

Title of the project      **Assessment of Vitamin A Supplementation Program in Lebak and Pandeglang, Banten, Indonesia**  
Conducted by            Center for Health Research, University of Indonesia  
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### **Introduction**

Vitamin A deficiency (VAD) is still a major public health problem in Indonesia. In the last biochemical survey of vitamin A in under five years old children, about 15% of them still have serum retinol below 20 microgram/dL. The government of Indonesia has a program of biannual vitamin A supplementation for under-five years old children in order to combat VAD. Vitamin A is given to under five years old children on February and August in each year all over Indonesia.

Micronutrient Initiatives (MI) is helping Indonesia in strengthen Vitamin A supplementation program. Currently, MI is working in 6 provinces: Banten, West Java, West Nusatenggara, North Sumatera, Riau and South Sumatera. In order to understand the achievement of its program, MI asked Center for Health Research Universitas Indonesia to conduct assessment in Lebak.

### **Objectives**

1. To identify critical inputs needed to increase vitamin A coverage in low coverage areas as demonstrated by the work of MI in its project areas (VAS extenders).
2. To estimate the coverage of vitamin A supplementation for under five years old children in MI extender supported district and compare to non MI supported district.

### **Method**

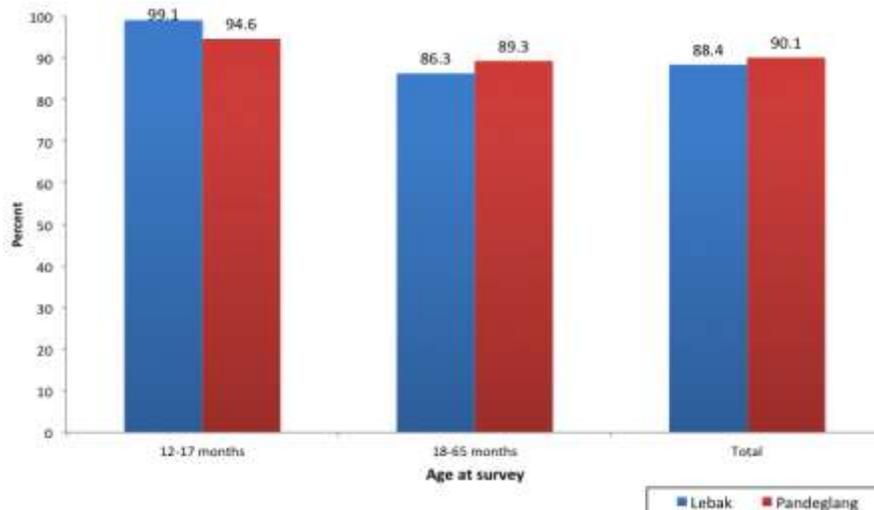
This study used mixed design: households survey, cadre survey and qualitative study. Beside program area in Lebak, Pandeglang was chosen as comparison area. Households and cadre surveys were conducted in 50 villages in each district. The sample size for households survey was 650 children age 12 to 65 months in each district. This sample will represent children age 6 – 59 months in 2011. Sample selection followed two stages cluster sample with probability proportionate to size selection of the clusters at the first stage. Cluster unit is village and cluster size is population. At the selected clusters, an interviewer went to the center of the cluster, selected a random direction, walked to the random direction until reached the cluster's border and created map of all houses alongside the way. Then she/he selected random first house to begin data collection. Next sample was the closest house to the previous house which had been visited. This procedure continued until she/he interviewed 13 mothers/caretakers who have children age 12-65 months. For cadre survey, one cadre was selected randomly in each selected cluster.

A qualitative study was conducted using in-depth interview. The aim of this qualitative study is to identify the impact of Micronutrient Initiative, specifically for the training of health personnel and improvement in knowledge and skills also improvement in management of Vitamin A supplementation program. The key informants for this study were: Head of nutrition section at Province level. At district Level, the key informant were Head of Community health service division, Head of nutrition section, Head of MCH, Head of selected Puskesmas and Nutritionist in Puskesmas.

### **Result**

The coverage of Vitamin A supplementation in 2011 in Lebak and Pandeglang by age is shown in graph 1. Age of children is age at time of survey, therefore children 12-17 months at time of survey was 6-11 months in 2011 and children 18-65 months at time of survey was 12-59 months in 2011. In 6-11 months children, the vitamin A coverage in Lebak is higher than Pandeglang. Nevertheless for older children, the coverage in Pandeglang is little higher than Lebak.

Graph 3.1 Coverage of vitamin A capsule in Lebak and Pandeglang by age group, 2011



Coverage of vitamin A supplementation by round (February and August 2011) was difficult to measure since most of the respondent did not remember when did their children received vitamin A. Most of vitamin A supplementation was given at Posyandu in Lebak and Pandeglang. Other facilities, such as Puskesmas, hospital, etc, only has small role in distribution of vitamin A.

Almost all mothers and caregivers mentioned that the place of dosing is close to their homes, less than 1 km and can be reached within 30 minutes, mostly by walking. There is no difference in accessibility of the place of dosing between Lebak and Pandeglang. Waiting time in place of dosing was also not a problem, most of them reported waiting time 30 minutes or less in both districts.

When the children did not come to Posyandu to get vitamin A, the cadres should do home visit for sweeping. Ninety four percent of cadres in Lebak and 92% in Pandeglang said that they did sweeping for children who did not get vitamin A in February or August round. Nevertheless, only 22% of mothers/caregivers who their children did not get vitamin A in Lebak and 19% in Pandeglang said that they were visited by cadres for vitamin A.

The vitamin supplementation program coverage in 2011, either in Lebak and Pandeglang was not difference by sex of the children and slightly difference between education level of the mothers. Higher educated mothers were more likely to get vitamin A supplementation for their children. This trend was similar in Lebak and Pandeglang. The coverage is not difference by family welfare.

More than half of the mothers or caregivers ever heard about vitamin A and the percentage is somewhat higher in Lebak compare to Pandeglang. For the source of information, most of the mothers or caregivers mentioned Posyandu's cadre (about 60%) and midwife (about 30%). Posyandu is the main place to get information regarding vitamin A capsule in Lebak and Pandeglang. Mass media as television plays important role in Pandeglang, but not in Lebak. Other mass media such as radio and newspaper only have small role as information sources regarding vitamin A capsule in Lebak and Pandeglang.

About 52% of mothers or caregivers in Lebak and 44% in Pandeglang never seen any IEC material related to vitamin A supplementation program. Among some mothers or caregivers said ever since the IEC materials, banner and poster were the most frequently mentioned by the mothers or caregivers. Other materials were rarely mentioned. The lack of vitamin A related IEC material ever seen by the mothers or caregivers was confirmed by the lack of IEC material in the cadre. More than half of the cadres in Lebak and Pandeglang said that they did not have any IEC material.

Availability and adequacy of vitamin A in almost all cadre in Lebak and Pandeglang were good, only one cadre in Lebak and one cadre in Pandeglang ever experienced the inadequacy of vitamin A capsule in 2011. This inadequacy was also mild, as she was lacking of 1-10 capsules. The main sources for vitamin A capsules were village midwife and puskesmas midwife.

Monitoring and supervision of vitamin A dosing in Posyandu was done by village midwives or puskesmas staff. More cadres in Pandeglang mentioned about this activity in Pandeglang, compared to Lebak (86% vs 78%). Almost all monitoring was done during the dosing activity.

Vitamin A deficiency was assessed using some specific signs and symptoms. Although the numbers could not accurately measure the prevalence of vitamin A deficiency among children under 5 years old, they could give us some indication about the problem. The percentage of mothers and caregivers who reported the three signs and symptoms related to vitamin A deficiency in Lebak and Pandeglang was small (0.2-2.4%).

Some cadre mentioned that they have seen children with Bitot spot and Xerophthalmia in their posyandu catchment area. Although the percentage was low, it should raise our concern about vitamin A deficiency problem in Lebak and Pandeglang. Since all of these cases were reported by lay person, it is necessary for the health personnel from Puskesmas and District Health Office to make confirmatory diagnosis of these cases.

Result from in-depth interviews with key informants revealed that there was not many problems related to vitamin A supplementation program for the children. The acceptance of the program by the community was good, support by the local government was good and availability of vitamin A was also no problem in both districts. There was some problems management, monitoring and evaluation of the program.

The MI-Extender helped Lebak district in management, monitoring and evaluation of the program. He helped in estimating the target population, provided hard data for advocacy to the local government, monitored the dosing of vitamin A and did sweeping for children who did not come to Posyandu in vitamin A round. Provincial health office, district health office and puskesmas felt the MI-Extender had helped them a lot in vitamin A supplementation program. They suggested that the program to be extended and also expanded to other districts.

### **Conclusion**

1. The coverage of vitamin A supplementation in Lebak and Pandeglang in 2011 already high with the coverage in Lebak is higher than Pandeglang for infant.
2. The equity of vitamin A supplementation coverage across family welfare group in Lebak and Pandeglang is good, similar across all family welfare group.
3. Almost all children get their vitamin A capsule at Posyandu. Only small fraction of them get it from other health facilities. This finding is also consistent with the source of information for vitamin A capsule, which is Posyandu's cadre and village midwife.
4. Access to place of dosing is not a problem in Lebak and Pandeglang. Almost all children can reach the place of dosing within 30 minutes or less by walking and the average walking distance is less than 1 km.
5. The most frequently mentioned reason for not get vitamin A is not coming to Posyandu and no time to go to Posyandu. Home visit for the children who was not get vitamin A from Posyandu was already done by the cadres, nevertheless the coverage of home visit is still low.
6. The information, education and communication material is limited, nevertheless most of mothers/caregivers already know about vitamin A capsule.
7. The provincial health office of Banten, district health office and Puskesmas in Lebak feel the benefit of MI-Extender, especially in program planning and monitoring of vitamin A supplementation program.

### **Recommendation**

1. Information, education and communication of vitamin A supplementation to the community needs to be maintain and strengthen to maintain the already high coverage and increase coverage in some low coverage area.
2. Home visit for children who did not come to place of dosing needs to be strengthen as the coverage is still low in both districts.
3. As most of family received information about vitamin A supplementation from cadre and midwife, the effective method of information dissemination is through them. Therefore it is

important to keep the cadre and midwife update about vitamin A supplementation program and to encourage them to educate to the community about vitamin A.

4. Reporting system of vitamin A needs to be improved as there is a discrepancy in vitamin A coverage between district health office and cadre report.

The MI-Extender program should be extended to other districts and provinces since district of Lebak and its puskesmas feels a significant benefit of the program, especially in planning and monitoring of vitamin A supplementation program.