



Vitamin A Supplements for Children



Child receiving vitamin A from a trained Female Community Health Volunteer

BACKGROUND

Two field trials conducted in Nepal, by NNIPS and John Hopkins University¹ (Sarlahi, 1989) and John Snow Incorporated (Jumla, 1991) demonstrated that high dose supplementation of vitamin A (200,000 IU) among pre-school children every four to six months can reduce mortality by about 30 percent.

Based on this evidence, in 1993, the Nepal Ministry of Health initiated a program to supplement a high dose vitamin A to children 6-59 months old on a twice yearly basis.

PROGRAM STRATEGIES

The Nepal Family Health Program II (NFHP) - a program designed to improve the delivery and use of family planning (FP), maternal, neonatal and child health services, particularly at the community level - partnered with local non governmental organization, the Nepal Technical Assistance Group (NTAG) to provide technical support to the Ministry of Health and Population (MoHP) for the implementation of the National Vitamin A Program (NVAP), the primary element of which has been supplementation of pre-school children.

The main strategy of the overall program has been the bi-annual supplementation of vitamin A

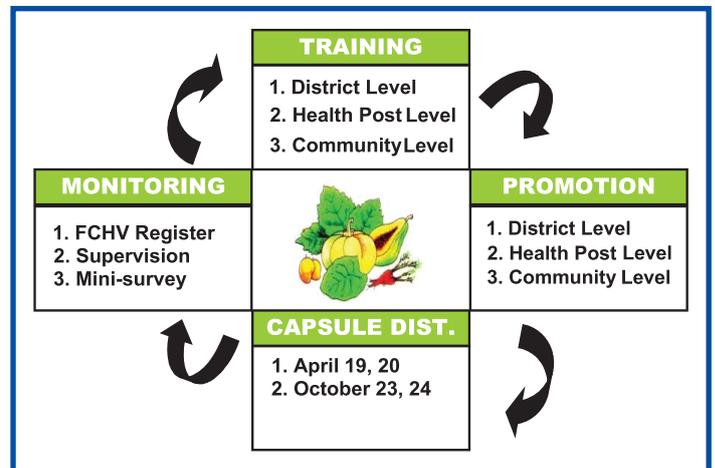
among pre-school children 6-59 months through Female Community Health Volunteers (FCHVs) who act as a vital link between the public health facilities

and the community. FCHVs are unpaid local volunteers who have been trained to provide basic FP/MNCH services and promote health awareness, and use of health services in their own communities. Currently there are about 52,000 FCHVs working throughout the country (see NFHP Technical Brief #1: FCHVs). Institutionalizing the role of FCHVs within the

national vitamin A program (NVAP) played an essential part in the success of the program. The program was initiated with technical support from the Nepal Technical Assistance Group (NTAG), a Nepali non-governmental organisation, which developed a phase-by-phase approach to roll out the program until nationwide coverage was achieved.

In order to establish the program in each district, four activities - training, promotion, distribution and monitoring - played a critical role in the introduction of NVAP and are interrelated as they strengthen the link between the program and the community.

Figure 1. Cycle of Activities for Expansion of NVAP



In each district, NTAG provided technical support to initiate the program and for the two rounds of capsule supplementation. Subsequently, the district health office continued managing the program on its own. By October 2002, the program was established in all 75 districts. Biannual capsule supplementation is now a routine activity and the focus is on sustaining the high coverage of over 90 percent.

The supplement program uses a broad multi-sectoral and community-based approach. This kind of approach involves the integration of different sectors of society to provide

a comprehensive health service. It consists of program advocacy with different sectors and levels of government. This approach helps generate widespread awareness and support for the program and also engenders a sense of ownership and facilitates social mobilization.

NVAP uses mass media and interpersonal communication channels to promote the program. FCHVs are also important interpersonal communication channels and have an extensive reach within their communities delivering information regarding vitamin A and time and location of the supplementation event. They play a crucial role in providing knowledge to the community that can transform behavior and are the main service providers of the program, dosing capsules to children and post-partum women. NVAP has facilitated community participation and emphasizes capacity building. It has made huge efforts to involve the community in all aspects of the program, enabling a self-managed, self-reliant sustainable intervention.

RESULTS

The overall results of the NVAP are impressive: the supplementation program for children has been successful in reaching out to every ward in the country. In 2011, vitamin A capsules were provided to 3.7 million children aged 6-59 months of age, through the successful mobilization of FCHVs.

Routine district level micronutrient surveys have been conducted in 8-10 districts after every supplementation round and these provided assessment of supplementation coverage. The average vitamin A capsule coverage has been consistently high, at 90 per cent or higher, every year over the past 17 years. This high coverage has also been validated by a number of external surveys including the Nepal Micronutrient Status Survey (1998), the UNICEF BCHIMES survey, and the 2001 and 2011 Demographic Health Surveys (DHS).

There is good reason to believe that this program has played a significant role in the very notable declines in under-5 mortality documented in the last few DHS surveys.

Vitamin A plus Deworming

Beginning in 1999, the success of NVAP's capsule supplementation approach led to the decision to integrate dosing deworming tablets to children 12-59 months old with the biannual vitamin A supplementation. Deworming was implemented in phases and covered all 75 districts by 2004. As with vitamin A, high coverage has been achieved. The deworming program was assessed in four districts during its introduction. Results showed that deworming reduced the prevalence and intensity of infection and improved anaemia rates. This significant reduction in anaemia has been verified by the 2006 and 2011 DHS results.

Cost-Effectiveness

A number of studies have shown that vitamin A supplementation is one of the most cost effective approaches for reducing child mortality. According to a cost-effectiveness study conducted by John L. Fielder in 2001², the average cost per child receiving one vitamin A capsule a year is US\$ 0.34 and that of a child receiving two doses is US\$ 0.74.

LESSONS LEARNED

- **Close collaboration and coordination** between partners is imperative. The MOHP, USAID, UNICEF, AusAid and NTAG have worked together closely in making NVAP a 'people's program'.
- **The three-tiered- training**, including at the district, health facility and community levels has strengthened the support structure of NVAP.
- **Phased implementation** of the program from 1993 until it was implemented in all 75 districts of the country in 2002, allowed ample opportunity for implementers to refine and redirect the program based on the lessons learned in the previous districts. This has resulted in redesigning the program for better coverage of vitamin A supplementation.
- **A strong sense of community ownership** towards NVAP helped the program generate extensive participation of community members as well as provide support to the FCHVs.
- **Regular monitoring** of the program enabled assessment of its effectiveness and identification of any weaknesses, allowing corrective measures to be taken.
- **Communication** tools such as miking, magic shows and school-based promotions are simple, straightforward and effective in reaching to the community. The messages used by NVAP addressed the most common concern of each parent - the health and well-being of their children.



FCHV dispensing vitamin A

- **Supplementation takes place on the same dates** in April and October. This has made the supplementation service reliable and consistent.
- **Cost-effectiveness can be achieved by integrating new interventions into the existing health structure.** With additional training and resource mobilization, NVAP, by using the existing government health structure even - with limited technical and financial support - can be sustained.

CHALLENGES

- **Supply and logistics:** Perhaps the most critical element of the program is ensuring the supply of vitamin A capsules to FCHVs. The overall logistics system needs to be strengthened in order to accurately estimate the total eligible children in each district, improve efficiency and avoid inadequacy of supplies during distribution days.
- **Sustaining motivation:** Although, sustaining motivation of FCHVs has been a great challenge, from the inception of the program, NVAP helped motivate FCHVs by ensuring they were well recognized, respected and given a special status in the community. However, motivation is a dynamic process and in order to sustain the motivation of these volunteers (before the FCHVs become less dedicated), the program needs to address more non-monetary incentives.
- **Supervision and review meetings:** Community health workers such as Village Health Workers must take a more active role in the supervision of FCHVs to encourage and support them. Also, review meetings should be held regularly to provide logistics support and motivation.
- **Nutrition education and long-term behaviour change:** Sub-clinical vitamin A deficiency among pre-school children is still high and justifies continuation of vitamin A supplementation. Although, NVAP has been successful in maintaining high vitamin A dosing coverage, there has not been an equivalent gain in food diversification through nutrition education. Measures

should be taken to encourage changes in dietary behaviour, breastfeeding and weaning through nutrition education.

RECOMMENDATIONS

- **Maintaining FCHV motivation:** Health facility operations and management committee and village development committee members should regularly monitor, supervise and appreciate FCHVs' work. In addition, a support system should be created from existing community groups, such as Mothers Groups and schools to support the FCHVs.
- **Timely review meetings and supervision during supplementation event:** Timely review meetings and supervision during the supplementation event is crucial for the program. The review meeting should be conducted on time so that all FCHVs are provided with vitamin A capsules and other program materials. Supervision during the supplementation event by health and multi-sectoral staff should be done to maintain the motivation of FCHVs.
- **Supply of vitamin A capsules:** Supply of vitamin A to FCHVs is crucial for the success of this program and for this, correct estimation is imperative. A standard protocol should be developed in order to calculate the number of eligible children in each district and avoid inadequacy of supplies during supplementation.
- **Nutrition Education:** The program has to work more on nutrition education since food diversification is an alternative to combat vitamin A deficiency.

REFERENCES

1. "Efficacy of vitamin A in reducing child mortality in Nepal", Keith P et al; 1991, Lancet (8759).
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FCHV counseling a mother about vitamin A



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