

Our COVID-19 response

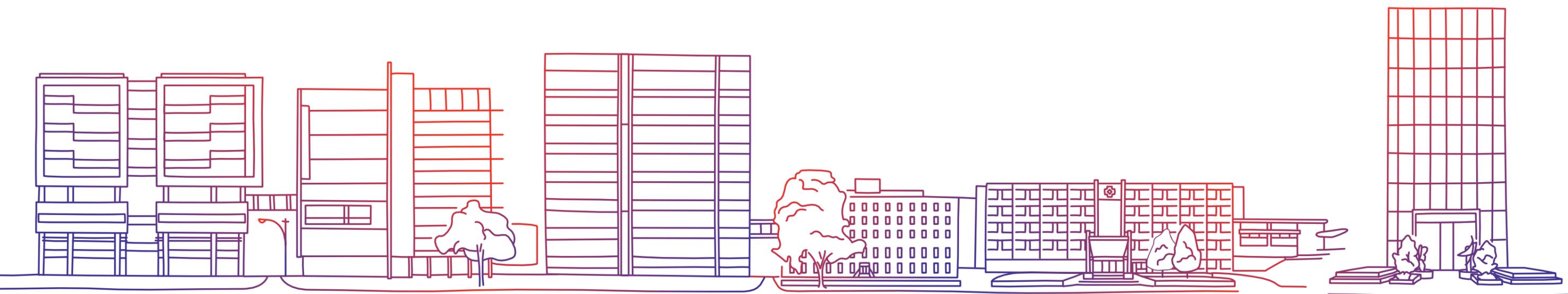
Over the past two years, the Alfred precinct has demonstrated outstanding determination and commitment to improving health outcomes for patients and the community, as each of our member organisations mobilised to play key roles in the COVID-19 pandemic response. The innovation and discovery that began on this site in early 2020 has rippled out to benefit the rest of the state, country and world. Read on for a snapshot of some our COVID-19 research and public health response highlights.

Vaccine development

The precinct was home to several clinical trials for COVID-19 vaccines. Nucleus Network conducted four in-human Phase 1 and Phase 2 trials, including for Novavax, which is due to become available in Australia in late 2021. 360biolabs has also been involved in vaccine development, providing specialist laboratory services to some COVID clinical trials.

Patient wellbeing

Patients hospitalised with COVID-19 needed to be isolated, which brought with it a host of challenges for medical teams. As nurses provided clinical care on the frontline, nursing researchers investigated ways to improve the experience for patients and families, as well as testing the efficacy of temperature screening and fever detection technologies.



Clinical practice

Alliance researchers are part of the National COVID-19 Clinical Evidence Taskforce, enabling clinicians around the country to translate the latest research into clinical guidelines in real time. Other joint studies by Monash and Alfred Health are focused on improving the critical care response for COVID-19: recording real time, detailed reporting of the sickest patients admitted to the ICU (SPRINT-SARI); helping emergency departments rapidly identify and predict the outcomes of patients with COVID-19 infection (COV-ED); and further developing the ECMO registry with outcomes of patients who experienced this life-saving intervention.

Treating the virus

As a novel coronavirus, researchers have had to work quickly to understand COVID-19 and how to best treat it. Researchers from Monash are leading the global REMAP-CAP trial, which brings together more than 250 experts to efficiently evaluate a range of treatment options for critically ill COVID-19 patients. Other researchers at the precinct are examining whether repurposing existing antiviral medications to treat COVID-19 is effective, while Burnet is applying their antibody expertise to the search for other drugs. Researchers from Monash and Alfred Health are studying clinical pathogenesis in COVID-19 patients via a biobank of clinical samples seeking insights to guide effective treatments.

Long-term effects

As the pandemic progressed, 'long COVID' – a collection of symptoms experienced by some COVID-19 patients after their infectious period – became an increasing concern. Several partners are researching these ongoing effects, including a study by Monash that tracks patients' recovery over time, another into the neurological effects of the virus, and one by the Baker Institute and Alfred Health to understand the impact of COVID-19 on the heart.

Advising government

Staff from several Alliance partners were seconded to advisory roles and working groups to provide expert advice to State and Federal Government's COVID responses, advising on public health measures, testing, contact tracing, vaccination and modelling. Professor Allen Cheng from Monash University and Alfred Health was Victoria's Deputy Chief Health Officer throughout much of 2020 and 2021, helping to guide Victoria through its deadly second wave.

Testing and diagnostics

Widespread testing was crucial for understanding the spread of COVID-19, but the typical PCR test, while very accurate, could be slow to return a result. Burnet Institute's diagnostics platform enabled researchers to start developing a rapid point-of-care test measuring current or past COVID-19 infection, as well as potential immunity to future infections. Monash has also been working on new diagnostic measures for detecting asymptomatic COVID-19 infection using DNA amplification technology for rapid testing.

Impacts of the pandemic

The highly infectious nature of COVID-19 necessitated that governments around the world institute a variety of strict public health measures, including lockdowns. Alliance researchers are investigating the knock-on effects of these measures on mental and physical wellbeing, with longitudinal studies to track how community members are coping throughout the pandemic, and what interventions may be required to support people and communities to help inform pandemic responses. Burnet Institute's Optimise study, Monash's COVID-19 work and health study and Living with COVID-19 restrictions in Australia study are three examples of research that will inform interventions for recovery.