



21 September 2021

Murdoch Children's Research Institute
Opening statement to Senate Select Committee on COVID-19

Good afternoon Senators, and thank you for the invitation to speak to the Committee today on this important subject.

I would like to begin by acknowledging the traditional owners of the land upon which we meet today.

My name is Sharon Goldfeld, I am a developmental paediatrician and a public health specialist. I lead the Population Health Theme at the Murdoch Children's Research Institute, I'm the Director of Centre for Community Child Health at The Royal Children's Hospital and a Professor at the University of Melbourne. I'll let my colleague Professor Andrew Steer introduce himself.

Good afternoon Senators, my name is Andrew Steer. I am a paediatrician and an infections disease specialist at the Royal Children's Hospital. I lead the Infection and Immunity Theme at the Murdoch Children's Research Institute and a Professor in the Department of Paediatrics at the University of Melbourne.

Murdoch Children's Research Institute (MCRI) is Australia's largest child health research organisation. We are an independent medical research institute and a registered not for profit organisation.

The Murdoch Children's Research Institute is a key member of the Melbourne Children's alliance, comprising ourselves, the University of Melbourne's Department of Paediatrics, and The Royal Children's Hospital.

For more than 35 years, the institute has been advancing knowledge of what influences a child's health, from preconception through to early adulthood. The institute's research is translated into life-changing health interventions and practical applications that improve medical practice, inform public health policy and education to deliver better outcomes for children.

We have a multi-disciplinary team of more than 1300 researchers and child health experts who focus on 5 broad scientific areas of child and adolescent health, namely Population Health, Infection and Immunity, Genetics and Genomics, Stem Cells and Clinical Sciences.

Our research spans genes, molecules and cells to children, families and society to understand, prevent and treat the broad range of health and developmental problems facing children and adolescents in



the 21st century. This includes Covid-19 research, and its effects on children.

At the outset of the pandemic, we recognised a need not only for research into the prevention, treatment and understanding of COVID-19 but for timely and accurate information for the public. In each of our key areas the institute has made significant and globally relevant contributions knowledge around COVID-19.

We established a COVID-19 research consortium in March 2020, and throughout 2020 and 2021 we and our partners have conducted research to understand how COVID affects children and adolescents, but also produced and contributed to research summaries, hosted or participated in online webinars, podcasts and media interviews to keep the public informed.

For example through our global health expertise we knew that healthcare workers would be some of the most at-risk populations early in the pandemic, and within weeks we had started recruiting for a clinical trial to test whether the 100-year old tuberculosis vaccine, called BCG, could help boost healthcare workers' immune systems, protecting them from severe disease or death. If shown to be effective, BCG could become a standard first line of defense in future pandemics.

We also created models of human organs using stem cells (cells that can be converted to a range of human tissues) and collaborated with the Doherty Institute, WEHI and Monash University to firstly infect these models with COVID-19, and then begin to screen these models for effective off-the-shelf treatments.

Our infectious disease clinician-researchers and immunologists have worked closely with The Royal Children's Hospital and Doherty to follow families affected by COVID, examining the immune systems of children and parents to find out why children remain at low risk from severe disease. These teams found differences in children's immune system responses that help explain their resilience.

We have collated data from Victoria and Australia on child and adolescent hospital admissions during 2020, and recently compiled international data from comparable settings during the Delta wave, and have shown that even with Delta, children overwhelmingly experience mild or no symptoms. Around 1% of infected children will be admitted to hospital, and death is rare. This is available in our research briefs.

And finally our population health and clinical science teams have been working with some of the most vulnerable families during the pandemic. This includes (1) following up around 8000 children in our cohorts to understand the mental health impacts of COVID (including families already experiencing adversity), (2) following up children with chronic disease and their experiences of the pandemic and (3) understanding the mental health impacts for children who experience COVID directly. We led the report that informed the opening of schools in Victoria in 2020.

Again, I would like to thank the Senators for their invitation to attend today's session and we look forward to answering your questions.