The implications of COVID-19 for the children of Africa

COVID-19, and the novel coronavirus causing it, has been declared a pandemic by the World Health Organization. It presents with signs and symptoms of respiratory illness, and other nonspecific symptoms. These symptoms may be mild enough to go unnoticed, or severe enough to overwhelm a healthcare system in a First-World country. It is an emerging problem that can potentially put intolerable strain on a health system that is fragile and likely to collapse, such as those that exist in Africa. Extraordinary times like these require ingenious statesmanship and astutely calculated plans to see a nation emerge through the crisis. And in such a crisis, special attention needs to be directed to the healthcare system, where medical attention, equipment and interventions need to be carefully rationed.

To date, sub-Saharan Africa has not seen the devastation wrought on the Northern Hemisphere. That may be fortuitous, we may be lucky, it may just be coming.

In addition, SARS-CoV-2 has left children largely unaffected by disease.^[1] They may be the silent carriers, which could have its own awful psychological impact. But whether or not COVID-19 ultimately affects the children of Africa directly, it will leave them scarred, worse off, and still facing a burden of infectious diseases not seen anywhere else in the world.

The health burden in Africa is in every way a unique one. Many common infectious diseases present with similar symptoms to COVID-19 (malaria, viral respiratory tract infections, pneumonia and others), and as we focus on diagnosing cases of COVID-19 in Africa we will miss these other illnesses, unless we are hyper-vigilant. Healthcare workers can therefore never focus exclusively on the coronavirus, because the children presenting to emergency rooms are very often severely ill. Hospitals and clinics are overwhelmed on an average day with a burden of disease centred in the African paediatric population. Factoring in additional patients with coronavirus illness and the time needed to don personal protective equipment will make timely care of sick children impossible.

The malaria saga in sub-Saharan Africa is very far from over, and it is a chronicle heavy with warnings. Malaria's presentation can mimic a COVID-19 case definition – and in severity, it is just as deadly. Malaria will kill a child faster than COVID-19, and malaria is not going to make way for coronaviruses. In the afternoon of 8 April 2020 a 14-year-old girl from the suburbs of a large city died of malaria. She had no travel history, no known exposure. Her medical team considered that she might have malaria despite the 'obvious' COVID-19 fever, but she was dead before the malaria test result came back positive. The fundamentals need to be preserved: other diseases cannot and should not take a back seat in our population.

South Africa (SA) is now in the height of respiratory syncytial virus acute lower respiratory tract infection season. [3] The case definitions of that condition and COVID-19 are almost identical. Widespread use of palivizumab is non-existent, cohorting of patients is outright impossible. Widespread virus testing is limited. How do we deal with that burden and yet focus on COVID-19?

Influenza season starts soon. And in Africa, influenza is a killer, more so than in the rest of the world. Yet widespread influenza vaccine is either not available, or not accepted by the population. The case definitions for COVID-19 and influenza are almost identical. This year we face the additional threat of influenza B in children, causing more severe disease.

Asthma may affect as many as 20% of children in Africa. [6] Although COVID-19 appears not to affect asthmatics in particular,

there are other implications. Spacer use to replace nebulising is almost unheard of in Africa. Most asthmatics in Africa are poorly controlled. SA has been ranked as fourth in asthma-related mortality for patients aged 5 - 35 years. This may be attributed to incorrect diagnosis, lack of treatment facilities, and inaccessibility to appropriate healthcare. [6] The question on the fate of these patients is a rhetorical one.

Malnutrition, AIDS and tuberculosis in Africa pose a daunting threat. What will the implications of reduced immunity be for children in Africa? Can we rely on the widespread use of antiretroviral agents to mitigate the threat? And, most importantly, are the nations of Africa ready to deal with the after-effects of poor policy decisions if they go awry?

The epidemiological suggestions that fewer SARS receptors in Africans, greater sunlight exposure or widespread BCG vaccine may protect Africans, are untested interventions. [7] Certainly chloroquine and azithromycin are not widely available. Convalescent serum and a vaccine are unlikely to find their way to Africa for many years, unless used in a clinical trial setting.

In conclusion, Africa may become the epicentre for COVID-19 or it may not. Either way the plight of African children will remain a perfectly frightening picture to adorn the posters of relief organisations in a quest to win!

Universal kindness and empathy for the children of Africa are indispensable.

There are remarkable acts of kindness going on in the Northern Hemisphere. Kindness is in abundance, with care for health workers, and generous donations of protective items and medications. Such acts of kindness are desperately needed in Africa. It may be time to forgive Third-World debt, invest in neonatal services, support childhood expanded programmes of immunisation, combat malnutrition and tackle infectious diseases.

The children of Africa and South Africa need your kindness now! This editorial is dedicated to the greatest philanthropists and

guardians of the children of Africa and the world – Bill and Melinda Gates and Abdul Sattar Edhi.

Fatima Mustafa, Robin J Green

Steve Biko Academic Hospital and Department of Paediatrics and Child Health, School of Medicine, Faculty of Health Sciences, University of Pretoria, South Africa robin.green@up.ac.za

- Ludvigsson JF. Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults. Acta Paediatr 2020 (epub 23 March 2020). https://doi.org/10.1111/apa.15270
- Snow RW, Sartorius B, Kyalo D. The prevalence of *Plasmodium falciparum* in sub-Saharan Africa since 1900. Nature 2017;550:515-518. https://doi.org/10.1038/nature24059
- White DA, Madhi SA, Jeena PA, et al. Acute viral bronchiolitis in South Africa: Viral aetiology and clinical epidemiology. S Afr Med J 2016;106(5):443-445. https://doi.org/10.7196/SAMJ.2016. v10655-10444
- Wang X, Li Y, O'Brien KL, Madhi SA, et al. Global burden of respiratory infections associated with seasonal influenza in children under 5 years in 2018: A systematic review and modelling study. Lancet Glob Health 2020;8(4):e497-e510. https://doi.org/10.1016/S2214-109X(19)30545-5
- 5. Sharma L, Rebaza A, Dela Cruz CS. When 'B' becomes 'A': The emerging threat of influenza B virus.

 Fur Respir L 2019-54(2):1901325 https://doi.org/10.1183/13993003.01325-2019
- Eur Respir J 2019;54(2):1901325. https://doi.org/10.1183/13993003.01325-2019
 6. Masekela R, Gray C, Green RJ; South African Childhood Chronic Asthma Working Group. The increasing burden of asthma in South African children: A call to action. S Afr Med J 2018;108(7):537-539. https://doi.org/10.7196/SAMJ.2018.v108i7.13162
 7. Fanidi A, Jouven X, Gaye B. Strategies to control COVID-19 and future pandemics in Africa and
- Fanidi A, Jouven X, Gaye B. Strategies to control COVID-19 and future pandemics in Africa an around the globe. Eur Heart J 2020 (epub 7 April 2020). https://doi.org/10.1093/eurheartj/ehaa278

S Afr Med J 2020;110(6):447. https://doi.org/10.7196/SAMJ.2020.v110i6.14824