Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Children, intersectionality, and COVID-19

Early in the COVID-19 pandemic, the broadcaster Emily Maitlis commented that COVID-19 is a "health issue with huge ramifications for social welfare and it is a welfare issue with huge ramifications for public health".[1] These words were prescient. It is now known that minority ethnic groups are disproportionately affected in terms of COVID-19 disease and deaths.[2] Such disproportionality has motivated a call for an intersectional approach to COVID-19 policy.[3] Yet there is one group of people routinely forgotten about in the turn to intersectionality: children.

The term intersectionality, first used by Kimberlé Crenshaw in the context of Black feminism,[4] can be thought of as a framework for conceptualising an individual, group, or social problem as affected by multiple and overlapping disadvantages and discriminations. In the context of the pandemic, an intersectional approach acknowledges the effect of interdependent systems of prejudice on both direct and indirect health effects of COVID-19. For example, Berkhout and Richardson[5] investigate the effect of COVID-19 on feminism, arguing that gender alone is inadequate to address both the risks and consequences of COVID-19, and Sasser and colleagues[6] examine the overlapping and compounding effects of race and class.

Childism, or systematic prejudice against children,[7] is a new concept in the context of public health. It has been invoked as a way of critiquing mass SARS-CoV-2 infections among children[8] and the de-prioritisation of children for vaccines.[9] What would it mean to take an intersectional approach to address childist prejudice in the pandemic?

The first step to understanding childism as part of an intersectional approach is to recognise that children are not a homogeneous group. This group includes children from minority ethnic backgrounds, girls, disabled children, children living in poverty, and so on. Yet the heterogeneousness of children as a group has been largely ignored in public health and policy decisions during COVID-19. For example, in the context of the decision to recommend vaccinating children, risks are discussed and decisions about offering vaccines are made with reference to all children, even though we know that boys are more at risk from myocarditis and pericarditis than girls.[10] Research points to racial inequalities with respect to COVID-19 outcomes, including hospital and intensive care admissions in children.[11]

The philosopher Karl Popper once described how he asked his students to observe: "'Take pencil and paper; carefully observe, and write down what you have observed!' They asked, of course, what I wanted them to observe. Clearly the instruction, 'Observe!' is absurd."[12] Popper makes the point that observation is always selective. If the right questions are not asked, data that will enable them to be answered cannot be collected.

Similarly to adults, the intersection of social, economic, and demographic characteristics, such as age, ethnicity, class, and gender, shapes children's daily experiences and outcomes. Yet, there are few data available to allow an evidence-based approach to addressing the intersectional needs of children in the context of COVID-19. Compared with adults, considerations of the effects of the pandemic on children have been deficient enough, even with lumping them all together as a homogeneous group. The dearth of data on how COVID-19 and its related interventions might differentially shape the experience of heterogeneous groups within all children is likely to compound this prejudice. An intersectional approach is key to addressing childism in public health decision making, practice, and policy.

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*Katy Dineen, Bengt Autzen, *Nisreen A Alwan*
n.a.alwan@soton.ac.uk
Department of Philosophy, University College Cork, Cork, Ireland (KD, BA); School of Primary Care, Population Sciences and Medical Education, Faculty of Medicine, University of Southampton, Southampton, UK (NAA); University Hospital Southampton NHS Foundation Trust, Southampton SO16 6YD, UK (NAA)

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Have we really failed to roll back malaria?

The World Malaria Report (WMR) 2021 estimates that there were 241 million (95% CI 218–269) malaria cases in the world in 2020,

which is the same number as in 2000 (241 [226–260] million).[1] Has the global burden of malaria really not changed over 20 years, after spending more than US$30 billion on malaria control activities, and after distributing more than 2·5 billion insecticide-treated bednets, 3 billion rapid diagnostic tests, and 3·5 billion artemisinin combination treatments?

A major problem with the WMR is that the method of calculation changes every year. For example, WMR 2020 reported an estimated 453 000 deaths from malaria (422 000–496 000) in 2015,[2] whereas WMR 2021 reports 566 000 deaths (524 000–619 000) in 2015 (appendix).[1] The WMR 2021 method of estimation is considered most robust,[1] but is it accurate? There has been substantial progress in malaria control in Asia and the Americas, so what is really going on in Africa? 20 years ago, the malaria situation in Africa was dire. There was little distribution of insecticide-treated bednets, and the increasingly ineffective chloroquine was still the first-line antimalarial treatment across the continent. Even adjusting for population increases in Africa, and the uncertain effect of COVID-19, returns on investments in the past 20 years seem profoundly disappointing. If these WHO estimates are correct, then deploying insecticide-treated bednets, rapid diagnostic tests, and artemisinin combination treatments across the continent, in addition to deploying seasonal malarial chemoprevention, has had little effect.

See Online for appendix

The WHO Global Malaria Programme messaging is confusing and contradictory. WMR 2020 documented an impressive 60% reduction in global malaria mortality since 2000.[2] In 2021, the reduction became 30% for the same years! In 2015, WMR 2015[3] announced a "dramatic decline in the global malaria burden over 15 years" and WHO proudly reported that target 6C of the Millennium Development Goals—namely, a decline in the global incidence of malaria—had unquestionably been achieved. This accomplishment was reiterated as a key message in the 2019 WMR: "on a global scale there was exceptional headway in reducing the burden of malaria in 2000–2015—proof that progress is possible".[4] Where are those claims now?

Each year WHO proposes that a substantial increase in international funding is needed. But a clear understanding of what is happening, what is going wrong, and why, are needed to justify this request.

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Nicholas J White, Nicholas P J Day, Elizabeth A Ashley, Frank M Smithuis, Francois H Nosten
nickw@tropmedres.ac

Mahidol Oxford Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok 10400, Thailand (NJW, NPJD, FHN); Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, Oxford, UK (NJW, NPJD, EAA, FMS, FHN); Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit, Microbiology Laboratory, Mahosot Hospital, Vientiane, Laos (EAA); Myanmar Oxford Clinical Research Unit, Yangon, Myanmar (FMS)

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Omicron neutralising antibodies after COVID-19 vaccination in haemodialysis patients

The SARS-CoV-2 variant of concern (VOC) B.1.1.529 omicron is now the predominant VOC in the UK.[1] The burden of more than 30 mutations in omicron spike suggests at least a degree of vaccine evasion,[2] and UK Health Security Agency estimates of vaccine efficacy against infection are reduced compared to delta.[1] The critical question is how well existing vaccines will protect clinically extremely vulnerable groups against infection. In the UK, the COVID-19 death rate for in-centre haemodialysis (IC-HD) patients during the delta wave was 14·65 (95% CI 11·49–18·67) per 1000 patient-years, the highest rate for any OpenSAFELY-defined comorbidity.[3] The increased transmissibility of omicron is likely to prove challenging in haemodialysis units, where in-unit transmission with prior VOCs has occurred.[4] We therefore sought to determine the neutralising antibody (nAb) titres (nAbTs) in IC-HD patients, a cohort we have previously shown to have attenuated nAb responses to delta.[5]

In the UK, the IC-HD vaccination schedule is complex. Most IC-HD patients are considered fully vaccinated after two doses and boosted after three. Boosting eligibility criteria were finalised on Sept 14, 2021.[6] A subset of IC-HD patients, due to their use of additional immunosuppression (eg, for failed renal transplants) or other comorbidities, are eligible for a three-dose primary course (announced Sept 1, 2021).[7] These patients are already permitted a fourth booster dose 3 months after their third dose.

To assess the induction, maintenance, and diversity of nAbs we convened the UK-wide NAOMI consortium study assessing neutralising antibody after COVID-19 vaccination in haemodialysis patients.[5] This is an observational multicentre meta-cohort study to compare nAb responses between different vaccine regimens, and in pre-specified patient subgroups. Previously, we compared nAb responses after two doses of the adenoviral vector Oxford–AstraZeneca vaccine (ChAdOx-1 nCoV-19; AZD1222) or the Pfizer–BioNTech mRNA vaccine (BNT162b2). mRNA vaccine neutralising responses against wildtype virus and VOCs were similar to those seen in health-care or laboratory workers.[5,8,9]

Here we report the first nAbTs against omicron in the at-risk IC-HD population (n=98) a median of 158 days [IQR 146–163] after