapid antigen testing.

For example, on February 2, 2022, the Testing Strategy Expert Panel provided recommendations for a COVID-19 Diagnostic Testing Strategy following the Omicron wave and identified considerations for COVID-19 testing usage and guidance, focusing on the short-term while establishing foundational principles and concepts for the medium-and long-term. The following assumptions were made for the short-term:

- COVID-19 testing services will continue to be required for the foreseeable future.
- PCR testing capacity and specimen collection capacity will be available throughout the next fiscal year.
- Market availability of rapid antigen tests will increase.
- Test performance with regards to sensitivity and specificity of PCR and rapid antigen tests will remain unchanged.
- Isolation guidance for the general public will remain the same or become less conservative.

- *clearly communicate to the public who should and should not be tested for COVID-19, including the reasons why asymptomatic Ontarians with no known exposure should not be prioritized for testing;*

Status: Fully implemented.

Details

In our 2020 audit, we found that on May 24, 2020, the Province announced the expansion of COVID-19 testing for asymptomatic Ontarians with no known exposure to COVID-19, even though the Testing Strategy Expert Panel had never recommended asymptomatic persons be tested for the virus. On September 24, 2020, the Province changed the policy so that asymptomatic Ontarians could only be tested for COVID-19 if they met certain conditions. For example, people could still be tested if they had contact with a confirmed positive case; if they worked at, resided in or would be visiting a long-term-care home; if they worked at or resided in a homeless shelter or another congregate-care setting; or if they were part of a targeted testing initiative directed by the Ministry of Health or the Ministry of Long-Term Care.

In our follow-up, we found that the government had informed the public about testing eligibility through various methods, including through the Ministry website. With respect to asymptomatic testing, the Ministry communicated the following major changes to the public:

- On August 25, 2021, the Ministry released an update to the COVID-19 testing guidance. The update included a statement that asymptomatic testing for fully vaccinated individuals was generally not recommended. It also included testing guidance for asymptomatic individuals, targeted testing groups, facility transfers and hospitals, and asymptomatic patients or residents for facility transfer.
- On December 30, 2021, the Ministry released another update to the COVID-19 testing guidance to integrate it with case and contact management guidance in response to the

Omicron wave. Key changes included prioritizing diagnostic testing for the highest-risk populations and settings—for instance, front-line health-care workers or congregate living facilities—and removing broad-based eligibility for symptomatic individuals or close contacts from the general public. To offset that reduction in diagnostic testing eligibility, the guidance also enabled symptomatic individuals to use rapid antigen tests as a diagnostic tool, when previously provincial guidance had only allowed for these tests to be used for asymptomatic screening.

Updates made to the testing guidance as well as case and contact management guidance were also released to stakeholders and made available to the public. Updates were communicated via the Chief Medical Office of Health, the Minister and technical briefings, and incorporated into online screening tools.

In addition, the Provincial Testing and Isolation Information Line (PTIIL) was launched in January 2022 to answer questions related to COVID-19 testing and isolation guidelines. The PTIIL continues to be used by public health units to provide Ontarians with information in accordance with guidance updates.

Furthermore, as mentioned in **Recommendation 3**, the Community Ambassadors program, as part of the High Priority Community Strategy, was put in place to ensure that up-to-date information is clearly communicated in high-needs areas. For example, when the Community Ambassadors conducted door-to-door visits earlier in the pandemic, they took a targeted and culturally appropriate communications approach by, for example, providing information in different languages about rapid antigen tests and isolation requirements. They also helped dispel myths and misinformation about testing and isolation.

- *investigate for potential implementation the use of an autodialer system like Alberta's to report all COVID-19 laboratory test results to Ontarians as soon as test results are known;*

Status: Fully implemented.

Details

In our 2020 audit, we found that faxing and mailing test results created redundancies and confusion, and delayed case management and contact tracing. Laboratories in other jurisdictions did not fax or mail test results. For example, Alberta had an automated laboratory reporting system; positive test results were seamlessly fed into the provincial contact tracing and surveillance system and sent to ordering physicians immediately. People with either positive or negative test results were quickly informed of their status through an autodialer—a device that dials phone numbers and leaves pre-recorded messages.

In our follow-up, we found Ontario has developed the COVID-19 Test Results Viewer, which is a mobile-friendly website that allows Ontarians to securely view their COVID-19 test results online.

The Province also performed an assessment of the requirement to alert patients of their COVID-19 test results. The assessment determined that the subscription to be notified by secure text messages or email through the COVID-19 Test Results Viewer provided the best measures of control and protection of personal health information, traceability of use, and disclosure, as well as the ability for caregivers to participate. Therefore, an autodialer solution was not pursued because it did not satisfy these conditions or offer the same potential for expanded use post-COVID-19.

Instead, a more comprehensive alternative solution, the COVID-19 Results Notification service, was implemented in two phases. In Phase 1, which began October 2021, individuals could receive an email notification right after a COVID-19 test result was submitted to the Ontario Laboratory Information System (OLIS). By December 2021, Phase 2 went live, allowing individuals to choose being notified by secure text messages in addition to email.

- *integrate the Ontario Laboratories Information System with the integrated Public Health Information System (or other systems used by public health units to perform COVID-19 case management and contact tracing).*

Status: Fully implemented.

Details

In our 2020 audit, we found that a lack of integration between the Ontario Laboratory Information System (OLIS) and the integrated Public Health Information System (iPHIS) necessitated the faxing and mailing of COVID-19 laboratory test results, which could delay case management and contact tracing. Additionally, public health units received multiple faxes of the same laboratory test result, making data management challenging. Our Office's 2007 audit of Outbreak Preparedness and Management had also identified the lack of integration between OLIS and iPHIS as a concern.

In our follow-up, the Ministry indicated that OLIS has provided COVID-19 test results twice daily. In July 2020, the Ministry also started integrating OLIS with the new Case and Contact Management (CCM) system, allowing the CCM system to acquire new COVID-19 test results from OLIS every 30 minutes. This integration aims to reduce the manual creation of cases by approximately 90%.

The integration can be considered fully completed at the time of our follow-up, but enhancements are still being made. For example, the Ministry informed us that further work was underway, jointly between the Ministry, Ontario Health and Public Health Ontario, to expand the CCM–OLIS integration to incorporate about 70 other “diseases of public health significance” (formally called “reportable diseases”). Examples of these diseases include hepatitis B, measles, SARS (Severe Acute Respiratory Syndrome), rabies, tuberculosis and West Nile virus.

Ontario's Public Health Information System Is Outdated and Contains Numerous Long-Standing Deficiencies, Creating Challenges and Inefficiencies for Case Management and Contact Tracing

Recommendation 5

To provide public health units with an IT solution that can capture timely, accurate and complete information for performing case management and contact tracing

during COVID-19 and for other reportable diseases, we recommend that the Ministry of Health cost effectively and expediently:

- obtain guidance from public health units on the requirements for the public health information system to enable effective and efficient case management and contact tracing;

Status: Fully implemented.

Details

In our 2020 audit, we found that Ontario's integrated Public Health Information System (iPHIS) contained numerous long-standing deficiencies, which had not started to be addressed until COVID-19. In the 15 years iPHIS had been in place, the Ministry failed to fix known deficiencies that impaired the system's efficiency and effectiveness. Examples of these deficiencies included difficulty in connecting close contacts to a COVID-19 case in the system, not allowing users to easily make progress notes, not allowing users to easily attach electronic files to a COVID-19 case, and not easily allowing remote access to the system.

In our follow-up, we found that the Ministry has regularly hosted working group meetings with stakeholders to obtain guidance from public health units and Public Health Ontario on the requirements for the new Case and Contact Management (CCM) system, as mentioned in **Recommendation 4**, to enable effective and efficient case management and contact tracing.

For example:

- The CCM Users Working Group, which the Ministry co-chaired with Public Health Ontario, had weekly meetings to share information, get clarity on provincial direction/guidance, and collaborate on best practices and priority issues.
 - The Reporting Working Group, also co-chaired by the Ministry and Public Health Ontario, had weekly meetings to interpret CCM data for surveillance and epidemiological analyses.
 - The Ontario Laboratory Information System (OLIS) Integration Working Group had biweekly meetings to design business scenarios, prioritize business requirements, and exchange knowledge.
- Informal question and answer sessions were scheduled after information releases to allow the Ministry to address issues from stakeholders and provide advice.

The Chief Medical Officer of Health directed the public health units to use the CCM system instead of iPHIS for reporting COVID-19 cases. In addition to regular consultations with the stakeholders, two reviews of the CCM process were conducted, one at Kingston, Frontenac, Lennox and Addington Public Health, the other at Peel Public Health. Key takeaways from these reviews included the importance of following a streamlined approach in the CCM process and looking for continuous refinements.

These stakeholder consultations and two reviews informed the creation of a single integrated case and contact management system in Ontario, which led to the development of the new CCM system. The CCM system phased out the local tools used across the province and replaced iPHIS, the provincial communicable disease database, for COVID-19 reporting. The platform on which the CCM system runs is customized for Ontario's use in the COVID-19 pandemic, using technology that is scalable and flexible. It allows for integration with Ontario Laboratory Information System (OLIS) data, eliminating the need for public health unit staff to re-enter laboratory results into the CCM system. The platform also enables the public health units and Public Health Ontario to access the data, which can then be analyzed to identify province-wide regional trends and hotspots.

Overall, the CCM system has made processes more efficient and reduced data entry and the administrative burden for case and contact management work. It also allows contact tracing to be quickly ramped up through a remote workforce when required. As well, it has enabled cases and contacts to receive follow-up emails or secure text messages in place of phone calls, which is critical to enable the ramp-up of case and contact management during surge periods.

- incorporate these requirements into the design and functional operation of a provincial case

management and contact tracing system to be used by all public health units;

Status: Fully implemented.

Details

In our 2020 audit, we found that the deficiencies of iPHIS forced public health units to develop their own systems or to rely on paper records to manage their high volumes of cases and their contact tracing work. Three public health units (Toronto, Ottawa and Middlesex-London) created their own systems during the COVID-19 pandemic to allow their staff to perform case management and contact tracing more effectively and efficiently.

In our follow-up, we found that the Province developed the centralized Case and Contact Management (CCM) system, as previously mentioned, which integrated with the Ontario Laboratory Information System (OLIS) to enable quick access to case data and laboratory results, standardize and enhance data models, and facilitate contact follow-up services.

This centralized CCM system was launched between July 17 and August 20, 2020, when 31 of 34 health units were onboarded; the remaining three public health units adopted the CCM system by January 2021. Additional work has since been done to strengthen the system to support epidemiological needs, case linking and outbreak management.

- *complete the rollout of the new case and contact management system (System) to all public health units;*

Status: Fully implemented.

Details

In our 2020 audit, we found that it was not until April 2020—during the escalation of the COVID-19 pandemic—that the Ministry recognized the need to replace the integrated Public Health Information System (iPHIS) with a new case management and contact tracing system (System). The new System was first used by four public health units on July 13, 2020. An additional nine public health units were added to the System by July 31, 2020, and another joined by August 20, 2020. The Ministry's plan for the three

remaining public health units—Middlesex-London, Ottawa and Toronto—was to have them phased into the new System throughout the fall of 2020. The Ministry intended to eventually adapt the System for all reportable diseases, eliminating the need for iPHIS.

As previously mentioned, the new centralized CCM system was launched between July 17 and August 20, 2020, and 31 of the 34 health units were onboarded. Since that time, all 34 health units have been onboarded onto this system.

Additional data migration activities have since taken place, and system features and functions were added to support case linking and outbreak management. The Ministry also informed us that in the summer of 2022, it has started expanding CCM system to include all Diseases of Public Health Significance (such as chickenpox, hepatitis and measles), and has established the appropriate governance and working groups with the public health units and Public Health Ontario to inform design and implementation.

- *continue to obtain feedback from public health units on the System to understand their implementation challenges in order to identify and implement solutions and other necessary features to be added.*

Status: Fully implemented.

Details

In our 2020 audit, we found that given the challenges public health units were experiencing in using iPHIS, the Ministry started working on a new system for case management and contact tracing in early June 2020, as mentioned previously. The public health units said that while the new system offered many improvements, it still posed several challenges. The public health units have continued to work with the Ministry and provide feedback on additional changes.

In our follow-up, we found that a Case and Contact Management (CCM) Users Working Group was established to provide a space for the users of the new system to provide input and discuss potential improvements with the system development team, reflect the evolving needs of public health units, and support continuous improvement of the system. This working group continues to be a mechanism for facilitating

system changes as needed by public health units for the following purposes:

- The Ministry and Public Health Ontario can share information with public health units, and solicit input or feedback.
- Public health units can share information to get clarity on provincial direction or guidance and to collaborate with each other on best practices and priorities or enhancements.
- The Ministry has a useful forum as it prepares to expand the system to include other “diseases of public health significance.”

Provincial Guidance on Case Management and Contact Tracing Needs More Clarity

Recommendation 6

To avoid confusion and inconsistencies with regard to case management and contact tracing, we recommend that the Ministry of Health expediently:

- *collect and confirm information from public health units on how they perform case management and contact tracing;*

Status: Fully implemented.

Details

In our 2020 audit, we found that given the challenges of using the integrated Public Health Information System (iPHIS), public health units used their internal systems or paper records instead to track their case management and contact tracing activities. Our review of a sample of COVID-19 cases and their associated close contacts found that while public health units had processes and procedures in place for managing the cases and tracing the close contacts, they did not always follow Ministry guidance on case management and contact tracing.

In our follow-up, we found that the Ministry has co-chaired case and contact management forums with Public Health Ontario, on a biweekly basis initially and on an ad hoc basis during Wave 2 up to Wave 7 of the pandemic, with representatives from public health units. The purpose of these forums was to better

understand how the public health units were addressing case and contact management business processes, and how the Provincial Case and Contact Management Workforce could provide support most effectively.

The Ministry and Public Health Ontario also collaborated on distributing surveys to all public health units in October 2021 to collect information on how they performed their case and contact management. Additional surveys have been distributed, up to Wave 7 of the pandemic, to determine the best ways to continue to support case and contact management. The purpose of the surveys was to quantify province-wide capacity of performing case and contact management in order to inform policy and program decisions going forward.

- *continue to update its guidance on case management and contact tracing based on the information collected, including further clarity on when, if ever, it is acceptable to not speak directly with the person with COVID-19 when managing their case and to not speak directly with those living with the person when tracing their contacts;*

Status: Fully implemented.

Details

In our 2020 audit, we found that public health units did not attempt to reach out to about 31% of the close contacts of individuals who tested positive for COVID-19. This shortfall mainly involved not contacting someone who lived in the same household as the individual with the virus. Ministry guidance stated that all high-risk close contacts had to be contacted, but did not specify whether it was acceptable or sufficient to rely on the infected individual to relay information from the public health unit to their household.

In our follow-up, we found that the guidance on case and contact management has been updated to clarify when it is acceptable for the case manager or contact tracer to not speak directly with the person with COVID-19 and those living with that person. Specifically, the guidance indicates that a proxy or next of kin may be permitted to speak to the case manager or contact tracer if cases or contacts are underage, incapacitated (e.g., a resident at a long-term-care facility) or hospitalized.

- *provide updated guidance on case management and contact tracing process to all necessary stakeholders;*

Status: Fully implemented.

Details

In our 2020 audit, we found that Ministry guidance on case management and contact tracing activities was not always met, and that these activities were not always done consistently. We also noted an instance where numerous COVID-19 cases were not being referred for case management and contact tracing due to confusion over reporting responsibilities. For example, Ministry guidance was not clear on how frequently an individual with COVID-19 needed to be contacted and when it was appropriate to contact the infected person's close contacts.

In our follow-up, we found the Ministry's communications staff have provided up-to-date guidance and notified stakeholders about changes to provincial case and contact management direction and processes. For example:

- In January 2021, the Ministry issued a memo to inform the public health units that it would be hosting a session about the adoption of the Virtual Assistant, a tool within the Case and Contact Management (CCM) system that helps public health units reach out to cases and contacts as quickly as possible by sending them text messages.
- In July 2021, the Ministry issued another memo to all public health units to emphasize the importance of continuing and enhancing case and contact management even though case rates were declining across the province. The memo also indicated that the guidance had been updated to reflect the practices or requirements involving self-isolation and testing.

In January 2020, the Ministry also established a regular stakeholder call (biweekly or monthly during the pandemic) to keep stakeholders informed of changes to its case and contact management guidance. Invitees on these calls represented stakeholders from organizations including the Ontario Medical

Association, Ontario Nurses Association, Ontario Association of Medical Laboratories, Home Care Ontario, and Home and Community Care Support Services. To ensure the information disseminated was up to date, weekly calls were also held between public health units and the Chief Medical Officer of Health, and regular meetings were scheduled between public health units and the Provincial Case and Contact Management Workforce, as mentioned under **Recommendation 3**.

- *communicate public awareness around case management and contact tracing process;*

Status: Fully implemented.

Details

In our 2020 audit, we found that Ministry guidance on case management and contact tracing activities was not always met. We also noted that numerous COVID-19 cases were not being referred for case management or contact tracing because of confusion over reporting responsibilities.

In our follow-up, we found that the Ministry has increased public awareness by regularly releasing updates around case management and contract tracing processes to notify the public, public health units and Provincial Workforce staff about the impact of these changes. For example, the Ministry has announced the following updates:

- On December 30, 2021, public health measures and guidance were updated in response to Omicron. In consultation with the Chief Medical Officer of Health (CMOH), Ontario updated its COVID-19 testing and isolation guidelines. These updates followed changes in other jurisdictions in Canada and the United Kingdom to ensure publicly funded testing and case and contact management resources were available for the highest-risk settings and the most vulnerable populations, and to help keep critical services running. For example, since December 31, 2021, publicly funded PCR testing has been available for high-risk individuals, workers and residents in the highest-risk settings, and vulnerable populations.

- On January 20, 2022, the CMOH released details of steps to cautiously and gradually ease public health measures beginning January 31. These measures included increasing social gathering limits to 10 people indoors and 25 people outdoors, and increasing capacity limits to 50% for indoor public settings. Public health measures were further lifted effective February 21, 2022 and March 14, 2022.

The Ministry has also used its High Priority Communities Strategy to create public awareness around case management and contact tracing in high-risk neighbourhoods in Durham, Peel, Toronto, York, Ottawa and Windsor. These neighbourhoods were selected based on their high COVID-19 prevalence (current or historical), low testing rates, and sociodemographic barriers to testing and self-isolation. Through this strategy, local agencies work in partnership with Ontario Health, public health units, municipalities, and other community partners to deliver key interventions for the province's hardest-hit neighbourhoods.

- *work with Ontario Health to provide laboratories with clear guidance on their reporting responsibilities to help ensure all COVID-19 cases are reported to public health units.*

Status: Fully implemented.

Details

In our 2020 audit, we found that confusion over reporting responsibilities resulted in numerous COVID-19 cases not being referred for case management and contact tracing. For instance, from March to late May 2020, 485 COVID-19 cases were not reported to public health units. This was because Mount Sinai Hospital's laboratory, which received the specimens from William Osler Health System's assessment centre, incorrectly believed that the assessment centre's ordering physician was solely responsible for reporting the results.

In our follow-up, we found that the Provincial Laboratory Network (Network) has maintained a standard operating manual, the Network Operations Committee

Operating Manual (Manual), which has been provided to all Network laboratories when they are onboarded. The Network has made the Manual available to these laboratories on Ontario Health's shared drive. The Manual outlines requirements and guidance for reporting COVID-19 test results. For example:

- The Manual lists key elements that are required on the COVID-19 requisition form, including health card number; date of birth; full name; gender; address; at least one piece of clinical information (i.e., ordering practitioner, ordering facility, or specimen collection centre); and outbreak/investigation number.
- The Manual emphasizes that "All Network laboratories are responsible for communicating results in accordance with Regulation 682 of the *Laboratory and Specimen Collection Centre Licensing Act*, and c H.7 of the *Health Protection and Promotion Act*. It is the responsibility of the testing laboratory to notify the associated Public Health Unit(s) with positive results."

When changes are made to the Manual, all laboratories are notified during weekly meetings. Support and emphasis on reporting requirements have also been presented to laboratories at weekly meetings. These meetings have helped ensure that the laboratories are aware of basic reporting requirements from various parties (such as the Ministry's Laboratories and Genetics Branch, the Laboratory Inspection and Licensing Information [LILI] system, and Accreditation Canada), including the regulatory requirement to report positive cases of communicable diseases to the public health units.

Collaboration, Communication and Specimen Collection Strategy for Assessment Centres Need Improvements

Recommendation 7

For specimen collection and laboratory testing services to be available and delivered in a safe, expedient and cost-effective manner, we recommend that the Ministry

of Health work collaboratively with Ontario Health as necessary to:

- *provide sufficient notice and clear communication when changes are being made to specimen collection and laboratory testing that gives impacted stakeholders enough time to prepare;*

Status: Fully implemented.

Details

In our 2020 audit, we found that the Province announced expanded testing at a news conference on May 24, 2020, indicating that no one seeking a COVID-19 laboratory test should be turned away. Assessment centres had been informed of the expansion only the day before in a memo from Ontario Health. Given the short notice and lack of a definitive timeline for expanding testing, assessment centres were caught off guard by the announcement. As a result, they were unable to staff their centres properly to address the initial surge in demand, which overwhelmed their operations and increased wait times for specimen collection.

In our follow-up, we found that as part of an effort to keep stakeholders informed of upcoming changes to testing guidance, weekly meetings are being held with laboratories and regional testing and assessment centres. These meetings allow for more open discussion and, when possible, advance notice of guidance changes from the Ministry.

As new challenges arise, such as the emergence of COVID-19 variants, the Provincial Laboratory Network (Network) has been supporting the dissemination of updated directives issued by the Chief Medical Officer of Health and changing eligibility criteria for testing through centralized communications. For example, the Network has increased the frequency of meetings with the laboratories and regional testing leads to respond quickly to the new testing threats and changing guidance.

- *establish an assessment centre network to collect and assess data on the operations of each centre, identify best practices (including for hours of operation, staffing and operating model), share*

information and best practices, and provide supports that help centres evaluate and address challenges as soon as possible;

Status: Fully implemented.

Details

In our 2020 audit, we found that assessment centres were not linked or led by a province-wide network to help co-ordinate and organize their services, as was the case for laboratories. Such a network would be valuable for these centres, allowing them to share their experiences and identify best practices. Among the topics of concern were operating hours, staffing ratios, and operating methods such as offering “drive through” COVID-19 specimen collection.

In our follow-up, we found that Ontario Health has increased support for assessment centres to share data through centralized communications and Ontario Health’s regional teams. Each region has been working closely with their local assessment centres and community sites to identify best practices, share information and provide support. A regional approach allows for actions that are more responsive to local needs.

To ensure collaboration, each region has identified an Assessment Centre and Testing Lead(s) who collaborates to support knowledge-sharing at a provincial level. Regional leads regularly review specimen collection strategies against local needs, working with regional partners to revise and/or expand strategies accordingly.

Ontario Health has also created a manual to provide assessment centres with operational guidance. This manual presents a set of recommendations designed to help the centres provide effective, efficient and safe care during the COVID-19 pandemic in accordance with relevant ethical principles. The manual further provides key considerations to promote standardization, and to support flexibility in responding to evolving assessment and testing needs. Although some variation is expected because of differences in local needs, there are basic foundational elements that should be standard across all assessment centres. The manual covers areas such as location and operational structure, staffing models, infection control and

prevention strategies, follow-up processes after testing, as well as reporting and monitoring.

In addition, Ontario Health has issued weekly collection reports, which discuss mitigation actions to support assessment centres and address challenges, such as identifying centres that were unable to collect specimens within 48 hours. As well, regular regional meetings provide a forum to raise issues faced by assessment centres for discussion at a provincial level.

- *regularly review both the appropriateness of different locations for specimen collection and groups of people to be tested for COVID-19 in comparison to available laboratory capacity;*

Status: Fully implemented.

Details

In our 2020 audit, we found that Ontario Health had not regularly reviewed the appropriateness of each assessment centre's operating hours and staffing in relation to the populations they served. A network linking these centres could do this analysis regularly to identify which centres should remain open longer, determine how they could operate more efficiently, and ensure there is appropriate capacity to collect specimens for testing across Ontario.

In our follow-up, we found that Ontario Health has held weekly regional testing meetings to assess each public health unit's collection needs.

We also noted that the Ministry has aligned its testing guidance with the advice provided by Public Health Ontario and the Testing Strategy Expert Panel. Throughout the COVID-19 pandemic, the Ministry has adjusted the testing strategy and guidance to be responsive to COVID-19 prevalence, risk, and testing capacity. For example, in September 2020, the Ministry discontinued asymptomatic testing of the general population and focused efforts on diagnostic testing for symptomatic and high-risk persons. It also focused on improving and maintaining provincial turnaround time targets. During the Omicron wave, diagnostic testing was prioritized for higher-risk populations, including those requiring diagnostic testing to facilitate treatment.

- *investigate opportunities to collect additional information from individuals who seek a COVID-19 test (such as how and where they believe they contracted COVID-19) as part of the appointment-booking process for specimen collection at assessment centres and pharmacies.*

Status: In the process of being implemented by December 1, 2022.

Details

In our 2020 audit, we found that while the Provincial Diagnostic Network (Network) established targets for laboratory test turnaround times and collected data from laboratories to determine progress against those targets, assessment centres were not conducting similar performance tracking and benchmarking. We noted that wait times varied significantly from one centre to another, depending on the day and time, and the centre's location. In some instances, wait times were up to eight hours. However, complete data on wait times across the province had not been collected and no wait-time targets had been set.

In our follow-up, we found that many of these issues have been addressed through updates to the COVID-19 test requisition form. These changes include the addition of fields such as vaccination status, patient setting, travel history and exposure history. The Network also has emphasized that all fields need to be completed in full.

As mentioned in the first action under **Recommendation 4**, the implementation of digital test ordering (e-ordering) at all assessment centres and specimen collection sites remains underway and will be expanded to other settings including pharmacies, long-term-care homes and clinical assessment centres. Certain locations have been prioritized and all were targeted to be fully enrolled in the provincial e-ordering system by December 1, 2022. This date has been extended from September 30, 2022 due to delays in onboarding pharmacy locations and a change in the planned approach to onboarding long-term-care homes. Education sessions and webinars were organized as these new settings began participating in PCR testing programs. Requirements for requisitions to be completed in full were further explored and then integrated as part of the e-ordering process.