

COVID-19 Testing

Issue Date	Review Date	Version
April 2022	April 2023	1.5

Purpose

This SOP sets out the current processes for testing of patients for Coronavirus Infectious Disease 2019 (COVID-19) at University Hospitals Plymouth NHS Trust (UHPNT).

Who should read this document?

These guidelines are applicable to all staff, to include Ministry of Defence (MOD) personnel; contractors, those employed on a fixed term contract, honorary contract, agency or locum staff, and students affiliated to educational establishments and volunteers.

Key Messages

One viral respiratory swab is required for PCR COVID-19 laboratory testing. The clinical specimen should be labelled correctly (first name, surname, date of birth and hospital or NHS number), double bagged and delivered to Microbiology laboratory in person or via the pod system.

Where lateral flow tests (LFTs) are used the sampling technique is similar to PCR testing and the oropharynx and nose should be sampled using the swab supplied with the kit. It is important that the detailed guidelines for correct use of LFTs accompanying the kit are followed, in particular the test should be allowed to develop for a full 30 minutes before declaring a result negative. Positive results that become apparent after 30 minutes should be disregarded as false positives, it is important the test cartridge is disposed of immediately after use as clinical waste to prevent any uncertainties regarding negative results.

Elective patients will be asked to undertake a LFT test in the 72 hours before admission and only travel to the hospital if the LFT is negative.

Those elective patients who will need an episode of critical care following their elective procedure and any other patient where a clinician deems that their risk profile warrants a PCR test in advance of their procedure should undergo SARS CoV2 PCR testing.

Non-elective patients requiring inpatient admission who present with respiratory tract illness or are extremely clinically vulnerable and all patients transferred from other health care facilities will have a SARS CoV-2 PCR swab taken on admission. Further testing is dependent on the nature of the ward they are admitted to.

Following organ or stem cell transplants, patients will have daily PCR tests performed for at least 10 days following the procedure. In the event of discharge within the 10 days the patient can be asked to continue testing using home LFT tests.

If discharge testing for SARS CoV 2 is required eg as mandated by the admitting facility, it should be by PCR and be taken in the 48 hours prior to discharge

Consider a SARS CoV 2 swab 48hrs before discharge for patients being discharged to their usual place of residence where they reside with clinically extremely vulnerable persons.

For patients with COVID-19 positive result, viral RNA may be detected in subsequent respiratory swabs taken weeks to months later. Development of new symptoms beyond 90 days could be a sign of a new/recurrent COVID-19 infection and isolation precautions should be instigated as per guidelines for management of patients with COVID-19.

Core accountabilities	
Owner	Claire Hail Director and Nurse Consultant of Infection Prevention and Control
Review	April 2022 – Infection Prevention and Control Sub-Committee
Ratification	Lenny Byrne, Chief Nurse
Dissemination (Raising Awareness)	Trust-wide
Compliance	NHS 1.2.8 & 2.2.8 CQC Essential Standards of Quality & Care The Hygiene Code

Links to other policies and procedures

Document Library - Infection Control Folder

Version History

1	14 th October 2020	Document Created
1.1	5 th January 2021	Updated in line with national guidance.
1.2	11 th February 2021	Updated in line with national guidance.
1.3	17 th June 2021	Update includes advice on management of patient reported COVID-19 positive lateral flow test results.
1.4	20 th January 2021	Post exposure contact patients will have a PCR screening swab daily for 10 days Patients admitted through the Emergency pathways will have the swab processed on the Genexpert platform
1.5	20 th April 2022	Extensive updates including changing to LFT for elective surgery, moving to the Living with COVID Secure wards

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An electronic version of this document is available on Trust Documents on StaffNET. Larger text, Braille and Audio versions can be made available upon request.

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Standard Operating Procedure (SOP)
COVID-19 Testing

1 Introduction

This SOP provides information on the current COVID-19 screening processes at the UHPNT for elective and non-elective patient pathways including adult, paediatric and maternity services. This document will provide information on management of COVID-19 results as part of patient care planning and pathway.

All patients should be assessed using the COVID-19 Patient/Accompanying Person Assessment form (see Summary of local procedures for management of suspected and confirmed cases of COVID 19 version 3)

This document should be read in line with the latest versions of:

- Guidelines for the Management of Coronavirus Infectious Diseases,
- SOP for Management of suspected and confirmed cases of COVID-19.

2 Taking the Viral Respiratory Swab

The optimal samples required for the confirmation of viral respiratory infections, including COVID-19, are a throat and nasal swab/aspirate.

For PCR testing the swab should be broken off into a viral transport media (VTM). For lateral flow tests the swab supplied with the test kit should be used to sample the patients nose and throat and then immersed in the supplied extraction fluid and excess fluid expressed from the swab by firmly pressing and rolling the swab on the inside of the extraction container for ten seconds. Use the extracted sample to complete the test as per the manufacturer's instructions.

Viral swabs can be obtained from Microbiology Reception on Level 5.

The healthcare worker taking the swab must wear the appropriate Personal Protective Equipment (PPE): sessional use fluid-repellent surgical face mask, appropriate eye protection, single use disposable apron and single use disposable non-sterile gloves. Wash hands and forearms with water and soap following removal of PPE.

Instructions on how to take the swabs are included in the appendix 1.

For laboratory PCR test complete the required electronic request documentation, double bag the specimen and send to the Microbiology Department on Level 5 via the pod system or hand deliver.

3 Viral Respiratory Swab Testing

The choice of test platform is designed to accommodate the clinical needs of patients and operational needs of the Trust

- a. Ultra rapid testing, Laboratory turn around time of around <90 minutes:
 - All from Plym Emergency Department,
 - Direct admissions eg from Clinic and complex discharges (arranged directly by the operations team)
 - Clinically urgent testing for logistical reasons eg Urgent pre op

This test may be supplied in the Microbiology Laboratory or by ED Point of Care test in line with test availability and clinical/logistical requirements.

- b. All other PCR tests will be processed on standard tests platforms eg alinity M. Typical turn around times may be as short as 6-8 hours though the guaranteed turn around time will be within 24 hours

In general, test platforms are decided on receipt in the laboratory based on the above criteria though the correct use of electronic test order codes can assist the laboratory

4 When to test patients Emergency admissions unplanned care

Emergency admissions that will be assessed in Plym ED are:

Signs of acute Respiratory illness SARS CoV 2 PCR test

Tested positive for COVID in the previous 10 days SARS CoV 2 by PCR test

All other emergency admissions, will be assessed in non-Plym areas of ED

Pre existing medical condition which might predict a poor response to COVID vaccination eg solid organ transplantation, current treatment for haematological malignancy, known immunodeficiency state, CKD 4 or 5: SARS CoV 2 PCR test and COVID serology

No pre-existing medical condition which might predict a poor response to COVID vaccination:

SARS CoV 2 testing not indicated

5 Frequency of COVID-19 Screening – When to test Appendix 2

Areas of the hospital are designated COVID cohort, COVID Secure and General Wards

COVID cohort wards Patients with clinical COVID will be nursed here.

COVID secure wards Clinically vulnerable patients will be nursed on these wards and only those known not to be COVID infected will be admitted

General wards Other clinical areas will be considered general areas

Ongoing testing requirements

COVID cohort wards None, all admitted will have been confirmed as COVID infected

No routine staff testing

COVID secure wards Frequent testing throughout admission, frequency will be dependant upon local epidemiology and likelihood of circulation and will typically be daily

Staff will undertake twice weekly self-testing with LFT

General Wards Routine SARS CoV-2 testing is not required

Patient SARS CoV-2 PCR testing only required when symptomatic for likely COVID eg fever, cough coryzal type illness and increased oxygen requirement

Staff should arrange SARS CoV 2 testing via Occupational Health testing only if symptomatic for likely COVID eg fever, cough coryzal type illness.

- Further testing of known positives is generally **not** required within 90 days of disease onset/first positive.
- All patients should be screened with a SARS CoV 2 PCR tests within 48 hours of discharge to another health care facility, other than those areas directly under the UHP Infection Control umbrella eg. Tavistock Hospital, Mount Gould Hospital, South Hams Hospital, in line with the requirements of the admitting facility.
- Consider offering a SARS CoV 2 PCR test 48 hours before discharge for patients being discharged to their usual place of residence where they reside with clinically extremely vulnerable persons
- In addition to the routine screening conducted on Covid Secure wards (see above), Oncology/Haematology patients should have a SARS CoV 2 PCR test before new treatments and if positive be screened regularly to check for clearance of virus.
- Patients with a negative COVID 19 test result but a persisting clinical suspicion of COVID 19 should remain isolated and be re swabbed using a SARS CoV 2 PCR at 72 hours.

6 COVID-19 Result Validity Period

For patients with COVID 19 positive result, viral RNA may be detected in subsequent respiratory swabs for weeks to months after the first positive sample. Manage in line with COVID-19 guidelines for the duration on infectivity period (likely to be shorter than time of RNA detection). Development of new symptoms could be a sign of a new/recurrent COVID-19 infection and isolation precautions should be instigated as per guidelines for management of patients with COVID-19.

7 Elective Admission Pathway

Elective patients whose procedure requires at least an overnight stay and day-case patients who are not fully vaccinated should self test with an LFD no more than 72 hours prior to the admission.

Patients who will need an episode of critical care following their elective procedure or for any other patient where a clinician deems that their risk profile warrants it, should have a PCR test in advance of their procedure.

No COVID-19 test will be required for fully vaccinated day-case patients deemed by their treating clinician to be low-risk.

In-patients who require a procedure during the current stay should be tested with SARS CoV-2 PCR test no more than 72 hours prior to the procedure.

8 Inter-hospital Transfer

Patients being admitted through transfer from another healthcare facility should be admitted into a single-room with droplet isolation precautions in place for completion of admission screening protocols (MRSA, CPE, etc). COVID-19 status from the transferring healthcare facility may be available at the time of admission, including information on possible exposure. Subsequent SARS CoV 2 PCR testing will be in line with the nature of the ward admitted to eg COVID Secure.

9 Influenza and Respiratory Viruses

Patients requiring testing for COVID-19 and respiratory viruses and/or Influenza will require two respiratory viral swabs sent for microbiology testing.

10 Staff COVID-19 Testing

Members of staff experiencing acute onset of COVID-19 symptoms (pyrexia and influenza-like illness) are required to remain off work and telephone the 24/7 central absence reporting (CAR) line on telephone 01752 430000. The CAR Hub will advise on the testing, self-isolation and return to work process.

Members of staff with symptomatic household contacts need not be tested unless symptomatic for likely COVID.

11 References

Public Health England (2022) Infection Prevention and Control for seasonal respiratory infections in Health and Care settings (including SARS-CoV-2) for winter 2021 to 2022. Available at: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control/covid-19-guidance-for-maintaining-services-within-health-and-care-settings-infection-prevention-and-control-recommendations>

Taking a Respiratory Viral sample for 'Flu & COVID-19

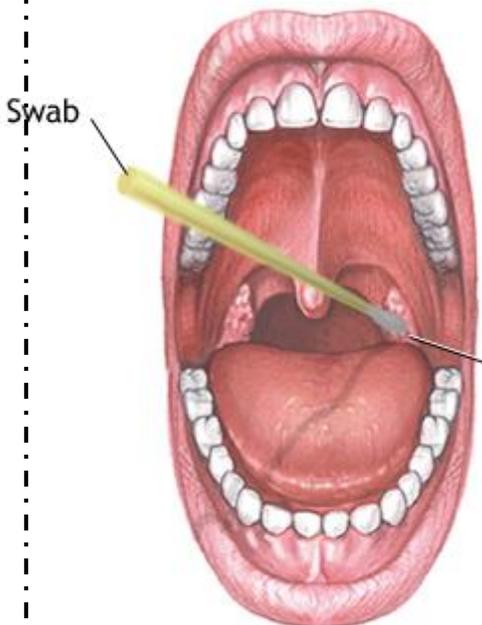
The optimal samples required for the confirmation of 'flu and COVID-19 infections are a **throat and nasal swab or nasal aspirate taken using a swab** broken off into a viral transport media (VTM).

- The person taking the swabs must wear: apron, fluid resistant mask, eye protection and gloves
- Throat and nasal (nasopharyngeal) swab as shown below
- Label the VTM tube with patient details of name / hospital no: / date of birth - apply a patient label flat to the swab tube

In the weekly during IP admission box during periods of high community transmission screening may be undertaken on alternate days throughout admission.

Taking the screen

1. Throat Swab

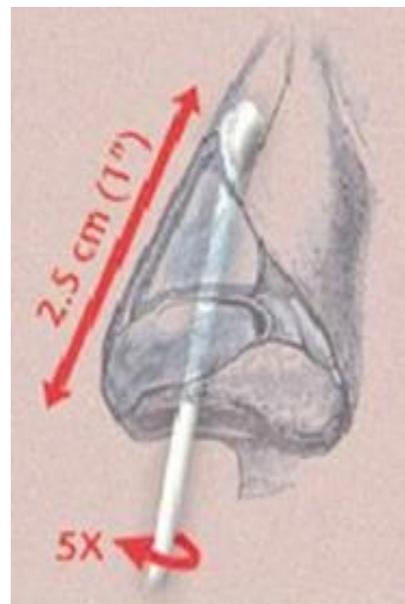


- Using the swab, vigorously swab the posterior pharyngeal wall

**USING
SAME
SWAB**



2. Nose Swab



- Tilt the patients head back slightly and gently insert **the same swab** along the medial part of the septum, as far as possible.
- Rotate the swab slightly several times, remove and insert the swab into the VTM (you will need to break the swab to fit inside the tube)

- Place the labelled VTM tube containing the swab in a plastic specimen bag and seal.
- Place in a second plastic bag with the request form or order electronically, outside the room.
- Remove PPE in the correct order and dispose as clinical waste
- Take the specimen to Microbiology Lab Level 5 or send via the pod system.

	No asymptomatic screening indicated	Within 72 hours of invasive/Surgical procedure	Admission testing	Daily testing
Elective admission Day case fully vaccinated (two doses)	√			
Elective admission Day case NOT fully vaccinated (two doses)		√ LFT		
Elective admission staying at least overnight whose procedure does NOT necessitate post operative critical care		√ LFT		
Elective admission whose procedure will necessitate post operative critical care		√ PCR		
Symptomatic non elective admission with signs of acute respiratory disease			√ PCR	
Asymptomatic non elective admission tested positive for COVID in the previous 10 days			√ PCR	
Asymptomatic non elective admission with a pre existing medical condition which might predict a poor response to COVID vaccination			√ PCR and clotted blood for serology	
Admission to a COVID secure ward			√ PCR	√ PCR
Admission to general wards	No admission or routine sampling indicated unless clinically symptomatic with COVID in which case test with SARS CoV 2 PCR			
Admission to a COVID RED Ward	Only those with known PCR positive symptomatic disease will be admitted. Further testing is not indicated			

