

COVID-19

Institute of Biomedical Science Statement on the use of Personal Protective Equipment (PPE) in Pathology Laboratories

The Institute wishes to provide clarification and support to its members, in the context of Covid-19, regarding the use of PPE in pathology laboratories. It would not be appropriate or possible, and would potentially be unsafe, to attempt to offer generic guidance that is applicable to everyone's working conditions while remaining meaningful.

There is an appreciation that advice regarding the handling of samples from potential coronavirus infected patients is subject to change in the light of increasing understanding of the virus and its pathogenicity. In making this statement, the Institute advocates following current Government advice.

The government's [government advice on Covid-19](#) states: "*Clinical laboratories must perform their own risk assessments for handling biological specimens from patients with suspected or confirmed COVID-19*". This may result in slight variation in practice between laboratories, which will be specific to and determined by local circumstances.

Public Health England (PHE) guidance [COVID-19: safe handling and processing for samples in laboratories](#) specifically addresses the issue of PPE and the need for a risk based approach to sample processing in sections 4 and 5 of the document. Reproduced below are these specific sections:

The use of PPE in the laboratory

Laboratory staff must wear PPE when conducting work in the laboratory. It must be removed on leaving the laboratory and hygiene practices including hand washing must be rigorously maintained.

PPE must include disposable gloves and a laboratory coat or gown as a minimum, and may also include eye protection and other equipment, as identified by risk assessment.

Respiratory protective equipment such as masks or respirators are not necessary when respiratory tract, urine, faecal or tissue samples are handled inside a microbiological safety cabinet (MSC).

Masks or respirators are not an appropriate substitute for processing samples in an MSC when there is a risk of aerosols being generated.

A risk-based approach to sample processing

Under normal circumstances, any procedure with Hazard Group 3 pathogens involving potentially infectious material where there is a risk of generating aerosols, droplets or splashes, must be performed within a MSC at Containment level 3 (CL3) as defined in the

Approved Code of Practice and Guidance for the Control of Substances hazardous to Health (COSHH) Regulations 2002 (as amended).

However, in light of the exceptional circumstances posed by SARS-CoV-2 and the potential impact on the diagnostic sector, a risk-based proportionate approach has been adopted in agreement with the Advisory Committee on Dangerous Pathogens (ACDP) and the Health and Safety Executive where certain laboratory activities can be undertaken within a MSC at containment level 2 (CL2). These are described in a following section.

Advice from the World Health Organisation is that all procedures must be performed subsequent to an appropriate risk assessment and only by personnel with demonstrated capability, in strict observance of any relevant protocols at all times.

All laboratory procedures should be performed in a way that minimizes the generation of aerosols and droplets. Appropriate personal protective equipment (PPE), as determined by a detailed risk assessment, should be worn by all laboratory personnel handling these specimens.”

Specific advice from WHO on the use of PPE is contained in the statement: ***Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19) – MARCH 2020***

This states that PPE should be used based on the risk of exposure (e.g. type of activity) and the transmission dynamics of the pathogen (e.g. contact, droplet or aerosol). The overuse of PPE will have a further impact on supply shortages. Observing the recommendations will ensure rational use of PPE.

Any testing for the presence of the virus responsible for COVID-19 or of clinical specimens from patients meeting the suspected case criteria should be performed in appropriately equipped laboratories, by staff trained in the relevant technical and safety procedures. National guidelines on laboratory biosafety should be followed in all circumstances.

Initial processing (before inactivation) of all specimens should take place in a validated biological safety cabinet (BSC) or primary containment device.

When handling and processing specimens, including blood for serological testing, laboratory practices and procedures that are basic to good microbiological practices and procedures (GMPP) should be followed.

The handling and processing of specimens from cases with suspected or confirmed COVID-19 infection that are intended for additional laboratory tests, such as haematology or blood gas analysis, should follow local guidelines for processing potentially infectious material.

The Institute supports the advice contained within these policies.