

Overview of the Provincial Antigen Screening Program

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Visit ontariohealth.ca/antigen-test to watch a training video on this topic.



Objectives

In this session you will learn:

- What the Provincial Antigen Screening Program is and what program participation means for your workplace
- An overview of COVID-19 antigen rapid tests
- The clinical guidance on rapid antigen testing
- About the experiences from employers who have conducted on-site rapid antigen testing
- How to get started with antigen screening



The Provincial Antigen Screening Program

Goals of the Provincial Antigen Screening Program

- Reduce the spread of COVID-19 and to support essential and vulnerable workplaces to safely stay open.
- Enhance existing routine screening measures for asymptomatic employees in priority settings.
- Allow for workplaces to proactively identify cases of COVID-19 that may have otherwise been missed, supporting employee safety and business continuity in a variety of workplaces.

Note: Rapid antigen screening **should not** replace existing workplace infection prevention and control measures.

Who is Eligible to Participate in this Program?

- Sectors prioritized for the Provincial Antigen Screening Program include:
 - All long-term care homes across the province
 - Retirement homes
 - Essential industry
 - Congregate living
 - Schools
 - High priority communities
 - Health
 - Any organization that is permitted to be open, and that requires employees to be physically present, is eligible to receive free antigen point-of-care test kits. Visit: ontario.ca/testingonsite

What Does Participation in the Program Mean for my Workplace?

- As per the Program Agreement,
 - The provincial government will provide participating workplaces with the required number of tests to meet sector-specific testing guidelines, for free, dependent on available inventory.
 - Participating employers will be required to enter a small set of data on a weekly basis into a centralized reporting database to support the evaluation of the program.
 - Participating employers who require additional on-site support to administer the Provincial Antigen Screening Program (e.g., human resources, and any additional supplies/equipment beyond the test kits themselves) may choose to voluntarily enter into an agreement with a service delivery provider, at their own cost.
- Participation in training is not mandatory but it will help build confidence and competence for those performing the testing and will assist your workplace in understanding program logistics and planning for implementation.

What Support is Available for Employers Participating in this Program?

- Ontario Health has developed Onboarding Guides to support sites in implementing COVID-19 antigen rapid testing:
 - Onboarding process overview
 - Clinical guidance
 - Specimen collection tips
 - Licensing and regulations
 - Best practices for point-of-care testing
 - Site set-up, supplies
 - Kit ordering considerations
 - Information sheets (FAQ) for individuals being tested and for staff operating a clinic
 - Recommended steps for implementing a clinic (operating procedures)
 - Go-live readiness checklist



Overview of COVID-19 Antigen Rapid Tests

Comparison of COVID-19 Tests

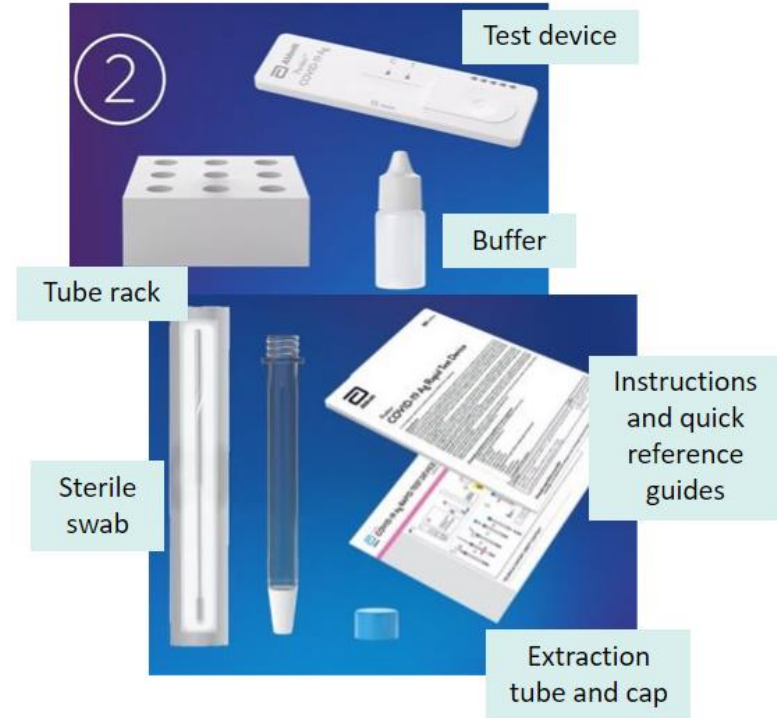
	Rapid Antigen Screening	Polymerase Chain Reaction (PCR) Diagnostic Testing
Description	<ul style="list-style-type: none">The antigen test looks for proteins from the COVID-19 virus	<ul style="list-style-type: none">PCR tests show if someone is infected with COVID-19
Use	<ul style="list-style-type: none">Screening of asymptomatic individuals with no known exposure to COVID-19Repeat/routine screeningNot for use in outbreaks	<ul style="list-style-type: none">DiagnosisSymptomatic individuals and known close contacts.
Location	<ul style="list-style-type: none">On-site	<ul style="list-style-type: none">Assessment CentrePharmacy (then shipped to a lab for processing)
Timing	<ul style="list-style-type: none">Results in 15-20 minutes	<ul style="list-style-type: none">Results in about 1-2 days
Accuracy	<ul style="list-style-type: none">Higher rates of false positive and false negative resultsPositive results need to be followed up with a PCR test to confirm	<ul style="list-style-type: none">Highly accurate

Abbott Panbio™ COVID-19 Ag Rapid Test

Panbio™ COVID-19 Ag Rapid Test



Type of Test	Antigen Testing
Model of Delivery	Screening
Manufacturer	Abbott
Swab Type	Nasopharyngeal or Nasal
Result TAT	15-20 mins
Sensitivity	>70%*
Specificity	>95%
Regulatory Approval	Health Canada=Approved



In medical diagnosis, test sensitivity is the ability of a test to correctly identify those with the disease, whereas test specificity is the ability of the test to correctly identify those without the disease.

*Test sensitivity varies depending on the screening population (symptomatic vs. asymptomatic) and the specimen collection technique. PHO reports sensitivity between 25-65% for asymptomatic population.

BD Veritor™ COVID-19 Antigen Testing System

BD Veritor™



Analyzer

Test device



Swabs

Positive and negative controls



Extraction reagent

Type of Test	Antigen test
Swab Type	Nasal, Deep Nasal, Combined throat and bilateral nares
Result TAT	15 mins
Performance	Sensitivity 84%*, Specificity 100*

Clinical Guidance - When can Antigen Screening be Used?

- Antigen screening must be conducted in accordance with the Ministry of Health's COVID-19 Guidance: Considerations for Rapid Antigen Screening.
- Rapid antigen testing is used for screening purposes only and **should NOT** be used for diagnosing someone with symptoms or exposure to COVID-19.
- Rapid antigen screening may only be performed using a testing device that has been approved by Health Canada and is available in Ontario.

Eligibility:

- **Asymptomatic employees** who have passed the initial standard screening conducted within the workplace.
- No suspected or confirmed outbreak in the workplace.

Clinical Guidance – What are the Appropriate Specimen Collection Techniques for Antigen Screening?

- Rapid antigen testing can be performed using one of the following specimen collection techniques:
 - a nasopharyngeal swab (highest sensitivity),
 - a combined swab of throat and both nares,
 - a deep nasal swab, or
 - a nasal swab.

Clinical Guidance – Who Can Perform the Swabbing and Testing?

- The Ministry of Health has addressed resourcing challenges expressed by early adopters of rapid antigen testing by making regulatory changes to allow health professionals, or other trained individuals, to perform rapid antigen testing as part of the Provincial Antigen Screening Program.

- Who can perform swabbing:

Nasopharyngeal (highest sensitivity)	Certain regulated health professionals
Combined specimen of throat and both nares	Health professionals, or other trained individuals
Deep nasal	Health professionals, or other trained individuals
Nasal	Health professionals, or other trained individuals

- Test processing can be done by broad range of health professionals, or other trained individuals

Clinical Guidance – What to Communicate about Antigen Screening Test Results

- **Positive Results:**
 - Tell the individual that the positive result is preliminary and PCR testing is required for confirmation.
 - Tell the individual that they must self-isolate and follow public health guidance until the result of the confirmatory, lab-based PCR test is known.
 - Ensure confirmatory PCR testing is booked and performed within 24 hours.
- **Negative Results:**
 - Tell the individual that the result is negative but a false negative is possible.
 - Individuals should continue to follow all infection prevention and control measures in place.

Clinical Guidance – COVID-19 Vaccines

- Vaccinated individuals should not be excluded from rapid antigen screening initiatives, as it is unknown at this time if they can still transmit COVID-19, despite being vaccinated.
- Individuals who have received a COVID-19 vaccine, regardless of whether they received one or two doses, are still able to receive an accurate result from a rapid antigen test.
- Based on a review of available evidence and expert guidance, regular testing will remain important even after individuals have received their COVID-19 vaccines.
- Rapid antigen testing is expected to continue for the foreseeable future.

Clinical Guidance – Variants of Concern

- The Panbio™ COVID-19 Ag Rapid Test has been proven to detect the B.1.1.7 variant (known as 'UK variant'). Other variants are also suspected of being detectable based on the way the test works.
- The test detects the nucleocapsid protein rather than the spike protein (where most of the variant mutations occur) and therefore is not expected to be affected by the differences in variant lineages.



Ordering Antigen Test Kits

Ordering Process

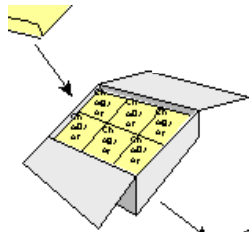
- Ordering instructions will be provided to you by your supporting Ministry.

Ordering Considerations

- Antigen test kits must be stored above 2°C and below 30°C. Do NOT freeze kits.
- Order approximately 1 month supply; re-orders should be placed when there is between 7 and 14 days of supplies left.

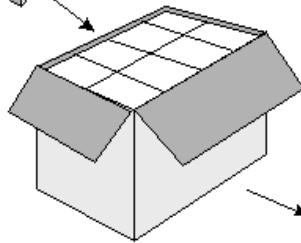
Abbott Panbio™ Inner box - Contains 25 tests

Dimensions (cm): 23 x 12.5 x 9

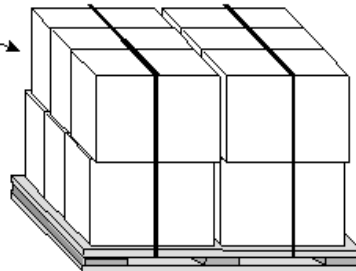


Case - Contains 800 tests

Dimensions (cm): 47 x 53 x 39



Pallet - Contains 9600 tests (12 cases)



Note:

- For large orders: place orders in multiples of 800 kits (i.e., 800, 1600, 2400, etc.)
- For orders under 400 kits: place orders in multiples of 25 (25 tests per box).
- This will help speed up shipments.



The Employer Antigen Screening Pilot – Employer Experiences

Employer Rapid Antigen Screening Pilot: Key Findings

- Most employers and employees felt an increased sense of protection and security in the workplace. Most employers felt implementation went smoothly, and most employees had no concerns with participating.
- Overall, the number of positives detected was low relative to the number of tests performed - the overall disruption to workplaces may be minimal.
- Asymptomatic screening with antigen tests was able to find COVID-19 cases that otherwise would have otherwise gone undetected.

“Overall the program went well and did identify a few asymptomatic employees and allowed us to implement the proper protocols.”

“The tool allowed us to catch at least 4 positive asymptomatic cases (just in the last month) before they came into the building and exposed the residents.”

“[Employees] felt a sense of trust in the company by us putting in a greater effort to keep our workplace and community safe.”

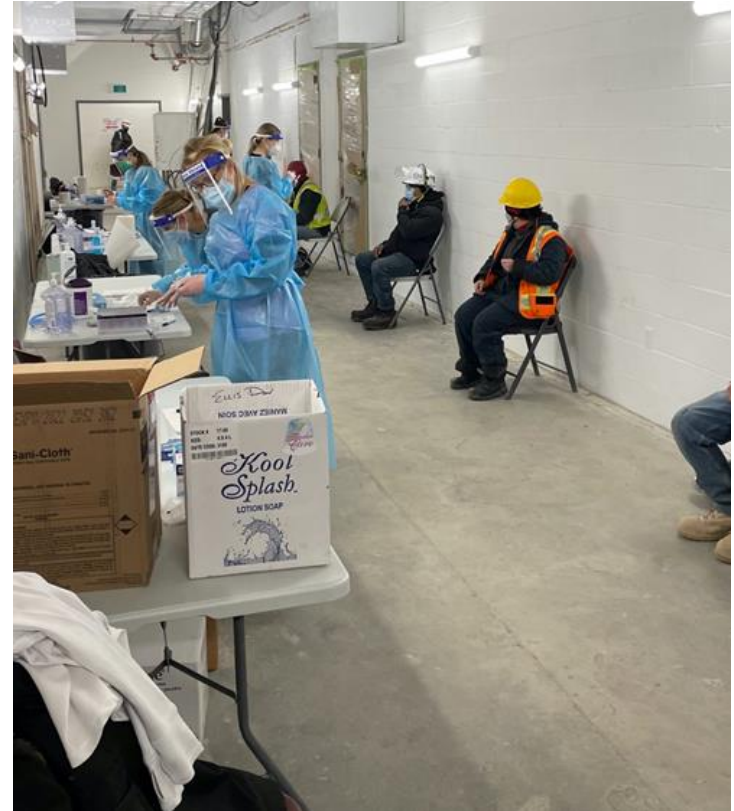
“I believe this is an effective, if not essential, method for keeping each other, our clients and ourselves safe and am grateful to have this service”



EllisDon (1/5)

Successes:

- Moving from a voluntary screening pilot to implementing mandatory screening with all onsite workers
- Implementing Point of Care (POC) antigen screening on 12 construction sites. Over 4000 employees screened, resulting in 5 positive cases. All positives were verified through PCR tests.
- The level of support and collaboration with Government, Ontario General Contractors Association and the Central Ontario Building Trades. Educating workers and demonstrated support from all levels helped to increase active worker participation.



EllisDon (2/5)

Challenges:

- Pre-registration and registration methods, logistics & planning and available staffing resources with nurses.
- Educating sites and workers, regarding why they need to be screened and general concerns with antigen screening
- We assigned someone as the lead and communicated clearly and consistently to all projects and screening sites.
- We developed a four-page FAQ and hold open calls the week before screening begins to communicate with the teams (virtually).



EllisDon (3/5)

Lessons learned:

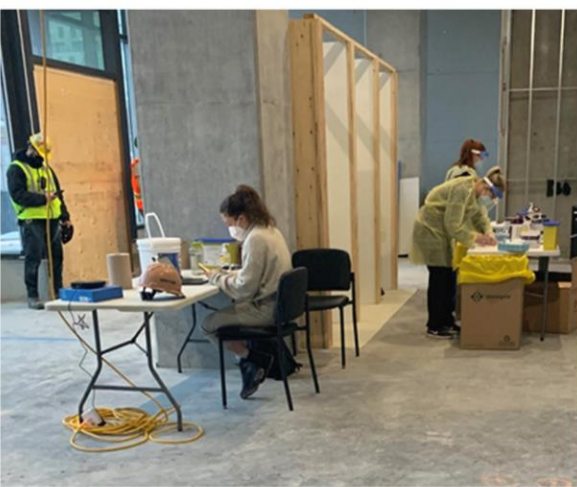
- Dedicate an overall lead person from your organization and a key coordinator for each site.
- Clearly communicate to the site in advance of the antigen screening.
- Stay on top of constant changes and updates with your team.
- First day of screening is slower as workers have questions and screening team is new to the site.
- Plan ahead and implement good pre-registration methods prior to getting started.
- Develop a consistent “package” of materials that goes out to all sites to ensure information is clear and consistent.
- Although individuals who can administer the antigen screening has changed, we have elected to keep one Registered Nurse per site and supplement with PSW’s and Nursing Students. Workers have felt more comfortable with having RN’s available if needed.



EllisDon (4/5)



EllisDon (5/5)



Central West Specialized Developmental Services: Introduction

- A registered, not-for-profit organization, funded by the Ministry of Children, Community and Social Services (MCCSS) and governed by a volunteer Board of Directors.
- An organization comprised of various services and supports including:
 - onsite and community residential homes,
 - day services, and
 - community services to help people with intellectual / developmental disabilities reach their full potential by providing exemplary supports and clinical services.
- Each of these services are supported by over 400 highly skilled direct support professionals and health care professionals.

Central West Specialized Developmental Services: Process of Pilot

- **Method:** Panbio™ Rapid Antigen Tests were conducted by an RN or MD, at various group home site locations
 - 8-week Pilot divided into 4 testing blocks of 2-weeks duration
 - 4 sampling sessions (2 per week) were requested of each participant per Block
 - Confirmatory testing was performed and sent for PCR lab testing when possible (Of the 160 Rapid Antigen tests, 106 had corresponding PCR tests)

- **Results:**



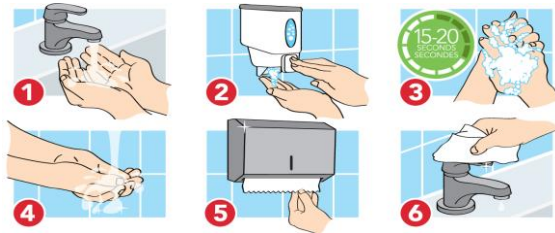
- 160 Panbio™ Rapid Antigen test completed
- 1 was inconclusive
 - 100% of conclusive tests provided negative results



- 106 PCR COVID test completed
- Two resulted in positive cases
 - 98% correspondence to Panbio Rapid Antigen

Central West Specialized Developmental Services: Successes

- Performing parallel PCR laboratory testing:
 - Emphasized to study participants that the Panbio™ Rapid Antigen Test is a screening tool, not a diagnostic test
 - Provided confirmation of the accuracy of the Panbio™ Rapid Antigen Test (98%)
- **Employee Satisfaction:** participants communicated positive feelings of participating in the pilot – feelings of assuredness and would be willing to participate in another round with a less invasive test
- **Health Education:** provided opportunity for discussion with health provider about COVID-19 prevention (e.g. reinforcing hand-washing, masking; discussion of vaccination)



Central West Specialized Developmental Services: Challenges

- Repeated testing over 2 weeks was challenging:
 - Those that worked off-site
 - Full participation= 8swabs in 2-week period
- Invasive nature of nasopharyngeal swab (NPS):
 - irritation, pain, and risk of bleeding/injury
 - PCR swab is larger diameter than swab used for Rapid test
 - Participants declined PCR confirmatory testing 1/3 of the time due to discomfort and invasiveness of the NPS
- Positive laboratory-based PCR result could be indicative of:
 - active infectious COVID-19
 - recently resolved COVID-19
 - false positive

Central West Specialized Developmental Services: Lessons Learned

- Access to the Panbio™ Rapid Antigen Test is reassuring to employees
- Screening by healthcare professionals provides additional opportunities for health education
- Less invasive sampling method would be preferable to the nasopharyngeal swab



- Next Steps: Phase #2 of Pilot using Throat + Nostrils combined sampling. Only positive screen results will warrant confirmatory PCR lab testing by nasopharyngeal swab.

New Gold (1/3)

Successes:

- New Gold's Rainy River mine has a protocol to test all employees and contractors arriving from outside the Northwestern Health Unit region. We were relying on our internal PCR testing, which is a lengthy process.
- The antigen tests have allowed us to test workers at our camp upon their arrival and produce results prior to site entry
- The quick turnaround time allows visitors and consultants to begin their day without restrictions.



New Gold (2/3)

Challenges:

- Reluctance of volunteers with the nasopharyngeal method
- With only one health care practitioner performing the antigen rapid tests there was a concern with the life of the sample during pre-shift screening. During peak screening events the health care practitioner would resort to PCR testing which has a longer sample life.



New Gold (3/3)

Lessons learned:

- We've allocated an additional person to the pre-shift screening process to eliminate the time constraint of the samples
 - Lab technician prepares the extraction tubes with buffer solution.
 - Nurse collects nasopharyngeal swab and stores in buffer solution inside prepared extraction tubes.
 - Lab technician completes the testing with devices while nurse continues swab collection.
 - Web-based screening application sped up the pre-screening process.





Getting Started

Key Site Requirements for Rapid Antigen Screening



Rapid testing lead:

An administrator, director of care or other lead to oversee the rapid testing implementation at your organization.



Testing Personnel: Health professionals, or other trained individuals, to perform the swabbing and operating the rapid testing device.



Confirmatory testing: The ability to collect PCR swabs or process in place to direct individuals with preliminary positive results from the rapid testing to closest assessment centre or participating community lab for confirmatory lab-based testing.



Ongoing quality support and capacity: Staff conducting the screening clinic should review the training session to ensure the antigen testing is run appropriately and the required quality checks are performed on the test kits.



Data reporting: Sites are required to submit minimum data elements requested on a regular basis (e.g. weekly reporting of volumes).



Next Steps to Implement an Antigen Screening Program

1. Review the Provincial Antigen Screening Program documents.
2. Review the onboarding guide, training modules and go-live checklist.
3. Review the procedures for using rapid antigen tests.
4. Identify a testing lead who will oversee implementation of antigen screening.
5. Order and receive antigen test kits, following instructions for your sector.



Available Resources and Additional Support

Training Resources Available from Ontario Health

- Ontario Health website - ontariohealth.ca/antigen-test
- Training modules:
 - Implementing a Rapid Antigen Screening Clinic with Panbio™ COVID-19 Antigen Rapid Test
 - Best Practices for Point-of-Care Testing
 - Specimen Collection
 - Documenting and Reporting Results
- Participants should also receive:
 - Onboarding guide
 - Ordering instructions

Additional Resources

- Abbott – Helpful documents and video demonstrations: globalpointofcare.abbott/en/product-details/panbio-covid-19-ag-antigen-test.html
- Public Health Ontario fact sheet: Abbott Panbio™ COVID-19 Antigen Rapid Test: Biosafety Considerations: publichealthontario.ca/-/media/documents/lab/covid-19-abbott-panbio-antigen-rapid-test-biosafety.pdf?la=en

Questions?

- For more information about this presentation contact covid19testing@ontariohealth.ca

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