Guidelines for severe malnutrition: back to basics

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Perspective on the paper by Karaolis *et al* (see page 198)

Malnutrition is a global problem that varies from undernutrition to overnutrition, but this article is confined to undernutrition. It has been defined as failure of the body to obtain the appropriate amounts of protein, energy, vitamins and other nutrients it needs to maintain healthy tissues and organ function. Worldwide, the most common form of malnutrition is iron deficiency, which affects about 80% of the world's population. Protein-energy malnutrition affects about 20% of the world's population and is most common in the developing countries of Asia and Africa. Although malnutrition occurs globally, with an estimated 26% of under-fives being moderately and severely underweight, 10% each being severely underweight or wasted, and 31% being moderately and severely stunted, the developing and resource-limited settings are most affected.¹ Various forms of malnutrition have been contributory to increased morbidity and mortality of under-fives in developing countries. Unfortunately, despite different intervention strategies, malnutrition, which was a contributing factor to 55% of under-five deaths in developing countries in the 1990s, is now estimated to contribute to about 60% of such deaths.²

THE NIGERIAN SCENE

In Nigeria, with an estimated population of 140 million inhabitants and an under-five population of approximately 28 million, between 1996 and 2004, the percentages of under-fives with severe underweight, moderate to severe wasting, and moderate to severe stunting were 9, 9 and 38, respectively.³ However, a more detailed analysis showed that children resident in the north-west zone of the country were most affected in all three subclasses. Furthermore, children resident in rural communities in all zones of the country taken together were more severely affected than their urban counterparts.⁴

Recognising that malnutrition was more common in resource-limited settings and that poverty was a major contributor, low-cost ways of treating

malnutrition and associated complications were developed by the World Health Organization (WHO) to assist its management in such settings.⁵

A review of the WHO programme in two South African hospitals concluded that the guidelines for severe malnutrition were largely feasible, but training workshops were insufficient to achieve optimal management, as staff turnover and an unsupportive health system eroded the gains made, and doctors treated cases without having been trained. Medical and nursing curricula in Africa must include the treatment of severe malnutrition.⁶

It is therefore important that programmes developed to consider the nutrition situation of developing nations, including management of different forms of malnutrition, should take cognisance of socioeconomic and other factors that would affect the implementation of such guidelines and work towards obtaining what would be feasible in the different settings. Involvement of workers in such settings will aid the attainment of these goals, as the cost of retraining may not be affordable to these nations.

WHO GUIDELINES FOR SEVERE MALNUTRITION: PRINCIPAL BARRIER TO IMPLEMENTATION

Although the WHO Guidelines for the Management of Severe Malnutrition were considered feasible, implementation in two hospitals in South Africa identified some problems that affected their full implementation,⁶ principal among which was inadequate workforce development involving the medical, nursing and other supporting cadres of staff. These problems are likely to increase in developing countries with global worsening of the economy and high rates of inflation in these countries. It is therefore essential to review these guidelines and adopt what would be feasible in such settings.

FEASIBILITY OF IMPLEMENTATION IN NIGERIA, PARTICULARLY IN RURAL SETTINGS

Protein energy and other forms of malnutrition are important contributors to

under-five morbidity and mortality in Nigeria. The adoption of primary health care (PHC) and the child survival strategies have largely failed to achieve targets because of poor implementation and pervasive poverty in the environment. Nigeria was one of the countries whose rates of under-five deaths and malnutrition increased as per the End Decade Goals set at the 1990 World Summit for Children. With an annual inflation rate of 23%, an estimated 70% of the population earning below \$1/day, low immunisation coverage rates, low birth weight rate of 14%, high HIV prevalence and orphans with AIDS, it is evident that malnutrition will remain and increase in Nigeria, and the cost of care will also become increasingly unaffordable to many carers.⁷

The WHO guidelines on the management of severe malnutrition, which require that malnourished children be admitted for up to 6 weeks, will therefore not be feasible in this setting, particularly in rural communities where the situation is even worse. Therefore, there is a need to develop alternative management procedures that may be more easily applied in such settings.

RECOMMENDATIONS ON IMPROVEMENT

In view of the prevailing situation in Nigeria as in most other developing economies, the following measures are being suggested for the improvement of the nutrition situation and management of malnourished children.

Implementation of all components of the Integrated Management of Childhood Illness

This will ensure that children gain access to preventive health services on time and are provided with skilled care when they are ill. The Community and Household component of the Integrated Management of Childhood Illness⁸ will improve family and community practices to ensure adequate growth and development of the children at the time when they are most at risk of malnutrition.

The PHC should also be strengthened so that all its components are used to ensure optimal health for the family. Some relevant programmes that can be promoted through PHC include breastfeeding and lactation management, food supplementation, growth monitoring and promotion, and reactivating and sustaining a good school health programme. The recommendation for optimal breast feeding should be taught to mothers at all contacts with the healthcare system. Outreach activities to the communities should also be used as opportunities to reach the mothers. Food supplements

such as vitamin A and iron should be offered to mothers and children at different contacts with the facility.

The special role of institutes of child health

Institutes of child health serve as bridges between universities/teaching hospitals and rural communities and thus have special roles to play in dealing with the problem of malnutrition and its management in resource-limited settings. Some of these roles include the development of appropriate nutritional programmes and packages for children in their respective catchment areas, operation of training centres for different cadres of health staff and community volunteers who can be recruited to provide nutrition services at the communities and facilities, and conduction of operational research to determine the trends and causes of malnutrition in different settings.

CONCLUSION

Malnutrition is a global problem and can be of macronutrients such as protein and calories, or micronutrients such as vitamins and minerals. It has been considered in different developmental programmes and has been a priority in

several health and other programmes. Despite this attention and the effects these programmes have had, malnutrition has remained a perennial problem in many developing countries, necessitating the development of management programmes that are applicable in such settings. Although the WHO guidelines seem feasible, their implementation has been constrained by a number of problems related to the limitations of resources and inadequate workforce development in such settings, which are much more pronounced in rural hospitals. The emphasis here is for a shift towards setting up programmes that would focus on preventing malnutrition.

ACKNOWLEDGEMENTS

The author is grateful to Dr AR Nte, Reader/Consultant Paediatrician and Dr DD Awi, Senior Research Fellow of the Institute of Maternal and Child Health, both of the University of Port Harcourt, for their immense help with the literature search

Arch Dis Child 2007;**92**:193–194.
doi: 10.1136/adc.2006.109462

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Competing interests: None declared.

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