

Mass deworming in Ugandan children

Is effective but associated malnutrition needs treatment

Research p 122

About two billion people are affected by either schistosomiasis or helminth infections transmitted through soil (such as roundworms, whipworms, and hookworms). And about 300 million people have severe and permanent ill health as a result, especially poor and marginalised groups. Children aged 2 to 5 years are most at risk of severe morbidity. Treatment is cheap and safe and need be given only two or three times a year. The benefits of such treatment, even for preschool children, are becoming clearer. A randomised controlled trial by Alderman and colleagues reported in this week's *BMJ* finds that adding deworming drugs to a government led child health programme in Uganda increased weight gain by 10% in children receiving treatment twice a year.¹ The benefits in other settings may be even greater since the study was conducted in areas that had relatively low prevalence of infection and in which many control children received treatment privately. Other studies have found that anthelmintic treatment improves anaemia and cognitive development.^{2,3}

The neglect of parasitic infections extends to other causes of childhood malnutrition. Sub-Saharan Africa is the only region in the world where the absolute number of undernourished children has increased in the past decade, and in east Africa the prevalence of underweight children in 2015 is forecast to be 25% higher than it was in 1990 (rising from 27% to 33%).⁴ At least 27 countries across sub-Saharan Africa are progressing too slowly—or not all—in achieving their millennium development goal targets of reducing underweight. Malnutrition, the underlying cause of over half of child deaths in many developing countries, affects cognitive development and future economic productivity. Nutrition based interventions such as breast feeding, micronutrient supplementation, and anthelmintic treatments are among the most cost effective ways to improve health. Yet there is no global fund for nutrition, and the recent Commission for Africa report devotes less than half a page to nutrition, concentrating instead on HIV/AIDS, malaria, and tuberculosis.⁵

The World Bank suggests that, because malnutrition is often “invisible” (mild to moderate malnutrition has no obvious symptoms but contributes substantially to poor outcomes), there is little demand for aid from affected communities. Health officials have

been slow to draw on the substantial experience that exists on how to implement cost effective and affordable nutrition programmes on a large scale.⁶ As the study in Uganda shows, countries across Africa are starting to increase investment in child health and nutrition. Whether effective interventions should be delivered through special health days or through strengthening routine health systems is still being debated.

Combating malnutrition, including worm infestation, requires more than providing treatment. It requires a multisector approach to address the broader causes such as poor water and sanitation provision and lack of food security.⁷ However, this approach is also needed for other conditions such as tuberculosis and HIV/AIDS, so the partnerships built to improve nutrition and the lessons learnt can be used more widely.

Economic and historical analysis, epidemiological evidence, and common sense tell us that widespread childhood malnutrition will undermine investments in health, education, and ultimately economic development. Investments in cost effective treatments combined with broader nutrition based interventions must get greater priority.

Mickey Chopra *director*

(mickey.chopra@mrc.ac.za)

Medical Research Council, Van Zyl Drive, Tygerberg, Parow, 7505, South Africa

Competing interests: None declared.

- 1 Alderman H, Konde-Lule J, Sebuliba I, Bundy D, Hall A. Effect on weight gain of routinely giving albendazole to preschool children during child health days in Uganda: cluster randomised controlled trial. *BMJ* 2006;333:122-4.
- 2 Stoltzfus RJ, Chway H, Montresor A, Tielsch JM, Jape JK, Albonico M, et al. Low dose daily iron supplementation improves iron status and appetite but not anemia, whereas quarterly anthelmintic treatment improves growth, appetite and anemia in Zanzibari preschool children. *J Nutr* 2004;134:348-56.
- 3 Dickson R, Awasthi S, Williamson P, Demellweek C, Garner P. Effect of treatment for intestinal helminth infection on growth and cognitive performance in children: systematic review of randomized trials. *BMJ* 2000;320:1697-701.
- 4 De Onis M, Blössner M, Borghi M, Frongillo E, Morris R. Estimates of global prevalence of childhood underweight in 1990 and 2015. *JAMA* 2004;291:2600-06.
- 5 Commission for Africa Report. 2005. www.pfm.gov.uk/output/Page7310.asp (accessed 2 Jul 2006).
- 6 World Bank. *Repositioning nutrition as central to development: a strategy for large scale action*. Washington DC: World Bank Publications, 2006.
- 7 Chopra M, Darnton-Hill I. Responding to the crisis in sub-Saharan Africa: the role of nutrition. *Public Health Nutr* (in press).