

Diagnostic/Testing approach for patients with suspected COVID-19

Day 1 (Day of admission)
All patients - **COVID-19 swab sent**

Admission COVID-19 swab **POSITIVE**

Manage patient on **RED** ward

Admission COVID-19 swab **NEGATIVE**

Is the result consistent with clinical expectation?

YES – Manage patient on **YELLOW** ward

NO – Further assessment required

Further assessment: On first medical review

Consider:

- Radiology – Does the patient have CT/CXR changes of COVID-19?
- Clinical – Does the suspicion of COVID-19 remain due to unexplained fever/breathlessness /hypoxia?
- Is there an alternative diagnosis?

NB: Lymphopenia is not specific to COVID-19 and is equally prevalent in alternative diagnoses

Send swab for other respiratory viruses

(COVID-19 is included on this panel and so gives you a 2nd COVID-19 result)

Clinical diagnosis of COVID-19 refuted
AND

Respiratory virus swab **NEGATIVE**

Manage patient on **YELLOW** ward¹

Clinical diagnosis of COVID-19 remains

Manage patient on **RED** ward

Daily review should be conducted - if an alternative diagnosis is found manage patient on **YELLOW** ward¹

Day 3 of admission: In addition to the daily review, **send a repeat COVID-19 swab**

Day 3 COVID-19 swab **POSITIVE**

Manage patient on **RED** ward

Day 3 COVID-19 swab **NEGATIVE**

Is the result consistent with clinical expectation?

YES – Manage patient on **YELLOW** ward

NO – Consultant review required to determine if clinical diagnosis of COVID-19 remains.

Consultant Review:

RT-PCR is the gold-standard diagnostic test for COVID-19.

The sensitivity of a single swab for COVID-19 RT-PCR is reported to be between 71-98%.²

Repeat testing will increase the sensitivity as it reduces the risk of false-negative due to poor sampling technique. By this stage the patient will have had x3 negative COVID-19 swabs, taken over a period of 72 hours and we will have used two different laboratory platforms for the test.

No laboratory diagnostic test can confirm/refute a diagnosis with 100% accuracy, clinical adjudication remains the final step. Patients who have a clinical diagnosis of COVID-19 and are thought to pose a transmission risk need to be managed in a side room. If no RED side rooms are available a YELLOW side room may be used.

¹ If a patient is de-escalated from clinical diagnosis of COVID-19 then any family members who are isolating because of contact need to be informed their isolation can end.

² Arevalo-Rodriguez I, Buitrago-Garcia D, Simancas-Racines D, et al. False-negative results of initial RT-PCR assays for covid-19: a systematic review. medRxiv 20066787 2020