Strengthening Omicron mitigation strategies in Early Childhood Education settings

23 February 2022

Julie Bennett, , Philippa Anderson, Sarah Donovan, Amanda Kvalsvig, Alison Leversha, Subhadra Rajanaidu, Jin Russell

Aotearoa New Zealand is in a major Omicron outbreak. With Covid-19 cases doubling every few days, what opportunities are there to strengthen the mitigation approaches in early education settings? In this blog we discuss what is needed to protect this group of children and their whānau as we navigate the next phases of the Covid-19 outbreak. There remains substantial scope for further risk reduction measures, especially relating to improving ventilation, increasing outdoor activities and appropriate mask use.

Covid-19 infection in young children

In general, young children experience less severe illness from Covid-19 compared to older age groups, with data suggesting that infection with the Omicron variant is less severe than Delta. However, there are rare cases of serious illness. Children aged 0-4 years have the highest rates of hospitalisation among people under the age of 18 years, although hospitalisations among children infected with Covid-19 are uncommon (1 to 2% of infected young persons under the age of 20 years).[1] With Omicron infection, hospitalisations also tend to be brief (median length of stay 2 to 3 days) and are often for croup, bronchiolitis, and dehydration.[1,2]

In the United States (US) at the height of their Omicron surge, the peak population-based weekly hospitalisation rate for children aged 0-4 years old (15.6 per 100,000 children) was five times higher than the Delta variant peak.[1] This Omicron weekly hospitalisation rate in the US is substantially lower than that of seasonal respiratory syncytial virus in New Zealand children (estimated at a weekly average of 29 per 100,000 children aged 0-4 years).[3]

The importance of reducing Covid-19 infections among young children

Despite the low risk of serious illness, there are sound reasons to take further steps to reduce the risk of Covid-19 infection among young children. Young children are the last age-group in the population who remain unvaccinated. Very large Omicron outbreaks can lead to a substantial rise in children requiring hospitalisation, which will further stretch healthcare resources. Paediatric hospitalisations will very likely be inequitably distributed, disproportionately impacting Māori and Pasifika children and their whānau, and children from low socioeconomic households. In addition, co-infection of Covid-19 and other common childhood viruses may cause more serious illness, and research into the long-term effects of Covid-19 infection are ongoing.

Young children can also transmit the pandemic virus within households, including to more medically at-risk members of the child's whānau. While boosters can substantially reduce risk to the whānau, the booster rollout is incomplete. Booster coverage and the 5-11 year old Covid-19 vaccination coverage among Māori and Pacific peoples is also unequal compared to total population coverage.

Overview of early childhood education settings

Early childhood education (ECE) centres are one setting of concern for increased risk of Covid-19 transmission. ECE is the term used to denote any early education and care service for children younger than five years of age, encompassing a wide range of settings. In New Zealand (NZ), in 2017, just over two-thirds (68%) of two-year olds, 84% of three-year olds, and 89% of four-year olds attended ECE. However, the pandemic has had an impact on attendance and in 2021 there was a slight drop in these figures.

ECE building types and ages vary substantially, ranging from converted houses to office space to purpose built buildings. Centres also vary in the number of hours children spend at them; from Kindergartens to Kohanga reo, Pacific language nests, and centres who care for children all day. ECE centres in NZ have some of the lowest space standards in the OECD. A 2019 analysis of indoor space per child placed NZ 29th out of 34 when matched to jurisdictions in Australia, North America, and the UK.[2] In some centres teacher surveys have identified that some are operating with group sizes in excess of 50 children. In NZ the maximum allowable licence is of 150 children.

Layers of protection against Covid-19 in ECE centres

The multi-layered approach to reducing Covid-19 transmission in educational settings

There are a number of layers of protection that have been put in place to protect children

attending schools in Aotearoa NZ. These include vaccine mandates for staff, a ventilation strategy supported by the Ministry of Education, mandatory mask wearing for staff and students from year four upwards, good hygiene practises, cohorting of students, and supporting vaccination for eligible children. Implementing some of these mitigation approaches has been more limited in ECE settings. Nevertheless, all ECE teachers and volunteers are required to receive a Covid vaccination booster by 1 March 2022.

Wearing masks in ECEs

Wearing masks in ECE centres is not mandated for staff or preschool students due to concerns for young children's language, psychological, and socioemotional development, which depend upon the 'serve and return' nature of human interaction, the visualisation of facial expressions, lip movements, and clear speech sounds. While the US CDC has recommended masking preschool children from two years of age, the World Health Organization currently does not recommend masking children under the age of five years. However, during the Omicron outbreak, it is beneficial for teachers to wear high quality masks when indoors, for individual protection, and to reduce the risk of onward transmission should they become infected.

Optimising ventilation

While the Ministry of Education is providing information to ECEs about how to measure and improve ventilation, there has been less practical support provided to ECEs compared to schools. This is despite instances of onward virus transmission within ECE settings in Auckland, during the Delta outbreak. Overseas experience also demonstrates higher secondary transmission in ECE settings compared to educational settings for older age groups. It is unclear yet whether this same pattern will be seen with Omicron.

Encouraging play, activities, meals, and learning in outdoor settings has a multitude of benefits for health and development, and should be encouraged as much as is practically possible.

Sleep rooms have been identified by ECE Centres as areas where achieving sufficient natural ventilation can be more challenging.

Reducing occupancy in ECEs during periods of high community transmission

The current Covid-19 protection framework guidance in the current "red traffic light" setting encourages parents and caregivers who are able to supervise their children at home to do so. ECEs can access funding using the EC12 exemption for permanently enrolled children who do not attend services under the Red setting.[5] Reducing the occupancy in ECEs will reduce the Covid-19 risk for children who need to continue with in-person ECE learning as well as for staff onsite.

What further protections can be put in place for ECE centres during the Omicron wave?

There is the potential to support ECE to optimise mitigation strategies for children who continue to attend ECE during the Omicron wave.

- Parents and caregivers who can care for their children at home should be actively encouraged to do so, especially for children under the age of one. It is acknowledged this may not be possible for some parents.

- For children who continue to attend ECE centres, playing and learning should be outdoors as much as possible. Singing and vigorous exercise activities are recommended to take place outdoors.
- Increase natural ventilation in all rooms: bring outdoor air in as much as possible by opening windows to get across-room airflow, and turn heaters on if needed to maintain comfort.
- The Ministry of Education should provide resourcing, support, and guidance for ECE centres to upgrade air quality and heating; including access to supply of carbon dioxide (CO_2) monitors to allow assessment of ventilation and inform air quality guidelines specifically for ECE centres.
- Provide access to supply of portable air cleaners (high-efficiency particulate air [HEPA] filtration units) for ECE settings where good ventilation is not possible and particularly for high-risk areas such as sleep rooms.
- All adults entering an ECE should wear a good quality mask as per government mask type guidelines.
- Parents and caregivers of young children should be encouraged to be fully vaccinated and boosted to protect themselves and help protect their children who are too young to be vaccinated.
- Teachers and volunteers are encouraged to wear high quality masks when indoors during the Omicron wave for individual protection and to reduce the risk of onward transmission. Taking activities outdoors as much as possible will mean that children can benefit developmentally from time with unmasked teachers in a low risk setting.
- A review of what ages children can safely/tolerably wear a mask, and impacts on their development, should be undertaken. Children whose parents wish for them to wear a mask should be enabled to.
- ECE centres are recommended to have staggered start and drop off times. Drop offs and pick ups should take place outdoors.
- Specific guidance for parents and caregivers around protection of under five year olds in enclosed public spaces such as indoor children's playgrounds, shops and public transport needs to be provided by the Ministry of Health.

In summary, it is important that the impact of Omicron on young children is minimised. There remains substantial scope for further risk reduction measures, especially relating to improving ventilation, increasing outdoor activities and appropriate mask use.

***Author information:** JB and AK are Senior Research Fellows in the Department of Public Health, University of Otago Wellington. SD is a Honorary Research Fellow in the Department of Public Health Otago Wellington. PA is a Public Health Physician at Counties Manukau District Health Board. JR is a Community and Developmental Paediatrician, School of Population Health, University of Auckland. SR is a Public Health Physician at Auckland and Waitemata District Health Boards. AL is a Community Paediatrician at Starship Child Health.

References

1. Marks KJ, Whitaker M, Anglin O, et al. Hospitalizations of Children and Adolescents with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, July 2021–January 2022. MMWR Morb Mortal Wkly Rep 2022;71:271–278. DOI: http://dx.doi.org/10.15585/mmwr.mm7107e4
2. Torjesen I. Covid-19: Omicron variant is linked to steep rise in hospital admissions of very young children. BMJ 2022;376:o110.
3. Prasad N, Newbern EC, Trenholme AA, Wood T, Thompson MG, Aminisani N, Huang

QS, Grant CC. Respiratory syncytial virus hospitalisations among young children: a data linkage study. Epidemiol Infect. 2019 Jan;147:e246. doi: 10.1017/S0950268819001377.
4. Bedford MJ, O'Neill K, Greenfield C, Gerritsen S, Page WH, Bates SJ. A Wellbeing-themed submission for: The Strategic Plan for Early Learning 2019-29, 2019.
5. https://www.education.govt.nz/covid-19/advice-for-early-learning-services/funding-settings-under-the-new-traffic-light-system/

Public Health Expert Briefing (ISSN 2816-1203)
