January 2018

INTEGRATING PROVEN MATERNAL NUTRITION INTERVENTIONS INTO ANTENATAL CARE PROGRAMS:

How We Can Optimize Strengths and Avoid Missed Opportunities in India

Photo credit: Ravi S Sahani/Alive & Thrive

MATERNAL NUTRITION IS ONE OF OUR GREATEST OPPORTUNITIES TO IMPROVE HEALTH ACROSS GENERATIONS

Undernutrition, including foetal growth restriction (FGR), suboptimal breastfeeding, stunting, wasting, and deficiencies of vitamin A and zinc, cause 45% of child deaths worldwide, resulting in 3.1 million deaths annually (Lancet 2013). Achieving optimal maternal nutrition and infant and young child feeding (IYCF) behaviors is recognized as the most effective set of interventions to reduce undernutrition across generations—and ultimately to reduce maternal and child mortality and disease.[1]

Optimal maternal nutrition can reduce maternal mortality and disability due to anaemia and hypertension, while ensuring an adequate level of nutrients are present in breastmilk. Haemorrhage, which is the leading cause of maternal mortality and contributes to 38%[2] of all maternal deaths in India, is greatly exacerbated by underlying anaemia in pregnant women. As per the Lancet Series on Maternal and Child Undernutrition in 2008, iron deficiency anaemia is responsible for 18% maternal mortality.

1 Lancet, 2013
2 Registration General of India Maternal Mortality Ratio Bulletin 2007-09

Maternal nutrition is not only critical to reducing mortality and disability, but is the foundation for a child's growth and development. An analysis of risk factors for childhood stunting found that FGR, which is defined as being small for gestational age (SGA), is the leading risk for stunting worldwide; 10.8 million cases of stunting (out of 44.1 million) were attributable to it.[3] The prevalence of low birth weight (LBW) is higher in Asia than elsewhere, mainly because of maternal undernutrition prior to and during pregnancy.[4] Pre-pregnancy weight is a strong predictor for LBW, as highlighted in the 2008 Lancet Series. Major determinants for LBW in middle- and low- income countries include poor maternal nutritional status (low BMI) at conception, inadequate gestational weight gain due to poor dietary intake, and short maternal stature due to a mother's own childhood undernutrition.[5] Every year, six million SGA births worldwide are associated with maternal short stature.[6]

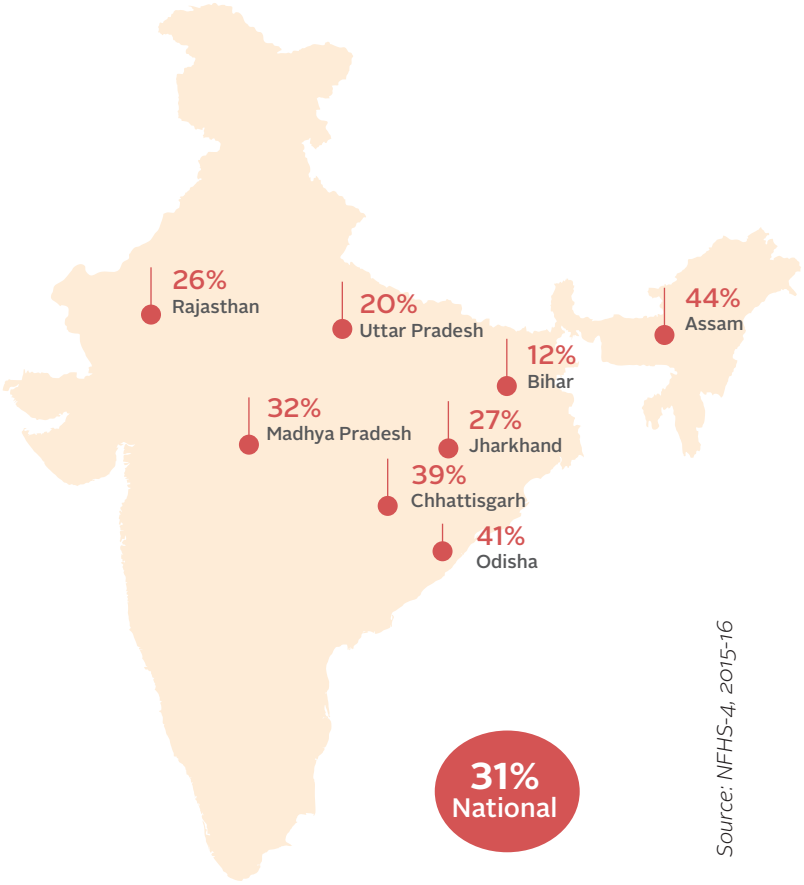
50% PREGNANT WOMEN ARE ANAEMIC

3 PLOS Medicine DOI:10.1371/journal.pmed.1002164 November 1, 2016
4 Indian J Med Research, 2009
5 De Onis M, et al, European Journal of Clinical Nutrition, 1998
6 Kozuki et al; J Nutr 2015; Christian et al; AJE 2013

The latest World Health Organization (WHO) antenatal care (ANC) guidelines highlight 14 nutrition interventions that are key to ensuring a healthy pregnancy, with a focus on recommendations for dietary interventions such as counselling for healthy eating, daily oral iron and folic acid (IFA) supplements with 30-60 mg elemental iron and 400 mg folic acid, and calcium (Ca) supplements. While India has a highly favourable policy environment, with commitments to improving the nutrition and health status of children and women, 50% of pregnant women and 53% of all women aged 15-49 years are anaemic.[5] In addition, 22.9% of women and 45% of adolescent girls are underweight.[6]

Ultimately, we must address maternal nutrition to prevent undernutrition in infants. Interventions such as IFA and Ca supplementations, as well as improving sub-optimal diets, address the two leading causes of maternal deaths in India and around the world: post-partum haemorrhage and hypertensive disorders. Yet coverage of these interventions remains low and largely neglected within ANC services. As per NFHS-4 data, only 31% of Indian women consume IFA tablets (Figure 1), while 89% receive tetanus toxoid immunization during pregnancy. This reveals a critical missed opportunity for pregnant women.

Figure. 1: Percent of pregnant women who consumed IFA for 100 days or more in high burden states in India (NFHS-4, 2015-16)



Source: NFHS-4, 2015-16

We know what works—and we know how to achieve it. Given the extensive and growing reach of Maternal Newborn and Child Health (MNCH) programmes, it is critical that quality maternal health care emphasizes the integration of proven maternal nutrition interventions. This brief describes why we maternal nutrition interventions should be integrated into maternal health service delivery platforms such as ANC services, identifies missed opportunities in India's programmes, and presents options to bridge the nutrition gap in India.

We Know What Works: Global evidence on integrating proven maternal nutrition interventions within MNCH platforms

Alive & Thrive (A&T) is a global initiative that aims to save lives, prevent illness, and ensure healthy growth by promoting optimal maternal, infant, and young child nutrition. During its first five years (2009-2014), A&T demonstrated that innovative approaches to improving nutrition could be delivered at scale in multiple contexts: breastfeeding rates tripled in Viet Nam and increased to over 80% in both Bangladesh and Ethiopia.

In 2016, A&T tested the feasibility of integrating a package of maternal nutrition interventions in a large-scale MNCH programme in Bangladesh. The maternal nutrition intervention package included:

- Home visits by frontline workers (FLWs) for counselling and demonstrations on diet diversity and quantity.
- Free distribution of IFA tablets and Ca supplements (as per the Government of Bangladesh's policy).
- Community mobilization through screening of videos to raise awareness, and special husbands' forums to ensure their commitment to providing adequate types and amounts of food.
- Measurement and counselling on weight gain during ANC visits.

5 National Family Health Survey (NFHS)-4, 2015-16
6 Rapid Survey on Children (RSOC), 2013-14

A feasibility study, conducted by IFPRI, demonstrated that when maternal nutrition interventions are integrated within a MNCH programme, rapid and large-scale increases in maternal nutrition practices are possible. In Bangladesh, the MNCH programme with maternal nutrition interventions had significant impacts on both the coverage and delivery of maternal nutrition services (ANC visits, delivery of key messages) and on the uptake of key behaviours (taking IFA and Ca supplements, dietary diversity, and quantity and weight monitoring).

Figure. 2 Impact on IFA & Calcium supplements consumption in Bangladesh, (IFPRI 2016)

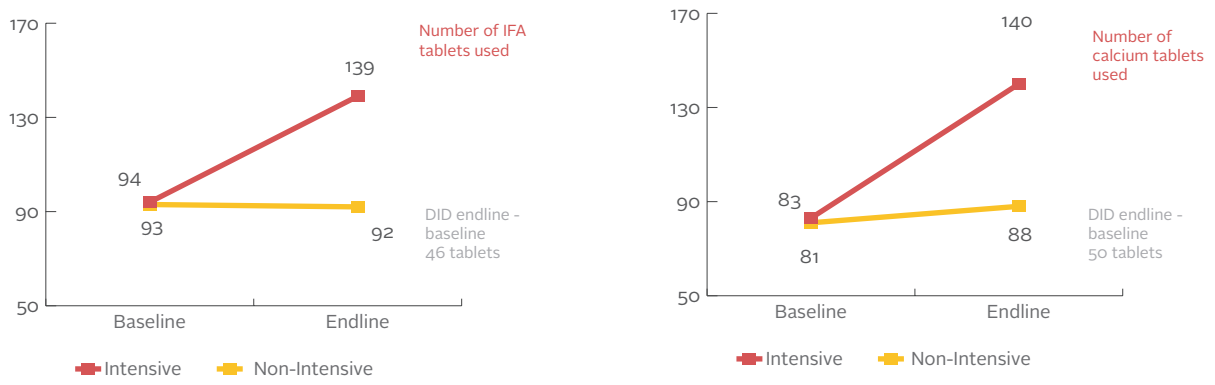
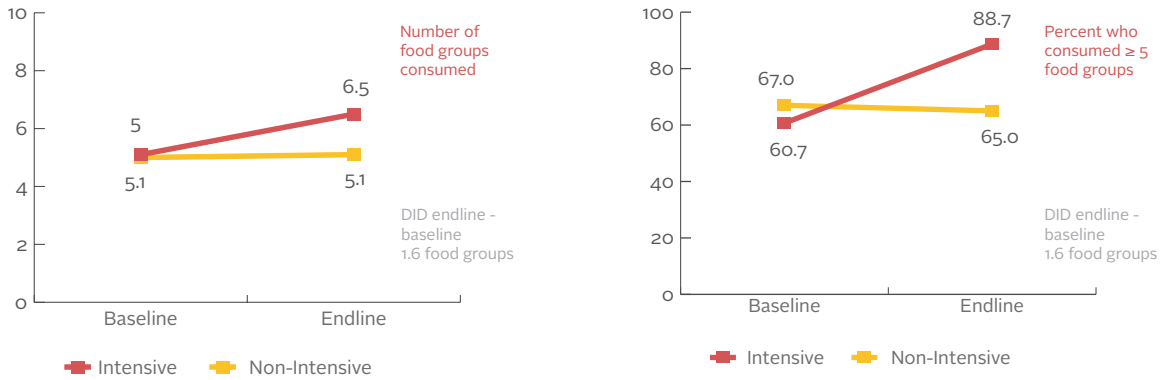


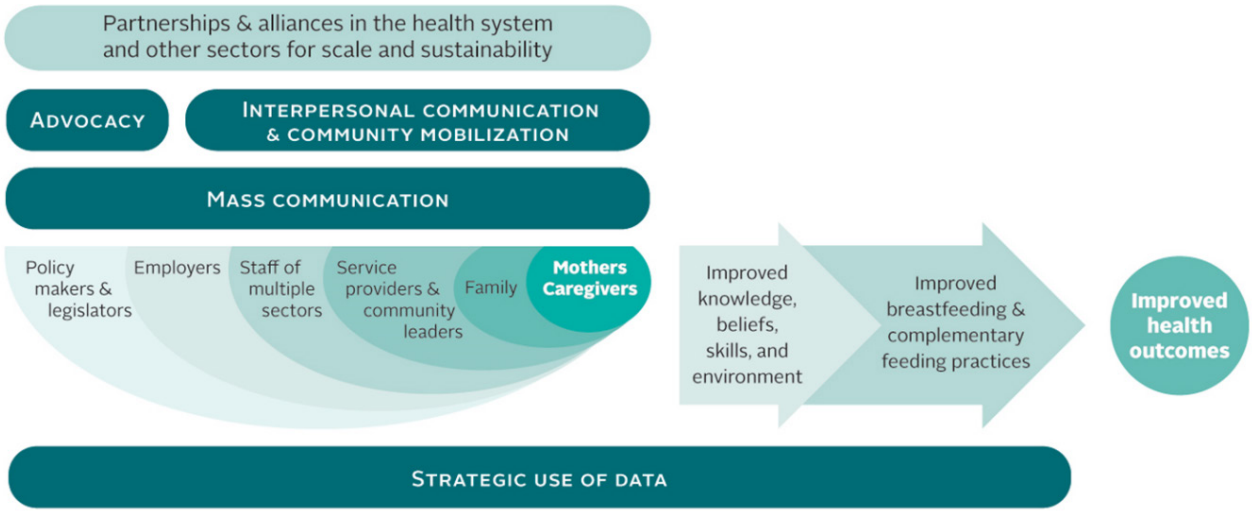
Figure. 3 Significant improvements in maternal diet diversity in Bangladesh, (IFPRI



Efforts considered the importance of working with family members (husbands, mothers-in-laws) as key influencers of a mother's nutrition practices. Interpersonal contact with pregnant women and their husbands was the most compelling component. Frequent contact through frontline health workers and high-quality of contact had the most impact, while the other activities were supportive.

The framework used to achieve these successes in Bangladesh included four operational components:

- *Policy advocacy* with stakeholders at national, district, and sub-district levels to raise the priority of maternal nutrition in MNCH services and at the community level, and build a harmonized programme across stakeholders.
- *Interpersonal communication and community mobilization* to deliver the package of maternal nutrition interventions; improve awareness, confidence, and skills of pregnant women; engage family members; and generate demand for improved maternal nutrition.
- *Mass communication* to reinforce messages for mothers and FLWs, and to involve families and social influencers through public awareness events. This included community engagement activities that included videos, Q&A, quizzes, and popular theatre performances.
- *Strategic use of data* to track the progress of intervention delivery and impact on coverage and practices; develop and test appropriate behaviour change strategies and communication materials; and generate evidence by testing innovations for informed decision-making.



We Know How to Do It: Opportunities to address missing links in maternal health and nutrition in India

There is a positive shift toward improving maternal nutrition in India, guided by a growing understanding of the impact of healthy pregnancies and optimal breastfeeding on maternal and infant mortality, morbidity and chronic illness in adult life. To support continued progress, several evidence-based policies and programmes for pregnant women are underway such as a revised strategy for IFA supplementation, Ca supplementation, and deworming.

Many recent initiatives such as Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) and Janani Suraksha Yojna (JSY) are providing critical focus on improving quality and access to maternal health services. The Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A) programme provides a comprehensive framework to improve women and children's health and prioritizes the implementation of proven Maternal Infant and Young Child Nutrition (MIYCN) interventions. The most critical window of opportunity for impactful intervention are the first 1,000 days of a child's life. Interventions during this period of time support a broader lifecycle approach to nutrition. Food fortification has emerged as another area of critical attention by the Ministry of Women and Child Development to address micronutrient deficiencies. However, translating these policies into action, especially in high burden states, is the call of the hour.

Given this momentum, the following recommendations outline a four-step approach to strengthening the work underway by integrating maternal nutrition within ANC services in India and ensuring rapid scale-up of proven interventions.

1 Leverage existing service delivery platforms to deliver maternal nutrition interventions at scale

The reach of MNCH services has expanded tremendously over the last decade and has the potential to deliver proven maternal nutrition services to women at scale:

- The MNCH system has been successful in delivering several health-focused interventions (e.g. tetanus toxoid injections for 89% of pregnant women and institutional delivery care for 79% women (NFHS-4, 2015-16)). The system can also deliver a small package of maternal nutrition interventions to maximize the health outcomes for mothers and newborns and bridge the access gap that is contributing to slow progress in maternal health.
- Emerging Self Help Group (SHG) platforms also have the potential to promote women's and children's nutrition in the community. The convergence of various national health programmes and platforms will help leverage these opportunities to expand coverage and uptake of proven maternal nutrition services.

TETANUS TOXOID INJECTIONS TO **89%** PREGNANT WOMEN & INSTITUTIONAL DELIVERY CARE FOR **79%** WOMEN

SUGGESTED NEXT STEPS TO RAISE THE PRIORITY FOR MATERNAL NUTRITION WITHIN MNCH PLATFORMS

- Conduct field-based implementation research to demonstrate how maternal nutrition can be achieved rapidly and at scale. The evidence generated will inform programming at scale, building on existing strengths of health systems in different states.
- Based on findings from implementation research, develop a plan to build capacity of existing platforms to deliver key nutrition interventions. This may include establishing a coordination mechanism to ensure platforms are implementing interventions consistently and with quality.

Given the potential for nutrition programme coverage, our responsibility is to ensure that these platforms are making effective use of known nutrition interventions through more effective job allocation, training, supervision, and monitoring.

2 Improve the frequency and quality of contacts by FLWs

The A&T Bangladesh maternal nutrition feasibility study shows that frequent and quality interpersonal contacts through home visits to pregnant women was one of the key enabling factors for changing behaviours. During home visits, FLWs in Bangladesh engaged with both mothers and family members—especially the mothers-in-law and husbands. They counselled and coached them to adopt recommended practices and demonstrated how to ensure a diverse diet in sufficient quantity, using foods that were available in the family kitchen.

Recent WHO guidelines recommend that a pregnant woman should be contacted eight times during pregnancy. While the number and type of contacts with pregnant women is important, the content and quality of contact is of even greater concern. We must ensure clear and consistent messaging with all audiences, including pregnant women, mothers, family members, and the community. Examples include:

- Address persistent misconceptions related to iron consumption (e.g. it will make the baby large and lead to birthing problems). Frontline workers are often unable to address this with confidence, and their inability to support pregnant women with correct information on how to manage IFA side effects often leads to non-compliance. For example, pregnant women and family members are rarely informed that IFA and Ca supplementation can help reduce life-threatening complications in pregnant mothers.
- Build awareness about the specific benefits of adding different food groups in the diet—not just food quantity—to achieve greater diversity in the diet of pregnant mothers.

Additional considerations for improving the quality of contacts is supporting FLWs with job aids and other tools—like weight tracking charts—that help them conduct the counselling session and serve as items that can be left behind with families. Expanding and strengthening community mobilization activities—including sensitization sessions with local opinion leaders and public forums and discussions—is also key to driving broader public awareness and behaviour change.

SUGGESTED NEXT STEPS FOR IMPROVING CONTACT POINTS

- Strengthen quality of home visits by FLWs and other routine contacts with pregnant women and their families through practical demonstrations and clear, focused messaging.
- Focus on priority behaviours during existing health contacts through home visits, outreach (e.g. Village Health and Nutrition Days) and facility-based sessions. Counselling on recommended practices must be timely and targeted with personalized messages based on their situation to build their confidence to try a priority behaviour.
- Simple tools (e.g. job aids, handouts, family calendars) to ensure that the messages are consistent from all cadres of FLWs at each stage of pregnancy, and problem solving information for common difficulties should be made available.
- FLWs should also help in addressing any household-level barriers to recommended practices, and work with the whole family (mothers-in-law and husbands) to undertake specific actions to support the pregnant mother.

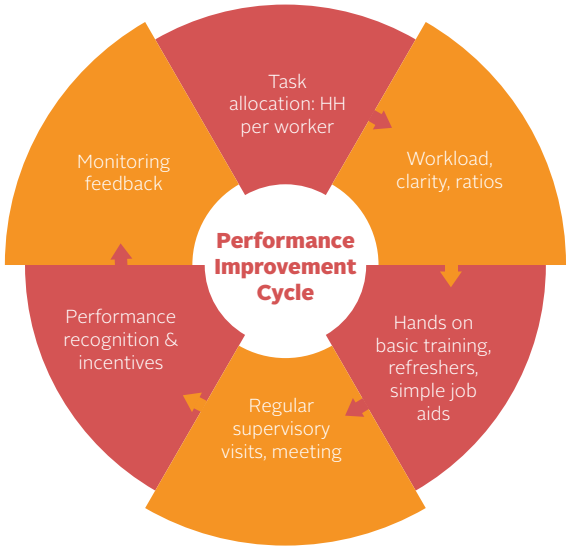
3 Focus on continuous performance improvement of FLWs

Evidence has already demonstrated key components of improving the performance of FLWs. They include:

- Clearly defining roles and responsibilities of different cadres of FLWs
- Ensuring equitable distribution of work, feasible workload and ratios of FLW assigned to a certain number of households
- Hands-on training and mentoring along with supportive supervision
- Making appropriate job aids available
- Performance-based recognition and incentives

In particular, clarity about the role and job description of each FLW is essential to ensuring that maternal nutrition counselling services do not fall through the cracks while the FLW is entrusted with numerous competing tasks and responsibilities.

Figure. 6. Performance improvement cycle for FLWs (A&T, Bangladesh)



SUGGESTED NEXT STEPS FOR ENHANCED CAPACITY BUILDING ON MATERNAL NUTRITION AND IMPROVING FLW PERFORMANCE

- In addition to training, ensuring supportive supervision, mentoring, and action-oriented feedback by supervisory cadre can improve the performance of FLWs and ensure they are counselling in a way that influences behaviour change. This includes undertaking regular supportive supervisory visits using a structured checklist, analysing the findings and sharing feedback to take corrective actions and help FLWs strengthen their counselling abilities.
- Improve the capacity of the supervisory cadre in the health and Integrated Child Development Services (ICDS) departments and provide them with tools (like supervisory checklists) to undertake this task effectively and on an on-going basis. The focus needs to be on continuous monitoring of quality and content of home visits—not just on the number of visits undertaken.
- Expand the role of accredited social health activists (ASHAs) in maternal nutrition service delivery. Incentivizing their performance is an area for future deliberation at the national programme level.

4 Intensify programme monitoring

It is evident that what is not reviewed and monitored will not work on the ground. For example, the phenomenal success of polio eradication and routine immunization strengthening programmes such as 'Muskaan' are attributable to robust review systems set in place for continuous monitoring of service delivery, as well as facilitating corrective actions based on data.

SUGGESTED NEXT STEPS FOR STRENGTHENING ACCOUNTABILITY

- Strengthen existing recording and reporting systems to improve data quality and include key maternal nutrition indicators in routine health management information systems.
- Ongoing tracking and monitoring of maternal nutrition interventions, including counselling services on the ground and reviewing data on a regular basis, will facilitate decision-making and corrective actions.
- Identification of key maternal nutrition indicators by health leadership at the national, state and district levels, followed by monitoring and tracking of those indicators to drive accountability at all levels.

We can act now to protect the health of current and future generations

With 30 million women becoming pregnant and 27 million babies being born each year in India, greater attention to maternal nutrition interventions in MNCH programmes is a critical area of focus.

The Ministry of Health & Family Welfare has tremendous potential to enact swift and attainable changes within the health system to strengthen delivery of proven maternal nutrition interventions and ensure gaps are adequately addressed. By developing an operational plan to integrate and strengthen the delivery of maternal nutrition interventions within ANC platforms, we can ensure that that our maternal, new-born and child health programmes reach their full potential to save and improve lives.

Acknowledgements

This note is an outcome of a sharing and learning meeting organised by A&T India, to learn from the implementation of A&T's approach in Bangladesh for improving maternal nutrition practices and draw lessons relevant for India. We deeply appreciate the insights shared by other A&T teams, support and guidance from senior officials from Child Health and Maternal Health Division, Ministry of Health and Family Welfare (MoHFW), Government of India and participants from the following agencies and organisations who contributed to the discussions during the meet:

1. Maternal Health Division, MoHFW, GoI
2. Child Health Division, MoHFW, GoI
3. World Health Organization (WHO) India Country Office
4. UNICEF
5. Bill and Melinda Gates Foundation (BMFG)
6. Save the Children
7. Indian Council of Medical Research (ICMR)
8. National Health Systems Resource Center (NHSRC)
9. Public Health Foundation of India (PHFI)
10. International Food & Policy Research Institute (IFPRI)
11. Project Concern International (PCI)
12. IPE Global
13. CARE
14. National Neonatology Forum (NNF)
15. Nutrition International (NI)
16. Coalition for Food and Nutrition Security

Photo credit: Ravi S Sahani/Alive & Thrive

alive&thrive
nourish. nurture. grow.

Alive and Thrive is funded by the Bill & Melinda Gates Foundation and the government of Canada and Ireland and managed by FHI 360.

For further information visit www.aliveandthrive.org.