

A conversation with Michael Zimmermann on February 11, 2014

Participants

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Note: This set of notes was compiled by GiveWell and gives an overview of the major points made by Dr. Zimmermann.

Summary

GiveWell spoke with Dr. Zimmermann about the strategies and impact of the International Council for the Control of Iodine Deficiency Disorders Global Network (ICCIDD). Conversation topics included: how ICCIDD chooses countries to work in, examples of successful programs led by ICCIDD, and ICCIDD's impact relative to other organizations working on salt iodization.

Impact of iodization programs

The World Health Organization (WHO) recently commissioned a systematic review quantifying the effects of iodized salt programs on biological and functional outcomes within a population, such as Intelligence Quotient (IQ), goiter, cretinism, growth, and thyroid diseases. The report was endorsed by the Cochrane Collaboration.

Further steps need to be taken to determine the economic and developmental impact of these programs. There should be further research on questions such as how a five-point increase in average IQ affects a country's development.

How iodine deficiency is measured

There is good data that has allowed measurement of iodine status at the national, regional, and global level. Two major ways to determine iodine status are: (1) measuring urinary iodine concentrations (UICs), and (2) surveying households to determine the proportion that have iodized salt.

In particular, ICCIDD focuses on UICs to measure iodine deficiency in pregnant women, infants, and young children. It uses the median UIC of a population to classify a country as mildly, moderately, or severely iodine deficient. ICCIDD and the United Nations Children's Fund (UNICEF) also calculate the number of iodine-deficient newborns using the percentage of the population that is deficient and the birth rate of the population. Based on this metric, Ethiopia, Morocco, and several other African countries have the most severe iodine deficiency problems.

How ICCIDD chooses countries to work in

ICCIDD uses these data in its situation analyses to determine where to focus its efforts and what strategies to use.

The size of a country's population also influences ICCIDD's decisions. For example, India has good coverage of iodized salt at the national level, but it has three or four states with only partial coverage that have very large populations, so ICCIDD has dedicated resources to India.

The ICCIDD website (www.iccidd.org) has a global scorecard that shows which countries are most in need of assistance with iodine deficiency. The scorecard is based on health metrics and does not consider potential barriers to implementation. Sometimes, barriers to implementation in a country are identified by the national coordinator and considered during ICCIDD's regional planning process. For example, if aging infrastructure in the salt industry were the only barrier to implementation in a country, an iodized salt program would be seriously considered. However, barriers are not analyzed in a systematic way for every country.

The Bill & Melinda Gates Foundation (BMGF) provided a grant to UNICEF and the Global Alliance for Improved Nutrition (GAIN) to address iodine deficiency in sixteen countries. GAIN is doing situation analyses, which they expect to finish in mid-to-late 2014, for several of these countries. These reports describe barriers to implementation (e.g., political barriers), resource availability, and technical capabilities. This information could be used to fill some of the gaps in ICCIDD's global scorecard.

Collaboration with other organizations

ICCIDD works with several other organizations – including UNICEF, GAIN, and the Micronutrient Initiative (MI) – on the issue of iodine deficiency. It also interacts with BMGF as part of BMGF's work with UNICEF and GAIN.

Two years ago, ICCIDD received an eighteen-month grant from the Canadian International Development Agency (CIDA) to implement programs in five countries – Ethiopia, Tanzania, Sudan, Bangladesh, and Ghana – that had been identified by CIDA's nutrition experts as the locations where ICCIDD could have the most impact. Following its work in those countries, ICCIDD produced a report for CIDA for each country that described ICCIDD's impact, how its funding was used, and its role in each country's coalition of organizations working on iodization.

ICCIDD's role among organizations working on iodization

Since ICCIDD relies on support from other organizations, it can be difficult to quantify its impact on the success of a program. ICCIDD is primarily focused on moving iodization programs forward; as long as iodization projects are making progress, it does not try to explicitly measure its relative contributions.

Broadly, ICCIDD sees its role as being a catalyst for change. One of its major successes has been bringing the major nutrition organizations together into a coordinated effort within

the last two years. This has allowed the ICCIDD Global Network to maximize resources, eliminate overlap, and improve communication with national governments. ICCIDD has synchronized iodine program guidelines from WHO, UNICEF, and MI. This type of cooperation is not found in many other charitable programs, where there is more competition between organizations.

ICCIDD's major impacts

- ICCIDD's work in **Ethiopia** is among its most successful. Ethiopia has been the focus of ICCIDD's regional coordinators in the Middle East and East Africa for two years. The problem of iodine deficiency had previously been solved in Ethiopia by importing iodized salt from Eritrea. However, war between Ethiopia and Eritrea in the 1980s caused trade to stop, so iodine deficiency increased rapidly and became far worse than in other countries. International observers waited for relations to improve so that trade would resume, but it became clear that the Ethiopian government wanted an independent salt industry. UN agencies initiated the process to bring a salt iodization program to Ethiopia, UNICEF and MI provided the necessary infrastructure, and GAIN also played an important role. In 2012, the Ethiopian government agreed to accept outside support for an iodization program. This was not the first time an iodization program had been attempted in Ethiopia; there had been several efforts that were not sustained in the past. Partly due to past issues, ICCIDD received an \$80,000 grant from CIDA to work in Ethiopia to ensure that the final stages of beginning the program were successful. ICCIDD's advocacy played a significant part in the final effort to persuade the country to adopt iodization. Two ICCIDD staff members spent several days with salt producers in the Afdera region, so that the producers would understand the urgency of the problem. ICCIDD showed them that iodization was feasible and sustainable and UNICEF and MI, along with the government, would support them with the necessary infrastructure. Implementation began in late 2012 to early 2013. Though this was a collaborative effort, other partners would agree that ICCIDD played a key role.

Ethiopia is currently conducting a micronutrient survey. Preliminary data show that household coverage with iodized salt has gone from less than 15% to as much as 70%. This suggests that roughly 60 million people who were severely iodine deficient are no longer deficient.

- ICCIDD played a central role in programs in **Mozambique** and **Madagascar**, countries that receive fewer resources from other nutrition aid groups. ICCIDD was the first to do situation analyses in these countries and is currently forming coalitions with governments to reduce iodine deficiency. ICCIDD's impact in these countries may be easier to quantify since it was one of the only organizations working in these countries.

- In **Tanzania**, coalition members (e.g., UNICEF, GAIN, and MI) would agree that Dr. Vincent Assey, ICCIDD's national coordinator, has been the leader of the iodization program.
- In **South Africa**, coalition members would describe ICCIDD's national coordinator, Dr. Pieter Jooste, as being key to success. Dr. Jooste, who works for the South African Medical Research Council, has been a very strong advocate for salt iodization.
- ICCIDD was instrumental in bringing salt iodization to many countries in Eastern Europe and the Balkans. Vilma Tyler and Arnold Timmer at UNICEF hired two ICCIDD consultants, Dr. Gregory Gerasimov and Dr. Frits van der Haar, to provide technical expertise while UNICEF provided basic infrastructure. MI and GAIN did not work in these countries. UNICEF and ICCIDD staff wrote a summary report of these projects.
- **Kazakhstan** is an excellent example of a strong, sustained program, which was led by Dr. Gerasimov, the ICCIDD regional coordinator for Eastern Europe and Central Asia, who is based in Moscow. The Asian Development Bank (ADB) did an independent evaluation of this program.
- ICCIDD worked with UNICEF and MI to reduce iodine deficiency in **India**. Iodized salt coverage in India has increased from about 50% of the population to over 75%, which means that hundreds of millions of additional people have been covered. Dr. Chandrakant Pandav, the ICCIDD regional coordinator for South Asia who is based in Delhi who is very influential with the Indian government, played a major role in reinstating a ban on non-iodized salt in India.
- In 1995, there was very little iodized salt in **China**. Today there is almost universal coverage, which means that over a billion people are covered. Most organizations would acknowledge that ICCIDD was key in that initiative. Dr. Zupei Chen, the ICCIDD regional coordinator for China and East Asia, and an expert in iodine programs and endocrinology, made a large contribution and continues to support the program there.
- The Australian Agency for International Development (AusAID) funded a team of ICCIDD staff from Sydney, led by the ICCIDD regional coordinator, Creswell Eastman, who worked with local government officials in Tibet and China to improve the iodine program in Tibet. There was a detailed report on this program published in 2005.

Iodization programs where ICCIDD has not been significantly involved

In some countries, ICCIDD has not played a leading role in salt iodization programs. For example, in Indonesia, UNICEF, GAIN and the Indonesia Ministry of Health were responsible for most of the success of the iodization program. ICCIDD also had little impact in Pakistan, where MI and UNICEF ran a successful program.

Characteristics of successful ICCIDD programs

Effective communication with local officials

ICCIDD is able to work closely with national governments and salt producers, partly because ICCIDD's regional coordinators are native to the regions where they work. A good example of this is ICCIDD's work in Ethiopia. A major barrier to salt iodization in Ethiopia was that the government felt that other agencies did not have their programs aligned and disagreed on various aspects of program implementation. The government wanted to have national ownership of the program, with support from the agencies when necessary.

To address this issue, ICCIDD staff communicated personally with key officials in the Ministry of Health and emphasized that national ownership of the program was essential to success, and reassured them they would receive external resources for support. Dr. Zimmermann believes that speaking the local language and understanding the culture was key to the success of these efforts.

Having a strong national coordinator

The regional coordinator decides where to focus efforts within a region, and that is often determined by which countries have strong national coordinators. In some countries, national coordinators are not influential, are unable to catalyze the formation of a coalition, or do not remain in their position long enough to effect change. Indonesia is one example of a country where ICCIDD until recently did not have an effective national coordinator.

Sustainability

A "quiet success" of ICCIDD's programs has been their sustainability, a characteristic that is often not included in impact assessments. This success is one reason that UNICEF, GAIN, MI and the U.S. CDC have provided ICCIDD with a significant amount of support. It is easy for a country to regress after an iodization program is completed, so ICCIDD continually works to sustain high coverage rates. For example, the iodine program in China has faced concerns about it causing thyroid disease. Dr. Chen, who supported the government in the initial program in the late 1990s and early 2000s, has used his expertise and authority to ensure that the program remains active with a few adjustments. Coverage of iodized salt has remained above 90% in most provinces.

Latin America, which has been mostly iodine-sufficient since the early 1990s, is another example of a region where ICCIDD has made a sustained effort. It continues to have phone conversations with officials, sends people to visit ministries of health and major salt producers, and ensures that the government provides funds for these programs.

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