THE IMPACT OF THE NATIONAL VITAMIN A SUPPLEMENTATION PROGRAM ON SUB-CLINICAL VITAMIN A DEFICIENCY IN PRE-SCHOOL CHILDREN IN THE PHILIPPINES

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Background: Vitamin A Deficiency (serum retinol <20 mcg/dL) in 1-5 year-old children in the Philippines rose from 35% in 1993 to 38% in 1998, despite a twice-yearly vitamin A capsule (VAC) distribution program that reached 80-90% coverage. The Philippines' 1998 National Nutrition Surveys (NNS), which had one-time serum retinol (SR) measurements from 11,640 children 1-5 y old, collected over an 8-month period, 1 month to more than 6 months after VAC distribution, was an opportunity to examine program impact on the children’s vitamin A status, using post-hoc analysis. Method: The NNS data were disaggregated by rural and highly urban cities, 2-3 month-bands after receipt of VAC, and period of data collection. Descriptive and linear regression analyses were carried out. Results were distinguished by the three main geographic areas: Luzon, Visayas, Mindanao. Results: Overall, a detectable impact of VAC on SR was limited, mainly to groups with highest deficiency. First, in highly urban cities in Visayas, where very high prevalences of severe deficiency (SR <10 mcg/dL) were found, the prevalence was reduced from 27% to 9% at 1-2 months after VAC to 16% at 3-4 months, hence tapering further. Second, in Mindanao, a generally significant reduction was seen in mild-moderate deficiency (SR <20 mcg/dL) 1-4 months after VAC, from 38% to 32%. Third, although there was no overall reduction in the prevalence of deficient SR in Luzon, a significant interaction with stunting was determined, such that among stunted children the prevalence of SR<20 mcg/dL was reduced from 48% to 32% at 1-2 months after VAC, then rising again. Otherwise, average effects on SR were minor and not significant: in Luzon, the mean stayed around 25 mcg/dL; in Mindanao, it rose marginally at 1-2 months after VAC from 23 to 27 mcg/dL; in Visayas, SR increased from 20 to 23 mcg/dL between 1-4 months after VAC. The mean SR levels returned to pre-dose value after 4 months or less. Conclusion/Recommendation: The policy implication that may be deducted from the analysis includes a shift in resources from low VAD prevalence areas, where VAC distribution may shift to a targeted scheme, to high VAD prevalence areas where a thrice-yearly schedule is warranted.