Subject: Assessment of adequately iodized salt
Posted by JGorstein on Fri, 04 Apr 2014 14:05:18 GMT
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The ICCIDD/GN, WHO and UNICEF have recommended Universal Salt Iodization (USI) as the most cost-effective strategy to achieve optimal iodine nutrition in populations. Although household salt is only part of the total salt supply, the presence of iodized salt in households is commonly used as a quick and easily measurable indicator for monitoring the progress of USI strategies. By convention, salt in households should contain at least 15 ppm (i.e., 15mg iodine per kg salt) to be considered as "adequately" iodized, and the established goal for USI programs is that 90% or more of households should be using adequately iodized salt.

The ICCIDD/GN strongly supports the continued use of the RTK as a tool to assess the presence of iodine in salt in DHS surveys (as per Question 140), but also highly recommends the addition of a test to determine the iodine content in salt based on quantitative testing. The current question, "ASK RESPONDENT FOR A TEASPOONFUL OF COOKING SALT" is used to collect salt specimens for testing by rapid test kit to determine whether iodine is present or not. Spot tests for iodine in household salt with a Rapid Test Kit (RTK) have been part of the DHSs for several years. However, a major limitation of the use of spot tests is that they cannot provide a robust determination of whether salt contains adequate iodine content. Validation studies of the RTK have generated a general consensus that the test can be useful in distinguishing whether a salt sample is iodized or not (i.e. a qualitative test result), but that the RTK is unable to accurately detect the level of iodine in iodized salt that is, determining whether salt is adequately iodized (Pandav CS et al. Validation of spot-testing kits to determine iodine content in salt. Bull WHO 2000; 78(8): 975-980).

In order to provide a measurement of the adequacy of the iodine content in household salt, it is necessary to employ a quantitative method, such as titration or WYD iodine checker, in at least a sub-sample of salt. Over the past few years, several surveys that used an RTK for salt tests of household salt also measured salt samples by a quantitative method and have provided more accurate data that have been important to assess the likelihood that the population is receiving sufficient iodine to meet physiological requirements.

In December 2007, WHO published a revision of the guide for program managers entitled: "Assessment of Iodine Deficiency Disorders and Monitoring their Elimination", putting emphasis on indicators of the iodized salt supply in the population. For determining the iodine content in salt, the guide mentions that the color generated by the RTK test can distinguish between the presence and absence of iodine, but that the test cannot be used for estimating the salt iodine concentration. To estimate the household coverage of adequately iodized salt, therefore, the guide recommends a quantitative method, such as titration or an equivalent method, for salt collected from all, or a sub-sample of, households.

As such, we would like to recommend the following improvements in the way that household salt is tested as part of DHS surveys, including:

(a) Continue to present results for all household salt tested by RTK as either containing no iodine or some iodine only. Typically, this will be possible for several sub-groups or strata as per DHS design.
(b) Collect household salt from a sub-sample, systematically, in order to test by a quantitative method. These salt specimens need to be placed in a tightly sealed plastic pouch and transported to a quality- assured laboratory to be subjected to quantitative analysis.
(c) Present data only at the national level on the proportion of salt containing adequate levels of iodine (> 15 ppm) based on the household salt test results.

File Attachments

1) Proposed DHS revision - salt by titration.docx, downloaded 1054 times