Remarkable progress against iodine deficiency in Ethiopia

Data excerpted from:

Background
In Ethiopia, iodine deficiency has been recognized as a major public health problem for the past six decades, and the threat it poses to the health and development of the population still looms large (1). The Ethiopian government, together with its development partners, has shown unflagging commitment to combating malnutrition in general, and iodine deficiency in particular. A multi-sectoral National Nutrition Strategy (NNS) was adopted in 2008, implemented through 5-year National Nutrition Programmes (NNP). In December 2016, the government launched the second NNP cycle focusing on the first 1,000 days of life to eradicate chronic malnutrition by 2030. Control of micronutrient deficiencies in the most vulnerable populations—children under five and pregnant/lactating women—is one of the program’s key targets.

Since its inception, the NNP has stressed the need for multi-sectoral coordination to tackle undernutrition. A dedicated implementation guideline was developed to facilitate this process between various sectors. The agriculture sector has been promoting diversified food production, whereas the education sector works to improve awareness and school feeding programs. The Ministry of Industry has taken important strides to ensure progress towards universal salt iodization (USI) including calling for mandatory use and sale of iodized salt. But a lack of up-to-date national and regional estimates of iodine intake has stood in the way of successful program implementation across the sectors.

2015 Micronutrient Survey confirms tremendous progress
Between March and July 2015, the Ethiopian Public Health Institute conducted a cross-sectional micronutrient survey with financial support from the Government of Ethiopia and development partners (UNICEF, Micronutrient Initiative, World Bank, USAID/ENGINE, WFP, FAO, GAIN, and World Vision). The goal of this ambitious project was to estimate the national prevalence of vitamin and micronutrient deficiencies, including iodine deficiency, and assess the access to adequately iodized salt in Ethiopia. A nationally-representative sample was drawn from nine regions and two administrations (Addis Ababa and Dire Dawa) in Ethiopia. Ninety-five percent (n=3805) of eligible households participated in the survey.

The median urinary iodine concentration (UIC), measured in spot urine samples collected from schoolchildren aged 5–14 years (n=1663) was 104 µg/L with an interquartile range (IQR) of 63–197 µg/L, indicating iodine sufficiency at the national level. In non-pregnant women aged 15–49 years (n=1751), the median UIC was 97 µg/L (IQR, 57–171 µg/L), closely mirroring the iodine intakes in school-age children. Variations in iodine intakes were reported across regions and between the rural and urban areas, with the rural populations more prone to iodine deficiency than their urban counterparts. Rural residence had been identified as a factor in iodine deficiency by previous studies in Ethiopia (2) and in other regions.

Knowledge of IDD and iodized salt
Around two-thirds of the surveyed women had heard about goiter, but this proportion varied from 46% in Somali to 86% in Amhara. Knowledge about the causes of goiter was the highest in the cities of Addis Ababa and Dire Dawa, and in the north-eastern region of Tigray. Women in those regions were the most likely to associate goiter with a lack of iodine (consumed either as iodized salt or in food). However, nationally, 52% of Ethiopian women could not identify any causes of goiter. This pro-
portion was even higher (>65% of women) in the Afar, Somali, Amhara, and SNNP regions. Although the awareness of goiter prevention appears to be increasing in some regions compared with past surveys (3), in others it remains low. More than a half of the women in Tigray and Addis Ababa knew that eating iodized salt could prevent goiter, but most women in Amhara, Oromia, Afar, Somali and Gambela had poor knowledge. In previous studies, poor maternal knowledge about iodized salt had been associated with lower iodine status (4). More health promotion efforts are needed to improve awareness across all sections of the population and increase the demand for iodized salt.

Access to iodized salt remains low

Thanks to ongoing multilateral efforts, the household use of adequately iodized salt has gradually improved. In 2015, the national coverage was 89.2%; however, only about 26% of the surveyed households had salt that was adequately iodized (at ≥15 ppm, measured using a quantitative titration method). The highest coverage of adequately iodized salt was in Tigray (55.2%) and Somali (49.4%) regions, and the lowest in the regions of Gambela (9.5%), SNNPR (13.7%), and Amhara (15%). This is lower than the national coverage reported in the 2014 national micronutrient survey (43% iodized at ≥15 ppm), but it is unclear whether the earlier estimate was weighted and therefore fully representative of the national situation (5).

The importance of USI in tackling child malnutrition

A USI program in Ethiopia was initiated in 1989, but it suffered a setback in the 2000s due to the Ethiopian-Eritrean war, which closed the borders to imports from the Red Sea for many products, including iodized salt (1). As a consequence, as recently as in 2005, school-age children were severely iodine deficient, with a population median UIC of only 24.5 µg/L (6). In the same year, the government adopted a strategy for the virtual elimination of IDD by the year 2015 through universal salt iodization (7). A law was passed in early 2011 requiring that all salt for human consumption should be iodized (8). At the time, the iodization capacity among Ethiopia’s 400 small-scale producers was estimated at only 15% of the national requirements (9).

Since the enactment of the law, wide-ranging efforts have been made to increase the monitoring capacity of regulatory agencies, promote the consolidation of the fragmented salt industry, build salt iodization capacity through improved QA/QC protocols and a sustainable supply of KIO3, and raise awareness of IDD among salt producers, local governments, and consumers. Despite the regional variation in household coverage with adequately iodized salt and iodine intake, the latest results demonstrate the extent of progress that could be achieved in just a few years with sufficient political will, committed investment, and multi-sectoral collaboration, and they validate the tremendous importance of USI in tackling child malnutrition in Ethiopia.

References