

- Beijing uses smart bracelets to monitor students' temperatures: [CNN](#)
- body: [Washington Post](#)
- Trump administration announces plan to distribute Covid-19 drug amid concerns over allocation: [STAT](#)
- AI-centric health companies landed crucial funding in early 2020: [TJ0.94 0.11](#)

## Infection Control and Prevention

It is crucial during the COVID-19 pandemic to ensure the safety of healthcare workers and patients. Providing unified guidelines on infection control in all healthcare sectors is essential to maintain a consistent standard of safety for HCWs and patients. This section will outline the main guidelines related to the use of personal protective equipment recommended by the US Center for Disease Control (CDC), the World Health Organization (WHO) and the recommendations by the Ministry of Health of New Zealand.

## Diagnosis and Testing

This report provides a technical overview of current diagnostic methods, including recent US FDA approval of three new testing techniques: an antibody assay from pharmaceutical company Roche, an antigen assay from diagnostic company Quidel Corporation, and CRISPR-based technology SHERLOCK.

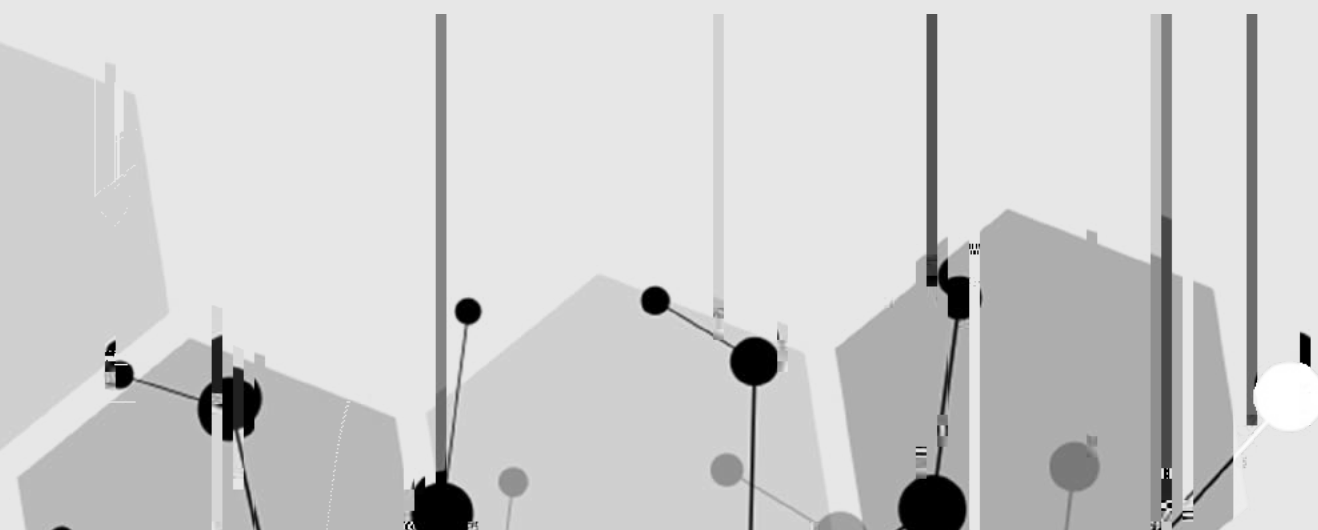
## Treatment and Therapy

During COVID-19 pandemic, as there are no clinically proven treatments, the treatment guidelines were based on evidence from best available clinical studies with patient-important endpoints. The safety of drugs used, especially in patients who are critically ill has not been fully studied. There are multiple promising ongoing trials e.g. Remdesivir, some with adaptive designs, which potentially can quickly answer pressing questions on efficacy and safety of drugs in the treatment of patients with COVID-19.

## Training Healthcare Professionals

The rapid transmission of COVID-19 poses a serious threat to healthcare workers (HCW). It also requires HCW to assume roles they do not usually hold. This has led to the urgent need to train HCW on processes and procedures related to infection control, testing, and critical care. The following report will outline key accredited training programs available to HCW and administrators in the following areas: The use of personal

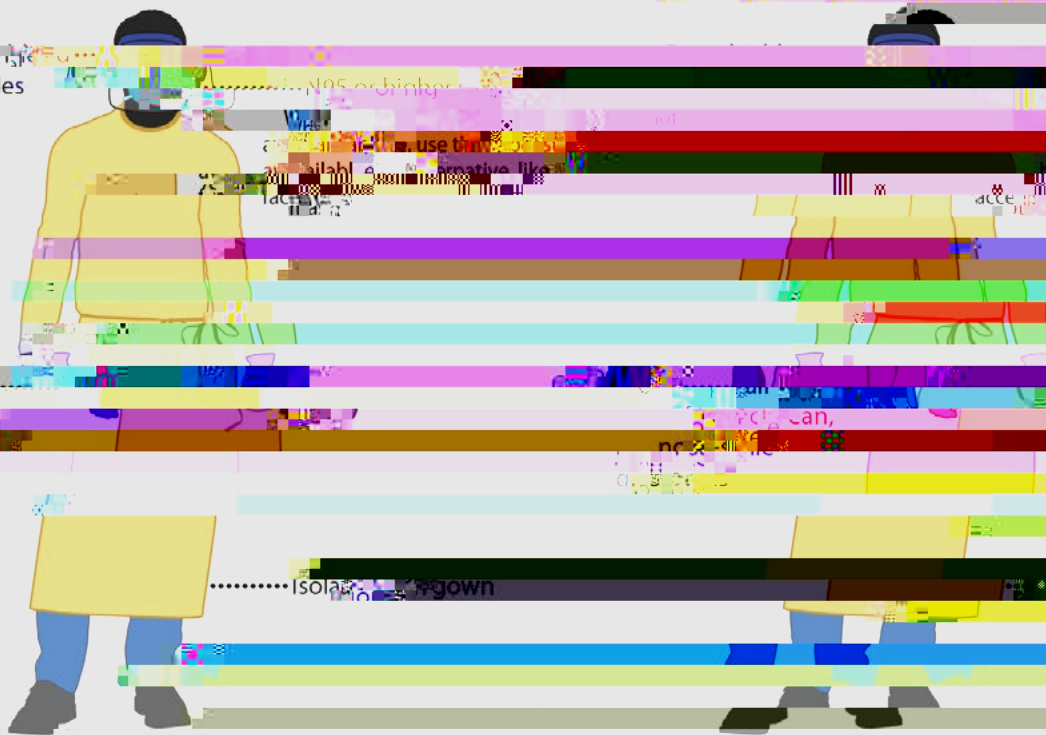
# Infection Control and Prevention



# Guidance on Personal Protective Equipment (PPE) for Health-care workers

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Face shield  
or goggles



CS 315838-4 09/23/2020

## Eye Protection:

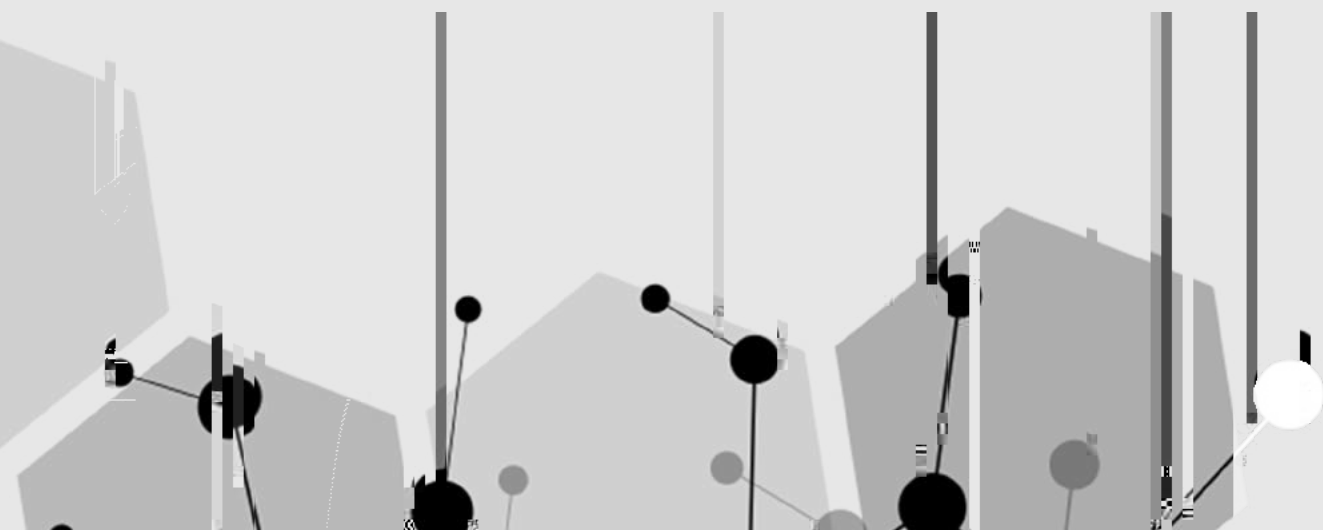
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## Gowns:

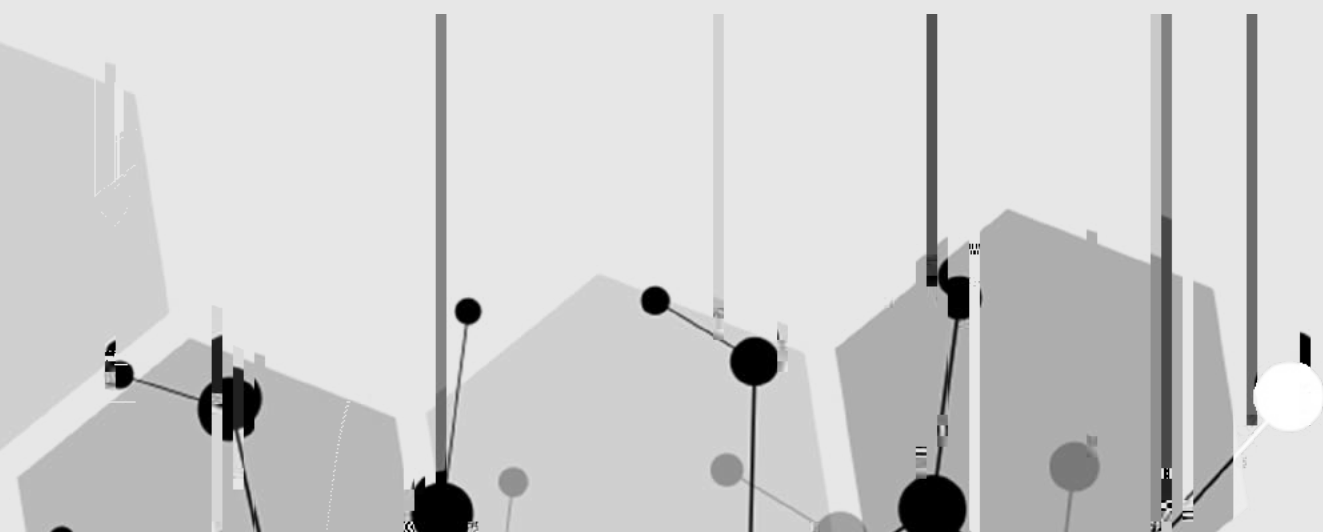
- Put on a clean isolation gown upon entry into the patient room or area. Change the gown if it becomes soiled. Remove and discard the gown in a dedicated container for waste or linen before leaving the patient room or care area. Disposable gowns should be discarded after use. Cloth gowns should be laundered after each use.
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# The World Health organization (WHO)

The WHO published a position paper titled: "Rational use of personal

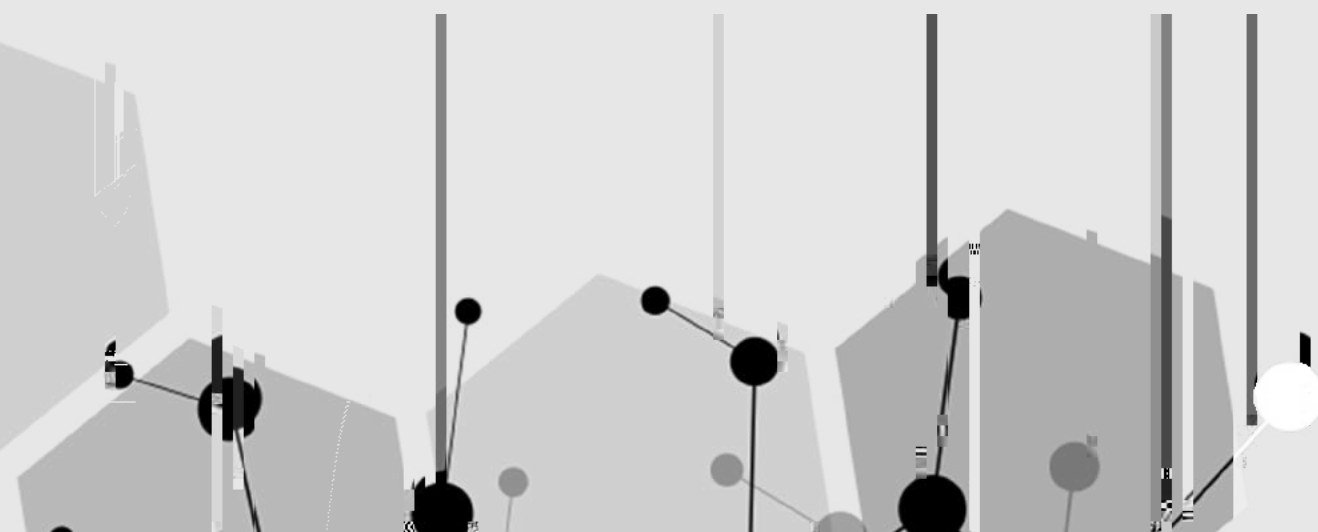




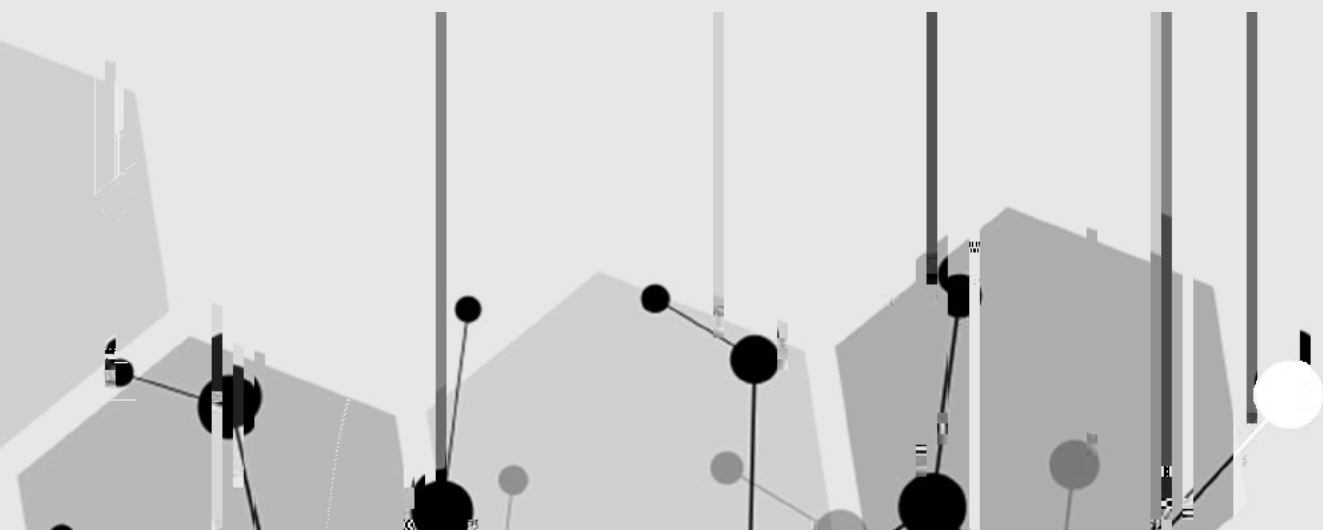


## Is RT-PCR really the best method for testing?

The rapid global spread of the novel acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and resulting COVID-19 pandemic have led to

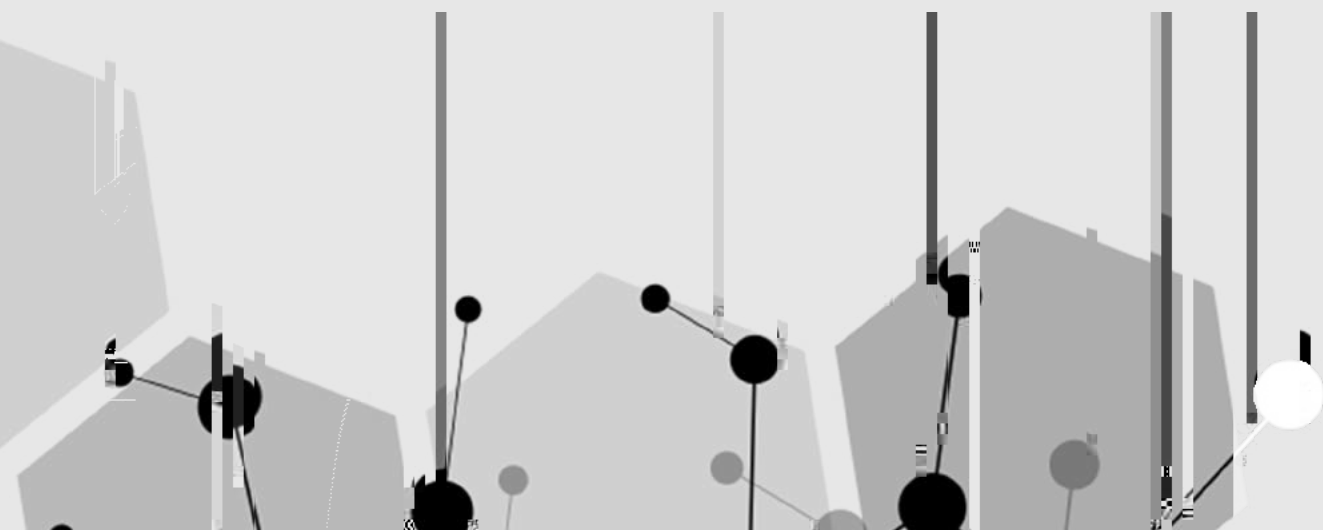


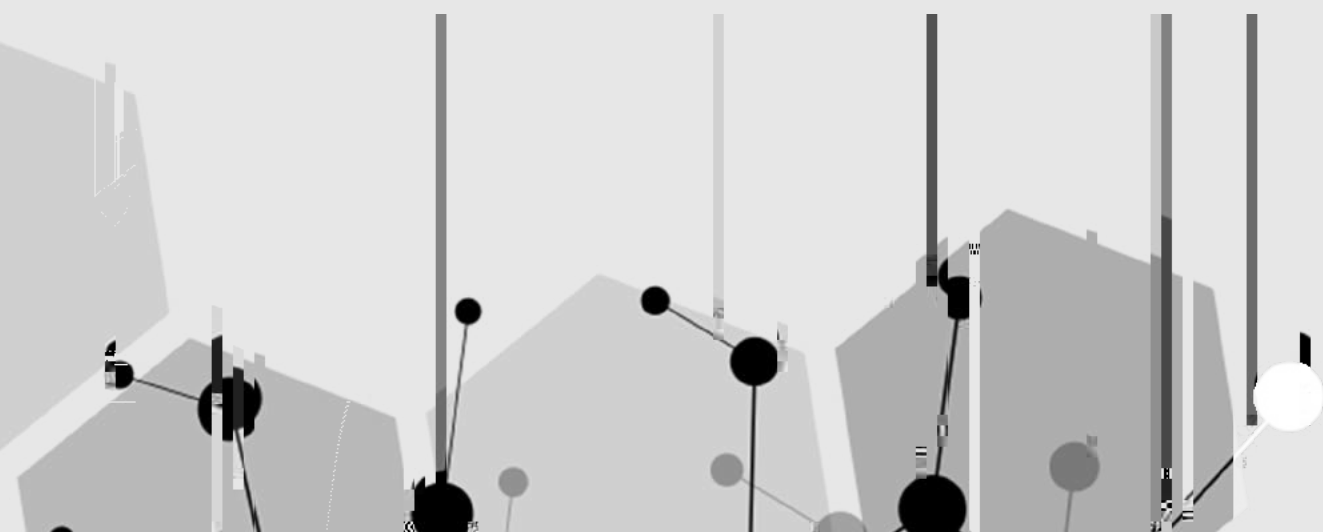
While it is possible to obtain a false negative due to wrong patient



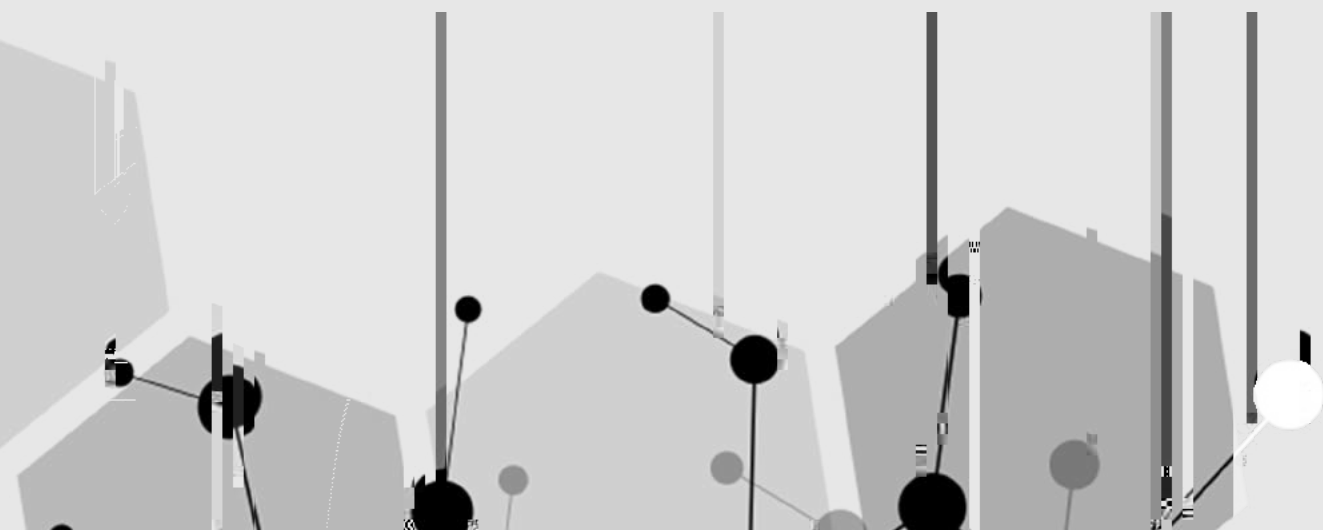
## The main disadvantages of RT-PCR are related to logistics

Whether it's the intense workload of processing procedures or the limited supply of needed materials such as reagents and swabs, the main drawbacks of using RT-PCR testing to diagnose COVID-19 are related to logistics. Samples take a couple hours to process, but (logistical round-trip time) -1.14





Test Name:





**Serological testing or Antibody testing reveals who has had the infection in the past and might be safe to return to work and has recently been approved for use by the FDA.**

**Test Name:** Antibody based Immunoassay (Serological Tests)

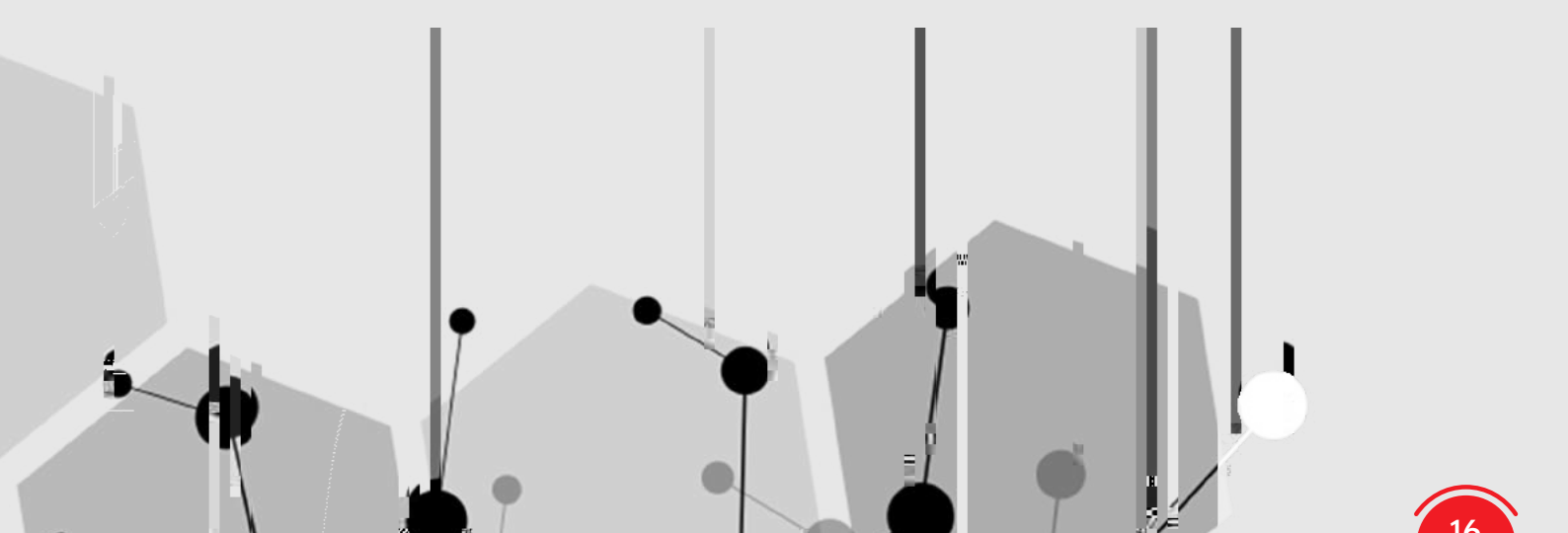
### **How it works**

Serological tests measure the body's immune response to the infection rather than the infection itself. The assay identifies the presence of anti-viral antibodies, IgG and IgM present in the blood when the body responds specifically to COVID-19. These tests are used to measure overall infection and immunity in a community.

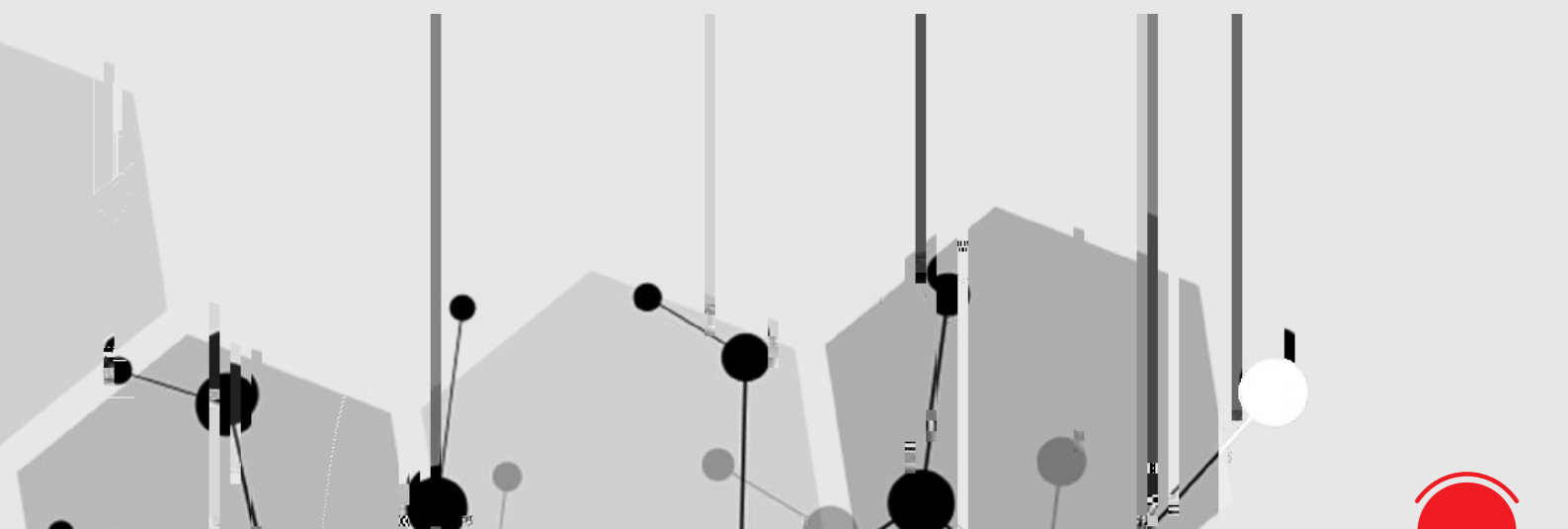
### **Advantages**

The technique allows healthcare professionals to identify those who have been infected in the past and therefore might be immune and potentially able to safely return to work. They can be laboratory based or used for point-of-care testing depending on the design of the test.

1 The FDA recently granted EUA for the use of serological tests for COVID-19.

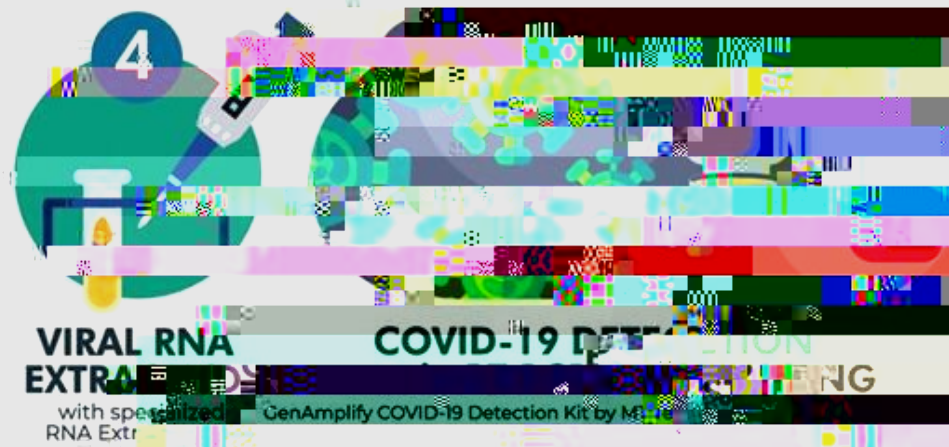






**Computer Tomography (CT) exams have a high sensitivity in making an early diagnosis of COVID-19 while X-rays have a poor sensitivity.**

Computer Tomography (CT) scans are a useful diagnostic tool for the diagnosis of COVID-19. The largest CT diagnostic study found a 95% sensitivity in early diagnosis of the virus using the characteristic identification of ground glass opacities, meaning five out of 100 tests will be falsely negative. Another significant study found CT sensitivity was 98% compared to 71% for RT-PCR for patients tested within three days of admission into a hospital. The use of CT scans is suggested to prevent infected patients visiting the hospital from being discharged back into the community. The drawback for testing using CT scans is the substantial cost and economic burden it could place on healthcare resources as well as the potential contamination of CT scanners. Chest X-rays alternatively, have been found to have a poor sensitivity, however if the presence of ground glass opacities is noted then it is recommended the patient be isolated



# Treatment and Therapy

## Treatment and Therapy: Current Guidelines

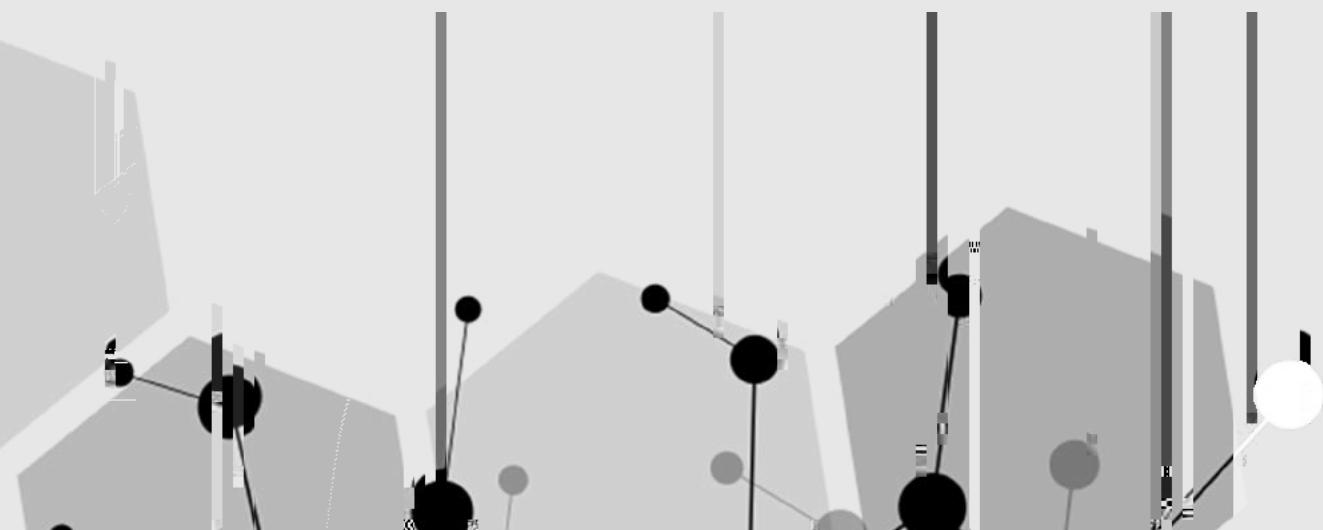
With few definitive studies published but volumes of information being circulated, Infectious Diseases Society of America (IDSA), National Institute of Health (NIH), and many other international entities have formulated interim guidance for managing patients with COVID-19 infections.

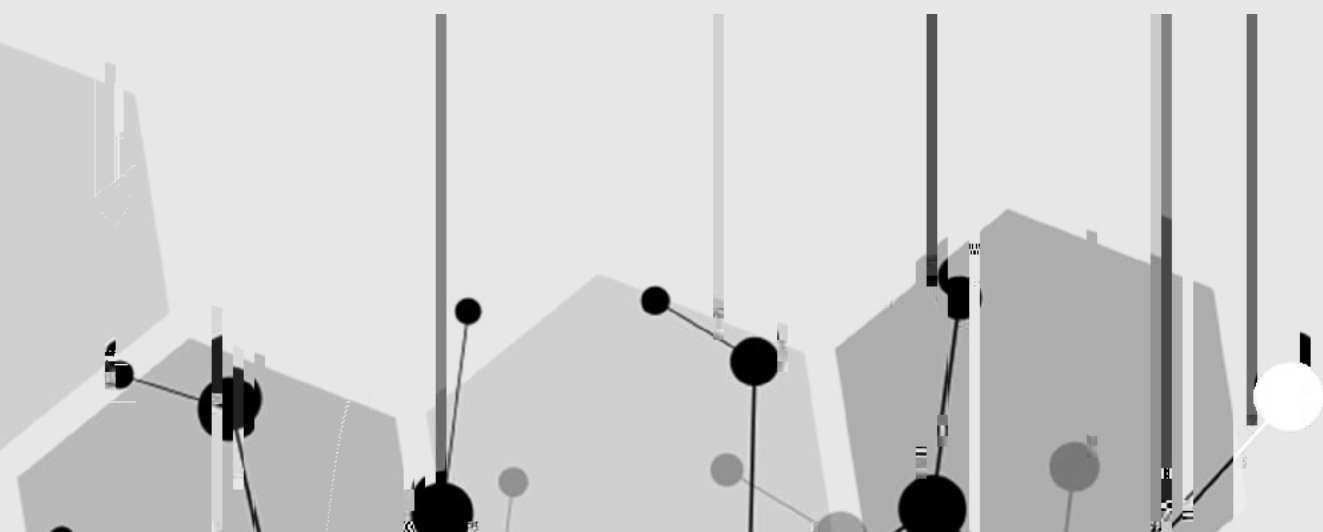
These Treatment Guidelines have been developed to inform clinicians how to care for patients with COVID-19, the Guidelines will be updated frequently as published data and other authoritative information becomes available.

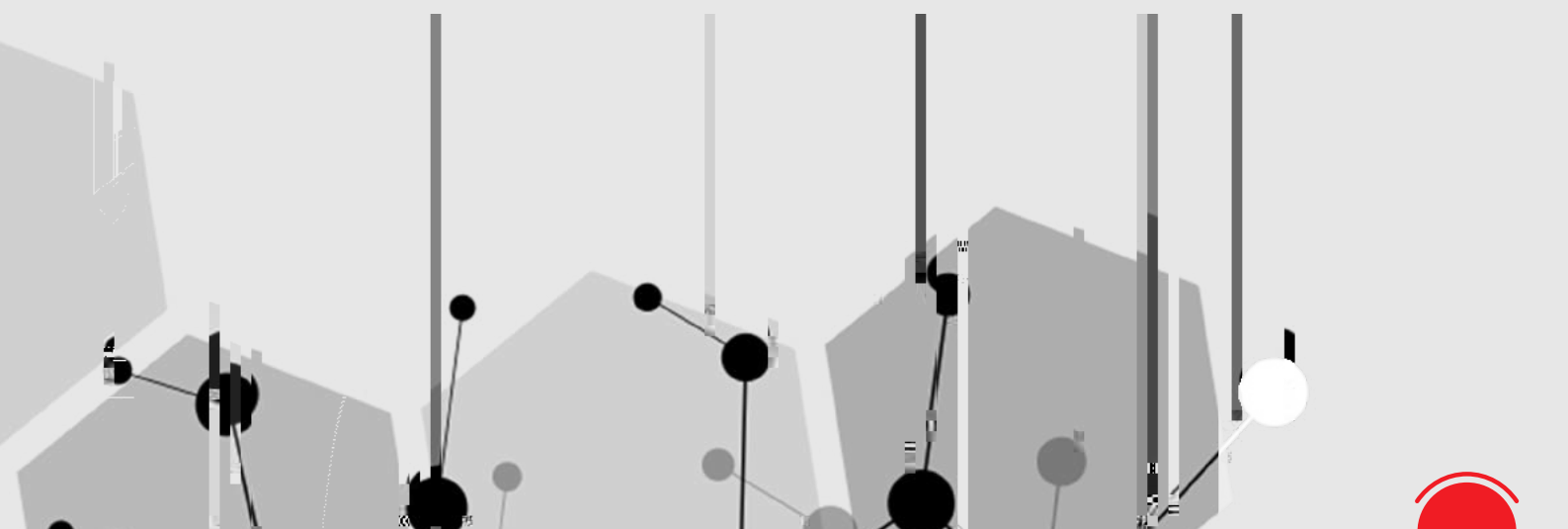
### Therapeutic options under investigation:

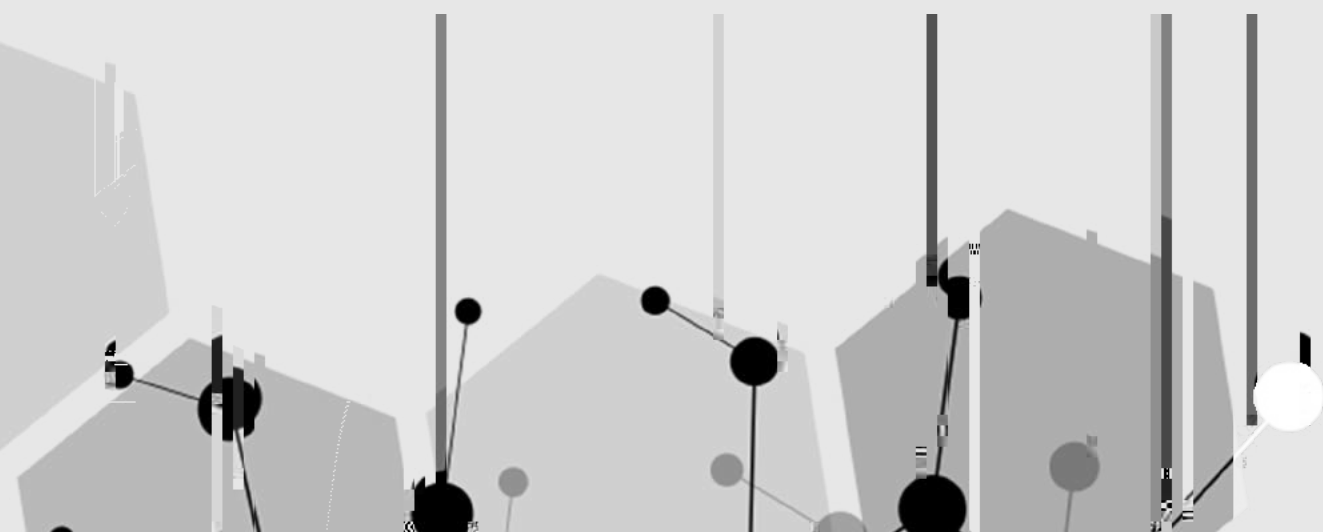
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- is a broad spectrum antiviral with in-vitro activity against





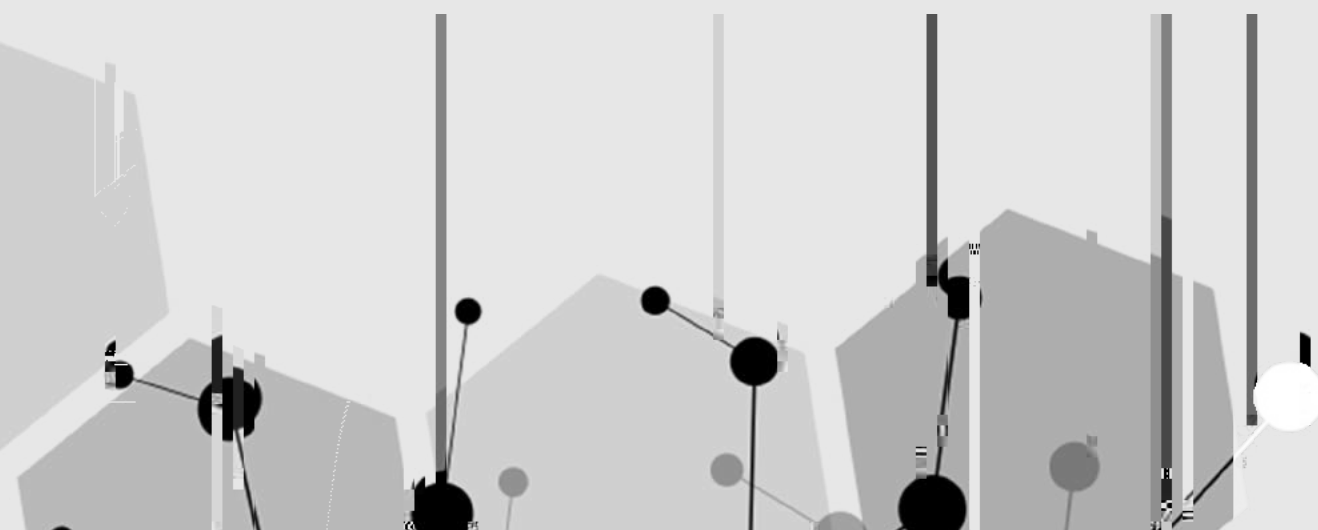






However, with the current restriction of social distancing, training may have to be delivered online. Ideally, online training should be supplemented with live simulation and assessment for competency. Only trained and competent staff should then be allowed to work with COVID-19 patients or patients under investigation.

It must be noted that PPE should be part of a more extensive infection control protocol and should be implemented as part of a multimodal strategy for the management of COVID-19 patients. Again, only clinical



Recommended courses:

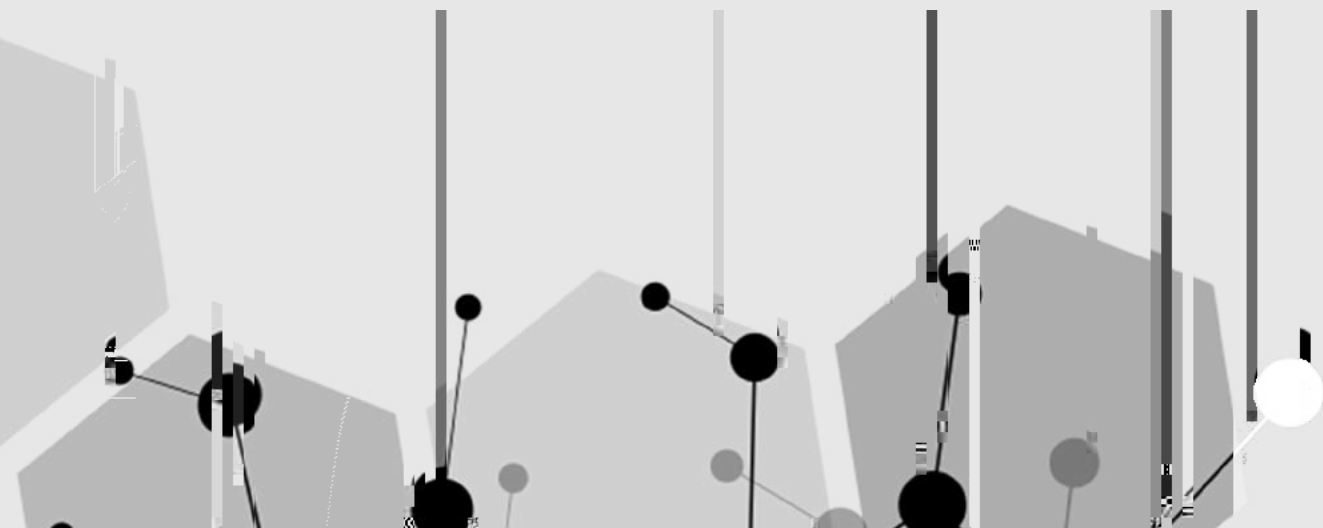
1. How to put on and remove personal protective equipment (PPE): Two modules that detail donning and doffing of PPE according to droplet and airborne precautions for COVID-19

2. Standard precautions: Hand hygiene course

3. Infection Prevention and Control (IC) for Novel Coronavirus (COVI-19): The

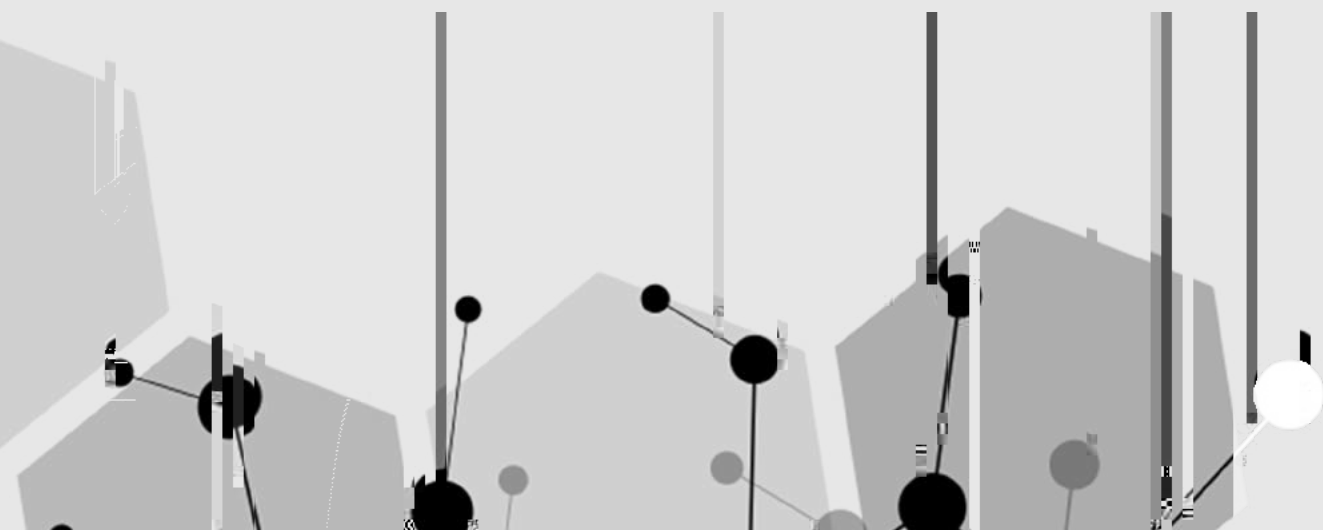
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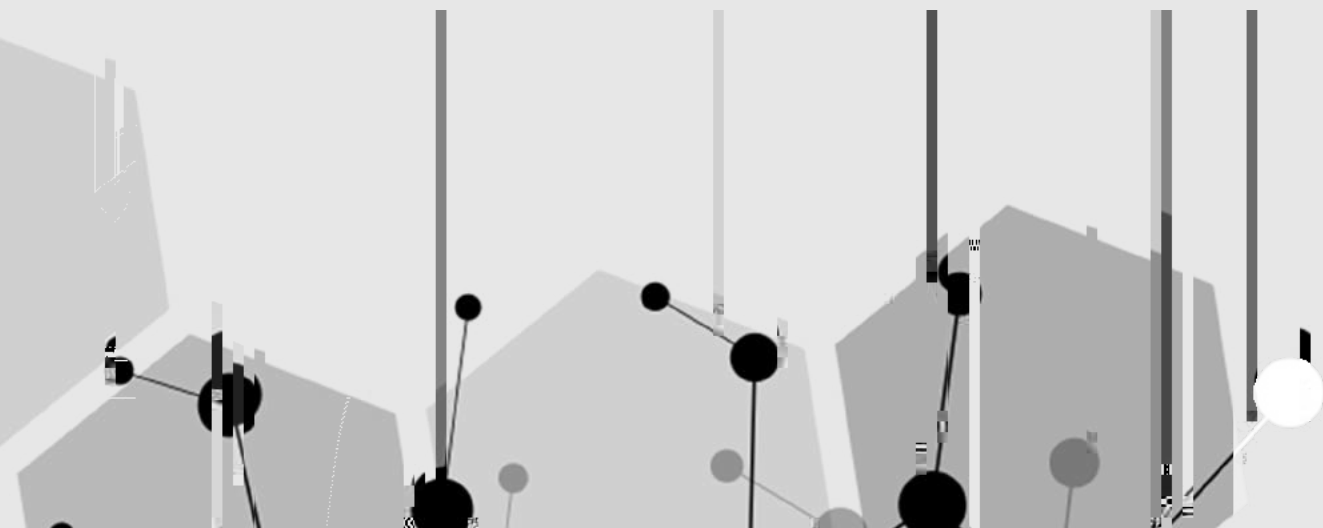
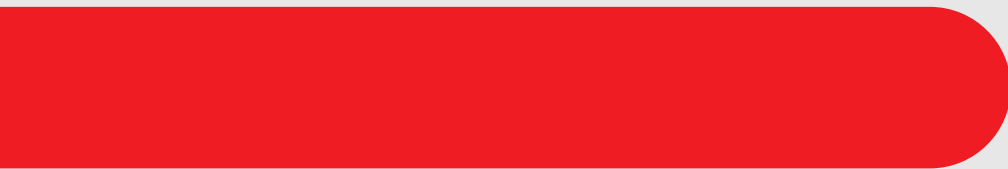
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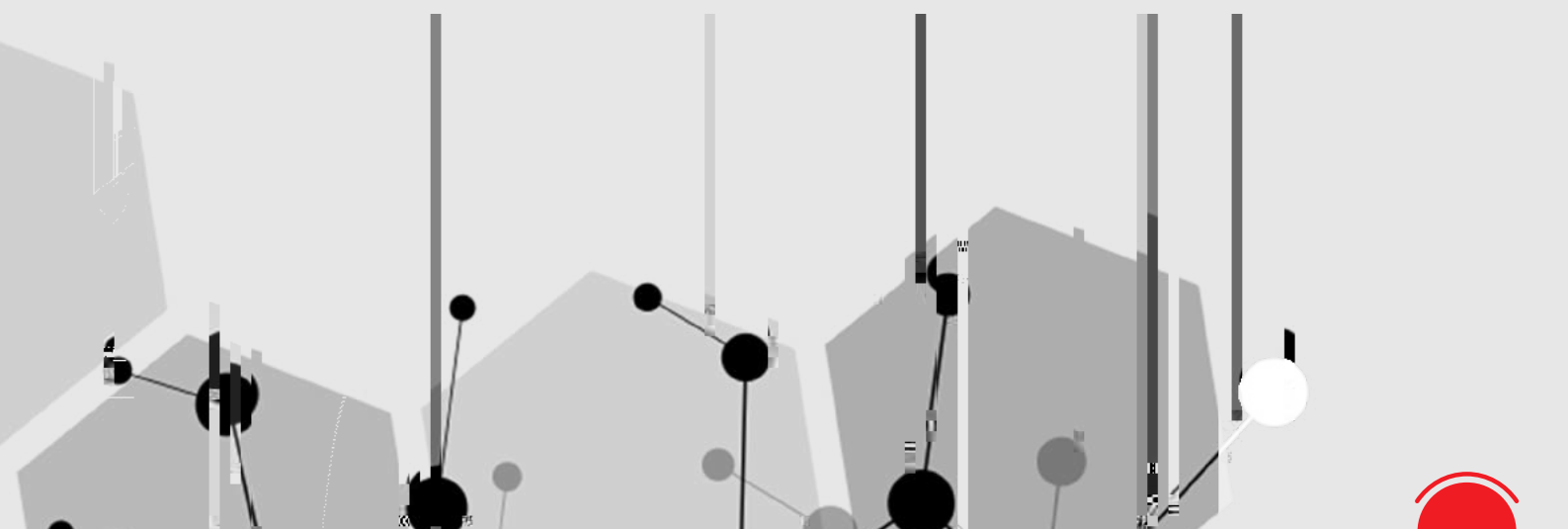


# Critical Care Training for the non-ICU clinician during COVID-19 pandemic

Critically ill patients have increased significantly in the COVID19 pandemic surge. Consequently, healthcare systems have quickly become overwhelmed with patients. To cope with high volume of patients that require critical care, healthcare workers from other clinical areas will be required to work in the ICU. This pattern has been seen in different parts of the world. Physicians, trainee doctors, nurses, and other health care providers from specialties areas other than







There are several questions regarding how workplaces should reopen and what future workplace would look like. In an article in Nature Medicine, the Gilbert et al. recommend that people of working age but that are considered high risk for COVID-19 should be exempt from returning to work encouraged to work remotely . This will require a tailored approach for each country, to maximize the social acceptance, which will be key in implementation. In order of priority, those that are immunized should be the first to return to work, followed younger, lower risk individuals, who are virus free but not immunized, slowly building "herd immunity", and potentially reducing the intensity of a second surge of infections. The goal is to shift from comprehensive lockdown and social distancing measures, to a more targeted, systematic approach: testing, tracing and targeted confinement measures.

It is vital that governments are transparent and consider community acceptance as a part of any plan moving forward for the "new normal". Adequate, transparent and timely public information, in all languages applicable to the population should be consistently provided and updated.