

1 **S1 Data Collection Protocols for *Combining Rapid***
2 ***Antigen Testing and Syndromic Data Improves***
3 ***Sensitivity and Specificity in Real-World COVID-19***
4 ***Detection***

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PVF

Screening

← Household

Address HHS

Respondent name Aa

Respondent phone number 11112236547

Complete household visit 🏠

← PVF Form

Does the person agree to a health screening and their information to be passed to health services?

All of your data will be kept confidential under the Ministry of Health and Family Welfare of Bangladesh. Your data might be shared for telemedicine referral and other health-related research or services. You have the right to stop this interview at any point in time or refuse to give answers to any questions that make you uncomfortable.

☐ Yes ☐ No

1. Phone number

+88 Enter phone number

2. Alternative phone number

+88 Enter phone number

3. PVF Name

Enter name

4. Age of the PVF

Age

5. Gender

☐ Male ☐ Female ☐ Other

10. PVF's temperature reading

Enter temperature (95 to 110 °F) °F

11. Symptoms

☐ Cough

☐ Diarrhoea

☐ Headache

☐ Loss of smell

☐ Loss of taste

☐ Muscle pain

☐ Shortness of breath

☐ Sore throat

☐ Tiredness

☐ Red eyes / Conjunctivitis

☐ Runny nose

☐ Sputum production (Wet cough)

☐ Vomiting

12. Has the PVF tested positive for covid in the last 7 days?

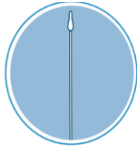
☐ Yes ☐ No

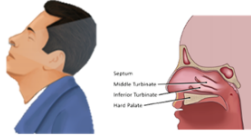
Save and next

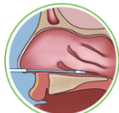
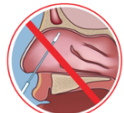
Figure 1: Data collection by the community support teams (CSTs) is implemented using a mobile phone application, screenshots presented here.

Nasal Sample Collection and Testing Protocol

[Nasal sample collection \(infographics showing Left Nasal sample collection\) instruction for CST 1](#)

	<ul style="list-style-type: none"><input type="checkbox"/> Take out the nasal mid-turbinate swab from the packet and keep the tube safely for the time being.<input type="checkbox"/> Touch only the plastic shaft not the padded end.
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	<ul style="list-style-type: none"><input type="checkbox"/> Ask the patient to sit straight and tilt the head back (approximately 70 degree).
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<div style="display: flex; justify-content: space-around;"><div data-bbox="521 1087 639 1199"><p>PROPER SWAB PLACEMENT</p></div><div data-bbox="659 1087 781 1199"><p>IMPROPER SWAB PLACEMENT</p></div></div>	<ul style="list-style-type: none"><input type="checkbox"/> Insert the swab in the nasal space parallel to the hard palate.<input type="checkbox"/> Resistance will be felt and that is the confirmation of reaching to the nasopharynx.
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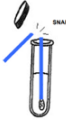

	<ul style="list-style-type: none"><input type="checkbox"/> Once the swab is against the hard surface rotate it several times.
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Figure 2: Page 1 sample collection protocols developed by Tasnuva Chowdhury.



- ☐ Take out the swab from the left nose and insert the swab into the VTM labelled as "N"
- ☐ Make sure the liquid transport medium covers the tip of the swabs.
- ☐ Break the swab shafts at the marking on the shaft.



- ☐ Screw the caps back on the test tubes tightly.

☐ Once the nasal sample is collected by CST 1, CST 2 will check the box in the app (See example below).

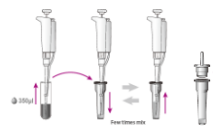
Specimen:

☐ Collected ☐ Not collected

If collected mention type:

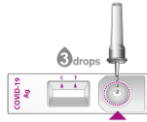
☐ Right nasal swab ☐ Throat swab ☐ Saliva ☐ Combined left nasal swab and throat swab

[Nasal swab sample analysis](#)




- ☐ Using a micropipette, collect the 350µl of specimen from the VTM. Mix the specimen with an extraction buffer in another tube.
- ☐ Press the nozzle cap tightly onto the tube.


Figure 3: Page 2 sample collection protocols developed by Tasnuva Chowdhury.



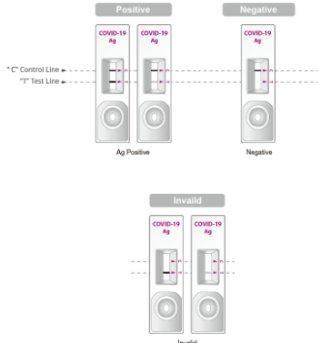
☐ Apply 3 drops of extracted specimen to the specimen well of the test device.



☐ Read the test result in 15-30 minutes.



Interpretation of Nasal sample analysis



☐ A colored band, control line (C), in the top section of the result window will appear in positive and negative test result.

- o Presence of a second colored band, "T" test line, in conjunction with the "C" Control line is always considered as positive. Even if the "T" test line is faint.
- o Presence of only "C" control line with out "T" test line will be considered as negative.

☐ Absence of the control line in the top section will always consider the result as invalid.

Image and Information Sources:

https://www.cdc.gov/coronavirus/2019-ncov/downloads/lab/NMT_Specimen_Collection_Infographic_FINAL_508.pdf

Figure 4: Page 3 sample collection protocols developed by Tasnuva Chowdhury.