

Review Article

The National Coalition for Sustained Optimal Iodine intake (NSOI): a case study of a successful experience from India

Kapil Yadav MBBS, MD, Arijit Chakrabarty MBBS, Jee Hyun Rah MSc, PhD, Rakesh Kumar MBBS, MD, Victor Aguayo PhD, Mohammad Anas Ansari MSc, Rajan Sankar MBBS, MD, Madhu Ganesh Karmarkar PhD, Chandrakant S Pandav MBBS, MSc, MD

National coalition for Sustained Optimal Iodine intake (NSOI), India

Iodine deficiency disorders (IDD) constitute the single most important preventable cause of mental handicap at global level. Recognizing the importance of coordination and synergy of the activities of wide range of universal salt iodisation (USI) stakeholders, WHO/ Unicef/ ICCIDD has prescribed a national multi-sectoral coalition as one of the ten indicators essential for attaining sustainable elimination of IDD at national level. Challenge for coordination among different stakeholders of IDD/USI is even greater in democratic and diverse country like India. In the present article we present successful experience from India regarding formation of a national coalition and contributions made by the coalition towards promoting USI in India. The activities of the national coalition in India are classified into three phases; 1) Phase 1- year 2006 to 2009- the inception; 2) Phase 2- year 2009 to 2012- consolidation; 3) Phase 3- year 2013 and ongoing- expansion. The National coalition for Sustained Optimal Iodine Intake (NSOI) has been instrumental in ensuring greater coordination and synergy amongst IDD and USI stakeholders in India and partially responsible for the current 71 percentage household level coverage of adequately iodised salt. The most significant contribution of the national coalition has been to act as a high level advocacy channel and provide a platform for regular dialogue for all partners of the coalition. With “mission” approach and allocation of optimal resource, India can achieve and should achieve USI by 2015, an apt culmination of a decade of existence of the national coalition.

Key Words: universal salt iodisation, iodine deficiency disorders, multi-sectoral, national coalition

INTRODUCTION

Iodine deficiency disorders (IDD) constitute the single most important cause of preventable mental handicap at global level.¹ Brain damage caused by iodine deficiency is totally preventable and a highly cost-effective strategy in the form of universal salt iodisation (USI) is available to combat IDD.² Fortifying salt with iodine is a relatively simple technology and to date salt iodisation remains the most practicable and affordable method of iodine supplementation. However, ensuring that iodine fortified salt reaches every pregnant mother and child - the primary target group in the population, is a challenging task. A multitude of stakeholders are required to ensure iodised salt reaches every household and is consumed every day. Diverse stakeholders are involved in the production of raw salt, its iodisation, transportation, distribution, wholesale trading, retailing and final consumption at household level. Each of these stakeholders should function optimally to ensure that good quality iodised salt reaches the end target consumers. Raw salt manufacturers are required to produce quality salt which can be optimally iodised, salt producers need to ensure optimal and uniform iodisation, salt whole salers/traders/transporters/ retailers should ensure that they only source and distribute adequately iodised salt and end user consumers should ensure that they

purchase and consume only adequately iodised salt. Continuous monitoring by both production and consumer end regulators is essential to ensure enforcement of mandatory salt iodisation. Sustained demand by the consumers and advocacy of the use of iodised salt by NGOs, civil society and media advocacy groups is critical to ensure sustainability of any USI program.

IDD control initiatives at global and national level have long been recognised as multi-sectoral initiatives.³ The critical role of developing multi-sectoral, inter-sectoral and trans-sectoral strategies for sustaining elimination of IDD has also been long recognised.⁴ The USI stakeholders can broadly be classified into government agencies which include ministries and regulatory bodies, private sector including salt producers and traders, civil society and non-governmental organizations, consumers and international partner agencies. Each of these catego-

Corresponding Author: Dr Chandrakant S Pandav, Room no 29, Centre for Community Medicine, Old OT Block, All India Institute of Medical Sciences, New Delhi- 110029, India.

Tel/fax: +91-11-26588522

Email: cpandav@gmail.com

Manuscript received 13 February 2014.

doi: 10.6133/apjcn.2014.23.s1.02

ries can further be expanded to include several distinct entities with their own specific role, characteristics, priorities and concerns regarding implementation of USI. Synergistic and coordinated efforts on part of all these stakeholders is essential to achieve USI.

For any public health program's success, consensus is required amongst all stakeholders to move together, forward and faster. We need a mechanism specifically designed to bring people with different perspectives together: to listen to each other, to distil the essence of their shared aspiration, and define the critical principles they will adhere to in their work as partners in progress. In other words, we need a system that supports collaborative approaches to solving complex and multilayered issues. The three critical components of any multi-sectoral coalition are: 1) Stakeholder alignment- broad consensus amongst the stakeholders and identifying the common goals and common ground so that they together can progress from "contention" to "collaboration"; 2) Situation/policy analysis-once the common goals have been agreed upon, the next critical step is to analyse the current scenario and move from "confusion" to "coordination"; 3) Project management- the last and the most important step is to translate "intentions" into "implementation".⁵

The challenge for coordination among different stakeholders of IDD control and USI is even greater in a democratic and diverse country like India with a total population of 1.2 billion. There are more than twelve thousand salt producers and thousand salt iodisation facilities spread across six salt producing states in India and an even greater number of salt traders, wholesalers and other key supply chain stakeholders including salt retailers. The huge diversity of the country in terms of culture, food preferences, and various types of salt consumed is further exemplified by the fact that health is a state subject in India, that is, each of 35 states/union territories is independent to pursue its own policy and strategy for IDD control and USI.⁶ This diversity needs to be factored in while accounting for "values" of different stakeholders and communities at large while formulating policy and programs at national and state level. "Values" operate at three different levels, namely the core values or ideologies, beliefs and interest levels. The core values relevant in the context of USI is recognition of salt as an icon of the freedom struggle in India and any attempt to regulate sale of salt is being perceived as an impingement on this freedom. The diverse negative "values" associated with the IDD program in India were not taken into account while formulating the IDD policy and program and this failure led to the lifting of the ban on sale of non-iodised salt in year 2000. The ban on sale of non-iodised salt was subsequently reinstated in year 2005 after intense advocacy efforts.

India has a national IDD control program in place since 1962 and has adopted a USI strategy to combat IDD in 1983.⁷ The National IDD Control Programme (NIDDCP) is a fully centrally (federal government) funded program and identifies USI as the primary strategy to eliminate IDD as public health problem in the country. The identified objectives of the NIDDC program are to conduct surveys to assess the magnitude of IDD, to supply iodised salt in place of common salt, to resurvey after every 5

years to assess the extent of IDD and the impact of iodised salt, laboratory monitoring of iodised salt and urinary iodine excretion and health education and advocacy.⁸ The Ministry of Health and Family Welfare, Government of India is the nodal ministry for implementation of the NIDDCP. The programme is being headed by the nutrition advisor, National IDD Cell, Directorate General of Health Services (DGHS). The Salt Commissioner office at the Ministry of Industry, Government of India is responsible for monitoring, production and distribution of iodised salt in India. The USI program has been one of the few public health success stories in India with 71 percent of the population consuming adequately iodised salt.⁹ The policy decision to iodize all edible salt in India was taken in 1984 and implemented in a phased manner from 1986. Since then the iodised salt coverage at household level has shown a gradual increase. The coverage of adequately iodised salt has increased from 49 percent in 1992 to the current level of 71 percent. Another 20 percent of households consume salt with some iodine and only 9 percent households consume salt with no iodine. The production of iodised salt has increased from two hundred thousand metric tons (MT) per year in 1980s to the current 6.2 million MT in year 2011-12, well in excess of the national requirement of 5.8 million MT per year.¹⁰

However, significant differentials occur in household level coverage across different regions of India (83.2 percent in urban areas and 66.1 percent in rural areas) (Chhattisgarh 31.6%, Karnataka 35.5% and Jharkhand 41.4% being the low coverage states and Manipur 98.3%, Meghalaya 98% and Nagaland 97.1% being high coverage states) and across socio-economic strata. Marginalised populations and vulnerable age groups (children less than 2 years and pregnant women) most at risk of iodine deficiency are yet to be universally covered with adequately iodised salt. The IDD program in India has faced many a serious challenge since its inception. The changing legislations pertaining to mandatory salt iodisation, weak implementation of existing legislation, inadequate or no iodisation by the small scale producers, natural disasters in form of cyclone destroying salt pans in June 1998 and an earth quake in 2001 destroying the salt iodisation facilities in Gujarat and continued inequitable iodised salt coverage amongst rural/urban and different socio-economic strata are a few of the important challenges facing USI in India. Added to this are the rising cost of potassium iodate (KIO₃) and the early discourse on policy around double fortified salt (DFS) which is creating confusion that is avoidable.

Recognising the importance of a formal mechanism for coordinating and synergizing the activities of these wide range of stakeholders, WHO/ Unicef/ ICCIDD have prescribed a national multi-sectoral coalition as one of the ten indicators essential for attaining sustainable elimination of IDD at national level.¹¹ The indicator specifies that it is prerequisite to have "Presence of a national multi-sector coalition responsible to the government for the national program for the elimination of IDD with the following characteristics: 1) National stature; 2) All concerned sectors, including the salt industry, represented, with defined roles and responsibilities; 3) Convenes at

least twice yearly. The coalition should not only act as a forum for collective advocacy for the promotion of USI at national level but also provide a platform for dialogues between the partners to iron out the differences, identify common ground and synergize and coordinate activities of all stakeholders.” The coalition should document its deliberations and ensure appropriate distribution of the same.

If India is to achieve USI in near future, it has to bring about a synergy amongst varied stakeholders and address the inequitable coverage of adequately iodised salt. Coalitions to achieve this synergy are critical to move forward. In the present article we present experience from India regarding the successful formation of a national coalition and contributions made by the coalition towards promoting USI in India. The activities of the national coalition in India can be broadly classified into three distinct phases with characteristic challenges and contributions by each of the three phases; 1) Phase 1- 2006 to 2009- the inception; 2) Phase 2- 2009 to 2012- consolidation; 3) Phase 3- 2013 and ongoing- expansion.

Phase 1: Inception (2006 to 2009)

In 2006 the Board meeting of the International Council for Control of Iodine Deficiency Disorders (ICCIDD) was held in New Delhi. During the meeting, in presence of global members of ICCIDD, the official launch of the national coalition in India was announced on 20th April, 2006. The proposed national coalition was to be led by the Ministry of Health and Family Welfare and have membership from all stakeholders including government agencies, private sector (salt producers and traders), civil society and non-governmental organizations and international agencies. The goal of the coalition was to strive to ensure that every pregnant, lactating and child-bearing age woman, as well as every child in India, has access to optimal iodine to allow full realization of their individual mental and physical development potential. The specific objective of the coalition was to act as a channel for high level advocacy and streamlined communication, open professional discourse amongst the stakeholders involved in IDD elimination activities in the country and to implement identified activities jointly. The proposed set of activities of the national coalition were: 1) to hold regular consultation meetings of the partners/stakeholders to identify actionable key interventions to strengthen USI; 2) information sharing and advising involved institutions and sectors regarding strengthening of USI; 3) to act as repository of national and international experiences and resource material pertaining to IDD and USI, interpret the same and adapt them to local context; 4) to advocate with policy makers and program implementing agencies and; 5) finally to implement select interventions that require multi-partner/stakeholders contribution and resources.

The national coalition was to be supported by an efficient secretariat, whose role would be to assemble essential information, prepare the agenda and other inputs into meetings, and disseminate the outcome of these meetings to the alliance members. A tentative list of members of the national coalition was prepared and a letter requesting for convening the first meeting of the coalition was sub-

mitted to the then Secretary of Health, Government of India. However, the Health Secretary who had agreed to support the activities of the coalition, superannuated and his successors were not equally keen on the role of the coalition. Multiple attempts were made to convince the Government of India to assume leadership of the coalition, but were unsuccessful. The official position was that already two goitre committees existed at national level and there was no need for the national coalition. It was an altogether different matter that these two goitre committees had never met even once in more than two decades of their existence.

However, the ICCIDD regional office with support of partner agencies continued to function as “unofficial” but operational secretariat of the coalition and coordinated the activities of all USI stakeholders. The collaboration and working together led to synergy in activities of different partner agencies. ICCIDD collected relevant information from line departments as well as private and civil societies, producers and other sources on the following: 1) the progress made in the past period; 2) constraints that have arisen and foreseeable challenges in achieving and sustaining USI; 3) actions required to overcome identified bottlenecks; 4) decisions to be taken in order to create an enabling environment for continued success. These were shared with all the partner agencies.

Phase 2: Consolidation (2009-2012)

The key players of the coalition realised that waiting for the Government of India to assume a leadership role of the coalition had not been fruitful in previous three years and there would be a need to explore alternatives. In a meeting held at the Unicef country office in early 2009, it was decided to establish a secretariat of the national coalition led by one of the partner agencies. The Regional Office (South Asia) of ICCIDD at the All India Institute of Medical Sciences (AIIMS) was agreed upon by consensus to be the host of the secretariat. The AIIMS and Regional Office had been associated with the IDD program in India since 1956, ie 60 years and enjoyed high credibility with all the stakeholders. (Box 1). By virtue of its association with pioneering research, an institutional legacy and mentorship, AIIMS and the Regional Office (South Asia) of ICCIDD were the obvious candidates for hosting the secretariat of the national coalition. The terms of reference of the secretariat were finalized in discussion with all the stakeholders and potential members identified (Box 2).

The Secretariat was to have a full time coordinator with part time secretarial staff and was to be guided by senior consultants having long term global and regional experience in IDD. Unicef and GAIN acted as a catalyst for the formation of the secretariat and provided the initial funding support along with ICCIDD. Subsequently other partner agencies including the Micronutrient Initiative also provided funding support to the coalition. The secretariat started functioning from 1st October, 2009. The exemplary leadership role played by the Salt Commissioner’s office and the Salt Commissioner in particular in supporting the coalition needs special mention.

The first big challenge facing the coalition was to engage the Ministry of Health and Family Welfare, Gov-

Box 1.**All India Institute of Medical Sciences (AIIMS), ICCIDD and IDD Program in India – the historical legacy**

The historic association of AIIMS with the IDD program started in 1956, when the legendary Prof V Ramalingaswami initiated the Kangra Valley study. This seminal community based study of effectiveness of iodised salt for control of IDD involved more than 100,000 children followed over a 16 years period. As a result of the Kangra Valley study the National Goitre Control Program was launched in the country in 1962. Professor V Ramalingaswami and his colleagues at AIIMS including Dr MG Karmarkar and Dr N Kochupillai significantly contributed to basic and translational research at regional and global level.

The International Council for Control of Iodine Deficiency Disorders (ICCIDD) was established in Kathmandu Nepal in 1986 and Prof V Ramalingaswami was the founding Vice Chairman. ICCIDD is the internationally recognized non-governmental organization comprising of over 700 scientists, doctors, public health experts, nutrition advocacy professionals. ICCIDD has played a key role in increasing the coverage of iodised salt at global level to 71 percent in the short span of two decades.

Both AIIMS and ICCIDD share a similar legacy and are associated with five C s, Commitment, Credibility, Continuity, Collaboration and Cohesiveness. India has been the unique beneficiary of the synergy of both these institution with the Regional Office of ICCIDD being housed in AIIMS and Dr Chandrakant S Pandav, the Regional Coordinator also being a faculty member at AIIMS.

Box 2.**Terms of reference of the secretariat of the National Coalition for Sustained Optimal Iodine intake (NSOI)**

- 1) To convene meetings on a regular basis of all the partner agencies; government, private and civil society stakeholders currently involved in activities of NIDDCP.
- 2) To prepare updates/compile/analyse/interpret available information (surveys, studies, etc) on iodine status of the population, salt use, production figures of iodised salt, sales trends, price trends, market availability and transportation, based on reports received from partner agencies, government, private and civil society stakeholders involved in the IDD program in India.
- 3) To facilitate preparation of specific activities and plans identified during the deliberation of national coalition meetings by various partner agencies with dedicated funding from concerned agencies for those activities.

Members of NSOI in India

Government Ministries at National and State level: Ministry of Health and Family Welfare, Ministry of Industry, Ministry of Railways, Ministry of Road Transport, Ministry of Women and Child Development, Ministry of Food and Civil Supplies, Ministry of Education, Ministry of Law and Justice, Ministry of Information and Broadcasting and Ministry of Panchayati Raj

Government agencies and institutes: National IDD Cell, Salt Commissioner's Office, Food Safety and Standards Authority of India (FSSAI), NIPCDD, NIHFV

Salt producers, traders and associations of these groups- Indian Salt Manufacturers' Association (ISMA)

Civil Society groups/Consumer advocacy groups, Non-governmental agencies- CLARA, Sharnum, Bharat Scouts, NCC, NSS

International partner agencies- WHO, Unicef, MI, GAIN, ICCIDD, WFP

Academic institutions and public health professional bodies: AIIMS, Medical Colleges, IMA, IPHA, IAPSM, IAP

Media advocacy groups

ernment of India, the nodal ministry for the IDD control program in India. The secretariat invited the Advisor, Nutrition, the focal point for the IDD control program in the Ministry of Health and Family Welfare to the meetings of the coalition and as per advisor's specific request all partners assured that henceforth each agencies work plan will be submitted to the Advisor, Nutrition and will also be shared with the other partners in the coalition. This step was a major ice breaker and was instrumental in getting the Ministry of Health and Family welfare on board the coalition.

Since its formation in 2009 the secretariat convened fourteen successful meetings of the coalition which had active participation from all stakeholders of USI in India and at state level. The important activities conducted by the national coalition are listed in Table 1. The coalition brought about a dramatic shift in coordination and synergy amongst the member of the coalition. There was sharing of concerns and many contentious issues were resolved by dialogue amongst the partners. The platform was successfully used for undertaking many joint programs and projects under the banner of the coalition especially those which involved resources in excess of capaci-

ty of an individual partner or those which were perceived to face opposition from any vested segment and thus might be risk prone if taken up alone by an individual agency/partner. We would like to briefly highlight the two most challenging activities accomplished by the coalition: leading the national level multi-sectoral workshop on IDD and establishing a management information system (MIS) at the Salt Commissioner's Office. These two activities also underline the key characteristics of the coalition: collaboration, coordination and implementation, facilitating this successful transformation of the policy making and program landscape pertaining to IDD at national level (Box 3).

Phase 3- Expansion (2013 and ongoing)

Inspired by the successful operations of the coalition, partner agencies invited the secretariat to share its experiences in Bangladesh and Sri Lanka. Plans are in place to establish a national level coalition promoting USI in these countries also, based on the India model. Similarly in India also plans are afoot to establish state level coalitions in India. The strategy for establishing state level coalitions was developed after a year-long consultation

Table 1. List of activities undertaken by the national coalition for sustained optimal iodine intake (NSOI)

Serial Number	Objective	Activity
1	To act as channel of high level advocacy and streamlined communication,	<ul style="list-style-type: none"> • National Multi-sectoral IDD workshop in October, 2010 • Advocacy for continuation of the ban on sale of non-iodised salt in India after Hon'ble Supreme court verdict in 2010 • Drafting of report of Expert group to review mandatory salt iodisation set up by Ministry of Health and Family Welfare • Successful roll back of Customs and Excise Duty on Iodine to offset the increased international prices of raw iodine • Providing technical inputs to Ministry of Health and Family Welfare, Women and Child Development (WCD), ICMR, Planning Commission • Advocacy and promotion of introduction and up scaling of iodised salt in public distribution system (PDS)
2	To facilitate professional discourse amongst the stakeholders involved in IDD elimination activities in the country	<ul style="list-style-type: none"> • Hosting fourteen coalition meetings since 2009 • Constitution of Indian Council of Medical Research (ICMR) expert group on salt intake in India • Developing and disseminating advocacy material for IDD • Organising international, national conferences, meetings on IDD • Member of Interagency expert group on micronutrients constituted by ICMR
3	To implement key identified activities jointly	<ul style="list-style-type: none"> • Conducting eight state Iodised salt study in 2010 • Establishing state of art management information system (MIS) at Salt Commissioner's Office • Conducting state level activities including multi-sectoral workshops, salt producer/traders workshop • Establishing quality assurance system in the salt iodisation laboratory at production end with small scale producers, medium and large scale salt refineries and laboratories of Salt Commissioner's office

amongst USI partners of the national coalition along with state level stakeholders. It was realised that to reach the proverbial "last mile" in India's journey towards the USI goal of a coverage of iodised salt greater than 90 from the current 71 percent coverage, it is essential to address socio-economic and interstate inequities in coverage of iodised salt. Each state of India has a unique set of challenges pertaining to USI and thus, the solutions to address them also have to be state specific. In addition the state coalition will also facilitate capacity building for USI advocacy and implementation at state level. In the initial phase, the salt producing states of Gujarat, Rajasthan and Tamil Nadu along with two high burden states of Bihar and Uttar Pradesh have been identified for establishing state coalitions in the year 2013-14. In consultation with other partner agencies the coalition has planned a series of advocacy activities and meetings in these five identified states.

Strengths and limitations of the national coalition

The success of the national coalition in India can be ascribed to several factors including the critical role played by AIIMS and the Regional Office, ICCIDD, the willingness of all partners to collaborate with each other and to share and to learn from each other, the existence of strong national resources in terms of technical expertise, undertaking projects and activities jointly at national and state level, due deference to the priorities of each stakeholder's parent organization/affiliation and the supportive role played by the Advisor, Nutrition and the Salt Commissioner's Office. Sensitive issues that individual stakeholders may not be able to take up at individual level can

be pursued from the collective platform of the coalition thus minimising the risks and optimizing the expected gains. Inspired by the success story of the NSOI other nutrition and micronutrient programs including flour fortification are on the way to establish national coalitions.

The coalition though having achieved considerable successes in the relatively short period of its existence did have its own share of limitations. The few important limitations are lack of sustainable funding for the secretariat, the absence of rotation of the secretariat amongst partner agencies on a periodic basis, and the failure to convince the ministry of Health and Family welfare to assume a leadership role in the coalition. Further expansion of the membership base of the coalition should also help in increasing its effectiveness.

DISCUSSION

The National coalition has played a significant role in the progress made towards sustainable elimination of iodine deficiency disorders in India. The current 71 percentage household level coverage of adequately iodised salt and its further progress towards the USI target of 90 percent can be at least partially attributed to the greater coordination and synergy amongst USI stakeholders in India. The most significant contribution of the national coalition has been to act as a high level advocacy channel and to provide a platform for regular dialogue for all partners of the coalition. The coalition helped with the transformation of contention to coordination, confusion to collaboration and intention to implementation, thus establishing an ecosystem favourable for achieving USI in India. In a short time span of 6 to 7 years (from NFHS 3, 2005-06 to CES,

Box 3.**Success stories of the National Coalition for Sustained Optimal Iodine intake (NSOI)****Organization of a national multi-sectoral workshop on IDD, 2010**

In India a national multi-sectoral workshop was organised annually by the Ministry of Health and Family Welfare with participation from all IDD and USI stakeholders. However the planning and implementation of the workshop was in a “top down” approach with stakeholders having minimal say in the issues being discussed.

The national coalition leveraged the opportunity provided in 2010 and organised the national multi-sectoral workshop in year 2010 in association with the Ministry of Health and Family Welfare. The Ministry of Health and Family Welfare officially recognized the national coalition and the funding support was provided by all partner agencies under the umbrella of the national coalition.

The national multi-sectoral workshop was first successful demonstration of joint organization of a national level event by all stakeholders of USI in India under the banner of the national coalition.

Establishing MIS at the Salt Commissioner’s Office, Ministry of Industry

The coalition with support of all partner agencies and particularly Unicef, GAIN, MI and ICCIDD undertook the ambitious project of computerization of Salt Commissioner’s Office including regional and circle offices all across India. The project involved establishment of a state-of-the-art Management Information System in all offices of the Salt Commissioner enabling a paperless and real time web enabled function of these office. The project received enthusiastic support and endorsement from the Salt Commissioner of India.

Successful implementation of the project completed in year 2011 has enhanced the production end monitoring of iodised salt in India specifically improving the quality of iodisation.

On demand from personnel of Salt Commissioner’s office the coalition will undertake extensive training of all staff members on MIS in the coming year.

2009)⁹ India has achieved a 20 percentage point increase in household level coverage of iodised salt. The coalition thus has managed to change the landscape of the IDD program at the national level. The coalition in coordination with its partners should now focus on sustaining the progress achieved so far and strive for the “final push” for achieving USI.

There is an immediate need to extend the coalitions to the state level learning from the national level coalition and contextualizing and adapting to state specific situation. State level coalitions should be formed with involvement of all important state level stakeholders. It is imperative that these state level coalitions have strong linkages with the national level coalition to enable bi-directional learning and exchange of ideas. The coalition should in the next phase address the issue of equity in delivering iodine nutrition to the population. The focus should be more on high risk groups (pregnant women and children in their first two years of life), on unreached and marginalized populations, in high burden states. The next major challenge that the coalition should undertake is to generate consensus and mobilize resources to conduct a national and state level representative IDD survey as per the guidelines of WHO/ Unicef/ ICCIDD. Currently no national and state level statistics on iodine nutrition indicators including total goitre rate and urinary iodine are available to monitor IDD status. The district specific IDD survey guidelines of the National Iodine Deficiency Disorders Control Program are obsolete and need to be revised to strengthen the monitoring of the IDD program.

Consensus and dialogue amongst all stakeholders has been long recognized as the corner stone for success of public health programs albeit rarely practiced. A top down approach of planning and implementation of programs may work during the initial stages of public health programs. However as the programs mature and key stakeholders become more sensitized, the identification

and formation of distinct interest groups is inevitable. The “one size fits all” approach may no longer work as programs mature. It becomes imperative that a mechanism to generate dialogues amongst varied perspectives of stakeholders is established. The success story of NIDDCP in India and of the national coalition can be used as a successful replication model for other micronutrient, nutrition and public health programs in India. The lessons learnt from the program should be disseminated to the wider audience.

One approach to achieve consensus can be the innovative “Future Search” conference methodology which has been successfully adopted for USI and IDD and used in South-east Asia region in the past. Future search methodology involves a planning meeting that helps people transform their capability for action very quickly.¹² The meeting is task-focused. The approach involves five creative and intensive tasks spread over three days; 1) A review and analysis of the past IDD elimination, 2) The construction of a composite picture of everything that is happening in the present, that is external, and that will have an impact on the future regarding IDD, 3) the development of one or more future scenarios for the elimination of IDD five to twenty years into the future, 4) the discovery of common ground amongst the scenarios, 5) the construction of action plans for both the short and long term for sustaining the elimination of IDD.

The “mission approach” with greater coordination amongst all stakeholders of IDD control has to be adopted by the government at the highest political level, and should have clearly defined objectives and strategies. The plan of action has to be executed within a defined time-frame by a committed team. Fast-track procedures and collective action by an inter-sectoral effort are integral components of this approach. Close monitoring and transparent evaluation should be developed in line with the goal, objectives and strategies of the “mission ap-

proach". With a "mission" approach and allocation of optimal resources India can achieve and should achieve USI by 2015, an apt culmination of a decade of existence of the national coalition.

In conclusion: the National coalition for Sustained Optimal Iodine intake (NSOI) has been instrumental in ensuring greater coordination and synergy amongst IDD and USI stakeholders in India. The national coalition will complete ten years of its existence in year 2015. The current adequately iodised salt coverage in India is 71% with the USI target of 90% being imminently within reach. What is required now is a "mission approach" striving for a final push through greater coordination amongst all stakeholders of IDD control efforts in India. Achieving USI in India by 2015 will not only meet the timeline set by the Millennium Development Goal but will also be a fitting culmination of a decade of existence of the national coalition.

ACKNOWLEDGEMENT

We would like to acknowledge the support provided by all the partners of the national coalition for implementation of activities of the coalition, in particular the support provided by Unicef, the Global Alliance for Improved Nutrition (GAIN), the Micronutrient Initiative (MI) and the International Council for Control of Iodine Deficiency Disorders (ICCIDD) for the secretariat of the National coalition for Sustained Optimal Iodine intake (NSOI), India.

AUTHORS DISCLOSURES

Kapil Yadav, MG Karmarkar and Chandrakant S Pandav are affiliated to the International Council of Iodine Deficiency Disorders. Jee Hyun Rah and Victor Aguayo are affiliated to Unicef and Arijit Chakrabarty and Rajan Sankar are affiliated to GAIN. The secretariat of the National Coalition for Sustained Optimal Iodine intake (NSOI), India is supported by funding from Unicef, the Global Alliance for Improved Nutrition (GAIN), the Micronutrient Initiative (MI) and the International Council for Control of Iodine Deficiency Disorders (ICCIDD).

REFERENCES

1. World Health Organisation (WHO). The World Health report: Reducing risks, promoting healthy life. WHO; 2002. pp 9. [cited 2013/7/15]; Available from: http://www.who.intwhr/2002/en/whr02_en.pdf?ua=1

2. World Health Organisation (WHO). Prevention and Control of Iodine Deficiency Disorders, Report to 43rd World Health Assembly, Geneva WHA43.2. 1990. pp 1. [cited 2013/7/15]; Available from: http://www.who.int/nutrition/topics/WHA43.2_idd_en.pdf?ua=1
3. WHO/Unicef/ICCIDD. Indicators for assessing iodine deficiency disorders and their control through salt iodization. Geneva; World Health Organization: 1994. pp 1-2.
4. ICCIDD. Partnership to end hidden hunger: Collaboration of stakeholders in sustaining the elimination of iodine deficiency disorders. Dhaka, Bangladesh: ICCIDD; 1995.
5. Planning Commission. Concept note: India Backbone Implementation Network. Government of India. March 2013.
6. Department of Health. Act 47. Part IV Directive Principles of State Policy. New Delhi: Ministry of Health and Family Welfare, Government of India; 1947.
7. Pandav CS, Yadav K, Moorthy D, Sankar R, Anand K, Karmarkar MG et al. National Health Programme Series 5: National Iodine Deficiency Disorders Control Programme. Delhi: National Institute of Health and Family Welfare; 2010. pp 23-4.
8. National Rural Health Mission IDD & Nutrition Cell. Revised Policy Guidelines On National Iodine Deficiency Disorders Control Programme. New Delhi: Directorate General of Health Services Ministry of Health & Family Welfare, Government of India; 2006. [cited 2013/7/15]; Available from: http://www.whoindia.org/LinkFiles/Nutrition_Revised_Policy_Guidelines_On_NIDDCP.pdf
9. UNICEF. Coverage Evaluation Survey 2009, All India Report. New Delhi: Ministry of Health and Family Welfare, Government of India; 2010. [cited 2013/7/1]; Available from: <http://www.unicef.org/india/health.html>.
10. Salt commissioner of India. Annual Report 2011-2012. New Delhi: Salt Department, Ministry of Commerce and Industry, Government of India; 2012.
11. World Health Organisation/ United Nations Childrens Fund/ International Council for Control of Iodine Deficiency Disorders. Assessment of iodine deficiency disorders and monitoring their elimination: A guide for programme managers. 3rd Edition. Geneva: WHO; 2007. pp 20.
12. Weisbord, Marvin Ross, Marvin Weisbord, and Sandra Janoff. Future search: An action guide to finding common ground in organizations and communities. San Francisco: Berrett-Koehler Publishers; 2000.

Review Article

The National Coalition for Sustained Optimal Iodine intake (NSOI): a case study of a successful experience from India

Kapil Yadav MBBS, MD, Arijit Chakrabarty MBBS, Jee Hyun Rah MSc, PhD, Rakesh Kumar MBBS, MD, Victor Aguayo PhD, Mohammad Anas Ansari MSc, Rajan Sankar MBBS, MD, Madhu Ganesh Karmarkar PhD, Chandrakant S Pandav MBBS, MSc, MD

National coalition for Sustained Optimal Iodine intake (NSOI), India

永續最適碘攝取量全國聯盟(NSOI)：一個印度成功經驗的個案研究

碘缺乏失調(IDD)是全球構成智力障礙最重要的單一可預防因素。全面食鹽加碘(USI) 各個利害關係人，世界衛生組織/聯合國兒童基金會/ICCIDD，認知到行動協調以及共同合作的重要性。他們已經規劃一個國家級多部門聯盟，當作國家永續消弭 IDD 十項必要的指標之一。在民主及多元的國家如印度，協調各個碘缺乏失調/全面食鹽加碘利害關係者的挑戰更大。本文，我們呈現印度全國聯盟組成，及共同推動全面食鹽加碘貢獻的成功經驗。全國聯盟在印度的行動分成三個階段；1)第一階段 - 2006 至 2009 年 - 創始；2)第二階段 - 2009 年至 2012 年 - 鞏固；3)第三階段 - 2013 年之後 - 擴展。永續最適碘攝取(NSOI)全國聯盟已確保印度 IDD 和全面食鹽加碘的利害關係者有更多的協調及合作，對目前 71%的家戶加碘鹽涵蓋率負部分的責任。全國聯盟最重要的貢獻為扮演高層級的宣傳管道，並提供給所有聯盟夥伴作例行對話的平台。隨著任務的推動及最適當的資源配置，印度應可以在全國聯盟成立十年之 2015 年前，達到全面食鹽加碘的目標。

關鍵字：全面性食鹽加碘、碘缺乏失調、多部門、全國聯盟