

The challenge of ensuring equity in mass deworming programmes



Preventing neglected tropical diseases (NTDs) through mass treatment of at-risk populations provides a cost-effective way of improving health equity in endemic countries.¹ Considerable funds and human resources are invested in mass deworming of children and women of childbearing age in areas endemic of soil-transmitted helminthiasis; that is, infections with parasites, such as roundworms, whipworms, and hookworms.² Ministries of Health have together with UN agencies, philanthropic foundations, pharmaceutical companies, and non-governmental organisations, put in place large-scale programmes for dispatching deworming medication across vast areas of the world, with inherent challenges related to logistics, infrastructure, human resources, sociocultural issues, and even armed conflict and unrest. Tremendous advances have been made, and in 2017, close to 750 million people were reached yearly.³

Nathan Lo and colleagues⁴ have estimated the equity of access to such deworming by analysing Demographic and Health Surveys data for over 820 000 children aged 1–4 years across 50 low-income and middle-income countries. The study includes analyses of data collected between 2004 and 2017, on the basis of mother-reported access to deworming for preschool age children. The findings suggest that deworming programmes did not consistently provide deworming equitably across geographical locations and wealth classes, indicating that children of wealthier families were more likely to be treated than others. The results also apply to countries that, in line with the WHO goal, have reported more than 75% national coverage.

The study draws attention to the need to assess the equity of access to deworming, in order to further strengthen and improve the efficacy and cost-effectiveness of such programmes. Although it has been argued that an average NTD service coverage indicator might serve as a measure of equity in the progress towards universal health coverage,⁵ NTD specific equity metrics have yet to be included in regular NTD programme monitoring and evaluation. As such, Lo and colleagues' article is an important addition to the literature on global health equity.

The success of large public health programmes depends on a complex interdependency between the many stakeholders involved in programme funding and organisation, including on-the-ground staff, and the many intermediaries involved in programme logistics. Such interdependency, as well as the relatively limited financial and human resources typically available for such programmes, has the potential to affect the way in which deworming is provided, and subsequently reported, evaluated and monitored. Various other factors associated with both supply and demand sides of deworming programmes, could also explain the findings by Lo and colleagues, including the motivation of health-care workers and community volunteers at the end of the supply chain. However, although some reports suggest that mismatches can occur between reported programme activities and actual treatments,⁶ other data suggest that sufficiently funded and well-organised programmes can be successful in providing equitable preventive chemotherapy.⁷

Importantly, the study by Lo and colleagues found a correlation between deworming and vitamin A supplementation and three doses of the diphtheria-tetanus-pertussis vaccine. This finding indicates that key to addressing the challenge of equitable deworming will lie in strengthening integrated public health services, in line with the Sustainable Development Goal of universal health coverage by 2030.

Further research is needed to determine whether the findings by Lo and colleagues might be supported by other studies, and whether the results are representative also for other age groups. Also, it remains unclear how simple and pragmatic the use of the suggested equity index might be in a programmatic context, and therefore how to accurately measure, assess, and address equitable access to mass deworming and, potentially, other NTD programmes.⁸ If the authors' findings do hold up, the question is whether there is room for readjusting NTD programmes to further improve access to deworming of those most in need.

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