Tanzania: marching toward sustainable IDD elimination

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Introduction

The United Republic of Tanzania has a current estimated population of 45 million. In 1980s it was estimated that 41% of the population was at risk of iodine deficiency disorders (IDD)(1). Salt iodization was adopted with a very high political commitment in early 1990s, and the program was inaugurated in April 1994 (2).

The government’s commitment to USI continues, and Tanzania was among the first countries to join the Scaling Up of Nutrition (SUN) movement in June 2011. As an ‘early riser’ of SUN, Tanzania launched a call for nutrition actions in May 2013 and inaugurated the national fortification program of the most commonly consumed foods, such as wheat/maize flour and edible oil. This was done by President Kikwete (Photo 1).

Salt iodization

Legislation on salt iodization for mainland Tanzania was effected in January 1995 and revised in 2010 (2,3). Based on this legislation, all salt for human and animal consumption must be fortified with iodine. Currently the major limitation is enforcement, as non-iodized salt is still being traded for human consumption. UNICEF is supporting national efforts to achieve USI by training of salt producers in quality assurance, and promoting demand creation through the Tanzania Food and Nutrition Centre, to ensure that households demand iodized salt. To create community awareness on iodized salt, a salt iodization logo was developed in 1992 to distinguish iodized from non-iodized salt (Figure 1). Recently, iodized salt has been included in the national Monitoring and Evaluation Framework for fortified products.

Photo 1: President Jakaya Mrisho Kikwete getting a brief on IDD status in Tanzania and exchanging words with Deputy Minister for Health and Social Welfare Dr. Sef Suleiman Rashid (with white cap) before launching SUN in Tanzania on 16th May 2013.

Figure 1 Logo for iodized salt
For procurement of potassium iodate (KIO₃), the Tanzania Salt Producers Association initiated a revolving fund in 1999 with support from the Government and UNICEF. In 2010, the global price of KIO₃ sky-rocketed after the tsunami disaster in Japan, and this caused this fund to be eroded, together with the inability of some small salt producers to pay back in. In response, in 2012 the government donated 8000 kgs of potassium iodate to keep the revolving fund operational.

Because medium and small-scale producers were producing a significant amount of salt, the program was expanded to support them. To ensure that salt iodization was carried out by small producers at affordable cost (salt iodization machinery entailed running costs that were too high for them), salt producers were trained on the use of hand held knapsack spray pumps. This technology enabled the salt producers, irrespective of their production capacity, to iodize their salt.

Rapid test kits for iodized salt are available in every district and have been used at the community level by trained health officers. The WYD iodine checker method has been installed in salt producing factories under UNICEF support. Also, 12 satellite laboratories have been established in remote peripheral areas by the government. These ensure that salt reaching into these areas is adequately iodized and, if not, legal action is taken. However, not all these facilities have been utilized fully and this has led to disparities in iodized salt coverage by region.

Tanzania has maintained household coverage with iodized salt at over 80% for the past 10 years. However, iodine content in salt is uneven and access to adequately iodized salt is low in eight regions where small-scale salt production is practiced, such as in Lindi (5% coverage) and Mtwara (23.4%). These regions will continue to receive attention to ensure that there is equitable access to iodated salt in Tanzania.

Availability of adequately iodized salt at household level

<table>
<thead>
<tr>
<th>Region</th>
<th>Coverage Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindi</td>
<td>&lt; 50%</td>
</tr>
<tr>
<td>Mtwara</td>
<td>&lt; 50%</td>
</tr>
<tr>
<td>Other regions</td>
<td>50-90%</td>
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<tr>
<td>Other regions</td>
<td>&gt; 90%</td>
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</tbody>
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Mbarouk Hamad Yussaf, a salt farmer in Pemba island, Zanzibar, sighs with relief. He has just received a year’s worth of potassium iodate and a manual sprayer. The equipment was distributed through Zanzibar’s Ministry of Health program aiming for universal salt iodization on the island with the support from UNICEF.

“One kilogram of potassium iodate would cost me 70,000 Tanzanian shillings (44 USD): it’s a fortune!”, Mbarouk Hamad Yussaf says. “Nearly every two years, I have to buy a manual sprayer, which costs me another 50,000 Tanzanian shillings (31 USD). This is more than I can afford.”

In Zanzibar, only one in two families has access to adequately iodized salt. In Pemba island, use of iodized salt is even lower. Only one in four families has access to adequately iodized salt. Yussaf’s farm produces up to 50 kilograms of iodized salt per year. “We can still see the consequences of decades of using non-iodized salt in our communities. There are a lot of miscarriages among women and many children with low weight at birth” Yussaf adds. “Iodine deficiency is easily prevented if every family member uses salt that has been properly treated”, says UNICEF’s Representative in Tanzania, Dr. Jama Gulaid.

Mbarouk Hamad Yussaf is doing his part – he’s been iodizing his salt since 2005.
Between 2005 and 2010, coverage of iodized salt increased from 73% to 82% while coverage of adequately iodized salt (>15 ppm) increased from 43% to 59% (Figure 2A) (4). Figure 2B shows that disparities among the socio-economic groups are high but this gap has lessened between 2005 and 2010.

Iodine status in target groups
The median urinary iodine concentration (UIC)s in school-age children, women of reproductive age and lactating women are 204, 160 and 113 µg/L, indicating iodine sufficiency in these groups. However, pregnant women had a median UIC of 136 µg/L, indicating iodine deficiency (4).

Challenges
The main challenge for the salt iodization program is weak enforcement, especially in areas where small-scale producers operate, resulting in noniodized salt being widely available. Second, although household coverage with iodized salt is above 80% nationally, the coverage of adequately iodized salt is only 47%. This shows that there is still more to be done to ensure that salt producers adequately iodize salt.

References

ABOUT THE AUTHOR

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