Testing COVID-19

Licensed Nurse Staff Training (12.29.2020)





Objectives

Upon completion of this presentation, participants should be able to:

- Verbalize the reasons COVID-19 testing is done in the facility
- 2. Describe the types of COVID-19 testing
- Identify PPE necessary for testing
- 4. Verbalize immediate follow-up for positive COVID-19 test results





Definitions

- Antigen Testing
- Screening Testing
- Surveillance Testing

https://www.cdc.gov/coronavirus/20 19-ncov/lab/resources/antigen-testsguidelines.html







Definitions

- Antibody Testing: Testing from a blood test that looks for antibodies that develop several days to weeks after infection. This is not a diagnostic test.
- Antigen Testing: "Antigen tests are immunoassays that detect the presence of a specific viral antigen, which implies current viral infection".
- Point of Care Testing "is diagnostic testing that is performed at or near the site of resident care."
- The RT-PCR (reverse transcription polymerase chain reaction) molecular test detects the COVID-19 genetic material.

https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/nursing-home-testing-algorithm-508.pdf





WHY TESTING FOR COVID-19 IS ESSENTIAL





Staff Testing

Staff testing:

- Staff with signs/symptoms of COVID-19
- Asymptomatic staff with known or suspected exposure
- Asymptomatic staff according to routine testing by community COVID-19 positivity rate
- Staff who have been diagnosed with COVID-19 to determine if no longer infectious (in some cases)

https://www.cdc.gov/coronavirus/2019-ncov/hcp/testing-healthcare-personnel.html





Testing Summary

Table 1 Testing Summary

Testing Trigger	Staff	Residents	
Symptomatic individual	Staff with signs and	Residents with signs and	
identified	symptoms must be tested	symptoms must be tested	
Outbreak (Any new case	Test all staff that previously	Test all residents that	
arises in facility)	tested negative until no new	previously tested negative	
****	cases are identified*	until no new cases are	
		identified*	
Routine Testing	According to Table 2 above	Not recommended, unless	
	W00000	the resident leaves the	
		facility routinely	





CMS

Table 2: Routine Testing Intervals Vary by Community COVID-19 Activity Level

Community COVID-19 Activity	County Positivity Rate in the past week	Minimum Testing Frequency
Low	<5%	Once a month
Medium	5% - 10%	Once a week*
High	>10%	Twice a week*

^{*}This frequency presumes availability of Point of Care testing on-site at the nursing home or where off-site testing turnaround time is <48 hours.

https://www.cms.gov/files/document/qso-20-38-nh.pdf





CMS Update - Testing for Rural Areas

"Counties with 20 or fewer tests over 14 days will now move to "green" in the color-coded system of assessing COVID-19 community prevalence. Counties with both fewer than 500 tests and fewer than 2,000 tests per 100,000 residents, and greater than 10 percent positivity over 14 days — which would have been "red" under the previous methodology — will move to "yellow."



https://www.cms.gov/newsroom/press-releases/cms-updates-covid-19-testing-methodology-nursing-homes





Rapid Antigen Testing

- FDA granted emergency use authorization for antigen testing that can identify COVID-19 (SARS-CoV-2).
- Can be used at point-of-care
- Results can be obtained in about 15 minutes
- Generally less sensitive than viral testing that detects nucleic acid using reverse transcription polymerase chain reaction (RT-PCR)
- Perform best when individual is tested in the early stages of COVID-19 infection (Viral load is generally at it's highest)
- Can be used for screening in high-risk settings (i.e. LTC facilities)
- Allows for prompt implementation of Infection Prevention and Control measures to prevent transmission





Gold Standard

The "gold standard" for clinical diagnostic detection of SARS-CoV-2 remains RT-PCR.

https://www.cdc.gov/coronavirus/201 9-ncov/lab/resources/antigen-testsguidelines.html#table1







Screening



"When used for *screening* testing in congregate settings, test results for SARS-CoV-2 should be considered presumptive"

https://www.cdc.gov/coronavirus/2019ncov/lab/resources/antigen-testsquidelines.html#table1





Summary Table

Table 1. Testing Strategies for SARS-CoV-2

	Diagnostic	Screening	Surveillance
Symptomatic or Known or Suspected Exposure	Yes	No	N/A
Asymptomatic without Known or Suspected Exposure	No	Yes	N/A
Characterize Incidence and Prevalence in the Community	N/A	N/A	Yes
Results may be Returned to Individuals	Yes	Yes	No

https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html#table1





Reporting

"HHS has determined that nursing homes must report point-of-care testing through NHSN."

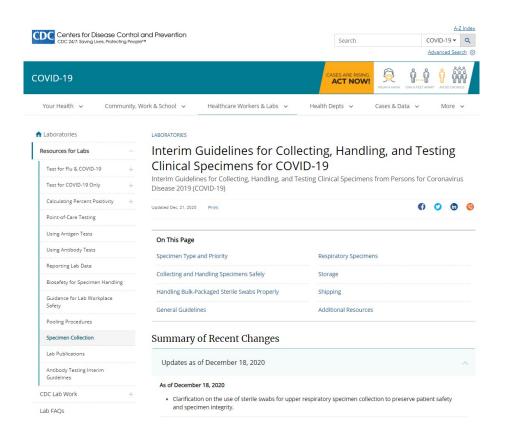


https://www.hhs.gov/sites/default/files/covid-19-laboratory-data-reporting-guidance.pdf





Specimen Collection



I. Respiratory Specimens

A. Upper respiratory tract

Nasopharyngeal specimen collection /Oropharyngeal (throat) specimen collection

Use only synthetic fiber swabs with plastic or wire shafts. Do not use calcium alginate swabs or swabs with wooden shafts, as they may contain substances that inactivate some viruses and may inhibit molecular tests. CDC is now recommending collecting only the NP specimen, although OP specimen remain an acceptable specimen type. If both NP and OP specimens are collected, they should be combined in a single tube to maximize test sensitivity and limit use of testing resources.



Instructions for collecting an NP specimen: Tilt patient's head back 70 degrees. Gently and slowly insert a minitip swab with a flexible shaft (wire or plastic) through the

nostril parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient, indicating contact with the nasopharynx. Swab should reach depth equal to distance from nostrils to outer opening of the ear. Gently rub and roll the swab, Leave swab in place for several seconds to absorb secretions. Slowly remove swab while rotating it. Specimens can be collected from both sides using the same swab, but it is not necessary to collect specimens from both sides if the minitip is saturated with fluid from the first collection. If a deviated septum or blockage create difficulty in obtaining the specimen from one nostril, use the same swab to obtain the specimen from the other nostril.

For a visual guide, see the Nasopharyngeal (NP) Specimen Collection Steps infographic 🚨 [PDF - 13 MB].

OP specimen: Insert swab into the posterior pharynx and tonsillar areas. Rub swab over both tonsillar pillars and posterior oropharynx and avoid touching the tongue, teeth, and gums.

Nasal mid-turbinate (NMT) specimen

Use a flocked tapered swab. Tilt patient's head back 70 degrees. While gently rotating the swab, insert swab less than one inch (about 2 cm) into nostril parallel to the palate (not upwards) until resistance is met at turbinates. Rotate the swab several times against nasal wall and repeat in other nostril using the same swab.

For a visual guide, see the Nasal mid-turbinate (NMT) Specimen Collection Steps infographic, [8] [PDF - 16 MB].

Anterior nasal (nares) specimen

Using a flocked or spun polyester swab, insert the entire absorbent tip of the swab (usually ½ to ¾ of an inch (1 to 1.5 cm) inside the nostril and firmly sample the nasal wall by rotating the swab in a circular path against the nasal wall at least 4 times. Take approximately 15 seconds to collect the sample. Be sure to collect any nasal drainage that may be present on the swab. Sample both nostrils with same swab.

For a visual guide, see the How To Collect Your Anterior Nasal Swab Sample For Covid-19 Testing infographic, D

https://www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html





PPE for Specimen Collection















Nasal Swab

- Gather supplies
- Don PPE
- 3. Use sterile swab provided in packet
- 4. Insert swab at least ½ inch inside the nostril
- Firmly sample the nasal membrane, rotating swab
- 6. Leave in place for at least 15 seconds
- 7. Sample both nostrils with same swab

https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html





Nasopharyngeal Swab

- Insert minitip swab with a flexible shaft (wire or plastic) through the nostril parallel to the palate (not upwards) until resistance is encountered or the distance is equivalent to that from the ear to the nostril of the patient, indicating contact with the nasopharynx.
- Swab should reach depth equal to distance from nostrils to outer opening of the ear. Gently rub and roll the swab.
- Leave swab in place for several seconds to absorb secretions.
- Slowly remove swab while rotating it

https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html





Oropharyngeal (throat) Swab

- 1. Insert swab into the posterior pharynx and tonsillar areas.
- Rub swab over both tonsillar pillars and posterior oropharynx and
- avoid touching the tongue, teeth, and gums

PATHWAY

This document is for general informational purposes only.



Anterior Nasal Swab

- 1. Use a flocked tapered swab.
- 2. Insert the entire absorpent TIP of the swab inside the nostril (1/2-3/4 of an inch)
- 3. Firmly sample the nasal wall by rotating swab in a circular motion against the nasal wall at least 4 times
- 4. This should take approximately 15 seconds to collect the sample
- 5. Collect any nasal drainage that may be present on swab
- 6. Both nostrils can be sampled with the same swab

https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html





Specific Testing Device

- Add specific manufacture device instructions here
- Quidel https://togetheragain.quidel.com/
- BD Veritor System https://www.bdveritor.com/
- Abbott Binax Now <u>https://www.globalpointofcare.abbott/en/support/product-installation-training/navica-brand/navica-binaxnow-ag-training.html</u>





Follow-up with Test Results

- 1. Immediate placement decision for resident
- 2. Employee: Send home immediately
- Notifications
- 4. Retesting
- 5. Facility Plan





Cleaning and Disinfecting







In Summary













- Centers for Disease Control and Prevention. Interim Guidance for Rapid Antigen Testing for SARS-CoV-2. Updated Sept. 4, 2020: https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html#table1
- Centers for Disease Control and Prevention. CLIA Home: https://www.cdc.gov/clia/index.html
- Centers for Disease Control and Prevention: Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for COVID-19, Updated Nov. 4, 2020: https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html
- United States Health & Human Services. COVID-19 Pandemic Response, Laboratory Data Reporting: Cares Act Section 18115: https://www.hhs.gov/sites/default/files/covid-19-laboratory-data-reporting-guidance.pdf



- Centers for Disease Control and Prevention. Considerations for Interpreting Antigen Test Results in Nursing Homes. August 21, 2020: https://www.cdc.gov/coronavirus/2019-ncov/downloads/hcp/nursing-home-testing-algorithm-508.pdf
- Centers for Disease Control and Prevention. Considerations for Use of SARS-CoV-2 Antigen Testing in Nursing Homes. Updated Dec. 28, 2020: https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-antigen-testing.html
- Centers for Disease Control and Prevention. Interim Guidelines for Collecting, Handling, and Testing Clinical Specimens for COVID-19. Updated Dec. 21, 2020: https://www.cdc.gov/coronavirus/2019-ncov/lab/guidelines-clinical-specimens.html
- Centers for Disease Control and Prevention. Interim Guidance for Antigen Testing for SARS-CoV-2. Updated Dec. 16, 2020: https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html





- Centers for Disease Control and Prevention. Performing Facility-wide SARS-CoV-2 Testing in Nursing Homes. May 19, 2020: https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-facility-wide-testing.html
- Centers for Disease Control and Prevention. Testing Guidelines for Nursing Homes.
 Interim SARS-CoV-2 Testing Guidelines for Nursing Home Residents and Healthcare Personnel. Updated Oct. 16, 2020: https://www.cdc.gov/coronavirus/2019-ncov/hcp/nursing-homes-testing.html
- Centers for Disease Control and Prevention. COVID-19 Testing Overview. Updated Dec. 7, 2020: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/testing.html
- Centers for Disease Control and Prevention. Guidance for SARS-CoV-2 Point-of-Care Testing. Updated Dec. 26, 2020: https://www.cdc.gov/coronavirus/2019-ncov/lab/point-of-care-testing.html
- Centers for Medicare & Medicaid Services: QSO-20-38-NH, Interim Final Rule (IFC), CMS-3401-IFC, Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency related to Long-Term Care (LTC) Facility Testing Requirements and Revised COVID19 Focused Survey Tool. August 26, 2020: https://www.cms.gov/files/document/qso-20-38-nh.pdf





- Centers for Medicare & Medicaid Services: QSO-20-37-CLIA, NH, Interim Final Rule (IFC), CMS-3401-IFC, Updating Requirements for Reporting of SARS-CoV-2 Test Results by Clinical Laboratory Improvement Amendments of 1988 (CLIA) Laboratories, and Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency. August 26, 2020: https://www.cms.gov/files/document/qso-20-37-clianh.pdf
- United States Food & Drug Administration. Coronavirus Testing Basics. https://www.fda.gov/consumers/consumer-updates/coronavirus-testing-basics
- United States Food & Drug Administration. FAQs on Testing for SARS-CoV-2: https://www.fda.gov/medical-devices/coronavirus-covid-19-and-medical-devices/faqs-testing-sars-cov-2#general-screening-asymptomatic





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