National Guidelines of Micronutrient deficiencies Control in Vietnam: Progress and lessons Learned

Le Thi Hop, Tran Khanh Van, Nguyen Song Tu – NIN, Vietnam

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Situation of Micronutrient deficiencies in Vietnam

Pre-clinical VAD in children, survey 2009

By ecological areas

By age groups
Low retinol in breast milk <1,05 µmol/L 
(Survey 2009)

WHO:
* 20-<30%:  
   Mild level
* >30%:  
   Severe level

<table>
<thead>
<tr>
<th>Provinces</th>
<th>Low retinol %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Kông Tum</td>
<td>39,8</td>
</tr>
<tr>
<td>2- Đắc Nông</td>
<td>33,3</td>
</tr>
<tr>
<td>3- Quảng Trị</td>
<td>20,2</td>
</tr>
<tr>
<td>4- Quảng Bình</td>
<td>34,3</td>
</tr>
<tr>
<td>5- Lào Cai</td>
<td>29,5</td>
</tr>
<tr>
<td>6- Lạng Sơn</td>
<td>52,2</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>35,0</strong></td>
</tr>
</tbody>
</table>

Anemia prevalence  
(Period 1995-2009)
Anemia in children <5 y- 2009

Zinc deficiency in Vietnam
Survey 2009

Sample size: Chil=947, PW=521, WRA=932
Vitamin D deficiency

- High levels in children, women in Vietnam

Low serum Vit D, survey 2010

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Children</td>
<td>485</td>
<td>211</td>
<td>274</td>
</tr>
<tr>
<td>Vit D deficit (&lt;50nmol/L)</td>
<td>57.3</td>
<td>62.1</td>
<td>53.7</td>
</tr>
<tr>
<td>Women</td>
<td>542</td>
<td>268</td>
<td>274</td>
</tr>
<tr>
<td>Vit D deficit (&lt;50nmol/L)</td>
<td>57.6</td>
<td>59.3</td>
<td>56.2</td>
</tr>
</tbody>
</table>
### Micronutrient deficiencies in stunted children (%)

<table>
<thead>
<tr>
<th>Sub. groups</th>
<th>Anemia</th>
<th>VAD</th>
<th>ZnD</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-12 mo</td>
<td>18.0</td>
<td>20.8</td>
<td>13.2</td>
</tr>
<tr>
<td>13-24 mo</td>
<td>58.0</td>
<td>41.7</td>
<td>45.3</td>
</tr>
<tr>
<td>25-36 mo</td>
<td>24.0</td>
<td>37.5</td>
<td>41.5</td>
</tr>
</tbody>
</table>

*Y học dự phòng 2008, 7:5-11*

### Results micronutrient survey 2010

**OVERLAPPING DEFICIENCIES (GAIN)**

- **Anemia:** 13%
- **Iron deficiency:** 67%
- **Zinc deficiency:** 28%
- **Marginal folate status:** 5%
- **Marginal vitamin A status:** 13%

*Results micronutrient survey 2010*
Conclusion Remarks

1- VAD & Anemia reduced during last decade, however still in moderate levels of PHS; very high in poor areas.
2- ZnD & Vit D. deficiencies are very high in Vietnam
3- Existing the multi-miconutrient deficiencies in children (stunted children), and WRA, PW)

Why National Guidelines of Micronutrient Deficiencies Control are needed for Vietnam?
National Nutrition Strategy
for period 2011-2020

Approved by Gov. 22/2/2012

Objectives of the NNS 2011-2020

1. To continue to improve the diet of Vietnamese people, in terms of both quantity and quality
2. To improve the nutrition status of mothers and children
3. To improve micro-nutrient status

*Indicators:*

The prevalence of children under five with low serum vitamin A (<0.7 µmol/L) will be reduced to 10% by 2010 and below 8% by 2020.

The prevalence of anaemia in pregnant women will be reduced to 28% by 2015 and to 23% by 2020.

The prevalence of anaemia among children will be reduced to 20% by 2015 and 15% by 2020.
Objectives of the NNS 2011-2020

4. To effectively control overweight and obesity and risk factors of nutrition related non-communicable chronic disease in adults
5. To improve knowledge and practices regarding proper nutrition in the general population
6. To reinforce capacity and effectiveness of the network of nutrition services in both community and health care facilities

Existing programs without general guidelines

• Micronutrient Day (1-2 of June)
• Fe+Folic supplementation for Pregnant Women and WRA
• Small scale of supplementation of MMN for small children and PW
• Malnutrition Control Program (PEM)…
International cooperation and support

- GAIN project: Food fortification
- Smiling Project in 5 Countries: Thailand, Indonesia, Lao, Cambodia and Vietnam.
- WHO, UNICEF technical support

Global Alliance for Improved Nutrition (GAIN)

- Fortification of fish Sauce, Soy sauce, bullions with Fe.
- Fortification of Vegetable oil, sugar, margarine, mayonnaise sauce, bullions with vitamin A
- Fortification of bullions with zinc, vitamin A, Iron
Flavoring powders

Structure of the National Guidelines
1. Purposes of the guidelines

- To increase coverage of the programs that improve the micronutrient status of the population
- To develop standards for national programs and provide diagnosis, tests, treatment and prevention of micronutrient deficiency

1. Purposes of the guidelines

- To update science knowledge on micronutrient (WHO Recommendations), review all micronutrients causing public health problems in Vietnam
- To provide guidance for IEC activities to control micronutrient deficiency in Vietnam
2. Target Groups of the Guidelines

Health Care Providers from Provincial to Commune levels

3. Strategic Approaches

- Food-Based Approach (Local available foods)
- Micronutrient supplementation for target groups, disadvantaged areas
- Food Fortification
4. Guidelines of specific micronutrients

1. Guidelines for vitamins A, D, B1, K…
2. Guidelines for Iron, acid folic, zinc, iodine
3. Guidelines for using multi-micronutrient tablets)

What are Lessons Learned?
1. Lessons learned

• Contribution of National, International Experts and Health care providers is very important.

• The National Guidelines for micronutrient deficiencies control will be approved by the MOH to become official document.

2. Lessons learned

• The application of NGMDC should be connected to the implementation of NNS, NPAN and other nutrition programs.

• Training, monitoring and evaluation of the NGMDC is essential for health care providers to convert guidelines into actions.
Thank You!