

This is the second edition of EARLY YEARS since the lockdown started back in March. Much has happened since then, but we have heard little from government or the National Coronavirus Command council on ECD and on NPOs. This is probably because the ECD and NPO sectors have been largely silent besides a few communications to government that have, for the most part, been ignored. It is only during this past week that we have seen the Minister of Basic Education and officials in the national Department of Social Development make any reference to ECD, and then what was said was almost nothing.

Whilst under lockdown, ECD NPOs have had a shock to the system. Given that ECD NPOs are unlikely to be back at work before June month at the earliest, what do we do in the meantime has been the question? Some have set up feeding schemes for ECD centres and in communities. At the Centre for Early Childhood Development we have been supplying food and food vouchers to ECD centres, ECD workers and parents, in Red Hill, Kalkfontein, Gugulethu, Philippi and Mooresburg, amongst many areas.

So, what do we need to do now during the lockdown and when we are back at work? Some ideas follow.

First, we must inform our donors what we are doing during the lockdown. We wrote to all our donors immediately when the lockdown began. We have also updated them on what we have done over the first two months of the lockdown. What we did not do was to ask for funding. As ECD NPOs it is not wise to ask donors for money now. It is poor strategy

to ask hard-pressed donors for funds now, especially if these funds are for organisation survival.

Donors are likely to be involved in supporting feeding programmes and are unlikely to consider funding organisations that are in financial trouble. Online funding efforts will yield little response unless you are a major national service provider. This is the reality. We have adopted the approach that on hearing what we are doing, donors may decide themselves to fund us, and some have done so.

What we should be doing in these times is paying our staff in full, communicating with our staff, keeping them informed of developments, thinking about what we must do when we return to work and how we can ensure workplace safety, if needs be, pay for staff to be tested, provide crisis counselling, and meet over Zoom or a similar video conferencing platform. It is also advised that your staff read and tune in to webinars appropriate to your work. There are excellent webinars every day. Along with our work efforts, colleagues of mine have had an online organisation fun quiz, developed an organisation music playlist and are currently putting together an inspirational video in appreciation of ECD workers country wide.

Next month I will write on what ECD NPOs can do to mitigate the effects of the Coronavirus.

Enjoy reading this education of EARLY YEARS.

ERIC ATMORE
Director

“... we have heard little from government or the National Coronavirus Command council on ECD and on NPOs.”

BACK TO SCHOOL : THE EVIDENCE IS CLEAR – START WITH THE YOUNG

~ Nic Spull

Studies from across the globe are in agreement: Children under 10 are least susceptible to Covid-19, and they should be the first to go back to school.



The question of when and how children should return to school depends on three main points:

- Risks to children of illness and death;
- Transmission of the virus from children to adults and the need to “flatten the curve”; and
- The social and economic costs of keeping children at home.

Evidence on these three issues from around the world is clear: when children go back to school the youngest should go back first.

There appears to be a clear and emerging consensus in the international research literature across all countries: Children under the age of 10 are considerably less likely than adults to get infected, either from each other or from adults. They are less likely to transmit the virus, even when they are infected. And it is extremely rare for them to get severely ill or die from Covid-19.

Why the youngest should go back first: In addition to the fact that children 10 years and younger are considerably less likely to get infected, they also present the highest child-care burden to their households. This prevents many parents and caregivers from going back to work and earning an income to support their families. Any response to mitigate the economic disaster from the lockdown and Covid-19 must take account of parents' additional child-care responsibilities while schools are closed.

Second, young children are also the least able to follow self-directed learning at home. This is partly because they have not yet learnt to read by themselves, but also because young

children require higher levels of human interaction and “activity” for them to learn. For most children in South Africa all curricular learning has stopped while schools are closed, leading to further inequalities in learning outcomes.

Finally, children’s well-being increases when they can go to school. Children receive free school meals to supplement their diet, they can interact with their same-age peers, and it gives their caregivers a break from otherwise constant child-care. This improves parents’ mental health and allows them to work, plan and relax, making them better caregivers when children come back from school. Young children being “locked up” at home when there are few health benefits to themselves or society is bad for the well-being of children, bad for parents and bad for the economy.

Judgments about the national threat posed by Covid-19 and mitigation strategies should be informed primarily by advice from virologists and epidemiologists (the author is neither). However, the Department of Basic Education, in consultation with these experts, has already decided that schools will now go back (from 1 June), starting with Grade 7 and Grade 12.

But I would argue for a different phasing-in approach to the current one, namely, at the same time that Grade 12 goes back, ECD sites should be opened and Grades R, 1, 2 and 3 should be allowed to return incrementally (rather than Grade 7) using a phased-in approach with special precautions for teachers. This should be combined with close monitoring of infection rates among a random sample of teachers and families of Grades R-3 children. There is a clear rationale for this that is informed by the best available research. Such an approach minimises the risk to learners and teachers and also allows many parents to go back to work. In short, children should go back to school and the youngest should go back first.

The evidence emerging from countries around the world is clear and consistent: children are less likely to catch Covid-19 and almost never die from it. Fatality rates from Covid-19 by age group for China, Italy, Spain and South Korea reflecting all deaths up to 24 March (Our World in Data, 2020) shows a clear age bias: fewer than 0.3% of fatalities for those under 40 years of age and “0%” for the 0-9 year-old category.

To date, the best available evidence on whether children can catch and transmit Covid-19 comes from Iceland which has tested the largest percentage of its population.

In their 14 April 2020 article in the New England Journal of Medicine Gudbjartsson et al report that, “In the population screening, no child under 10 years of age had a positive result, as compared with 0.8% of those 10 years of age or older. Even among a pre-selected high-risk group that had likely exposure to the virus, children under the age of 10 were half as likely to test positive compared to those older than 10.”

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Furthermore, in an interview with the CEO of the genetic sequencing company working with the Icelandic Directorate of Health to trace all Covid-19 infections they explain that: "Children under 10 are less likely to get infected than adults and if they get infected, they are less likely to get seriously ill. What is interesting is that even if children do get infected, they are less likely to transmit the disease to others than adults. We have not found a single instance of a child infecting parents."

South Korea: The South Korean experience is notable because it was one of the first countries to undertake widespread community testing. In a study looking at the first 7,755 confirmed cases of Covid-19 in South Korea, only 1% of cases were among the 0-9 age group (Choe et al 2020). There were no fatalities for any patient under 30 years of age.

Switzerland: In May 2020, the Swiss health ministry's infectious diseases chief, Daniel Koch, reported that after wide consultation with clinicians and researchers, "Young children are not infected and do not transmit the virus. They just don't have the receptors to catch the disease." He went on to say that children under the age of 10 in Switzerland can now hug their grandparents (BBC). This is now the official policy in Switzerland and has subsequently been supported by infectious-diseases paediatricians and the Swiss Pediatric Society (RTS, 1 May 2020).

The US: On 1 May 2020 the CDC in the US reported that of 37,308 deaths from Covid-19 in the US, only nine (0.02%) were among children aged 0-14 years.

Germany: One German study showed that the children who tested positive for Covid-19 harbour just as much of the virus as adults (Drosten et al. 2020). This has led to speculation that children are as infectious as adults. However, a number of other recently published studies refute this. Studies that look at this question specifically (ie, tracing studies to identify index cases) show that this is not the case. Children are very rarely the source of infection in a household or a population. These tracing studies are consistent with each other and come from the US, Australia, China, the Netherlands, Singapore, South Korea and Vietnam, and all support the hypothesis that children are not the primary spreaders of the virus.

Italy: The town of Vo in Italy screened 86% of its population and found that, "No infections were detected in either survey in 234 tested children ranging from 0 to 10 years, despite some of them living in the same household as infected people" (Lavezzo et al, 2020, p.5).

Japan: In a study that reviewed the 313 domestically acquired cases in Japan from January to March 2020, Mizumoto et al (2020) found that: "Children are less likely to be diagnosed as cases, and moreover, the risk of disease given exposure among children appears to be low."

Netherlands: In April 2020, the Dutch National Institute for Public Health and the Environment reported that "children play a small role in the spread of the novel coronavirus. The virus is mainly spread between adults and from adult family members to children. Cases of children infecting each other or children infecting adults are less common."

There are also a range of synthesis studies which review evidence across a number of countries and studies. These help to draw out the similarities and differences across these studies. A review of 67 studies on Covid-19 and children concluded, "The role of children in transmission is unclear, but it seems likely they do not play a significant role." (DFTB, 2020: p.8) In a review of 31 household transmission clusters from China, Singapore, the US, South Korea and Iran, only three households (10%) had a child as the index case (Zhu et al, 2020). To put this in perspective, in the H5N1 outbreak, children were the index case in 54% of cases (Zhu et al, 2020). The researchers conclude that "Whilst SARS-CoV-2 can cause mild disease in children, the data available to date suggests that children have not played a substantive role in the intra-household transmission of SARS-CoV-2."

In their April 2020 paper paediatric infectious disease experts Munro and Faust summarise three recent studies: "A case study of a cluster in the French Alps included a child with Covid-19 who failed to transmit it to any other person, despite exposure to more than a hundred children in different schools and a ski resort (Danis et al, 2020). In New South Wales, Australia, none of 735 students and 128 staff contracted Covid-19 from nine child and nine adult initial school cases despite close contact (NSW, 2020). In the Netherlands, separate data from primary care and household studies suggests SARS-CoV-2 is mainly spread between adults and from adult family members to children (RIVM, 2020)."

Research emerging across all countries seems to be highly consistent. In brief, children are less likely to get infected (either from each other or from adults) and they are less likely to transmit even where they are infected. The literature on Covid-19 is being rapidly updated as new papers come out. This helpful website summarises new paediatric Covid-19 literature as it comes out. It is managed by paediatric infectious disease experts Alison Boast, Alasdair Munro and Henry Goldstein. See also this resource from Nature.

Are children less susceptible than adults?

Munro (2020) reports that there have been five studies looking specifically at whether children catch the disease at the same rate as adults after they are exposed to a confirmed positive case (an index case). The first study came from Shenzhen in China and looked at 1,286 contacts exposed to 391 positive cases. They found that children caught the disease at the same rate as adults (7.4% for children under 10 years vs population average of 6.6%) (Bi et al, 2020). This finding caused a lot of



concern, but four more studies have now been published and all show that children are significantly less likely to get infected compared to adults.

The next study came from Japan and looked at 2,496 contacts exposed to 313 positive cases and found children were much less likely to get the disease after exposure. Among children aged 0-19 years who were exposed, 7.2% of boys were infected, and 3.8% of girls were infected compared to 22% of males and females aged 50-59 (Mizumoto et al, 2020).

The third study is from Guangzhou in China, which looked at close contacts of 212 positive cases. It found that children were much less likely to get infected (5.3%) compared to adults (12.6%) after exposure (Jing et al, 2020).

The fourth study came from Wuhan in China and looked at 392 contacts exposed to 105 positive cases. It found that only 4% of children (fewer than 18) became infected compared to 17% among adults (Li et al., 2020).

The last study comes from Hunan in China, which traced 7,375 contacts exposed to 136 positive cases. It found that adults aged 15-64 are about four times as likely to get infected compared to those 14 and under (Zhang et al, 2020).

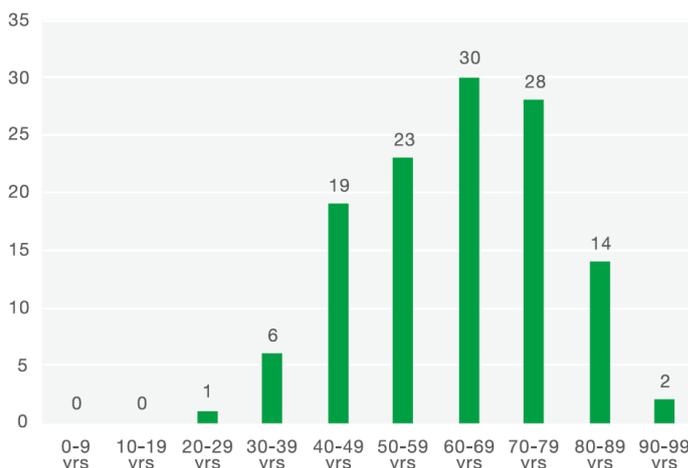
To quote Munro (2020), who summarises these five studies: "In conclusion, we have five studies assessing the secondary attack rate of Covid-19 across age groups, in which four report a considerably lower attack rate in children and one which reports the same in children as the general population. It appears fairly convincing that children are less likely to acquire the infection than adults, by a significant amount."

Infection rates by age in South Africa

While South Africa has a considerably smaller number of infections and fatalities compared to any of the countries reviewed above, the age-profile of infections and deaths is consistent with the international experience. As of 2 May 2020, 123 people had died of Covid-19 in South Africa but none of these deaths were among those under 20 years of age (NICD, 2020). Of the 3,144 positive cases of Covid-19 in South Africa as at 19 April, only 0.3% were aged 0-10 and 4% were aged 11-20. The two figures below present the full set of data.

Deaths from COVID-19 by age in South Africa

(Source: NICD 2 May 2020, total=123)



Do school closures help?

In a widely cited study published in the Lancet Journal of Child and Adolescent Health, Viner et al (2020) conducted a rapid systematic review on the effectiveness of school closures in limiting the spread of Covid-19. They conclude as follows: "Data from the SARS outbreak in mainland China, Hong Kong, and Singapore suggest that school closures did not contribute to the control of the epidemic... Recent modelling studies of Covid-19 predict that school closures alone would prevent only 2-4% of deaths, much less than other social distancing interventions."

In another article, published in Science and also modelling the impacts of different interventions to limit the spread of Covid-19, Zhang et al (2020) use contact surveys of 136 confirmed index cases infected in Wuhan and Shanghai. They conclude that "social distancing alone, as implemented in China during the outbreak, is sufficient to control Covid-19." Yet they also argue that school closures can help to flatten the curve: "While proactive school closures cannot interrupt transmission on their own, they can reduce peak incidence by 40-60% and delay the epidemic."

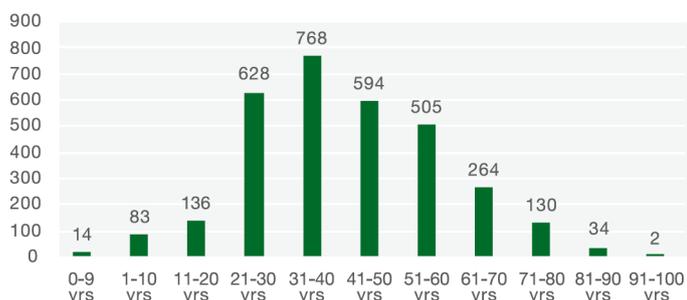
Are children continuing to learn at home during lockdown in South Africa?

It is difficult to answer this question definitively, but given what we know about learning losses during holiday periods, the lack of access to technology and educational materials at home for the poorest 70% of South African children, and the lack of preparation for distance-learning before the lockdown started, the short answer to this question is "no". If one is realistic, for the poorest 80% of learners in South Africa there is virtually no curricular learning that is taking place during lockdown.

Apart from the fact that parents and caregivers are not trained or equipped to teach their own children, the existing lockdown "plans" for learning will not significantly mitigate the losses in learning for children that do not have proper technology-enabled learning at home. At most, 5-10% of learners can continue learning at home given their access to computers and

Infections of COVID-19 by age in South Africa

Department of Health, 19 April 2020, total=3144



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the internet. Data from the “Trends in International Mathematics and Science Study” (TIMSS 2015 Grade 9) shows that for no-fee schools (the poorest 75%), fewer than half the children in a class have a computer with the internet. Only in the wealthiest 5% of schools do at least 90% of learners have access to a computer and the internet at school (Gustafsson, 2020).

The DBE’s partnership with the South African Broadcasting Corporation (SABC) to provide “Covid-19 Learner Support” via television and radio (DBE, 2020), while admirable, is not a replacement for school. It targets only “Grade 10-12 and ECD” and is only available for 1.5 hours per day across three television channels. Given that these programmes would need to be subject- and grade-specific for them to continue with curricular work, this still amounts to less than 5% of the “instruction” time learners would be receiving if they were in school, assuming they watch all programmes dedicated to their grade. It is also not clear what children in Grades R-9 are meant to do.

Access to computers and the internet in South African homes is very low. The General Household Survey of 2018 shows that only 22% of households have a computer in them (StatsSA, 2019: p.63), and only 10% have an internet connection in their home (p.57). While it is true that 90%+ of South African households report access to a mobile phone, only 60% report access to the internet via their mobile phone. It should further be emphasised that these rates are for adults in the household. One cannot assume that during lockdown children in a household would have exclusive or unlimited access to the cellphone to access educational content. There is also the issue of multiple children in the same household needing to share a mobile phone, and the high cost of data, although there are now some zero-rated educational sites (Duncan-Williams, 2020).

Given the practical impossibility of continuing with meaningful learning from home – at least for the poorest 80% of learners, the emphasis for the Department of Basic Education should be making schools safe for learners and teachers to return.

Conclusion

South Africa’s choice to re-open schools is in keeping with a number of other countries that have far greater Covid-19 outbreaks and some with shorter lockdown periods. These countries include China, Denmark, Israel, Finland, France, Germany, Japan and the Netherlands. In all cases governments are introducing precautionary measures such as temperature checks, reduced class-sizes, holding classes outside and spacing desks further apart.

Deciding to re-open schools and bring children back in a phased -in approach will involve a number of administrative complexities. These include how to manage the infection risks

for adults that facilitate schooling including teachers, principals, administrative staff, transport workers and school feeding employees. Temporarily replacing high-risk individuals such as those older than 60, those with diabetes and other pre-existing conditions etc, will not be simple or easy. Yet, this should be held in tension with the severe limitations imposed by school closures; to children’s ability to learn, to caregivers’ ability to earn an income, and to the economy’s ability to function. The economy cannot properly “re-open” while schools are closed. This is especially true for schooling for those 10 years of age and younger who require the most care when at home.

The aim of this article has been to summarise some of the emerging international evidence. The latest evidence suggests that by allowing the youngest children to go back first, policymakers are putting teachers and parents at lower risk than if high school learners went back to school first. As two paediatric infectious disease experts explain “severe Covid-19 is as rare as many other serious infection syndromes in children that do not cause schools to be closed”.

As the Department of Basic Education considers when and how to bring children and teachers back to school, it would be wise to heed the epidemiological evidence emerging from around the world. Younger children are far less likely to catch or transmit the Covid-19 virus and therefore bringing them back to school first is the safest approach – for them, for their teachers, and for the health of our economy and society as a whole. DM Dr Nic Spaul is with the Department of Economics at Stellenbosch University.

Article available at

<https://www.dailymaverick.co.za/article/2020-05-14-back-to-school-the-evidence-is-clear-start-with-the-young/>



This article is an edited version of a Policy Brief by Stellenbosch University’s Research on Economic Policy unit (RESEP) that is available here: <https://nicspaul.files.wordpress.com/2020/05/spaul-2020-schooling-policy-brief-10-may-2020.pdf>