Public Health Interventions, Policies and Implementation Priorities for Improving Nutrition of Adolescent Girls in Bangladesh

A Stakeholder Consultative Meeting

Mahamudul Hasan
Md. Golam Rasul
Daluwar Hossain
Subhasish Das
Muttaquina Hossain
Tahmeed Ahmed

December, 2018

USAID
FROM THE AMERICAN PEOPLE

icddr,b

Disclaimer

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID) under cooperative agreement no. AID-388-A-17-00006. The views expressed herein are responsibility of the RDM Activity and do not necessarily reflect the views of the U.S. Government or USAID or icddr,b, the implementing agency. icddr,b is also grateful to the Governments of Bangladesh, Canada, Sweden and the UK for providing unrestricted/institutional support.

Key Words

adolescent girls, malnutrition, micronutrient deficiency, nutrition policy, interventions, programs

Contents

ACRONYMS

ACC/SCN	Administrative Committee on Coordination/Subcommittee on Nutrition
ASRH	Adolescent Sexual and Reproductive Health
BAPSA	Association for Prevention of Septic Abortion, Bangladesh
BBF	Breast Feeding Foundation
BCC	Behavior Change Communication
BDHS	Bangladesh Demographic and Health Survey
BMI	Body Mass Index
BMIZ	Body Mass Index Z-score
BNNC	Bangladesh National Nutrition Council
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CHCP	Community Health Care Provider
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
ESP	Essential Service Package
FWA	Family Welfare Assistant
FWC	Family Welfare Center
FWV	Family Welfare Visitor
FY	Fiscal Year
GAIN	Global Alliance on Improved Nutrition
HA	Health Assistant
HAZ	Height-for-Age z score
HKI	Helen Keller International
HPNSP	Health, Population and Nutrition Sector Program
ICN2	The Second International Conference on Nutrition
ICPD	International Conference on Population and Development

ICT	Information and Communication Technology
IEC	Information, Education, and Communication
IFA	Iron-Folic Acid
IPHN	Institute of Public Health Nutrition
LMIC	Low and Middle Income Countries
MAL-ED	Malnutrition and Enteric Disease
MCH	Maternal and Child Health
MMS	Multiple Micronutrient Supplementation
MOHFW	Ministry of Health and Family Welfare
MOWCA	Ministry of Woman and Children Affairs
NCSD	Nutrition and Clinical Services Division
NGO	Non-Governmental Organization
NHSDP	NGO Health Services Delivery Project
NI	Nutrition International
NNS	National Nutrition Services
NPAN	National Plan of Action for Nutrition
OP	Operation Plan
RDM	Research for Decision Makers
RMNCAH	Reproductive, Maternal, Neonatal, Child and Adolescent Health
SACMO	Sub Assistant Community Medical Officer
SBCC	Social and Behavior Change Communication
SRH	Sexual and Reproductive Health
STD	Sexually Transmitted Diseases
TAHN	Training and Assistance for Health and Nutrition (TAHN) Foundation
UH&FPO	Upazila Health & Family Planning Officer
UHC	Upazila Health Complex

UNCRC	United Nations Convention on the Rights of the Child
UNFPA	United Nations Population Fund
UNICEF	United Nations International Children's Emergency Fund
UPHCSDP	Urban Primary Health Care Services Delivery Project
USAID	United States Agency for International Development
WFP	World Food Program
WHO	World Health Organization

ACKNOWLEDGMENTS

This stakeholder consultative meeting was part of an activity under USAID's Research for Decision Makers (RDM) Activity. icddr,b acknowledges with gratitude the commitment of United States Agency for International Development (USAID) to its research efforts. We also acknowledge the support of Maternal and Child Health Division (MCHD) of icddr,b, and Institute of Public Health Nutrition (IPHN). Our sincerest gratitude is to all stakeholders who attended this consultative meeting.

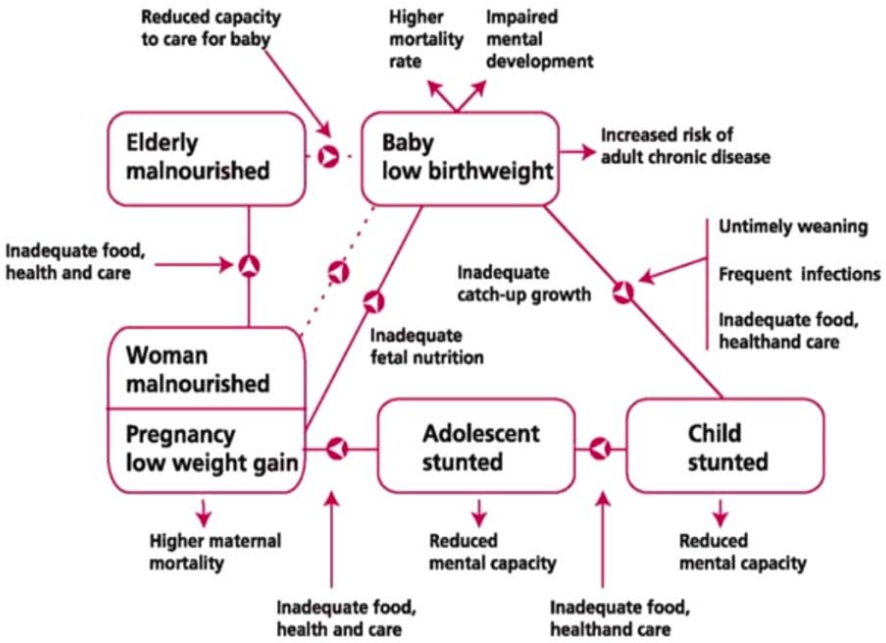
EXECUTIVE SUMMARY

Bangladesh has made considerable progress in reducing child malnutrition, but the prevalence of malnutrition among adolescent girls is still at unacceptable levels. One-third of adolescent girls (31%) aged between 15-19 years are undernourished (BMI<18.5) in our country while 11% of them are moderate to severely thin (BMI <17.0). Micronutrient deficiency is also high in the adolescent age group, as the usual diet consumed in our country typically deficits micronutrients. This high prevalence of malnutrition among adolescent girls directly affects their health and also has an impact on their future pregnancy outcomes. Although the importance of the nutritional status of adolescent girls is often talked about, not much attention has been paid to nutrition program targeting adolescent girls in Bangladesh.

This activity aimed to undertake a stakeholder consultative meeting with representatives from various government and non-government organizations who are currently working on adolescent nutrition. The meeting was aimed for identifying which interventions are working well for improving the nutrition of adolescent girls in the country and could be taken for further scaling up. Potential barriers for utilization of these interventions were also planned for discussion. As preparatory work for the meeting, we reviewed adolescent nutrition-related policies in Bangladesh and also reviewed two recent purposively selected reports; one by the Evidence Project/Population Council and another by Global Alliance on Improved Nutrition (GAIN). To gain an understanding of the adolescent nutrition service delivery, we also made a small-scale exploration of selected urban and rural health care settings of Dhaka and talked with health care service providers. Based on this evidence, we organized a stakeholder consultative meeting on December 17, 2018, at Hospital Conference Room of icddr,b. The event brought together 30 participants from the Institute of Public Health Nutrition (IPHN), Directorate General of Family Planning (DGFP), Nutrition International (NI), Care International and icddr,b. Following the welcome notes and introduction, a presentation was done on the current situation of nutritional status of adolescent girls in Bangladesh, brief review of policies on adolescent nutrition, and summary of findings from reviewing two mentioned reports and study team's experience from the small-scale exploration of adolescent nutrition service delivery in selected health care settings of Dhaka. Through interactive discussions after the presentation, all participants came to a consensus that there are plenty of issues needed to be addressed to improve adolescent girls' nutrition in Bangladesh and well-coordinated and collaborative efforts are needed to improve the situation. Important suggestions made during the meeting include, (1) Existing guidelines for adolescent health services and nutrition programs should be revised to include adolescent boys, (2) All types of nutrition interventions should identify and employ innovative ideas to reach out the adolescents who are out of school or at workplaces, and (3) programs should focus more on changing adolescent's behavior towards nutrition.

INTRODUCTION

Nutrition is a basic human need and prerequisite for a healthy life. Adequate nutrition is indispensable in every phase of life, especially during adolescent age period, as it is the time of rapid physical growth, second only to the first year after birth (1). During adolescence, more than 20% of adult height and up to 50% of adult weight and skeletal mass is reached (2). Poor nutrition during this age period affects adult body size, which results in shortness or thinness (3). Over nutrition in adolescents, on the other hand, potentiates the risk of developing chronic diseases in later part of life (4). Optimum nutrition puts an added importance to the health of adolescent girls as it is relevant to maternal nutrition. Pregnancies in malnourished adolescents have a high risk of complications and mortality in mothers (5) and children and poor birth outcomes (6, 7). Furthermore, pregnancy in adolescence will slow and stunt a girl's growth (8), reinforcing the 'intergenerational cycle' of malnutrition. A recent publication from the Malnutrition and Enteric Disease (MAL-ED) study on a multidisciplinary, prospective, longitudinal birth cohort to assess the growth and development of children living in low and middle income countries (LMICs) including Bangladesh, showed that short maternal height has a significant association with shortfalls of linear growth in their offspring. This finding points towards the importance of intergenerational effects of linear growth failure in LMICs (9). Intergenerational improvements in height are achievable when adolescent girls are given adequate healthcare and nutrition.



Source: ACC/SCN (2000) Fourth Report on the World Nutrition Situation

Globally, there are 1.2 billion adolescents (age 10 to 19 years) with a vast majority (90%) living in low- or middle-income countries (10). In some countries, nearly half of all adolescents are stunted (10), which means their physical and cognitive development has been restricted because of inadequate nutrition (1). In

India, 32% of adolescents are stunted (11) (HAZ<-2) and 11% of adolescent girls are thin based on BMI-Z score (BMIZ<-2) (10). In Nepal, 47% of adolescents are stunted and 36% are dealing with thinness (11). Overweight or obesity (BMIZ>2) is also highly prevalent in many regions, for example, Latin America and the Caribbean have the highest regional prevalence of overweight in both rural and urban settings (12). For Bangladesh, the burden of adolescent malnutrition is no different to neighboring countries. There are about 27.7 million adolescents aged 10-19 years of age in Bangladesh and about 13.7 million girls, which makes up about one-fifth of the total population (13). According to, Bangladesh Demographic and Health Survey 2014 (BDHS 2011), 31% of 15-19 years aged adolescent females are undernourished (BMI<18.5) in the country (14) while 11% of them are moderate to severely thin (BMI <17.0). Nearly 13% adolescents aged 15-19 years are of short stature (height <145 cm). Micronutrient deficiency is also high in the adolescent age group as the usual diet consumed in our country typically deficits one or more micronutrients. Nearly 17% adolescents (male and female) aged 12-14 years and 49% girls aged 15-19 years are anemic (Hemoglobin (Hb) <12.0 g/dl) (15). This high prevalence of malnutrition among adolescent girls directly affects their health and also has an impact on their future pregnancy outcomes. As per BDHS 2014, thirty percent of adolescents aged 15-19 reported that they had either already given birth to their first child (24%) or were currently pregnant (6%) (16). To bring an end to this vicious cycle of inter-generational malnutrition, chronic diseases, and poverty, it is imperative to address the challenges of adolescent nutrition.

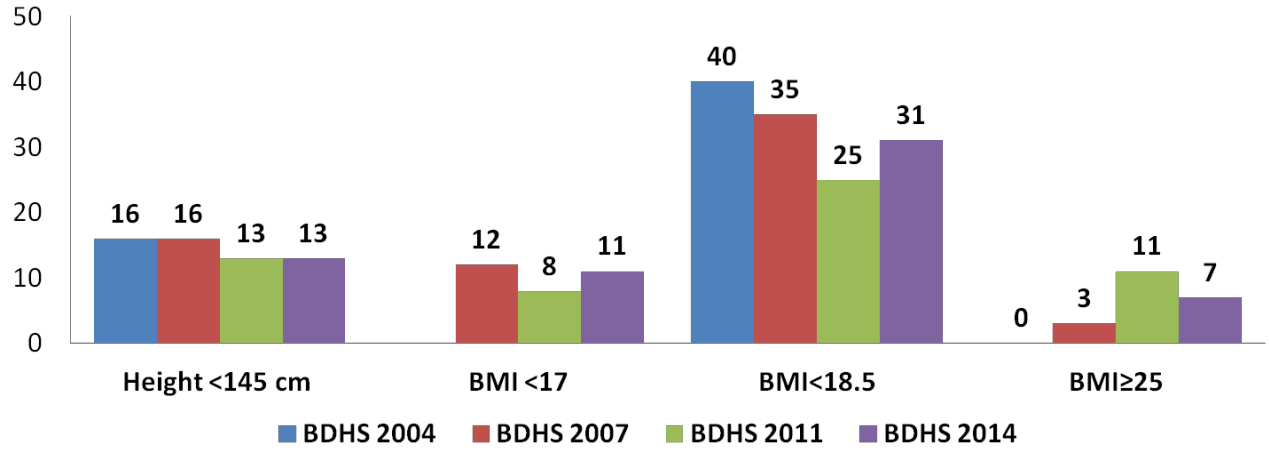


Figure1: Trends in Nutritional status of adolescent girls aged 15-19 years

Recent systematic review conducted by Zohra S. Lassi and her team on evidence-based adolescent nutrition interventions (17) has identified both nutrition specific and nutrition sensitive activities to improve adolescents and young women's nutrition. The review suggests that iron alone, Iron folic acid (IFA), zinc, and multiple micronutrient supplementations in adolescents can significantly improve serum hemoglobin concentration.

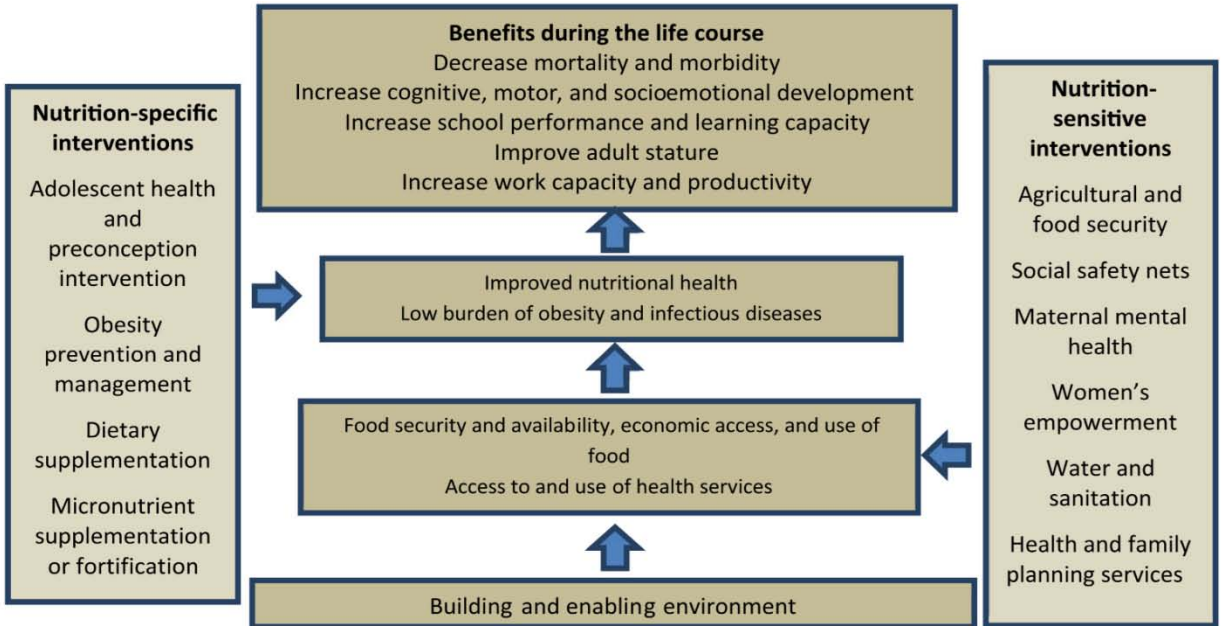


Figure 1: Framework for nutrition in adolescents and young women

The Government of Bangladesh recognizes nutrition as a public health priority and addresses nutrition in its policies and programs but their impact on nutrition of adolescent girls' health are still indecisive. So far, most of the interventions in our country have either focused on children aged 0-5 years or on pregnant women, and, to some extent on lactating women. Nutrition-related programs in Bangladesh did not pay adequate attention to the need of adolescent girls. Nevertheless, there is a lack of empirical evidence on what interventions work to alleviate adolescent nutrition status and how do those interventions affect. Information on program needs and their impact on adolescent nutrition are also sparse. This necessitated a review of interventions aimed for improving adolescent nutrition. Potential barriers for utilization of adolescent nutrition services also required further exploration.

AIM OF THIS ACTIVITY

This activity aimed to undertake a stakeholder consultative meeting with representatives from various government and non-government organizations who are currently working on adolescent nutrition. The meeting was intended to be held for identifying which interventions are working well for improving nutrition of adolescent girls in the country and could be taken for further scaling up. Discussion on potential barriers for utilization of these interventions was also planned.

ACTIVITY APPROACH

The whole activity was subdivided into following four components:

1. Review of existing policies supporting adolescent nutrition in Bangladesh;
2. Review of two recent reports (purposively selected) focusing on adolescent health and nutrition related programs in Bangladesh;
3. Small-scale exploration of adolescent nutrition service delivery in selected health care settings of Dhaka;
4. Conduct stakeholder consultative meeting to share the findings from review and field visits and to receive their suggestions on next steps.

1. Adolescent Nutrition Policies in Bangladesh

International Context:

At the international level, relevant conventions and conferences endorsed by the Government of Bangladesh highlighted the issues of adolescent girls and nutrition that include

- ✓ Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)- 1981
- ✓ United Nations Convention on the Rights of the Child (UNCRC)- 1990
- ✓ International Conference on Population and Development (ICPD) - 1994
- ✓ The Second International Conference on Nutrition (ICN2) - 2014

National Context:

The following policy documents of Government of Bangladesh endorsed the adolescent nutrition perspective.

a) **Constitution**: Bangladesh is constitutionally obliged to improve nutrition of all citizens (Article 18 (1)), including adolescents (18).

b) **Perspective plan of Bangladesh 2010-2021: Making vision 2021 a reality**: The perspective plan of Bangladesh 2010-2021 (19) mentioned that gender equality at all levels of education will be ensured and all students enrolled in primary, secondary, and tertiary levels will have access to gender responsive health, nutrition, water and sanitation, socio-cultural development, greater participation in sports and ensuring a fruitful learning and living environment.

c) **7th Five Year Plan: FY2016- FY 2020: Accelerating Growth Empowering Citizens**: Seventh Five Year Plan FY 2016-FY 2020 (20) aims to ensure nutrition to children and women along with gender and adolescent friendly services together with availability of proper information for the adolescent to protect themselves from health hazards. It also aims better completion of girls at secondary schools and enrollment in higher education.

d) **National Women Development Policy 2011:** National Women Development Policy 2011 (21) visions to create a society where men and women will have equal opportunities and will enjoy all fundamental rights on an equal basis.

e) **National Health Policy 2011:** National Health Policy 2011's (22) main objectives include improvement in nutrition and ensure gender equity in health services. Its strategies include ensuring women's rights to physical and mental health in all stages of life cycle for establishing gender equity.

f) **National Population Policy 2012:** Objectives of National Population Policy 2012 (23) includes ensuring gender equity and women's empowerment, and strengthen activities to eliminate gender discrimination in family planning and maternal and child health care programs (Major strategies include adolescent welfare program).

g) **National Nutrition Policy 2015:** The National Nutrition Policy 2015 (24) identify the following strategies targeting adolescent nutrition: Strategy 6.1.2.4 mentions that ensuring availability of nutritious and safe food for growth and development of adolescent boys and girls along with stopping

child marriage with the aim of having healthy and productive future generation. Strategy 6.3 (direct nutrition intervention) includes advising adolescent girls and women at family level for improving nutrition knowledge leading to improvement of nutrition through behavior change. Strategy 6.3.7 mentions about ensuring sufficient diversified food intake of adolescent boys and girls so that their physical growth is proper to become full adult with desired height and weight. Strategy 6.4.3 (indirect nutrition intervention) emphasize on increasing female literacy rate, women empowerment, women employment opportunities and delaying pregnancy after the age of twenty years.

h) **Bangladesh Essential Service Package (ESP) 2016**: The Bangladesh Essential Service Package (ESP), revised in 2016, (25) has adolescent friendly health services to focus on counseling on issues ranging from safe sexual behavior to substance abuse, family planning information and services, nutrition, screening and management of Sexually Transmitted Infections, trafficking and mental health. Clinical service linked to adolescent health are to be provided where Medical Officer, Sub-Assistant Community Medical Officer (SACMO) or Family Welfare Visitor (FWV) operate.

i) **4th Health, Population and Nutrition Sector Program 2017-2022 (HPNSP)**:

- The Program Implementation Plan of the 4th Health, Population and Nutrition Sector Program 2017-2022 (26) endorses the 'Adolescent Reproductive Health Strategy 2006' and related 'National Plan of Action 2011-17' and recognizes that insufficient progress has been made on prevention of child marriage, early pregnancy, unsafe abortion, violence and promotion of healthy reproductive behaviors among adolescents.
- Combined action by all sectors is needed to ensure that legal, educational, social and cultural issues to be addressed.
- Information and communications technology (ICT) and social networks will be used to disseminate information and promote healthy behaviors. Mainstreaming of nutrition will be strengthened through delivery of the Ministry of Health and Family Welfare's (MOHFW) essential service package (ESP) which will provide nutrition services through RMNCAH platforms.
- The vital entry point for nutrition will be the community clinic level serving as the hub of preventive and promotional health.
- It would be important to increase awareness on the importance of adolescent nutrition to promote maternal survival as well as child survival and development. An effective behavior change communication (BCC) strategy and materials specific to nutrition services would be critical for such awareness program. This type of program could be designed and implemented as integrated component of RMNCAH program for increasing demand for adolescent nutrition services.
- Partnerships with NGOs and the private sector will be critical to expand the population coverage for health services. Working with the community clinics in rural areas would be a good way to reach higher proportion of population. However, lack of such widespread infrastructure in urban areas leads to the need of partnerships with NGOs and private sector. Such partnerships and collaborations would be critical for urban areas to address nutrition related issues with targeted emphasis on slum areas.

j) National Nutrition Service Operational Plan (2017-2022): The National Nutrition Services (NNS) has been pursuing a variety of key strategies and actions. In 2017, the operational plan (OP) of NNS (27) was approved by the government of Bangladesh. According to the OP, the mainstreamed NNS interventions should be implemented through the existing health system from January 2017 to June 2022.

Key activities:

- ✓ Awareness raising program to promote adolescent nutrition
- ✓ Development of guidelines, information, education and communication (IEC) materials, training modules, academic curriculum related to adolescent nutrition
- ✓ Micronutrient supplementation i.e. IFA
- ✓ Orientation program for teachers and students
- ✓ Establish Link with relevant authorities to include/strengthen the nutrition component in academic curriculum

k) **Second National Plan of Action for Nutrition (2016-2025):** Bangladesh National Nutrition Council (BNNC) Executive Committee, chaired by the Minister of Health and Family Welfare of Government of the People's Republic of Bangladesh has endorsed the Second National Plan of Action for Nutrition (NPAN 2), 2016-2025 in March 2017 (28). Its goal is to improve the nutritional status of all citizens and reduce all forms of malnutrition, with a focus on children, adolescent girls, pregnant women and lactating mothers.

Key strategies

- Conduct awareness raising activities
- Enforce law to prevent early marriage
- Scale up formal and non-formal nutrition education and BCC programs
- Update nutrition education modules
- Provide orientation/training on adolescent nutrition to relevant stakeholders
- Link with community support group/Girl Guides/Scouts
- Link with school health program/ Adolescent Sexual and Reproductive Health (ASRH) programs.

l) National Strategy for Adolescent Health 2017-2030: The National Strategy for Adolescent Health 2017-2030 (29) has been developed for a period of 14 years to be in line with the sustainable development goals. The strategy envisions that by 2030, all adolescents in Bangladesh will be able to enjoy a healthy life and has the goal of all adolescents attaining a healthy and productive life in a socially secure and supportive environment.

Key strategies

- ✓ Mainstream nutrition education, promotion, and hygiene education into the health care, education, and other systems
- ✓ Establish programs that promote dietary diversification, adequacy, fortified foods, and nutrition security
- ✓ Strengthen capacity of service providers to deliver effective nutrition counseling and service to all adolescents
- ✓ Provide and promote IFA, multiple micronutrient supplements (MMS), fortified foods, and de-worming at health facilities, schools, and workplaces
- ✓ Conduct community based awareness campaigns
- ✓ Promote and improve access to sports and physical activities.

2. Review of Two Recent Reports (purposively selected) Focusing on Adolescent Health and Nutrition Related Programs in Bangladesh

As part of this study, we had reviewed two recently published reports which were purposively selected to match with the aim of this study. Both reports have summarized/mapped program on adolescent health and nutrition in Bangladesh. The Evidence Project/Population Council has recently conducted a situation analysis of ASRH programs and also the interventions implemented in Bangladesh in the last decade. Activities undertaken as a part of this review include: identification of sexual reproductive health (SRH) programs in Bangladesh with a focus on adolescents, collection of relevant programmatic information, engagement of key stakeholders, analysis of selected programs, field visits to current ASRH programs, and communication (including interviews) with ASRH program managers. Recently, Global Alliance on Improved Nutrition (GAIN) has also done a landscape analysis on adolescent nutrition. This report contains recently available information on the nutrition, health and socio-economic status of Bangladeshi adolescents, means of reaching adolescents and mapping actors of different sectors with their interventions.

Nutrition Specific Programs for Adolescent Girls (According to Reviewed Reports)			
Nutrition-specific programs	**Target Group**	**Organizations/institutions**	**Geographic Area**
School health and nutrition	Primary and High school students	Government (Directorate General of Health Services-DGHS, Directorate General of Family Planning- DGFP)	National
		UNICEF, WFP	National
		Save the Children, World Vision, Plan International	Selected Districts
		BBF, Shornokishoree Network Foundation	National
Infant and Young Child Feeding/ Stunting reduction	Adolescent, pregnant and lactating women, children under 5 years	Government (DGHS, DGFP)	National
		UNICEF, WHO, WFP, UNFPA	Selected Districts
		Save the Children, World Vision, Care International, HKI	Selected Districts
		GAIN, Nutrition International, Alive and Thrive	Selected Districts
		BRAC, FHI, Jibika, BBF	Selected Districts
Anaemia reduction	Mothers and/or children under 2 years	Government (DGHS, DGFP)	National
		UNICEF, UNFPA, WHO,WFP	National
		GAIN, Nutrition International, HKI	Selected Districts
		Save the Children, World Vision, CARE International, Concern Worldwide, FHI 360, HKI	Selected Districts
		BRAC, Marie Stopes, NHSDP, BBF	Selected Districts
Food fortification	General population	Government (DGHS, DGFP) UNICEF, WHO, WFP, GAIN, Micronutrient	Selected Districts

Nutrition Specific Programs for Adolescent Girls (According to Reviewed Reports)			
Nutrition-specific programs	**Target Group**	**Organizations/institutions**	**Geographic Area**
program	including adolescent	Initiative, BRAC, Private sector- PRAN	
Awareness and behavior change in linkages with adolescent friendly health services	Adolescent boys & girls, pregnant women, lactating Women	Government (DGHS, DGFP)	National
		WHO, UNICEF, UNFPA, WFP	National
		Save the Children, CARE International, World Vision, Concern Worldwide, HKI, Plan International	Selected Districts
		GAIN, Nutrition International, Alive & Thrive	Selected Districts
		Shornokishoree Network Foundation, BBF, Training and Assistance for Health and Nutrition (TAHN) Foundation	Selected Districts
		BRAC, Marie Stopes, NHSDP BAPSA, Terre Des Homes, Aparajeo Bangladesh	Selected Districts

Summary of Findings from the Reports

- There are very few programs aiming to reduce the massive micronutrient malnutrition problems of adolescents in Bangladesh with nutrition-specific interventions.
- Nutrition-specific interventions such as food fortification or iron-folate supplementation for pregnant women, reach adolescents only as part of a larger target population.
- There are programs specifically targeting adolescents exist mainly in areas of education and SRH, but there is limited inclusion of nutrition-specific interventions within these programs.
- School based programs have been utilized at a minimal scale to target primary school children to improve their nutritional status and school enrollment. There are some ongoing interventions at secondary school level; however, the intervention package and geographical coverage are fragmental.
- There is no common data-base or inventory of adolescent nutrition programs which presents a challenge for effective coordination of program types, interventions, geographical coverage, roles and resources.
- Geographical coverage of nutrition-specific and nutrition sensitive interventions directly targeting adolescents is small scale, scattered and limited to a few districts.
- Alternative delivery channels are needed to consider an integrated approach for addressing the health, nutrition and social wellbeing of adolescent girls.

3. Experience from a Small Scale Exploration of Adolescent Nutrition Service Delivery in Selected Health Care Settings of Dhaka

We explored selected urban and rural government health care settings at Dhaka and talked with health service providers to gain an understanding of how they provide adolescent nutrition services. Following health care settings were visited;

- ✓ Urban Primary Health Care Service Delivery Project (UPHCSDP), Pallabi, Mirpur
- ✓ Upazila Health Complex (UHC), Dhamrai
- ✓ Barigaon Community Clinic (CC), Dhamrai
- ✓ Makhuliya CC, Dhamrai
- ✓ Shombhag Family Welfare Centre (FWC), Dhamrai

Urban Primary Healthcare Service Delivery Project (UPHCSDP), Mirpur

- Adolescent nutrition related activities
    - ✓ IFA supplementation (Free supplementation is based on the availability of medicine)
    - ✓ Nutrition message for adolescent girls who visit the facility
- About 17,545 adolescents received health services from the visited UPHCSDP in 2017, among them, 37% adolescent boys and girls received free services through the provision of red card. No specific information on nutrition related services to adolescents.
- Adolescent girls receive nutrition message during their visit to the facility for general health related problems.
- Counsellors provide one to one counselling to adolescent girls visiting Comprehensive Reproductive Health Care Centre (CRHCC) or Primary Health Care Centre (PHCC).
- Service Promoters (SP) conduct health awareness session in schools occasionally; there is no specific schedule for the activity.
- There is no specific reporting system or register regarding the number of nutrition related services provided to adolescent girls.
- Counsellors received a 3 days long training from IPHN on nutrition, where adolescent nutrition was also a component.

Upazila Health Complex (UHC), Dhamrai

- IFA supplementation for adolescent girls.
- Adolescent girls receive nutrition message during their visit to the facility for general health related problems.
- According to Upazila Health & Family Planning Officer (UH&FPO), health complex arrange one health education session at the outdoor premises with patients and their attendants every morning, however, there is no specific focus on adolescent health and nutrition.
- No specific registration and reporting format for adolescent health and nutrition services.

Community Clinics, Dhamrai (two CCs)

- CCs provide IFA and vitamin B complex to adolescent girls.
- Health Assistants (HAs) arrange health education sessions at primary schools in their working area, these sessions are mostly on general health services, there is no specific nutrition related topics.
- CHCPs arrange one health education session with the adolescent boys and girls every month in the CC compound.
- In the visited two CCs, four sessions on adolescent health education were conducted in previous seven months of our visit. Fifteen (15) male and 28 female adolescents attended in those sessions.
- No BCC materials or adolescent nutrition related activity manual or guideline was available.
- No specific registration and reporting format was established for adolescent health and nutrition services.
- Family Welfare Assistant (FWA) provides counselling to adolescent girls during their home visit to eligible couples.
- According to the reporting format for FWAs, there are four components of adolescent counselling;
  - Physiological changes during adolescent age period
  - Harmful effect of early marriage and early pregnancy
  - IFA consumption for adolescent girls
  - About Sexually Transmitted Diseases (STDs) and other reproductive health issues
- FWA provided counselling to 10 adolescent girls in the previous month of our visit according to the report.

Family Welfare Centre, Dhamrai

- In Family Welfare Centre (FWC), services are provided to only adolescent girls who come to the facility for treatment of general health problems (weakness, cold fever etc.)
- SACMOs and FWVs provide health education to school going children (Class I to Class V), they usually discuss about primary health care related issues.
- No BCC materials or adolescent nutrition related activity manual or guideline for the services, as well as no reporting format was available.

Summary of Findings from Field Visits in Selected Sites

- There is no specific registration and reporting format for adolescent health and nutrition services.
- No BCC materials or adolescent nutrition related activity manual or guideline for the rural services.

4. Stakeholder Consultative Meeting

Our stakeholder consultative meeting was intended to focus on the gaps which have come out from the review and also to find out the opportunities to design future interventions. We also wanted to determine which components are most effective and could be further scaled up. We invited representatives from DGHS, DGFP, MOHFW, IPHN, UNICEF, USAID, Concern Worldwide, GAIN, Nutrition International, CARE and BRAC to participate in this meeting.

The stakeholder consultative meeting held on December 17, 2018, at Hospital Conference Room of icddr,b. The event brought together 30 participants from IPHN, DGFP, Nutrition International, Care International and icddr,b.

At the beginning of the event, Dr. Tahmeed Ahmed, Theme Lad (Nutrition) for the RDM Activity, and Senior Director, Nutrition and Clinical Services Division (NCSD) of icddr,b, welcomed the participants and shared the objective of the meeting. Following the introduction, Dr. Mahamudul Hasan (Research Investigator, NCSD, icddr,b) gave a presentation on the current situation of nutritional status of adolescent girls in Bangladesh, brief review of policies on adolescent nutrition in Bangladesh, and summary of findings from reviewing two recent reports by Population Council and GAIN on adolescent health and nutrition. Dr. Mahamud and his team also shared their experience from a small-scale exploration of adolescent nutrition service delivery in selected health care setting of Dhaka.

Following the presentation, there was an open discussion session moderated by Dr. Tahmeed Ahmed. Through interactive discussions, all participants came to a consensus that there are plenty of issues needed to be addressed to improve adolescent girls' nutrition in Bangladesh.

a. Discussions in the meeting

Dr. Tahmeed Ahmed started the discussion stating that Bangladesh has achieved improvements in nutrition but adolescent nutrition is less prioritized and less improved. One-third of the adolescent girls are suffering from undernutrition and their BMI is less than 18.5. This is very important as a recent paper published in PLOS Medicine showed that low birth weight is the principal determinant of stunting followed by maternal height. If the height of mother becomes less, then the risk for children to be stunted is very high. Nutritional status of a mother needs to be improved while they are pregnant. But since, it is difficult to improve maternal height at that time; the focus should be given on adolescent age to improve maternal height and linear growth for mothers. Dr. Tahmeed advised that, reconsideration should be given for one IFA tablet per week for the adolescent girls and it should be on spot feeding.

Dr. SM Mustafizur Rahman, Deputy Director & Program Manager of National Nutrition Service (NNS), stated that IPHN is working on many issues but till now adolescents received much less emphasis than required. Adolescent nutrition is less prioritized in the government health service delivery system and there is also a lack of adolescent-specific health services in the health centers. Besides, adolescent girls often feel shy to discuss reproductive health-related issues. However, current NNS OP has emphasized activities to improve adolescent nutrition. Coordination and collaboration among the DGHS, DGFP and others NGOs would be essential. Dr. Mustafiz also said that nutrition interventions are focusing on adolescent girls only, but adolescent boys are not getting much attention. He recommended strengthening Social and Behavior Change Communication (SBCC) related activities.

Dr. Md. Jaynal Haque, Program Manager, Adolescent & Reproductive Health (MCH Service Unit), DGFP shared his view on DGFP's recent reporting system regarding adolescent nutrition service

delivery. He stated that adolescent nutrition-related activities need the active participation of all relevant stakeholders including MOHFW and relevant organizations. At union level, FWVs and SACMOs are providing services to the adolescent girls and other patients of reproductive age. However, adolescents are receiving services as part of regular health service delivery system. DGFP has introduced a reporting format in 91 sub-districts in collaboration with the NNS to document adolescent clients. DGFP is also providing training to health service providers and used NNS curriculums for the basic training. Recently, DGFP has prepared an online and offline reporting format to measure service improvement. They have also established an adolescent-friendly health corner in the health facilities. This special corner has already been established in 403 health facilities throughout the country and the program is ongoing to establish more such corners. Dr. Jaynal recommended that orientation and sensitization of the service providers are needed so that they can prioritize the issue of adolescent nutrition. He also stated the importance of training teachers and district health educators on adolescent nutrition. Addressing mental health of the adolescent boys and girls was another recommendation which came out from Dr. Jaynal's discussion.

Dr. Pobitra Kumar Kundu, Deputy Director & Program Manager, NSS said that IPHN has arranged training sessions on adolescent nutrition for the school teachers of three schools from every district of Bangladesh. IPHN is also training the health educators at the district level. IPHN is currently working with the adolescent clubs where they are providing training to the girls from the schools. However, it is very tough to reach all adolescent girls, as they are scattered in school, out of school and in the workplace. Thereby, a coordinated approach would be essential to reach this critical population.

Hafizul Islam, Technical coordinator, nutrition at the center (N@C) Program, Care Bangladesh, highlighted the importance of targeting future adolescent girls. He suggested that a unique program or activity should be designed where all organizations will work collaboratively and establish a reporting format to track the number of adolescent girls receiving services from the different service providers.

Dr. Nandalal Sutradhar, Deputy Program Manager, NSS stated the importance of developing and updating the adolescent nutrition training modules and guidelines. He also recommended that adolescent clubs developed by Ministry of Women and Children Affairs (MOWCA), should incorporate nutrition as part of their activities.

Mahbubul Islam, Program Manager, N-Lift project of Nutrition International (NI), mentioned that NI has an ongoing partnership with the Department of Secondary Education (DSE) to implement adolescent nutrition program focusing on the supply of IFA and deworming. NI is also going to implement another program for adolescent girls where they will provide fortified lentils.

Dr. Mostafa Mahfuz, Associate Scientist, NCSD, icddr,b mentioned the importance of going beyond the adolescent period. 7-10 years is the most neglected age and there is a paucity of data for this age group. Since it is very difficult to increase height after menarche, the basic need of this age group needs to be identified.

Dr. Md. M. Islam Bulbul, Deputy Program Manager, NSS, mentioned the gap in nutrition service delivery for 5-14 years. He stated that to address primary school age children, school feeding program needs to be reconsidered. Nutrition would not work individually. It's a multi-sectoral issue. The relevant ministry should focus their activities for the whole country. MOWCA already has adolescent clubs for their activities and they are working with the Shornokishoree Network Foundation (SKNF). But most of the program is implementing with IFA as a component. Emphasis should be given on SBCC as a component.

Small messages for SBCC should be developed. There should also be an active individual tracking system for adolescent girls. Finally, there should be a single reporting format for the adolescent nutrition services and every service provider should follow that reporting format which will be helpful to identify the coverage.

Dr. Shamima Akhter, Deputy Project Coordinator, RDM Activity, icddr,b, mentioned that video clip messages delivered by selected champions could be useful as children of 5-19 years age-group like to follow their champions. Ms. Liza Talukder, Senior Manager, RDM Activity, icddr,b, stated the importance of sensitizing parents along with the adolescents in front of the schools in urban areas.

All government and non-government stakeholders agreed that adolescent boys should be included in the national programs and multi-sectoral collaboration should be strengthened. The meeting ended with a summarization of the fruitful discussion and closing remarks from Dr. Tahmeed Ahmed.

b. Lessons Learned

The lessons learned from the findings of review and discussion points from the stakeholder workshop have been organized as per the aim of the study –

i. Interventions that are effective for improving adolescent nutrition for further scaling up

- Expanding the current IFA supplementation program to increase coverage and also, modifying to adopt a new strategy of providing IFA tablets to adolescent girls (one tablet per week as spot feeding).
- Existing nutrition programs should be scaled up to include adolescent boys; all guidelines for adolescent health services are also focusing on girls which need to be revised to incorporate adolescent boys.
- All types of nutrition interventions need to employ new strategies to reach out the adolescents who are out of school or at workplaces, which comprises a large proportion of total adolescent population. Working through adolescent clubs can be a potential way for reaching these groups.
- Existing programs need more focus on changing adolescent's behavior towards nutrition. School based programs already providing training to adolescent girls as well as school teachers. This program could extend their objective to address healthy nutrition behavior and their importance. Training of religious leaders, implemented by the DGFP, could be another program to scale up and modify to address adolescent nutrition.

ii. To identify and overcome potential barriers for utilization of these interventions

- Mainstreaming the nutrition program and make collaborative effort to improve adolescent girl's nutrition.
- Revising the existing policies and strategies and/or develop new policies and strategies, if required, to set up activities and plan for achieving short-term and long-term goals for Bangladesh in terms of improving adolescent nutrition status.
- Innovative ideas for addressing the gaps in nutrition interventions for 5 to19 years' age group. .

- Awareness about preventing overweight among children is very important as most people do not consider this as a problem.
- Further research is required to understand the biology of adolescent growth including generating evidences for planned interventions.

REFERENCES

1. Khara, T., & Mates, E. (2015). Adolescent nutrition: policy and programming in SUN+ countries. *Save the Children, London. Accessed March*, *10*, 2017.
2. Meier, P. R., Nickerson, H. J., Olson, K. A., Berg, R. L., & Meyer, J. A. (2003). Prevention of iron deficiency anemia in adolescent and adult pregnancies. *Clinical medicine & research*, *1*(1), 29-36.
3. World Health Organization. (2006). *Adolescent nutrition: a review of the situation in selected South-East Asian countries* (No. SEA-NUT-163). WHO Regional Office for South-East Asia.
4. Delisle, H., & World Health Organization. (2005). Nutrition in adolescence: issues and challenges for the health sector: issues in adolescent health and development.
5. UNICEF. (2008). *Progress for children: a report card on maternal mortality* (No. 7). Unicef.
6. Kozuki, N., Lee, A. C., Silveira, M. F., Sania, A., Vogel, J. P., Adair, L., ... & Humphrey, J. (2013). The associations of parity and maternal age with small-for-gestational-age, preterm, and neonatal and infant mortality: a meta-analysis. *BMC public health*, *13*(3), S2.
7. Gibbs, C. M., Wendt, A., Peters, S., & Hogue, C. J. (2012). The impact of early age at first childbirth on maternal and infant health. *Paediatric and perinatal epidemiology*, *26*, 259-284.
8. Rah, J. H., Christian, P., Shamim, A. A., Arju, U. T., Labrique, A. B., & Rashid, M. (2008). Pregnancy and lactation hinder growth and nutritional status of adolescent girls in rural Bangladesh. *The Journal of nutrition*, *138*(8), 1505-1511.
9. Mal-Ed Network Investigators. (2017). Childhood stunting in relation to the pre-and postnatal environment during the first 2 years of life: The MAL-ED longitudinal birth cohort study. *PLoS medicine*, *14*(10), e1002408.
10. Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., De Onis, M., ... & Uauy, R. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The lancet*, *382*(9890), 427-451.
11. Alam, N., Roy, S. K., Ahmed, T., & Ahmed, A. S. (2010). Nutritional status, dietary intake, and relevant knowledge of adolescent girls in rural Bangladesh. *Journal of health, population, and nutrition*, *28*(1), 86.
12. Jaacks, L. M., Slining, M. M., & Popkin, B. M. (2015). Recent trends in the prevalence of under-and overweight among adolescent girls in low-and middle-income countries. *Pediatric obesity*, *10*(6), 428-435.
13. Akhter, N., & Sondhya, F. Y. (2013). Nutritional status of adolescents in Bangladesh: Comparison of severe thinness status of a low–income family's adolescents between urban and rural Bangladesh. *Journal of education and health promotion*, *2*.

14. NIPORT, M., 2014. *Bangladesh Demographic and Health Survey BDHS 2014: Key Indicators.* Dhaka, Bangladesh and Calverton, Maryland, USA: National Institute of Population Research and Training (NIPORT), Mitra and Associates, and ICF International.

15. Desai, S., Haddad, L., Chopra, D., & Thorat, A. (Eds.). (2015). *Undernutrition and Public Policy in India: Investing in the future*. Routledge, 336

16. National Institute of Population Research and Training (NIPORT), Mitra and Associates, and ICF International. 2013. *Bangladesh Demographic and Health Survey 2011*. Dhaka, Bangladesh and Calverton, Maryland, USA: NIPORT, Mitra and Associates, and ICF International.

17. Lassi, Z. S., Moin, A., Das, J. K., Salam, R. A., & Bhutta, Z. A. (2017). Systematic review on evidence-based adolescent nutrition interventions. *Annals of the New York Academy of Sciences*, *1393*(1), 34-50.

18. *Constitution of the People's Republic of Bangladesh* [Bangladesh], 4 November 1972

19. Planning Commission. (2012). *Perspective Plan of Bangladesh 2010-2021: Making Vision 2021 a reality*.

20. Planning Commission, B. (2015). *7th Five Year Plan, FY2016–FY2020: Accelerating Growth, Empowering Citizens*.

21. Ministry of Women and Children Affairs, B. (2011). *National Women Development Policy 2011*.

22. Ministry of Health and family planning, B. (2012). *National Health Policy 2011*.

23. Ministry of Health and family planning, B. (2012). *National Population Policy 2012*.

24. Institution of Public Health and Nutrition, (2015). *National Nutrition Policy 2015.*

25. Ministry of Health and family planning, (2016). *Bangladesh Essential Health Service Package (ESP).*

26. Ministry of Health and family planning, (2018). *4th Health, Population and Nutrition Sector Program 2017-2022 (HPNSP).*

27. Institution of Public Health and Nutrition, (2018). *National Nutrition Service Operational Plan (2017-2022).*

28. Ministry of Health and family planning, (2017). *Second national plan of action for nutrition 2016-2025 (NPAN 2).*

29. Directorate General of Family Planning (DGFP), (2016). *National Strategy for Adolescent Health 2017-2030*

ANNEX A

Few snapshots of the stakeholder consultation held on December 17, 2018.