EDITORIAL

Vitamin A supplementation in South Africa: Time for reappraisal

High-dose vitamin A supplementation (VAS) is one of the strategies to combat vitamin A deficiency and in the past was usually considered to be a short-term deficiency control measure. However, it is currently argued that vitamin A supplementation is a sustainable public health intervention for child survival, and should not be seen as a short-term measure.[1] VAS has been extensively documented to decrease overall child mortality by about 30%, while the mortality reduction in hospitalised children with measles was reported to be in the region of 60% on average.[2] The effect of VAS has primarily been associated with a reduction of *diarrhoea-related mortality*, though the effect on the latter has not been consistently documented in all studies. The effect of VAS may also be linked to the aetiology of the diarrhoea. There may therefore be disease- and cause-specific effects of VAS applicable to both preventive and treatment regimens.[3]

Based on the findings of the SAVACG survey, South Africa implemented a blanket VAS programme nationally in 2002.[4] Four years previously, the Western Cape province had implemented a medically targeted VAS programme (curative) despite having only the second lowest prevalence of vitamin A deficiency in the country (21%). However, the province did not incorporate the preventive component of VAS until April 2005.

In this issue of *SAJCN*, Du Plessis *et al.* evaluate the vitamin A supplementation programme at clinics in a rural district in the Western Cape in 2005.[5] The authors documented many missed opportunities, especially for curative VAS, as well as poor recording of the dispensed doses on the Road-to-Health cards. Many mothers were also not aware of the VAS programme. Notwithstanding the very small sample size of their study, these results are still important and very relevant. In the same province, the VAS programme (curative only) in two different districts, one urban and one rural, was evaluated by Hendricks *et al.* between April 2003 and October 2004[6] and reported findings that were very similar to those of the current study, viz. missed opportunities for VAS, lack of awareness of VAS by mothers, and a need for training of nurses. In comparing the findings of the two studies, however, one should bear in mind, among other considerations, that the indications for curative VAS supplementation were different in the more recent study by Du Plessis *et al.*

Nevertheless, the study by Du Plessis *et al.* raises, among others, the important issue of the right to information. The Poverty and Human Rights report of the South African Non-Governmental Organizations Coalition (SANGOCO)[7] in 1998 found that there was a general lack of understanding and awareness by people of their socio-economic rights, which include food and nutrition. The right of children to basic nutrition in Section 28 (1) (c) of the South African Constitution can be directly linked to the right to information of their caregivers. The need to educate the public of their rights in general and the right to food and nutrition in particular are therefore of equal importance. The provincial circular on VAS for the Western Cape province (H29/2005) clearly states that 'All mothers/caregivers must be informed of the administration of the vitamin A supplementation ...'.[8] It would appear that this aspect of the VAS policy may well be sorely neglected at health care facilities, which may be considered as a violation of the right to information and needs to be further investigated.

In this regard, the authors of the present study plead for more studies of this nature, which should include children <6 months of age (early VAS). Such future studies should not only be supported for the sake of coverage, but they should also include an evaluation of the role of early VAS since the latter is not clearly defined in the literature.[9,10] This aspect of VAS is of particular importance, since the current provincial VAS protocol stipulates a supplementary dose of 50 000 IU of vitamin A to be given at 6 weeks of age (non-breastfed infants), which appears to be a watered down version of the regimen recommended by the International Vitamin A Consultative Group (IVACG), viz. 50 000 IU at 6, 10 and 14 weeks of age.[11] The latter regimen had not been tested in clinical trials but was based on theoretical assumptions/calculations of a higher dose possibly leading to positive effects on infant outcomes, which is contrary to the findings of recent trials showing no benefit of the IVACG regimen.[12,13]

Du Plessis *et al.*'s general call for improved coverage for VAS in the country is undoubtedly commendable. However, one should also consider whether the programme, as it is currently being implemented, is based on sound evidence in view of the current debate on the role of VAS in relation to HIV-positive populations and in the context of high-dose VAS postpartum and to the neonate.[14] The debate is

particularly relevant to South Africa with its known high HIV prevalence.

Another consideration at the national level is of course the question of whether national policy should not concentrate only on children aged 24 months and younger, rather than also aiming to reach children of the older age groups, particularly since clinic attendance is known to be poor after the second measles immunisation visit, and infectious morbidity and mortality are more prevalent during early infancy. Certainly, the recent article on priorities for child health research investments lists improving vitamin A coverage as the number one priority within the health policy and systems research domain.[15] The VAS programme in the country should therefore be optimised in order to achieve maximum impact, since such a programme absorbs a lot of resources, including human resources.

Lastly, the results of the National Food Consumption Survey: Fortification Baseline I are keenly awaited and should shed some light on national VAS coverage and vitamin A status. Once these findings are available, the question of the efficiency, effectiveness and safety of the VAS programme as currently implemented in the country should be appraised by policy makers, investigators in the field, health care providers and NGOs as a matter of urgency. Such an appraisal should be critical in relation to accepting and implementing interventions which are seen as low-cost and are assumed to be beneficial, and should look beyond using proximate measures of assessing vitamin A status, such as serum retinol, to evaluate the success of VAS interventions.

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