



Guidance for use of point of care testing equipment in positive patients and those with a suspected diagnosis of COVID-19

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This guidance is based on documentation produced by the Royal Free London NHS Foundation Trust for the use of point of care tests (POCT) for confirmed or suspected COVID-19 patients. It should be adapted for local use depending on the clinical setting and range of POCT in use.

To avoid the risk of inadvertent testing of patients with unknown COVID-19, the measures in this document should be adopted for all POCT for all patients. The key measures are the wearing of PPE for all POCT and the cleaning of POCT devices by the operator after every use.

Scope of this document

The guidance has been prepared to provide information around POCT provision by healthcare professionals at this time of COVID-19 outbreak. Both laboratory personnel and various grades of clinical staff are in provision of the POCT service. Knowledge about the pathogenic potential and transmission of the SARS Coronavirus-2 (SARS-COV-2) is currently limited. The guidance applies to all clinical staff and laboratory staff within the POCT team providing a service for confirmed or suspected cases of COVID-19. It is intended to minimise the risk for healthcare professionals handling POCT testing and devices. It may need to be updated as new data becomes available.

All analysis that is not urgent and that can be carried out in the main laboratory on an automated closed system should not be performed using POCT equipment. Please note, as per national policy, it is recommended that urgent and essential tests are not postponed pending results of SARS-COV-2 – in other words, appropriate containment measures should be in place.

MERS COR RNA has been detected in urine, blood and faeces and it is reasonable to assume this could be the case for SARS-COV-2 until more is known. POCT testing usually involves the use of blood or urine.

There is human-to-human transmission for SARS-COV-2. Laboratory related infection has not been reported for SARS-COV-2. Infection could occur from aerosol or by contact with droplets and contaminated fomites. It is possible that a diagnosis of COVID-19 has not been considered before testing has been performed.

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Good laboratory practice

Good laboratory practice includes use of standard biological safety precautions, use of personal protective equipment (PPE), regular training and use of standard operating procedure to minimise the risk of healthcare-related transmission to staff or patients.

A detailed risk assessment for the safe use of POCT should be in place in all NHS organisations.

This guideline applies to both laboratory personnel providing support and the clinical staff who perform POCT.

Personal protection equipment

Using a blood gas analyser is a not an aerosol-generating procedure.

Laboratory and medical staff doing POCT for suspected or positive COVID-19 patients need to wear PPE according to their current trust guidance, and appropriate to the clinical setting they are in (e.g. a general ward setting, or an intensive care unit [ITU]/high dependency care [HDU] setting). The PPE for aerosol-generating procedures is not required, but PPE should be worn in accordance with the clinical setting of the POCT device.

Transportation of specimens

The specimen should be transported to the POCT device area as per current trust policy for transportation of specimens within the hospital site. To run the sample, the user will need to take with them or wear clean PPE as per protocol.

Cleaning POCT equipment

The device should be cleaned after every use by the person running the sample using the designated cleaning material for each analyser. This will usually be 70% alcohol wipes, but local cleaning protocols agreed with infection control must be followed.

Carrying out calibration and maintenance for POCT instruments

Any activity related to calibration and maintenance of analysers should only be carried out by the POCT team after the clinical staff have decontaminated/disinfected as per local procedure agreed by the infection control team and the manufacturers of instruments. Using inappropriate agents for decontamination may adversely affect the performance of the analyser.

The POCT team can carry out some troubleshooting tasks remotely if the analysers are connected to a data management system.

The POCT team should not go into isolation rooms, but can communicate with staff in the room from outside as necessary to assist with maintenance and troubleshooting.

If staff in the isolation room are unable to fix the analyser, the analyser will need to be decontaminated and moved to a 'clean' area before either POCT staff or an engineer will be able to touch it.

In exceptional circumstances when any laboratory staff enters isolated areas, they will have first needed to have undertaken specialist PPE training as per local policy.

The external surface of any sample tubes, containers or vials the POCT staff are required to handle should be decontaminated using an appropriate agent against enveloped RNA virions.

All operators should take care to avoid accidental contamination of exterior surfaces of the devices and the bench where the analyser is placed.

All work surfaces and exterior of the devices should be decontaminated as per local policy, as well as manufacturer's instruction.

Disposal of waste

Waste must be double bagged and disposed of in keeping with local policy.

Risk assessment

A risk assessment of all aspects of the use of POCT in the care of patients with confirmed or suspected COVID-19 should be performed and include:

- contamination of POCT devices
- generation of aerosols by POCT devices
- maintenance and troubleshooting of POCT equipment
- insufficient number of POCT devices and analysers
- shortage of POCT reagents
- POCT staffing shortage due to illness or carer responsibility.