A conversation with ICCIDD on April 30, 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. Zimmerman and Dr. Gorstein.

Summary

GiveWell staff visited the offices of the International Council for the Control of Iodine Deficiency Disorders (ICCIDD) Secretariat in Zurich, where they discussed ICCIDD with Dr. Zimmerman and Dr. Gorstein. Topics included the structure of ICCIDD, its relationship with the Global Alliance for Improved Nutrition (GAIN) and the United Nations Children's Fund (UNICEF), and its funding needs for the future. In addition, ICCIDD efforts in the following regions were discussed:

- Nigeria
- Ethiopia
- The Middle East and North Africa
- India
- West Africa
- Vietnam
- Belarus

History of Universal Salt Iodization

In the late 1990s, there was a huge push for universal salt iodization (USI). Iodization programs were implemented in places where there was no preexisting iodization infrastructure. With Kiwanis funding, UNICEF hired two consultants, one of whom was Venkatesh Mannar (now President of the Micronutrient Initiative [MI]). Mr. Mannar travelled from country to country doing salt situation analyses. Mr. Mannar's work included:

- Identifying existing production capability
- Identifying opportunities for iodization
- Recommending equipment
- Recommending capacity building

Also during this time, Dr. Rainer Gutekunst worked to understand the extent of the iodine deficiency problem. Dr. Gutekunst conducted a series of rapid goiter surveys. He quickly realized the limitations of measuring goiter via palpations, so he began using a mobile

thyroid measurement. These initial assessments revealed the extent of Iodine Deficiency Disorders (IDD).

Salt situation analyses

Generally, UNICEF or MI, often working in conjunction with an ICCIDD regional coordinator (RC) or national coordinator (NC), will decide that a salt situation analysis is needed. The analysis is usually conducted by a consultant (either from GAIN, ICCIDD, or an independent contractor).

For example, when the GAIN-UNICEF USI Partnership Project was launched, large project assessments (including salt situation analyses) were carried out. The Partnership Project relied on ICCIDD regional coordinators (RCs) for recommendations of consultants to carry out the analyses. GAIN hired Lorenzo Locatelli-Rossi (a long-term member of ICCIDD); Mr. Locatelli-Rossi was involved in the initial assessments.

The ICCIDD model

The "value-add" of ICCIDD is coordinating the actions of its implementing partners, so that they act in alignment without contradicting one another (with a common agenda, shared measurement, and clear communication between partners).

The RCs and NCs are the backbone of ICCIDD; they are very loyal to the organization. When ICCIDD wrote its new bylaws, all RCs and NCs were incorporated as voting members. RCs and NCs voted for the first time in the 2013 ICCIDD annual general meeting.

When RCs and senior ICCIDD advisers discuss plans for the coming year, the RC has room for input. The RCs develop their goals for the coming year, then senior staff help them refine their goals. RCs submit provisional work-plans and reporting from the previous year by the end of January each year. The work-plans are reviewed from January to March, and feedback is given two weeks before the Management Council meeting in April. Finalized work-plans and budgets are due by the Management Council meeting.

The senior adviser's role is to review the initial work-plan, provide input for revision, participate in the Management Council meeting, and hold check-in phone calls during the year. Senior advisers are also on-call throughout the year. Senior advisers hold 2-3 phone calls with each RC throughout the year to follow up; sometimes work plans are modified during the year.

National coalitions

NCs will often set up a national coalition in a country, but they will not actively lead the coalition. This practice gives the local institution or ministry a sense of ownership, while allowing the NC to observe the coalition's progress and address questions that arise.

Terms of reference

ICCIDD is developing terms of reference for RCs and NCs. Until recently, RCs have been very opportunistic and entrepreneurial in their work. Moving forward, ICCIDD needs to be more focused and strategic in its approach, with formalized roles and increased accountability. Overall, ICCIDD is trying to be more explicit about the role of the Global Network compared to the roles of the implementing partners – not so much to better understand attribution, but to increase the complementarity of its members.

Iodine taskforce

The Partnership Project funded an iodine taskforce that addressed bottlenecks in iodine nutrition research and program implementation. MI was a part of the taskforce from the beginning, in an attempt to be as inclusive as possible. Prior to the taskforce, MI and the Partnership Project sometimes worked in parallel without coordinating with each other.

Iodine labs

ICCIDD does not need to operate an iodine lab in every country; it needs only enough laboratories to conduct excellent regional monitoring (most of the RCs have a lab).

ICCIDD operates two labs in Africa – one in Dar Es Salaam run by Dr. Vincent Assey, the other in Cape Town, which used to be run by Dr. Pieter Jooste. Dr. Jooste's lab, which used to process most of Africa's national surveys, is closing as part of a Medical Research Council reorganization, and he is retiring from his post as Director of Nutrition at the Council. Dr. Assey's lab has been filling the processing gap since the Cape Town closure. A Canadian International Development Agency (CIDA) grant to ICCIDD has funded a new lab in Ghana, where much of the lab infrastructure is already in place.

Most RCs operate a laboratory, though it is not an explicit part of the RC role. The RC's affiliated institution usually pays for the lab infrastructure and overhead; technician salaries are often paid for by iodine survey fees. Surveys are paid for by the government or the implementing agency (UNICEF, GAIN, or MI).

UIC surveys cost \$5-\$8/sample. A single national stratum of 1000 individuals will be \$5000-\$8000, the logistics of data collection brings the total cost up to \$20,000 for a national iodine survey. There is a marginal additional cost for salt sample collection and titration, around \$0.50/specimen.

Universal Salt Iodization funding

Most USI funding comes from the U.S. and Canadian aid agencies or the Bill & Melinda Gates Foundation (BMGF). BMGF has been relatively restrictive with its funding, focusing on 14 countries. USAID has a list of countries in which it can operate (per U.S. policy). ICCIDD

does not have the funding to do implementation work in countries independently; it needs to coordinate with an implementing agency (like UNICEF) in the process.

Additional funding

To date, NCs have never received a stipend for their work; RCs are offered a \$10,000/year stipend. Half of the RCs roll the stipend into their operating budget rather than keeping it. In specific cases (where increased funding would be very effective), ICCIDD would like to increase the operational budget for the NCs. Overall, the RCs need better compensation and a larger operational budget.

With more funding, RCs would be paid for 30% - 50% of their time, at a P5 grade on the UN pay scale. Any pay increase has to be compared to the current \$10,000 stipend RCs receive, which compensates for 5%-8% of their time.

Nigeria

Nigeria was the first African country to achieve a sustained elimination of IDD; elimination was certified in 2005. Dora Akunyili, head of Nigeria's National Agency for Food and Drug Administration and Control, led the IDD coalition for a long period. Ms. Akunyili used her prestige to push excellent iodine legislation through; enforcement of this legislation remains fairly good. Dr. John Egbuta, the ICCIDD NC, has sustained the Nigerian program.

In Nigeria, a salt producer association controlled a significant portion of the salt market. UNICEF was able to work with these major players, beginning in the late 1990s. At first, UNICEF subsidized the cost of potassium iodate, but this model was not sustainable. The program shifted to a model of passing iodization costs onto consumers. There was a lot of corruption and non-compliance, as well as personal threats to Ms. Akunyili, but she continued to spread a message of salt iodization as a public good. In doing so, Ms. Akunyili relied on the support of the global health community, including ICCIDD and the World Health Organization (WHO).

Ethiopia

In the 1990s, Ethiopian was importing all of its salt from Eritrea, which had two large salt producers on the Red Sea. These salt producers were technically sophisticated and produced high-quality, iodized salt. In the late 1990s, iodized salt coverage in Ethiopia was nearing 90%.

In 1998, Ethiopian-Eritrean relations deteriorated as war broke out between the countries. Ethiopia lost access to Eritrean iodized salt. Ethiopia had large amounts of lake salt, but no infrastructure to extract it. Ethiopia began importing salt, both iodized and non-iodized (whatever was cheapest). By 2003, median urinary iodine concentration (UIC) fell to 24.5 micrograms/L; adequately iodized salt (HHIS) coverage fell to 5%.

In the mid-2000s, there was a large effort, primarily by MI, to begin increasing HHIS coverage. A doctor from Tanzania, Dr. Vincent Assey, the ICCIDD East Africa RC, became involved in Ethiopia and tried to pass iodization legislation for salt imports. In the late 2000s, there was discussion with the Ministry of Mines and the Ministry of Industry regarding a potential revenue stream from salt production. A huge lake in the Afar region had upwards of 1.5 million metric tons of salt/year; the annual need of Ethiopia was around 200,000 metric tons. Ethiopian salt production could be a self-sufficient enterprise.

In the late 2000s, MI and UNICEF began supplying salt iodization machines to the region, in a non-systematic way (no legislation or coordinated deployment). They received permission from the government to place salt iodization machines by the lake, but there was no incentive for the salt producers to iodize. The iodization machines were not used frequently, and began to break down in the harsh environment.

In Senegal, the Ethiopian Ambassador was exposed to the importance of iodine nutrition. He brought the Ethiopian Minister of Health and representatives of salt producers in the Afar region to Senegal to see its salt iodization program.

These players were able to form a national coalition that included political and salt production representation from Afar. Within two years, mandatory salt legislation was developed and passed.

UNICEF purchased knapsack sprayers (a simple iodization mechanism), and Dr. Assey trained salt producers in their use. The producers were unable to absorb the costs of the fortificant, potassium iodate, so the Partnership Project subsidized the initial purchase (\$2 million for 24 tons of potassium iodate).

Mr. Locatelli-Rossi was involved in this effort. By 2010, Ethiopia was generating reasonable-quality iodized salt in an environment inhospitable to iodization.

Ethiopian National Coordinator

The Ethiopian NC, Teshome Desta, worked within the Ministry of Health. Mr. Desta was employed by the government prior to being appointed NC (Mr. Assey recommended him in late 2012). Mr. Desta played a coordinating role, keeping the agencies aligned, which was critical to the program's success. Prior to the iodization legislation, GAIN, UNICEF, and MI were independently purchasing equipment. Each had separate memorandums of understanding with the government. Mr. Desta's work is a model of how a NC should operate.

Mr. Desta receives no resources as a NC, though he is passionate about the work. Moving forward, it is important that the NCs receive credibility and recognition for their role. Dr. Assey and Mr. Desta have approached ICCIDD leadership several times requesting a stipend and operational budget for the NC position. The Ethiopian situation is complex and delicate; funding is required to convene the coalitions that sustain iodization efforts.

Ethiopian Regional Coordinator

Dr. Assey is the RC for Ethiopia and surrounding countries. He identified potassium iodate sourcing as a contentious issue well before the issue arose. Dr. Assey has not been directly involved in the cost-recovery model of the project, but he has been an instrumental resource by way of his long relationship with Ethiopia and his technical knowledge.

The Middle East and North Africa

Dr. Izzeldin Hussein is the RC for the Middle East and North Africa, a region that extends from Pakistan to Morocco. Dr. Hussein has the advantage of being an Arabic-speaking Muslim (from Oman). He has close personal relationships with important people throughout the Arab world. ICCIDD is hoping to receive funding from Gulf donors in the future.

Dr. Hussein's region is one of the largest; ICCIDD is considering splitting it into multiple regions. Dr. Hussein is based in the Gulf; it is difficult for him to coordinate with distant areas. Morocco and Algeria are two countries that should be focused on, but are very far from Dr. Hussein's office. This case shows the constraints of the current ICCIDD regional structure.

Dr. Hussein spends around 10% of his RC time on fundraising efforts.

In the last three years, Dr. Hussein has conducted six new national surveys: Qatar, Oman, Kuwait, Saudi Arabia, Bahrain and the United Arab Emirates (UAE). UICs in schoolchildren are generally in the low-normal range; pregnant women are mildly deficient in the UAE. When deficiencies are found, governments consult Dr. Hussein on the course of action (e.g. increase iodine levels in the salt? supplement pregnant women?). He has single-handedly introduced the topic of iodine deficiency to the governments of this region.

Other development organizations interested in iodine have a minimal presence in the Gulf. The WHO has a presence in the region; but their emphasis is salt reduction and Dr Hussein has worked hard with WHO to ensure clarity and complementarity of salt iodization and salt reduction programs.

Dr. Hussein's work-plan

- General strategy for the Gulf Region
 - Dr. Hussein first looks at national data.
 - He then meets with government officials to argue for reporting on iodine nutrition.
 - Governments then spend around \$20,000-\$30,000 for a national UIC survey.
 - Dr. Hussein uses the implementation of the survey as a platform for coalition building.
- Saudi Arabia

- Problem: Lack of national UIC data, lack of iodized salt production data. Saudi Arabia produces and exports salt, but does not conduct iodine surveys.
- Objectives: analyze situation, start coalition building, conduct a national survey.
- Deliverables: conducted first national UIC survey, showed media UIC was 133.9 micrograms/L.
- o ICCIDD leadership does not think the Saudi national survey would have happened without Dr. Hussein's involvement.

United Arab Emirates (UAE)

- ICCIDD is working to establish a regional office and laboratory. A UAE undersecretary spearheaded this effort until he had to retire due to health concerns.
- o UAE had pledged support (\$500,000) for ICCIDD; this grant is still pending.
- Establishment of a regional office and the UAE grant are a package deal. The iodine laboratory addition would be around \$60,000 for a ventilation hood, heating block, spectrometer, glassware, and basic reagents.
- Dr. Sala is NC for the UAE; he is the focal point nutrition within the Ministry of Health.
- o Lab equipment has been purchased, but it's waiting in boxes in the UAE.
- o Ghana's lab was much less expensive to set up than UAE because there was no need to install a vent hood there.
- Dr. Hussein has spent a lot of time in the UAE, in part due to fundraising work.

Bahrain

- o Problem: lack of data, confusion of messages about salt iodization and salt intake reduction, IDD is not a priority program for the government.
- o Bahrain imports its salt from Saudi Arabia.
- Dr. Hussein convinced the Bahraini government to conduct a survey, and provided the protocol for this survey.
- He also began training the Bahraini NC on urine sample and dietary data collection, physicians on goiter assessment, and teachers on the importance of IDD elimination and awareness.

• Oman

 Dr. Frits van der Haar traveled to Oman to help Dr. Hussein design a survey that tracks sodium, creatinine, and iodine. This survey includes repeat sampling for 20% of the population.

Egypt

- Egypt is a focus country for the Partnership Project.
- The WHO Eastern Mediterranean Region office is located in Egypt. The WHO nutritional adviser there advocates for reduced sodium intake and needs to be convinced that increasing iodization does not imply increased salt consumption.

Sudan

- There were no quality control guidelines in Sudanese salt production. Dr. Hussein developed Quality Control/Quality Assurance guidelines in both English and Arabic.
- Ethiopia
 - Ethiopia is in Dr. Assey's region; he collaborated with Dr. Hussein on the program there.

India

Dr. Chandrakant Pandav is the RC for South Asia (former NC of India). His results have confirmed his model of working to harmonize the various stakeholders in iodization. Dr. Pandav's deliverables for 2014 were:

- Hosting secretariat of the national coalition (\$6,000)
- Meetings with key opinion members and state coalitions (\$3,000)
 - Large countries have state coalitions that are often the size of national coalitions in other countries. Dr. Pandav would like to decentralize ICCIDD's Indian operation.
- Renovation and maintenance of the website, IQ Plus (http://www.iqplusin.org/) (\$3,000)
- Publication of four issues of IDD newsletter (\$4,000)

West Africa

Similar to the Gulf region and North Africa, many countries in West Africa did not have data on iodization. In the last four years, West African RC Dr. Roland Kupka has facilitated new national surveys in several countries (Sierra Leone, Burkina Faso, Togo, Senegal).

Dr. Kupka is also a UNICEF regional adviser for nutrition; this is a unique case among the ICCIDD RCs. Dr. Kupka is able to function well in both roles, leveraging his relationship with UNICEF when useful.

Vietnam

In 2000, UNICEF and the Vietnamese National Institute of Nutrition conducted a national IDD survey. In Vietnamese children, the survey found a 20% goiter rate and a median UIC rate of 32 micrograms/liter. Following advocacy by UNICEF and ICCIDD Southeast Asia/Pacific RC Dr. Cres Eastman, the Vietnamese government set targets for iodine.

There is a UNICEF country office in Hanoi; a Chief of Nutrition is stationed there. The Chief of Nutrition was interested in iodine and had some resources to dedicate to the issue, but did not have much expertise or credibility on the issue. The UNICEF Chief invited Dr. Eastman, who was very experienced with iodine, to consult on the issue. Together, ICCIDD and UNICEF were able to successfully lobby the government, which passed iodization legislation in 2002.

An endocrinology hospital was identified as a focal point for the iodine effort. A clinician at this hospital established an iodine lab and began reaching out to salt producers. The clinician met with salt producers and discussed enforcement of the new legislation with them. An ICCIDD consultant, Dr. Gary Ma, established seven provincial iodine labs in addition to the central lab.

By 2005, 90% of Vietnamese household salt was adequately iodized; median UIC in schoolchildren was 113 micrograms/liter. The Vietnamese government was receptive to the initiative. The National Institute of Nutrition was enthusiastic about iodization and played a pivotal role in implementing iodine requirements.

Slipping iodine levels

There was a big push from the government to publicize the initial success of the iodization effort. After the initial goal was achieved, government interest in iodization waned. Iodization was perceived to have been achieved; maintenance of adequate iodine levels was not a priority. In addition, salt producers pushed for deregulation, arguing that iodized salt was too expensive to produce.

Several factors contributed to the slip in iodization rates:

- UNICEF stopped subsidizing potassium iodate.
- The funding for the national lab was cut, and the lab dissolved (in 2006).
- An effective national coalition was never built up, mostly because of the rapid adoption of iodization policy.
- There was no monitoring during this period, no Vietnamese NC, and ICCIDD did not follow up.

In 2010, UNICEF conducted another country survey for Vietnam, which confirmed the return of IDD. Dr. Eastman was brought back in to work on the situation, discussions were held with the National Institute of Nutrition and the Ministry of Health.

In 2012, the ban on non-iodized salt was reinstated. The new proposed legislation explicitly required that salty condiments be iodized. The laboratory network was reestablished. In addition, iodization costs are now passed to consumers. All of the original players were involved in the reinstatement of iodization legislation.

Belarus

In Belarus, sustained advocacy resulted in voluntary salt iodization by the industry, but this was insufficient to ensure adequate iodine nutrition. Compulsory USI is often not viable in the former Soviet states. In 2001, the government adopted a decree on the prevention of IDD – iodized salt must be used in processed foods, as well as in all educational and health facilities. All retailers selling salt had to offer iodized salt, though non-iodized salt was also available.

Slipping iodine levels

In some areas the coverage rate and iodization level has decreased:

- Some areas of Latin America lost ground in the 1990s, e.g. Bolivia.
- In the last three years, coverage levels in Cambodia appear to be slipping due to some issues with the regional salt iodization cooperative.
- In Ethiopia, access to iodized salt was cut at the beginning of the war with Eritrea in 1998. Iodization levels did not recover until 2014.
- In India, some states rescinded the ban on non-iodized salt. There was slippage in household coverage with iodized salt in these areas.
- The Soviet Union had compulsory iodization; when it broke up, coverage rates plummeted. Rates in post-Soviet states (except Russia) have been slowly rising since the break-up.

Recruiting Regional Coordinators

Western Europe

Dr. John Lazarus had recently retired from his post as a Professor of Medicine in Cardiff, U.K., and is an international expert on iodine and the thyroid. The previous RC had passed away, and Dr. Lazarus was the logical choice. Many European NCs are medical doctors, and iodization programs are administered by Ministries of Health. Dr. Lazarus was interested in the ICCIDD, he was able to meet the time commitment, and he was well recognized in the field.

East Africa

ICCIDD has had difficulty recruiting RCs and NCs in Africa for a long time. It is not easy to find local partners in Africa that have secure employment and a passion for iodine.

Dr. Vincent Assey, the current East African RC, is very effective in the role. Dr. Assey earned his PhD in Sweden, and then took a position at the Tanzanian Food and Nutrition Research Center. He now has a position in the Ministry of Health. ICCIDD was familiar with Dr. Assey from the scientific community – Dr. Zimmerman was a reviewer of Dr. Assey's PhD thesis. Dr. Assey was invited to two Management Council meetings and was eventually hired as RC.

South Africa

Dr. Jooste, the current RC for South Africa, was a long-time NC for South Africa. He also served as the secretary of ICCIDD before the Global Network was formed. When Dr. Jooste retired from his position as Head of Nutrition at the South African Medical Research Council, he was brought on as the South Africa RC.

West Africa

ICCIDD had difficulty filling the West Africa RC position. Dr. Dan Lantum, a founding member of ICCIDD, was RC for the region. Dr. Lantum's health began to fail, and he was unable to continue serving as RC.

ICCIDD decided to piggyback onto the UNICEF regional office in Dakar. Dr. Roland Kupka was the Regional Nutrition Adviser for UNICEF. ICCIDD approached UNICEF with the idea of having Dr. Kupka function in a dual role. ICCIDD would give Dr. Kupka \$20,000-\$25,000 to supplement the UNICEF funding.

Dr. Kupka is now working for UNICEF in New York, so the West Africa RC post must be filled again. Dr. Roland has some leads for the West Africa RC spot, though he has not selected a first-pick candidate. There is a potential candidate in Ghana who ICCIDD is supporting, though he will likely need a couple of years before having the credentials necessary for the RC position.

West Africa is a massive ICCIDD region; it might be divided in two if sufficient resources were available.

Southeast Asia and the Pacific

Dr. Karen Codling is the new RC for Southeast Asia and the Pacific. She was suggested for the role by Dr. Gorstein and Arnold Timmer. Dr. Codling has a background as a nutritional biochemist from Cambridge. She worked initially in Kenya, then moved to Bangkok working with the UNICEF Thailand office, then for the UNICEF regional office of Southeast Asia (including China and Indonesia).

In 2002, UNICEF Thailand received a large grant from USAID and CIDA to support iodine nutrition. At UNICEF, around 50% of her time was spent on iodine. Dr. Codling has the qualities of an excellent regional leader – good writing and interpersonal skills, and credible technical knowledge.

Dr. Gary Ma is the deputy RC for the region. He oversees Australia, New Zealand, and some Pacific Islands. He provides technical support and laboratory expertise to Dr. Codling.

Role of the ICCIDD Global Network over time

The efforts of MI and GAIN on salt iodization often overlap on issues of advocacy and implementation, and within some national programs, could be better integrated and harmonized to maximize impact. UNICEF, on the other hand, does not work on the supply side (except in certain areas where no other organization is active). Going forward, ICCIDD hopes to help GAIN and MI coordinate their efforts better in the most effective, complementary relationship.

Because there are many organizations involved in iodization, there are often issues of attribution, accountability, and credit due. The Global Network does not need to report back to specific donors in most cases, so is not as concerned with taking credit as individual agencies may be.

Some countries are left out of the iodization discussion, due to lack of funder interest (either due to small population size, conflict, or a pariah government). These countries include Algeria, Angola, Mozambique, Yemen, Morocco, and North Korea. The neutrality of ICCIDD's Global Network enables it to function in fragile states and work with pariah governments.

There are only a few countries that lack some sort of iodization effort. In most countries with iodization programs, the goal of the ICCIDD will be to sustain the iodine gains that have been already achieved. As a country develops and changes, food consumption shifts towards processed foods, and iodized salt must be reincorporated into the diet.

Supporting iodization infrastructure is a long-term commitment. A component of this support is developing guidelines and providing technical training, which ICCIDD can cover. Day-to-day follow-up and ongoing support would not be the role of ICCIDD, but instead of an implementing agency or government body.

ICCIDD will continue its role as a provider of global guidance for the iodization effort. This role includes leadership of the iodine task force dedicated to understanding emerging issues around iodization, as well as coordination with the WHO, informing applied research, and distributing an iodization newsletter.

One issue for the task force is the iodization of processed foods, for which best practices need to be developed. The solution includes elements of advocacy, closing legislative loopholes, and a better technical understanding of iodized salt in processed foods.

The GAIN-UNICEF Partnership Project is coming to a close. By 2016, Partnership Project country teams will not be active; its focus countries will not receive the same level of attention.

The Global Network is in the process of publishing documentation of case studies and lessons learned by the Partnership Project as well as by MI. There is value in cooperatively publishing these documents, rather than regarding them as proprietary.

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