

VITAMIN & MINERAL DEFICIENCY

Moldova is acting to prevent large-scale losses of national health, brainpower, energy and productivity. The benefits of universal salt iodisation are already visible.

A Protection Audit Report
for

MOLDOVA 2006

LEADERSHIP BRIEFING

Chisinau, December 2006

THE PROBLEM

Vitamin and Mineral Deficiency (VM deficiency) is now known to be a more important problem than imagined even a decade ago.

For many years the lack of key vitamins and minerals, also known as micronutrients, has been known to cause the anaemia, cretinism, blindness and goiter that afflict many millions of the world's people. But recent research has shown that this is only the tip of a very large iceberg.

It is now known that even moderate levels of deficiency, with no clinical symptoms, can have devastating consequences. It also has become clear that 'moderate' VM deficiency is so common, affecting perhaps a third of the world's people, that it threatens the energies, intellects and productivity of nations.

Some examples of what has been learnt about VM deficiency in the last decade:-

- It is the world's leading cause of mental impairment, lowering the intellectual capacity of nations.
 - It compromises the human immune system, leading to the deaths of approximately one million young children a year – and poor health and growth for many millions more.
 - It is responsible for the deaths of approximately 60,000 women a year in childbirth.
 - It causes an estimated 250,000 serious birth defects every year.
 - It is associated with a significant increase in deaths from heart disease and stroke.
 - It lowers the productivity of workforces – with estimated losses of up to 2% of GDP.
- "Vitamin and mineral deficiencies," says the World Bank "impose high economic costs on virtually every developing nation."*

All this means that the challenge is no longer one of identifying and treating those with symptoms of VM deficiency. The task today is to reach out and protect whole populations.

THE SOLUTION

VM deficiency has largely been brought under control in the industrialised nations. It could now be controlled world-wide by means that are tried and tested, available and affordable:-

FORTIFYING staple foods like flour, sugar and salt with vitamins and minerals. Fortified foods have long protected people in Europe and North America. It is now time that they did the same for the entire world.

SUPPLEMENTING diets with low-cost capsules, syrups, or tablets in order to get vitamins and minerals to women of child-bearing age and to the developing minds and bodies of young children.

EDUCATING communities about the changes in diet needed to increase the regular consumption of vitamins and minerals.

All three approaches are necessary. They need to be pursued together. The cost can be as little as a few cents per person per year. This is why the World Bank believes that *"Probably no other technology available today offers as large an opportunity to improve lives and accelerate development at such low cost and in such a short time."*

The countries that have controlled VM Deficiency did so with less knowledge and technology than is available today. What is needed now is leadership to deploy these known solutions on the same scale as the problems. In particular, defeating VM deficiency depends on national alliances of government, food companies, universities and researchers, health and education professionals, and civil society leaders.

SOME NATIONS MOVING RAPIDLY

Damage assessment reports have been issued for more than 90 individual nations. Some of these nations are now moving rapidly against VM deficiency:-

- 49 nations in the developing world have already passed the 75% mark for salt iodization.
- 39 developing countries are reaching 75% or more of their young children with vitamin A supplements.
- 51 nations, including the USA and Canada, now require the fortification of flour with iron.
- 40 nations, again including the USA and Canada, are fortifying flour with folic acid.

For once
we are
confronted
with a
global
problem
for which
there are
available
and
affordable
solutions

VM deficiency: Protection

Audit for

MOLDOVA

The estimation of benefits obtained from actions to overcome VM deficiency is not perfect. Nevertheless, it is very important to assess results from the national actions that are already underway, to create a sense of achievement and resolve. Using best available data in 2006 from a variety of reports and sources, progress calculations have been made for Moldova below.

The benefits already gained from known, affordable strategies in the Republic of Moldova are estimated as follows:

- **Two out of three of all babies born in Moldova are now protected against intellectual impairment caused by the brain damage from iodine deficiency. Reason: Their households use iodized salt when the mother is pregnant**
- **The daily diet of up to 10% of the nation's 6-to-24 month-old children protects them against disrupted brain development. Reason: Their households have started using food products prepared from fortified wheat flour**
- **Some unmeasured, but limited, reduction of severe iron deficiency, leading to less death risk among infants and young women during pregnancy and around childbirth. Reason: Flour fortification and iron/folate supplements**
- **The annual losses in GDP from lowered productivity of the adult work-force are being reduced. Reason: Steadfast progress is being planned in fortifying salt and wheat flour, which will benefit the entire population**
- **The beginning of a dent in the burden on health services, educational systems, and on families and society caring for children left disabled or mentally impaired. Reason: A planned, coordinated strategy to eliminate VM deficiency is gaining momentum in Moldova**

VM DEFICIENCY: DAMAGE ASSESSMENT FOR REPUBLIC OF MOLDOVA

IRON DEFICIENCY ANAEMIA

The Moldova Demographic Health Survey of 2005, conducted by the National Center for Preventive Medicine and covering more than 11,000 households throughout the country, reports that 32% of young children and 28% of women of reproductive age have anaemia. International experience predicts that at these levels of anemia in the most vulnerable groups, iron deficiency affects virtually the entire population. Thus, addressing the problem will require a universal solution.

IODINE DEFICIENCY

The finding of goiter (neck enlargement) in 37% of schoolchildren in 1996 was confirmation that iodine deficiency threatened the brain development of newborns and infants in Moldova. The above-cited Demographic Health Survey in 2005 found adequately iodised in 59% of the households in Moldova. Very recently, a specialised national survey conducted by the National Center for Preventive Medicine has found that more than two out of three households in Moldova are now consuming adequately iodised salt.

VITAMIN A DEFICIENCY

Thanks to the widespread consumption of fruits and vegetables, complemented by an occasional amount of milk and eggs, it is not likely that vitamin A deficiency is a public health issue in young children of Moldova.

“It is no longer a question of treating severe deficiency in individuals. It is a question of reaching out to whole populations to protect them against the devastating consequences of even moderate forms of vitamin and mineral deficiency.”

Carol Bellamy, Executive Director, UNICEF

“Fortifying foods with basic vitamins and minerals is both essential and affordable.”

Bill Gates, co-founder, Bill and Melinda Gates Foundation

“For nearly 40 years, food fortification has protected the populations of the United States, Canada, and many other countries. It is long past the time when the same protection was available to the peoples of the developing world.”

Nevin Scrimshaw, President, International Nutrition Foundation

“The case for the elimination of vitamin and mineral deficiency is compelling beyond description. The return on investment is beyond equal.”

Rolf Carriere, Executive Director, Global Alliance for Improved Nutrition

“This is a vital economic and humanitarian cause and we in the food industry are uniquely positioned to help progress.”

Brendan Stewart, Chairman, Australian Wheat Board

“The cost is minuscule. The benefit enormous. We have acted on this issue both because it is right – and because it presents our business in a positive light.”

Philip Punarma, Chief Commercial Officer, Bogosari Flour Mills, Indonesia

“Vitamin and mineral deficiencies deprive 1 billion people world-wide of their intellect, strength and vitality”

The World Bank

“The road to regional health and life-long productivity cannot be passed without removing the obstacle of vitamin and mineral deficiency.”

Joseph Hunt, Health and Nutrition Advisor, Asian Development Bank

“We now have the knowledge and the solutions that can protect the muscles, brains and blood of whole populations at an extraordinarily low cost.”

Venkatesh Mannar, President, Micronutrient Initiative

A MESSAGE TO LEADERSHIP

This Protection Audit Report is being presented to national political leaders, to major print and broadcast media, to food industry CEOs, and to leading figures in health, education, and consumer affairs.

No permission is required for the wider distribution of this Protection Audit Report by print or electronic means.

VM DEFICIENCY – THE BREAKDOWN

Iodine deficiency is the leading cause of preventable mental impairment. It significantly reduces mental capacity and work potential. In pregnancy, it causes babies to be born dead, physically disabled, or with severe brain damage.

Iron deficiency reduces activity levels and productivity in whole populations. In children 6 to 24 months, it disrupts the normal development of the brain. Effects on children include stunting, sickness, poor school attendance, and lower levels of concentration and memory. Severe anaemia also causes higher death rates in childbirth.

Folate deficiency before and during early pregnancy is a major cause of serious birth defects. In adults it is associated with a higher rate of deaths from heart disease and stroke.

Zinc deficiency can restrict physical growth, impair mental ability, damage immune systems, and boost diseases like malaria, diarrhea, and respiratory infections. It affects probably a third of the world's population, in some degree, and is thought to be responsible for almost 1 million deaths a year world-wide.

A problem not only for the poor:

Iron deficiency still affects up to 10% of the population in Western Europe and the United States.

Iodine deficiency remains a matter of concern in countries like Germany and Spain.

Folate deficiency is still causing birth defects in Europe, where flour is not fortified with folic acid.

World-wide, VM deficiency is to be found not only in poor and remote rural areas but also in the middle class suburbs of capital cities.

**This Protection Audit Report was developed for:
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