Vitamin A supplementation
From fiasco to scandal

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Editor’s note
The first issue of World Nutrition in May 2010 included a long commentary by Michael Latham. This opposes the still-dominant global programme, backed by the UN Children’s Fund (UNICEF), of universal supplementation of 6-59 month-old young children with massive doses of vitamin A. The responses listed above almost all support Michael Latham’s position; as do John Mason and colleagues, Ashok Bhurtyal from Nepal, and Ted Greiner, recently in WN. Now in his letter below, Ashok Bhurtyal responds to Keith West of the Johns Hopkins School of Public Health, USA, a distinguished researcher with long experience of interventions in Nepal. In a letter quoted here, Keith West vigorously upholds the universal vitamin A supplementation programme in Nepal and worldwide, stating that it ‘has likely saved the lives of more than 100,000 Nepali preschoolers since the mid-late 1990s’. By contrast, the case vigorously made here, by the WN contributors listed above, and others, is that supplementation is generally ineffective, and impedes and frustrates sustainable food based public policies and actions that ensure adequacy of vitamin A and other nutrients.
People living in the high mountains of Nepal, like these from Langtang, are well nourished by plant-based diets of cultivated as well as wild vegetables, grains, berries and other foods. None of the girls pictured here received vitamin A capsules

Prevention and treatment of nutritional deficiencies remains one of the most important public health nutrition priorities in Nepal, and worldwide. But by their nature, quasi-medical nutritional interventions such as supplementation programmes are not indefinitely sustainable. Also, they do not address the reasons why children, families and populations are impoverished and therefore liable to be undernourished.

This contribution concerns the still-vexed issue of the universal vitamin A supplementation programme, which remains the dominant strategy in my country of Nepal. It should now be replaced by food-based strategies.

Any dominant strategy should be indefinitely sustainable. This means protection and strengthening of plant-based food systems as the basis of abundant varied healthy diets. In action such a strategy will sharply reduce prevalence of various deficiencies so that they are no longer substantial public health problems, and will improve health and promote well-being of parents as well as children, throughout life. The permanent solution is to overcome the structural reasons for poverty. This should be the prime priority of legislators, officials and professionals in all countries where malnutrition in any form is prevalent.

The case of Nepal

Last year Dushala Adhikari and I wrote a WN commentary on the universal vitamin A capsule programme in our country (1). Nepal has been (2,3) and remains (4-5) a ‘model’ for this programme (6,7), and in Nepal over 90 per cent of all children between the ages of 6 and 59 months in countries identified as vulnerable are given massive doses of vitamin A, to prevent deficiency and – so it is claimed – to save lives on a grand scale. In our commentary we contest this claim, and conclude:
The vitamin A capsule programme is distracting attention from sustainable solutions for vitamin A deficiency and for general malnutrition in Nepal. A great deal of attention and resource is given to it, in our country where human and material resources are precious. This is despite having obvious alternatives, most of all healthy diets based on indigenous and local fresh foods… Yet… the ‘donors’ and managers show no signs of reconsidering vitamin A supplementation, despite it using up so much of our scarce national material and human resources. We see this as a scandal. It is time to replace high-dose vitamin A supplementation by strongly supported national and local food-based approaches, in the spirit of justice, equity, autonomy, and plain good sense.

Our commentary and its conclusions echo statements made by distinguished colleagues throughout the global South for many years now. What we advocate is also supported by statements and conclusions made in United Nations reports, and by previous statements from many parts of the world, some published in WN. Here follow some of these, from the Indian sub-continent. Coluthur Gopalan, founding director of the Indian National Institute of Nutrition, states (8):

Public-spirited citizens, together with the scientific community, must now ensure the scrapping of the massive-dose vitamin A prophylaxis approach. This will not only avoid the considerable unnecessary expenditure which the Indian and other governments are incurring on the programme but, more importantly, will save our children from undesirable side-effects.

Harshpal Sachdev of the Institute of Science and Research, and Umesh Kapil of the all-India Institute of Medical Research, both in New Delhi, conclude (9):

On the basis of current evidence, universal vitamin A supplementation cannot be justified as a priority public health intervention for prevention of xerophthalmic blindness or childhood mortality in India. We recommend an immediate phasing out of this intervention, with a simultaneous shift of focus and efforts towards sustainable solutions, including dietary diversification and agricultural production, sanitation, immunisation, and prevention and treatment of childhood infections.

Vinodini Reddy, also a former director of India’s National Institute of Nutrition, concludes (10):

Children who suffer from vitamin A deficiency lack other essential nutrients. Emphasis on vitamin A should not obscure the need for a sustaining food-based approach to overcome multiple nutritional deficiencies. Milk and many vegetables and fruits are good sources of vitamin A and also of other micronutrients. Including adequate amounts of such foods in the diets of children is the best way to improve their nutritional status.

Support also has come from within the UN, from the Food and Agriculture Organization. Ezzeddine Boutrif, Brian Thompson and Leslie Amoroso state (11):

Much of the effort to control the three major deficiencies of greatest public health concern, of vitamin A, iron and iodine, have focused on supplementation. Supplementation is necessary for groups at high risk and as a short-term emergency measure, but it fails to recognise the root causes of micronutrient malnutrition, and does not assist communities and households to feed and nourish themselves adequately.
Supplementation cannot provide the overall long-term benefits that food-based approaches can deliver.

Furthermore, they state:

Food has social and economic significance which, for many people, especially those living in lower-income countries, is commonly mediated through agriculture and agriculture-related activities that sustain rural livelihoods. The multiple social, economic and health benefits associated with successful food-based approaches that lead to year-round availability, access and consumption of nutritionally adequate foods in terms of quantity, quality and variety are clear. The nutritional well-being and health of individuals is promoted, incomes and livelihoods supported, and community and national wealth created and protected.

The great vitamin A fiasco

These contributions were written in support of ‘The great vitamin A fiasco’ by the distinguished scholar Michael Latham of Cornell University, published in the first issue of WNN in May 2010 (12). It can be accessed above. Michael Latham concludes by citing UN policy which, on vitamin A deficiency, as stated in the 1992 FAO-WHO International Conference on Nutrition Declaration and Plan of Action, is:

Ensure that sustainable food-based strategies are given first priority, particularly for populations deficient in vitamin A and iron, favouring locally available foods and taking into account local food habits. Supplementation of intakes on a short-term basis with vitamin A, iodine and iron may be required to reinforce dietary approaches in severely deficient populations utilizing, where possible, primary health care services...

Supplementation should be progressively phased out as soon as micronutrient-rich food-based strategies enable adequate consumption of micronutrients.

Michael Latham wrote two decades after the UN Declaration. WNN received and published one letter that was hostile to his analysis (13). This came from Keith West and Alfred Sommer, eminent scholars from the Johns Hopkins School of Public Health, US, both closely associated with and champions of the worldwide universal vitamin A supplement programme (14-15). It was vigorous. It states:

Unfortunately, the only ‘fiasco’ here is the paper by Dr Latham…. It's shocking to find that a new journal seeking legitimacy would publish, as its launch, such a meandering, opinionated, unscientific, 28-page diatribe that distorts the evidence on vitamin A and child mortality from over a half-dozen randomised trials reported in peer-reviewed journals, as it attempts to rewrite the history of one of the most successful nutrition-based, child survival strategies in the developing world.

We are Nepali public health professionals with direct lifelong knowledge of our country, including our national and local food systems and supplies and of relevant public policy initiatives. This of course does not mean that we are infallible, and we respect colleagues in Nepal and elsewhere with different well-reasoned opinions. But we do know long-term and first-hand what we are writing about.
More than a fiasco – a scandal

In our commentary we develop and update some of Michael Latham’s points, and apply them to Nepal. We state (1):

It may not be well-known that today, the donors no longer donate the vitamin A capsules. The Nepali government buys the capsules from the suppliers with money which is now contributed by the parents of the children to whom the capsules are administered. The parents however have no say in policy, planning or decisions at any stage, while the ‘donors’, whose organisations are in other parts of the world, continue to recommend that the Nepali government continue with the programme of mass supplementation.

The vitamin A programme has been described as one of the most sustainable public health interventions in Nepal. In reality what is being sustained is dependence on the influence of ‘donors’ who no longer donate capsules, but who still effectively control the Nepalese vitamin A and other public health and nutrition interventions. This has been characterised as putting government in the taxi-driver’s seat, while the non-paying passenger sits back and instructs the driver where to go.

So who are the ‘donors’ now, when the foreign capsules are bought with domestic money? As well as those mentioned already, they include the ‘development’ agencies of various wealthy countries, international financial institutions, and other influential organisations that are interested in getting the countries that are ‘aided’ with national public health and other programmes to see things their way. In Nepal they are called ‘external development partners’.

The initial and subsequent claims made in favour of the vitamin A capsule supplementation programmes have never been substantiated by rigorously conducted and honestly reported research. For the past one and half decades, there has been no assessment of micronutrient deficiency prevalence among Nepali children. There are no national data on serum retinol levels among Nepali children. Any claim concerning vitamin A deficiency and its prevention is not founded on research findings….There is now no reliable evidence that vitamin A capsules reduce morbidity or mortality. Certainly, there is no good evidence in Nepal or indeed in South Asia.

Thus, our commentary amounts to additional observations on what seems to be a virtual consensus among authorities in many countries where the massive dose vitamin A supplementation strategy remains in force. We received a number of communications from various parts of the world, in particular from colleagues in Nepal and South Asia, thanking and encouraging us.

We also received a letter from Keith West, copied to a number of his co-authors (including of 3, 6, 7) and colleagues in Nepal, most of which follows:

I have read your commentary in World Nutrition… I found it to lack a public health perspective or an understanding of the efforts that have been underway in your country for the past 30 years to reduce childhood blindness and mortality by preventing vitamin A deficiency. I wish to bring to your attention the surveys, epidemiological studies and randomized trials that have been collaboratively conducted in Nepal in the 1980s up to
the present day that form a scientific rockbed of evidence driving today’s national, semi-
annual vitamin A supplementation program that has likely saved the lives of more than
100,000 Nepalese preschoolers since the mid to late 1990s.

… Not a single paper [attached] claims that the vitamin A capsule program should go on
forever, or that diet should not be improved. [But] it would be a public health crime for a
life and sight saving national program to be withdrawn before there is clear evidence that
you have done what you correctly assert is needed: to have a national dietary strategy that
is providing adequate vitamin A intakes to young children living in rural Nepal. To
suggest that giving a capsule with vitamin A to young children twice a year has derailed
the country’s efforts to grow and market more food is frankly ludicrous …

It is not sufficient to proclaim that children should eat a good diet: it must be assured
before you dismantle the safety net that supplementation provides, or those less fortunate
will bear the consequence. I urge you both to do what you can to prevent vitamin A
deficiency through diet, fortification, supplementation, biofortification, animal husbandry,
gardening, etc in an evidence-based way, rather than opting for sensationalism.

This letter does make clear that advocates of the universal vitamin A supplement
strategy accept that in future, strategies need to be food-based and sustainable. But
how, and when? This transition should have begun a long time ago. It should begin
now. It could begin if the executive director of UNICEF and the group at Johns
Hopkins headed by Alfred Sommer of which Keith West is a senior member, in
consultation with all affected national governments and other interested parties,
make a real commitment.

This means an explicit and unequivocal widely circulated public statement that the
universal vitamin A supplementation strategy is coming to an end. It should include a
time-table as specified by national governments, for phasing out supplementation
programmes, with dates. It should stipulate replacement by food-based strategies
derived from authentic food systems and supplies. These must not include other
strategies involving foreign-owned or controlled seeds, fertilisers or other agricultural
inputs and technologies, or commercial exploitation of forest and wilderness species.

Meanwhile we ask Keith West for data that support his claim that since the mid to
late 1990s, the lives of over 100,000 young Nepali children have probably been saved
by the vitamin A supplement programme. We have not been able to find studies or
other literature that support this claim, and would like to examine and assess them.

Finally, there is an issue of food sovereignty here. Which is better for Nepal and
many other countries with little available public money? Is it better to welcome
interventions controlled from outside the country which starve public funds and
which by their nature cannot be sustained? Or is it better to give dominant priority to
programmes whose effect is to sustain and strengthen national, regional and local
food systems and supplies, and that valorise the enjoyment of freshly prepared meals,
support family life, strengthen established social and cultural structures and customs,
give secure employment to farmers and family businesses in rural and urban areas,
and protect the living and physical environment? The answer is surely obvious.
References


Bhurtyal A. From fiasco to scandal. [Vitamin A supplementation] [Feedback]. World Nutrition January-March 2016, 7(1-3), 135-141

Editor’s note. We have advised Ashok Bhurtyal that Keith West’s note to him, being copied to colleagues, has the status of an open letter. We have seen the note and confirm that the extracts used above fairly represent all its points. Some time has passed between the WN commentary by Ashok Bhurtyal and Dushala Adhikari, the receipt of Keith West’s note, and this response. A sufficient reason has been the earthquakes in Nepal and their after-effects, and relief and recovery work, which continue to be the main concern of Nepali public health professionals and volunteers. Ashok Bhurtyal confirms reports of others that established food systems in Nepal especially in the southern lowlands remain intact and abundant, and that arable land in the highland areas directly affected is being restored.