

# Bangladesh



Demographic and Health Survey

2014

**POLICY BRIEFS**

The 2014 Bangladesh Demographic and Health Survey (2014 BDHS) was conducted under the authority of the National Institute of Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare (MOHFW). Designed to provide national and divisional data on fertility, family planning, child mortality, child health, maternal health, nutrition of children and women, HIV, and women's empowerment, the 2014 BDHS collected information from more than 17,000 households and more than 17,800 ever-married women. The survey results provide information to evaluate existing health and social programs and to design new strategies for improving the health status of the country's women and children.

The four policy briefs in this publication are based largely on the results of the Bangladesh DHS as well as on other international, regional, national and divisional sources of data. Each brief provides critical policy and program recommendations to the Government of Bangladesh (GOB), program managers, NGOs, and international donors with the goal of improving the health status for all citizens of Bangladesh.

Additional information about the 2014 BDHS may be obtained from the National Institute of Population Research and Training (NIPORT), 13/1 Sheikh Shaheb Bazar Road, Azimpur, Dhaka - 1205, Bangladesh. Telephone: 88-02-5861-1206; Internet: <http://www.niport.gov.bd>

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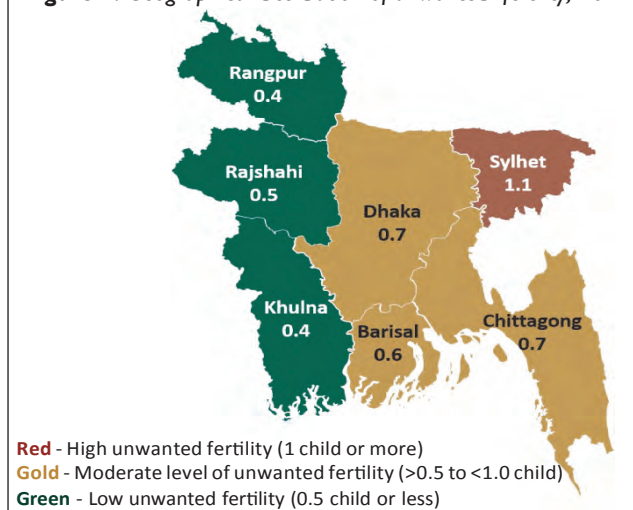


# Fertility and Family Planning: Differential Approach is Needed

## National commitments on fertility and family planning

- A current Sustainable Development Goal (SDG) of the UN General Assembly (UNGA) is to ensure universal access to sexual and reproductive health care services, including family planning (FP), by 2030.<sup>1</sup> Bangladesh, as a signatory to the global partnership on Family Planning 2020 (FP 2020), pledged to increase the quality of FP services and reduce the total fertility rate (TFR) to 1.7 children per woman by 2021. This has to be done by equitably increasing the coverage of effective contraceptives and reducing unmet need.<sup>2</sup> In line with its global commitments, Bangladesh targets a reduction in the TFR to 1.7 and an increase in the contraceptive prevalence rate (CPR) to 75% by 2021 under the fourth health sector program.<sup>3</sup>

Figure 1. Geographical distribution of unwanted fertility, 2014



**A lack of decline in fertility level from 2011 to 2014 may indicate a plateau. To achieve the Bangladesh target of a TFR of 1.7 by 2021, we must immediately adopt a differential, regional approach to reduce unwanted fertility further.**

- After almost a decade of stagnation in the TFR at around 3.3 children per woman (1991-1999), fertility declined to 2.3 in 2011, and remains there in 2014. This could indicate another plateau of fertility just above the population replacement level, similar to that observed in some other countries.<sup>4</sup> This apparent plateau in TFR will delay reaching a below-replacement fertility level and will have serious implications for population size in Bangladesh.
- In 2014, the total wanted fertility rate (TWFR) was 1.6 children per woman compared with the actual TFR of 2.3, meaning that the overall unwanted fertility in Bangladesh is 0.7 child per woman. An 80% reduction of this unwanted fertility will achieve the target of 1.7 children per woman. In terms of geographic distribution, Sylhet division has the highest level of unwanted fertility, followed by Dhaka and Chittagong (Figure 1).
- During 2011-14 fertility declined in four divisions and remained the same in two divisions. Fertility rose slightly in Dhaka division during this period, which could be the reason that the TFR plateaued at the national level. Because Dhaka's population is so much larger than the population of other divisions, even a TFR increase of 0.1 child there can offset fertility reductions in four other divisions.
- In the 2014 BDHS, 26% of women reported that their last birth was untimed or unwanted, indicating the desire to limit or postpone births. Instead of the existing vertical, one-size fits-all service delivery model for FP, Bangladesh must design and implement differential approaches for reducing unwanted fertility to address the needs of specific population groups. Such regional service packages must include both behavior change communication (BCC) and service delivery components, with a focus on:
  - Overall low-performing regions like Sylhet, Chittagong, and Dhaka;
  - Pockets of hard-to-reach areas like chars and coastal regions, where service coverage is low; and

- Urban areas including City Corporations to meet specific demands of new migrants, slum dwellers, who appears to have higher levels of fertility than their urban counterparts.<sup>5</sup>
- Currently, some initiatives target low-performing and hard-to-reach areas to increase use of family planning. One such example is delivery of FP services through community volunteers and NGO partners in selected areas by the Directorate General of Family Planning (DGFP).<sup>6</sup> Also in the private sector, the Social Marketing Company (SMC) is currently implementing an innovative community mobilization program in 19 districts, where BCC campaigns and basic contraceptives are being delivered by community volunteers. These geographically-targeted initiatives in Bangladesh must be evaluated carefully and scaled up if they prove effective.

### Recommendations for differential programming

1. Develop regional service packages to strengthen quality FP service delivery in low performing and hard-to-reach areas, and in urban slums.
2. Evaluate ongoing public and private programs using targeted approach and scale-up of effective programs.

**Over the last two decades, the contraceptive prevalence rate (CPR) has increased by less than one percentage point annually. To achieve national contraceptive and fertility goals by 2021, the rate of increase in CPR must double.**

- The CPR has risen gradually, from 45% in 1993-94 to 62% in 2014—an annual rate of increase of less than one percentage point. To attain a CPR level of 75% by 2021, as outlined in the government's seventh Five-Year Plan and Strategic Investment Plan for the next health sector program,<sup>7</sup> this rate of increase needs to double.
- Motivating couples to adopt and continue using appropriate FP methods through effective BCC is the first step to increase CPR. Despite a high intent to use contraceptives (58% of non-users intend to use FP), only 20% of currently married women have had any contacts with FP fieldworkers, and 41% rely on shops and drug stores (pharmacies) for FP supplies. This limits opportunities for client-provider interaction and counseling on contraceptive choice and correct use. To increase demand for FP, we must prioritize the following areas:
  - **Client segmentation for BCC.** Messages for spacing and limiting children differ; so FP programs need to segment couples by group and target communication to their needs. Clients also need to be segmented by location and socio-economic status to reduce prevailing inequity in fertility and contraceptive use.
  - **Targeted campaigns for specific population groups.** There exist special population groups who need targeted information and FP services. For example, one in eight women reported that her husband lives outside of home; more than half of these husbands (58%) visited at least once in the past 12 months. Qualitative research<sup>8</sup> shows that these women use contraceptives incorrectly during their husbands' visits, exposing them to unintended pregnancy. These women need specific messages and support to select appropriate methods and use them correctly.
  - **Innovative mass media approaches and channels for BCC.** Evidence shows that mass media campaigns are effective in encouraging the use of contraceptives.<sup>9</sup> Along with conventional media like TV, radio, and newspapers, mobile phones and social media also should be used. According to the BDHS, 89% of the households owned a mobile phone in 2014. Texting FP information and messages is a feasible and effective communication method for promoting contraception use, as seen in other countries.<sup>10</sup>



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

- FP service delivery needs to focus on promoting contraceptive use with special emphasis on:
  - **Promoting the use of injectable contraceptives:** Currently one in five nonusers intends to use injectables in the future. Such desire provides an opportunity to increase the CPR by promoting and distributing injectables to eligible couples. Experience from Matlab shows that injectables can be used to increase the CPR by 41% through intensive motivation and follow up.<sup>11</sup> Newer technologies like Sayana Press,<sup>12</sup> a lower-dose formulation of Depo-Provera with a pre-filled, auto-disposable injection system that allows for subcutaneous (under the skin) delivery, can also be explored to popularize this method, along with expanding sources for injectables to involve community clinics and private facilities.
  - **Strengthening post-partum family planning (PPFP) services:** Post-partum family planning presents a unique opportunity to increase the CPR, given that 3.1 million births take place in Bangladesh every year. Service providers from both the health and FP directorates have to be trained on PPFP services to counsel couples on appropriate FP methods starting from routine antenatal care visits, and to promote contraceptives including LARC/PMs to couples right after the delivery of a baby. The government's recent decision to provide implants and progestogen-only pills as an immediate post-partum FP method needs to be incorporated in the Bangladesh National Action Plan<sup>13</sup> for implementation on a priority basis.



Courtesy: Shafiqul Alam Kiron, Save the Children/USAID

- **Promoting use of Long-Acting Reversible Contraceptives and Permanent Methods (LARC/PMs):** Two in three Bangladeshi women want no more children, and most women complete their child bearing by age 29, indicating that more couples need to adopt LARC/PM. Only 8% of couples use LARC/PM, and this has not changed much in the last 15 years. The current over-reliance on temporary methods is becoming increasingly costly and logistically complicated. The low use of LARC/PM is related to both low demand and poor availability of quality services for these methods.

**Increasing demand for LARC/PM though client segmentation and targeted BCC:** Intent to use LAPMs remains very low (only 3.4% of non-users intend to use LAPMs in the future). Also experience from Khulna division indicates that a below replacement fertility level like 1.9 children per woman can be attained even with a low method mix for LAPM (14% of all contraceptive use). A qualitative study conducted under 2014 BDHS found that the majority of women do not want to consider LAPMs due to perceived religious restrictions and physical consequences they experienced or observed in the community.

**Prioritizing LAPMs where there is potential demand for FP:** The western region of Bangladesh (Khulna, Rajshahi, and Rangpur divisions) has the strongest desire to limit fertility. Accordingly, the likelihood of LAPM use was markedly higher in the western than in other regions. The FP programs are also relatively stronger in the western region compared with those in other regions of the country.<sup>14</sup> This demand for low fertility and strong FP service delivery make the western region suitable for focused LAPM interventions to improve contraceptive method mix.

**Expanding service provision of LARCs/ PMs through the private sector:** Nearly 90% of LARC/PM users received their method from government facilities (for female sterilization, 60% received it from the public sector). In contrast, temporary contraceptives are available both in public and in private sectors. To increase LARC/PM use, more public and private sector facilities need to offer these methods. Currently, only 79% of public health facilities, 86% of NGO facilities, and 13% of private hospitals offer any family planning services; for any LARC/PM, the percentages are much lower: 26%, 65%, and 12% respectively.<sup>15</sup>

### Recommendations for increasing CPR

1. Generate demand for family planning through BCC:
  - a. Segment client and develop BCC messages and materials appropriate for the targeted population group.
  - b. Use multiple and innovative BCC channels/ approaches to reach targeted population.
2. Improve availability of FP services with emphasis on:
  - a. Promoting injectables by expanding choice of injectables and sources from where they are available;
  - b. Strengthening post-partum FP through counseling during ANC and after delivery, and offering FP services at delivery facilities in the public, NGO, and private sectors;
  - c. Promoting LARC/PM use by:
    - Generating demand for LARC/PM through client-segmented and targeted BCC;
    - Selecting districts to promote LARC/PM; where the desire to limit births is stronger and facilities better prepared to provide LARC/PM services;
    - Expanding LARC/PM service availability in non-public sectors.

### Interventions to reduce the adolescent fertility level need to start before marriage to improve young girls' knowledge of reproductive health and to prevent unwanted pregnancy.

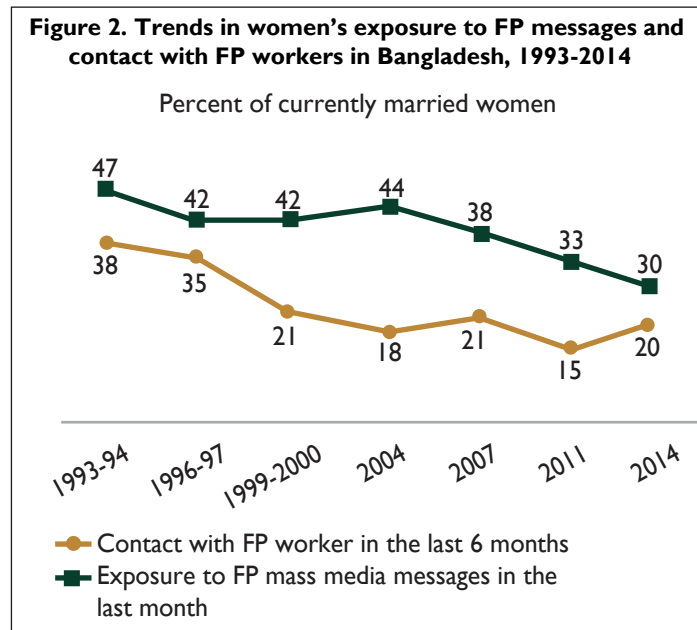
- In 2014, nearly one in three women age 15-19 had begun childbearing (i.e., either has had a live birth or is pregnant with a first child). During the last two decades, the level of teenage childbearing has remained alarmingly high. Trends in age-specific fertility rates (ASFRs) indicate that by 2025, all births will take place before age 34, and a third of all births will be to teenage mothers.<sup>16</sup>
- The 2014 BDHS data also show that 43% of married teenage girls discontinue FP use within 12 months of use, the highest level of contraceptive discontinuation across all age groups (compared with an overall discontinuation rate of 30%).
- A qualitative study conducted under the 2014 BDHS<sup>17</sup> found that the majority of young women knew little or nothing about contraception prior to marriage. Those who reported some knowledge were familiar with the oral pill but lacked detailed information to effectively use this method. The study also reported that marriages take place within just one to three days of being arranged. Thus the young couple does not have a chance to talk about or get contraception. This clearly indicates that girls need to be educated on family planning before marriage.
- Effective BCC interventions for unmarried adolescent girls can be implemented through the following channels:
  - **School health programs:** Trained teams can visit schools at regular intervals to educate adolescent girls on reproductive health (RH), personal hygiene, and FP. Other social groups like girls' scouts and youth clubs can also be considered.
  - **Mobile phones for FP information:** The 2014 BDHS found that nearly half of the teenage household members age 15-19 (63% male, 31% female) owned a mobile phone. As discussed above, texting messages is both feasible and effective for providing FP and sexual health information to youth.
- The National Communication Strategy for Family Planning and Reproductive Health 2008 and the Bangladesh Adolescent Reproductive Health Strategy 2006 need to be updated with timebound, evidence-based interventions to develop and implement effective BCC campaigns targeted for specific adolescent groups.

### Recommendations for reducing adolescent childbearing

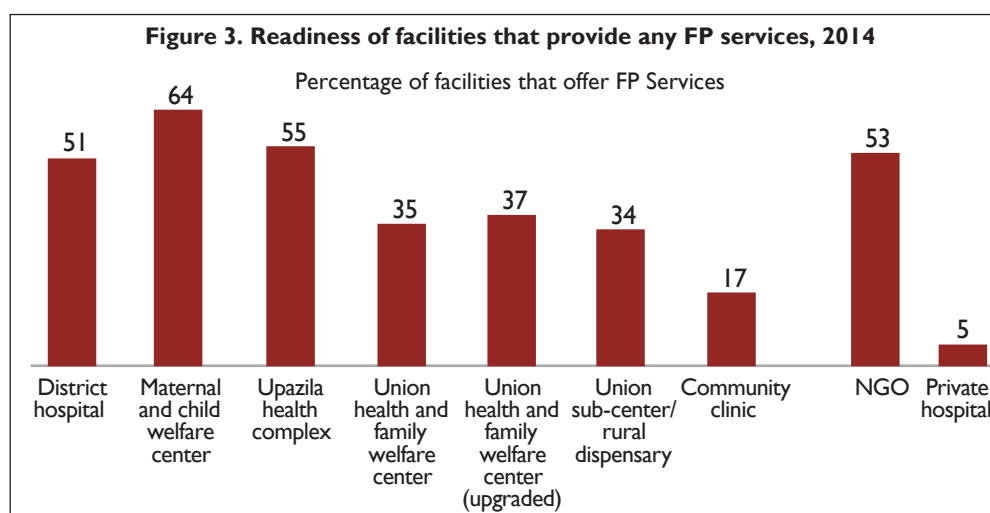
1. Introduce RH/FP programs at schools to educate unmarried adolescent girls on RH, personal hygiene, and family planning.
2. Target youth for BCC and mass media campaigns using mobile phones, social networking, and other methods.
3. Update and implement relevant strategies and action plans for coordinated targeting of youths.

The national FP program has evolved over the last four decades. Since the initial momentum achieved during the 1980s and 1990s, the FP program has weakened, providing suboptimal service delivery in both the public and private sectors. FP service readiness needs to be improved by addressing systemic weakness at each level.

- Over the last 20 years, fewer women have heard about FP. In 1993/94, 38% of currently married women said they had been visited by an FP field worker in the 6 months before the survey; in 2014, the proportion decreased to 20%. Women’s exposure to FP mass media messages and other sources has also declined during the same period—from 47% to 30% (Figure 2). These trends indicate poor program planning, management, and implementation.



- The FP service delivery system remains weak. The Bangladesh Health Facility Survey 2014 examined FP service readiness by facility type and found that only 25% of the facilities that offer FP services are ready to provide quality FP services (Figure 3). For private hospitals, the proportion is only 5%.<sup>18</sup> Overall, the main reasons for low readiness are unavailability of guidelines on FP and lack of providers with structured, in-service training in FP. This low FP service readiness in facilities is a major reason that shops and pharmacies, which provide temporary methods only, have become a dominant source of modern contraceptives, increasing from 37% of users in 2011 to 41% in 2014.







Courtesy: Shafiqul Alam Kiron, Save the Children/USAID

- Lack of human resources has been a major constraint for quality FP service delivery in the public sector. Half (51%) of the sanctioned Medical Officer and 23% of the Family Welfare Visitor positions in the Directorate General of Family Planning (DGFP) remain vacant<sup>19</sup>—these two cadres are the most crucial service providers for clinical contraceptive methods. Moreover, 95% of Director/other administrative positions remain vacant, which clearly indicates DGFP's weakness in program monitoring and supervision.

### Recommendations for addressing the existing programmatic gaps

1. Improve readiness of facilities for delivering quality FP services by immediately taking the following measures:
  - a. Distribute national/other guidelines on FP to the facilities, particularly to lower-level (union and community level) public facilities and the private hospitals;
  - b. Train service providers in quality FP service delivery – the training must involve structured sessions, and does not include individual instruction that a provider might have received during routine supervision; and
  - c. Improve availability of FP commodities, particularly in the private facilities.
2. Fill vacant positions in DGFP to minimize vacancies in critical service provider and supervisor positions.

### Conclusion

A high level of unwanted fertility clearly indicates that there exists scope for lowering the fertility level in Bangladesh in the near future by meeting the latent demand for contraception. Instead of the existing one-size-fits-all service delivery model for the entire country, Bangladesh must adopt out-of-the-box measures for FP. Existing systemic weaknesses in the public sector must be addressed to effectively deliver services and meet the demand for FP. The readiness and quality of FP services in public facilities must be improved immediately.

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# Maternal Health in Bangladesh: Let's Do it Right

## National Commitment towards Ending Preventable Deaths

Bangladesh has committed to ending preventable child and maternal deaths by 2030. This commitment has been made in the spirit of achieving universal health coverage (UHC) and is in alignment with the goals of Sustainable Development and Ending Preventable Child and Maternal Deaths (EPCMD). Table 1 presents achievements in key indicators so far and the milestones aspired to for 2030.

To achieve the SDG goal 3.1, Bangladesh has to bring its maternal mortality rate (MMR) down to 59 from the current level of 170.<sup>1</sup> The average annual rate of reduction of MMR between 2001 and 2010 was 5.63%. If a steady decline at a rate of 5.5% can be maintained, reaching an MMR of 59, in theory, seems to be an achievable target. In real life, as the mortality level declines further, 'business as usual' is highly unlikely to work.

Key Indicators	HPNSDP	Current Levels	2021 Target	2030 Target
	(2016 Target)			
Delivery by SBA	50%	42%*	65%***	98%*****
4 ANC contacts	50%	31%*	50%***	98%*****
PNC within 2 days	50%	36%*	50%***	
MMR	143	170**	105***	59*****

\* BDHS 2014  
 \*\* Interagency projection  
 \*\*\* 4th HNP RFW  
 \*\*\*\* Revised MHS  
 \*\*\*\*\* Projections from EPCMD assuming two-thirds reduction from the 2015 IGME estimate of 176

Our efforts should prioritize (1) antenatal care (ANC), (2) normal delivery care and, (3) emergency obstetric and newborn care (EmNOC). The intermediate goal should be to reach highly effective coverage (quality + coverage) for each of these types of care to sustain their growth as well as to reduce maternal and child mortality. Milestones should be defined and time frames should be stipulated for each of the three upcoming sector programs between now and 2030.

## The Shift from Home to Facility Delivery Has Begun

It's evident that the population is shifting its norm of home delivery to delivery at facilities. In the last decade facility delivery increased rapidly from 12% to 37%. The private sector has contributed to most of this increase. Between 2004 and 2014 delivery in the private sector increased from 4% to 22%; in comparison, births in the public sector increased from 7% to only 13%.

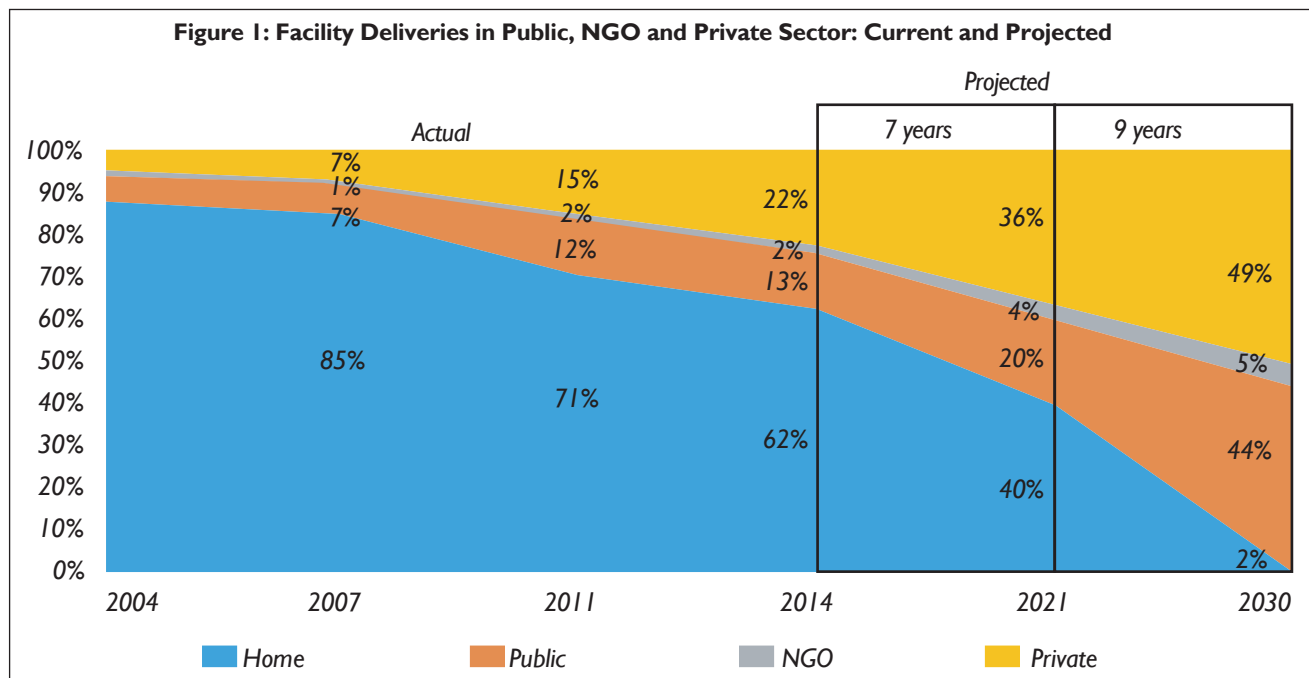
However, the shift also entailed great inequity in use of facility care for maternal health services by population groups and regions. For example, 55% of women in Khulna delivered in a health facility compared with only 23% in Sylhet. And, nationwide, only 15% of the poorest women gave birth in health facilities vs. 70% of the richest women.

Despite substantial increase in facility delivery, ultimately UHC cannot be attained if some population groups are left behind. Access to facility delivery by the poor and the marginalized groups will be possible if the public sector steps up to increase its relative and absolute share of delivery care. Growth of the private sector has a limit, most likely to focus in urban areas and, for those who can afford to pay its higher cost. It is not a solution to increase facility delivery among the poor.

## Planning the Shift from Home to Facility Delivery: Needs Steering in Planned Directions

We need a roadmap to steer the shift in direction and to answer the following questions: (1) What are the desired market shares for delivery care among public, private, and NGO health facilities? (2) What are the benchmarks and timeframes to achieve this growth in facility delivery for each of the sectors? (3) And, most important, how can we shape this facility delivery growth to achieve quality and equity? We are fortunate that the MOHFW has sector programs in place to answer these questions on the ground.

**Planning and setting targets for the desired market share of public, NGO, and private sectors for facility delivery.** We recommend that the MOHFW come up with a desired market share scenario for 2030 and for every 5 years beforehand. The draft Result Framework for 4th HNP Sector Program has set a target of 65% for deliveries by skilled birth attendants by 2021. Given the current trend and program efforts we propose some reasonable and doable targets for market shares for facility delivery for 2021 and 2030. We assume that 60% of the deliveries in 2021 will take place in health facilities<sup>2</sup>—36% in private, 20% in public, and 4% in NGO facilities (Figure 1). We also project a possible 2030 scenario with almost all deliveries (98%) taking place at facilities— approximately half and half between public (including NGO) and private. Other countries/states in the region have reached this goal of very high facility delivery with very low levels of maternal mortality [Facility Delivery (MMR): Sri Lanka: 98% (33), Malaysia: 99% (29), Kerala: 99% (66)].<sup>3</sup> Also the projection for 2030 is consistent with GOB’s aim to achieve universal health coverage by 2030.



**Assessing the caseload a prerequisite to planning and preparing.** There must be a threefold increase in public facility deliveries in the next 15 years to achieve the desired scenario. In the next 5 years, public facilities must handle 300,000 additional births per year. Therefore, special efforts must be taken in the 4th sector program. Strategies to attract more families to the public sector facilities should be in place to slow down the private sector growth to a 36% share by 2021 and then to around 50% by 2030. According to this scenario, the case load for the private sector will more than double. The private sector also must be better regulated; laissez faire cannot be allowed.

This scenario planning sets the basis for preparing the case for investment. Achieving the planned shift is crucial, and, in particular, so is improving the preparedness and quality of the health facilities, bridging demand and supply, and generating demand itself.

**Achieving the Shift from Home to Facility Delivery: Preparing Public Facilities to Handle Deliveries**

Strengthen upazila health and family welfare centers (UHFWCs) to handle an increasing caseload of normal deliveries in the public sector. To achieve the shift to a facility, the crucial question is to decide where these deliveries will take place. Are we prepared? Results from the USAID-supported MaMoni project and from Plan International show that comprehensive interventions in the number of UHFWCs result in high coverage of antenatal care, facility delivery by a medically trained provider (MTP), and, most important, reduction in mortality. The comprehensive interventions include 24/7 delivery care from UHFWC packaged with antenatal care, pregnancy surveillance, quality improvement initiatives, upward referral linkage, and community plus local government engagement.



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

Lessons also show that ensuring the facilities are continuously staffed and improving providers' relationships with women during antenatal visits also increases the likelihood that women will deliver in the facility. This approach has been prioritized in the revised maternal health strategy, in the draft Strategic Investment Plan (SIP) of the 4th HNP, and has drawn the attention of key stakeholders, including the MOHFW, as a shorter route to accelerate the shift. At a rate of 30-50 deliveries per month, the UHFWCs can handle most uncomplicated deliveries.

**Build, allocate, and retain capacity of skilled providers at the primary level.** Central to the discussion of increasing delivery at facilities is the availability of trained staff. Recent initiatives focus on developing midwifery-led maternity care. A promising sign of the journey is the training program already started to train midwives and foster related institutional arrangements.

Lessons learned from traditional birth attendant (TBA) and community-based skilled birth attendant (CSBA) programs tell us that, unless a health systems approach is taken, as opposed to a training only focus, midwives will not be a panacea that prevents mortality. The midwifery strategy 2014<sup>4</sup> expresses the spirit of wider coverage: Registered Midwife[s] will be recruited and deployed at any health facility down to upazila and union level[s] where maternal and neonatal health services are provided.

This should be translated to targeted numeric planning for need vs. actual services performed in the context of the roadmap and preparedness goals previously discussed. In addition, necessary health system support (logistics, supervision, and physical environment) to create an enabling environment for midwives must be ensured.

An estimated 21,154 midwives (one midwife for approximately 175 annual births) will be required to meet national needs.<sup>5</sup> The current pipeline indicates that only around 5,000 midwives will be available by 2019, far short of the required number. Unfortunately the recently finalized health workforce strategy and its action plan have stopped short of addressing strategies to meet this huge demand.<sup>6</sup>



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

One of the important omissions in the midwifery strategy is, Family Welfare Visitors (FWV). At present, there are 4,888 FWVs in place with only 1,749 trained in midwifery. The investment in this cadre of workers should be enhanced by prioritizing and accelerating midwifery training for FWVs (18 months course already in place). Currently, FWVs conduct less than 1% of deliveries and less than 3% of antenatal care visits, which is primarily what they are recruited for. It is widely known that a substantial number of FWVs are getting posted in upazila health complexes (UHCs) and maternal and child welfare centers (MCWCs), leaving UHFWCs unattended. The DGFP needs to take stern administrative actions to improve efficiency, including retention at the place of posting. We have to make optimal utilization of every resource already invested.

### **Should we invest in reaching home deliveries in the interim? The answer is NO.**

So far, attempts to reach home deliveries with skilled care have failed. Between the late 1970s and the mid-1990s, about 60,000 TBAs were trained, achieving only 17% coverage.<sup>7</sup> MOHFW replaced this program in 2004 with the CSBA training program. While this program adds very low coverage, less than 1% of births, the MOHFW continues to support it without any modifications. There are two policy options to consider:

1. Stop the CSBA training program and immediately focus on shifting to facility deliveries. The CSBA approach should continue only in selected hard-to-reach areas and only with necessary system support.
2. Shift the scope of work for already trained CSBAs (FWAs in particular) to provide antenatal care in community clinics and delivery care in upgraded union health and family welfare centers (UHFWCs), and to act as assistants to midwives.

Make smart decisions in selecting and transforming facilities to functional EmOC facilities. Reducing mortality will not be possible without fully functional EmOC services throughout the country. The biggest challenge to maintaining such services is keeping pairs of surgeons and anesthetists at the designated CEmOC centers. Given the current density of population and improvements in roads, we probably need fewer than the nearly 300 centers<sup>8</sup> designated to provide CEmOC services. It will be easier for the MOHFW to retain anesthetists and surgeons and to ensure 24/7 CEmOC care in fewer facilities.



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

To date, anesthetists in Bangladesh have successfully blocked efforts to train nurses to provide spinal anesthesia for cesarean deliveries. More than a hundred countries now allow nurses to provide anesthesia.<sup>9</sup> To increase the availability of cesarean deliveries, the MOHFW must negotiate with the concerned professional society to allow training for nurses and condensed training for doctors to increase the availability of anesthetists for cesarean deliveries.

### **Improving and Ensuring Quality of Care is Fundamental**

A cautionary reminder about quality of care is available next door. India has rapidly increased facility delivery coverage to 80%; its conditional cash transfer program, Janani Shuraksha Yojana, started in 2005, has been very successful in drawing the large population toward use of facilities for delivery care. Surprisingly, the MMR has not changed significantly, possibly indicating poor quality of care at the facilities<sup>10</sup>; India's MMR is 170. To make a difference, a rapid increase in facility deliveries needs to be matched with high quality services.

Improve service readiness of facilities. Readiness of facilities in terms of infrastructure, staffing, and supplies is a prerequisite for quality service. The 2014 Bangladesh Health Facility Survey (BHFS) was an eye-opener, showing that among all levels of public and private facilities providing maternity care, only 3% of facilities were fully prepared to provide such care, and only 1% were prepared to provide normal delivery. Among all facilities, only 10% of district hospitals had readiness for BEmOC. For all maternal health services, facilities did not meet standards for staff training, availability of standards and guidelines, and essential drugs and supplies.

Being too thinly spread will only dilute our efforts to offer standard quality. Attempting to introduce delivery care at community clinics is a perfect example. Community clinics, in their current specification, by no means meet standards for delivery care. The private sector needs pay serious attention to alarms raised about their preparedness and the quality of care they currently offer. Although the data are serious enough to call for immediate national action, several steps might improve quality of care at the local level. Some recommended action items are:

- (i) Enforce the Standard Operating Procedures (SOP) for maternal health at all levels as applicable,

- (ii) Start with providing easier readiness items (like, guidelines, strips for testing urine albumin),
- (iii) Put accountability mechanism in place for both public and private sectors,
- (iv) Switch to competency-based training, for example, Helping Babies Breathe, and
- (v) The Quality Improvement Cell of the MOHFW should use preparedness data to meet standards at each service delivery point.

**Intervene judiciously to limit the rapid increase in caesarian sections (CS).** Too many caesarian deliveries are as dangerous as too few. According to international recommendations, caesarian sections are medically indicated in only 10%-15% of deliveries. Most countries with high maternal mortality have CS rates well below 10% of all deliveries. In these countries, there appears to be a strong ecologic association between increasing CS rates and decreasing mortality. On the other hand, emergency and elective caesarians both put women at risk.<sup>11</sup> According to the 2014 BDHS, 23% of facility deliveries in the last 3 years were caesarians, well above the recommended range. The majority of these deliveries occurred in private facilities. Research is needed to determine whether all of these surgeries were medically necessary.<sup>12</sup>

The possibility that Demand Side Financing incentives contribute to a higher CS rate at facilities cannot be ruled out. The MOHFW may think about modifying the DSF payment scheme. Irrespective of the type of delivery, normal or CS payment should be same. Ethical, economical, clinical, social, and health implications cannot simply be ignored. In joint action with the Obstetrics and Gynecological Society of Bangladesh (OGSB), the MOHFW should conduct multidisciplinary reviews/investigations on CS and take appropriate measures to ensure judicious use of this life-saving intervention.

### Generating Demand and Use of ANC as Stepping Stone to Facility Delivery

**Generating demand through innovative BCC:** Currently, about 66% of women can read (nearly 80% in the 15-29 age group); 51% of women watch television at least once a week; and, 38% of women own a mobile phone. Such a level of exposure to different channels of communication and, rapid expansion and enhancement of cellular and internet accessibility, should allow us to modify our BCC approach and reduce reliance on labor intensive fieldworker visits to households. Promising experiences from the Aponjon and Maya Apa hotlines operated by different telecom operators suggest that these channels can attract women and should be well coordinated and targeted to optimize reach and effectiveness.

**Promoting the shift to facility delivery:** Increasing coverage and quality of ANC are key factors: ANC safeguards women's health during pregnancy, brings them in contact with the health care system, and encourages further care-seeking behavior. The 2014 BDHS data shows the likelihood of facility delivery increases with the number of ANC visits. Significant progress has been observed in coverage from MTPs over the past decade, from 49% coverage in 2004 to 64% in 2014. We should focus on rapidly achieving universal coverage in ANC.

Facts show that 58% of ANC visits are being provided by qualified doctors, and FWV/CSBAs combined provide only 2.6% of coverage, which indicates that the primary care level is not functioning as it is meant to be. Course correction in terms of value addition to the ANC package and a change in service delivery strategy is needed. Between the government and NGO community health workers (CHWs) a total of 14% of women received ANC by individuals who are not recognized to be MTPs. This seems to be a missed task in a situation where shifting opportunity has the potential to expand the ANC net.

We should consider, (1) training the CHWs to provide a minimal package of ANC and (2) preparing and promoting community clinics with special days focused on providing ANC either by CHCP, CSBA, or roaming FWVs, with referral linkage to UHFWCs/UHCs for delivery care.



## Incorporate Systems in Current Maternal Health Programs to Address Key Indirect Causes of Maternal Death

To achieve the projected MMR of 59, indirect obstetric deaths will need to decline by a significant 57% to 30 per 100,000 live births from the Bangladesh Maternal Mortality Survey (BMMS) 2010 estimated level of 71. MMR due to indirect causes is 35%. Anemia (4%), jaundice (8%), and ischemic heart diseases (6%) are some of the major causes for which preventive public health approaches could be put in place at the primary level.

The formidable challenge is that in current practice, prevention, screening, and management of these non-communicable diseases falls outside the purview of the maternal health program, particularly at the primary care level. Adolescent health and ANC programs need to be modified to include interventions targeted toward the indirect causes of maternal death. A forward-looking strategy to address non-communicable diseases must be included in the revised maternal health strategy and must be followed by a pragmatic action plan.

### Let's Do It Right

According to UN projection (2015), by 2021, the population of Bangladesh will grow to 172 million and by 2030 to 186 million.<sup>13</sup> Bangladesh will face increasing challenges to provide quality maternal health services. As more investment is required, enhancing efficiency to ensure optimal utilization of the investment is essential. To implement the recommendations made here, MOHFW needs to lead from the front and be proactive in dealing with some of the delicate issues like governance and accountability. The SIP for the 4th HNP Sector Program rightly states,

“...the MOHFW will need to redefine its role and responsibility to take on the wider governance and stewardship role that will be needed to ensure that all health sector stakeholders adhere to policies, procedures, and standards. More emphasis will need to be given to regulation and building transparency and accountability across the sector. This will require substantive changes in the way the MOHFW is set up as well as the development of capacity in these governance areas.”

Now is the time to marshal political and executive efforts and translate this rhetoric into reality. Efficiency of health systems needs monitoring with brutal honesty. The final hundred meters ahead is the toughest part—let's be bold and do it right.

*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*



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*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*



# Newborn and Child Health in Bangladesh: Moving Forward

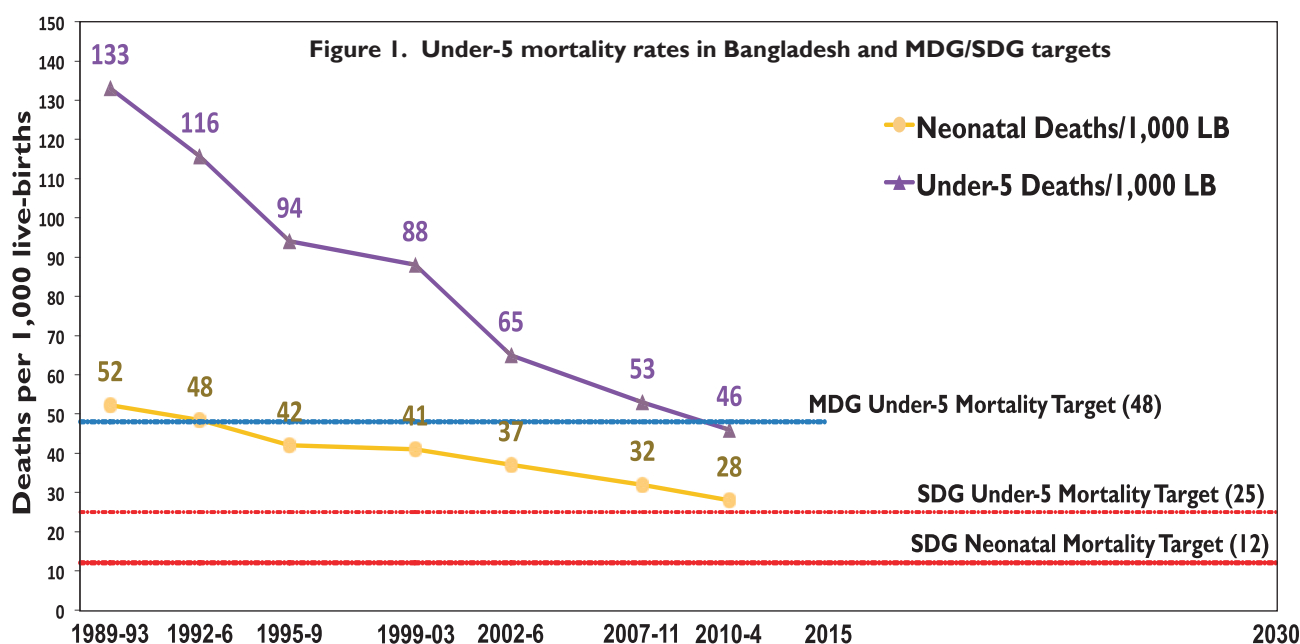
## Sustainable Development Goals and National Commitment

The 2030 Global Agenda for Sustainable Development, adopted on 25 September 2015, contained 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle the effects of climate change. Bangladesh has committed to SDG target 3.2 to end preventable deaths of newborns and children under age 5 by 2030. The aim is to reduce neonatal mortality to 12 or fewer deaths per 1,000 live births and under-5 mortality to 25 or fewer deaths per 1,000 live births.

Over a period of two decades under-5 mortality in Bangladesh has declined by 65%. However, the reduction in neonatal mortality has happened more slowly than the reduction in deaths among older children. To achieve SDG target 3.2, Bangladesh has to further reduce under-5 mortality by 46%, and at the same time also reduce newborn deaths by 57%.

## Newborn Health: Will the current priority interventions to address newborn deaths help Bangladesh achieve the SDG target of reducing neonatal deaths to 12 per 1,000 by 2030?

The Government of Bangladesh has prioritized interventions to target the major causes of newborn death as part of the Bangladesh Call for Action 2013, and formalized in subsequent policy decisions (Table 1). An analysis of the likely impact of the prioritized interventions based on the cause of death distribution of neonatal deaths should help us determine how likely we are to meet our target.



Source: Bangladesh Demographic and Health Surveys, 1993-4, 1996-7, 1999-2000, 2004, 2007, 2011, 2014

Table 1 presents the government's priorities for newborn interventions and the expected national coverage by 2030, based on the level of implementation envisioned in the Bangladesh Every Newborn Action Plan (BENAP). This calculation uses the cause of death distribution from the 2011 Bangladesh DHS and assumes that these interventions will primarily affect specific causes of newborn deaths.

Table 1. Estimated neonatal deaths averted (per 1,000 live births) by specific interventions

Common causes of neonatal death	Interventions	Expected 2030 coverage*	Effectiveness	Neonatal deaths Averted per 1,000 live births (base: 28)
Infection	Chlorhexidine for cord care to prevent infections	80%	40% <sup>1</sup>	3.36
	Management of newborn infections, including care at first level facilities, improved inpatient care, Special Care Newborn Units (SCANUs)/Newborn Stabilization Units (NSUs)	70%	80% <sup>1</sup>	5.82
Birth asphyxia	Resuscitation of newborns	78%**	50% <sup>2</sup>	2.25
Prematurity	Special Care Newborn Units (SCaNUs)/Newborn Stabilization Units (NSUs) for prematurity	25%***	80% <sup>3</sup>	0.62
	Antenatal corticosteroids (ACS)	16%****	40% <sup>3</sup>	0.20
	Kangaroo mother care (KMC)	25%*****	80% <sup>3</sup>	0.62
				12.87

Assumptions:  
 \* 44% of deliveries in public sector facilities by 2030, 5% in NGO facilities, and 49% in private facilities  
 \*\* 80% coverage in public/NGO facilities and private facilities  
 \*\*\* 50% coverage in public/NGO facilities and 0% in private facilities  
 \*\*\*\* 33% coverage in public/NGO facilities and 0% in private facilities  
 \*\*\*\*\* 50% coverage in public/NGO facilities, and 0% in private facilities  
<sup>1</sup> of infection deaths, <sup>2</sup> of asphyxia deaths, <sup>3</sup> of prematurity deaths  
 Note: This is a somewhat simplistic calculation, susceptible to both an over-estimation of deaths averted (by double counting those deaths averted by two or more interventions) and an under-estimation of deaths averted (by not counting the indirect impact of interventions for all causes of neonatal deaths (e.g., chlorhexidine can potentially reduce preterm deaths). In addition, this analysis does not account for uncertainties in the effectiveness estimates.

**Our estimates, based on proposed interventions and their anticipated coverage, suggest that even under the most optimistic scenarios, we may not reach the target of averting 16 deaths per 1,000 live births (to reach the SDG target of 12, down from the current level of 28).**

The analysis means that to achieve the SDG targets we will need to:

- Make every effort possible to achieve, and possibly exceed, the “optimistic” coverage targets for the interventions, and
- Invest in improving the quality of services to ensure expected or higher levels of effectiveness

## Newborn Interventions: Making Maximum Effort to Achieve and Exceed Optimistic Coverage Targets

**Substantially increase facility deliveries, particularly in public facilities, by improving service readiness.** Level of facility deliveries is a critical determinant of expected coverage of most newborn interventions. In 2014, 15% of deliveries took place in public (13%) and NGO (2%) facilities, and 22% in private facilities (Table 2). Bangladesh’s draft maternal health strategy aims to achieve 98% of all deliveries in facilities by 2030. The government is rapidly increasing its investment in public facilities offering delivery services. This is important, as continued overreliance on private facilities will lead to greater inequities with the poor being left out.

Table 2. Current and expected levels of facility deliveries

Types of Facility	Levels of facility deliveries (% of all deliveries)	
	Actual in 2014	Expected 2030 level
Public facilities	13	44
NGO facilities	2	5
Private facilities	22	49
Total	37	98

For the analysis presented in this policy brief, we have assumed that this strategy will result in 44% of deliveries in public sector facilities by 2030, 5% of deliveries in NGO facilities, and 49% in private facilities. This result has been summarized in Table 2—presenting an optimistic projection for 2030.

The most important challenge with this expansion will be to ensure a minimum quality of care, as illustrated by the 2014 Bangladesh Health Facility Survey (BHFS), which showed that only 7% of district facilities and no private facilities met the minimum physical, human resources, equipment, and supplies requirements for providing normal delivery care.

**Table 3. Possible delivery strategies for newborn interventions and challenges**

Intervention	Delivery Strategy	Challenges
<b>Chlorhexidine for cord care</b>	<ul style="list-style-type: none"> <li>• Application to all newborns in facilities</li> <li>• Distribution by GoB/NGO CHWs and social marketing for home birth babies</li> </ul>	<ul style="list-style-type: none"> <li>• How to intervene in private facilities?</li> <li>• How to avoid duplication in distribution?</li> </ul>
<b>Resuscitation of newborns</b>	<ul style="list-style-type: none"> <li>• For all newborns in facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Staff skill retention</li> <li>• Infection prevention</li> <li>• Sustained availability of equipment</li> <li>• How to intervene in private facilities?</li> </ul>
<b>Management of newborn infections</b>	<ul style="list-style-type: none"> <li>• Primary care at union facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring compliance with and follow-up of ambulatory management</li> <li>• How to deal with high careseeking from informal providers?</li> <li>• Should we include community clinics?</li> </ul>
	<ul style="list-style-type: none"> <li>• Care for referred severe cases in upazila and district hospitals (NSUs and SCANUs)</li> </ul>	<ul style="list-style-type: none"> <li>• Effective referral/transport options needed</li> <li>• Customized protocols needed</li> <li>• How to retain nurses with specialized skills?</li> <li>• Whether and how to intervene in private facilities?</li> </ul>
<b>SCANUs/ NSUs</b>	<ul style="list-style-type: none"> <li>• NSUs in upazila hospitals</li> <li>• SCANUs in district and medical college hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• Sustaining initial investments, maintenance and replacement of equipment, sustained supplies</li> <li>• How to retain nurses and doctors with specialized skills?</li> </ul>
<b>Antenatal corticosteroids</b>	<ul style="list-style-type: none"> <li>• In upazila, district, and medical college hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to reach all pre-term infants</li> <li>• Staff skill retention</li> <li>• How to intervene in private facilities?</li> <li>• How to correctly determine gestational age and how to monitor for safety?</li> </ul>
<b>Kangaroo Mother Care (KMC)</b>	<ul style="list-style-type: none"> <li>• In upazila, district, and medical college hospitals</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to reach all preterm infants</li> <li>• How to retain nurses with specialized skills?</li> <li>• How to intervene in private facilities?</li> </ul>

**Focus on a few (strategically located) but well-functioning facilities: Make “smart” choices.** Bangladesh tends to stretch itself too thin—that is, tries to expand delivery services to levels of providers and facilities clearly inappropriate to provide those services and to expand to too many facilities that are beyond the country’s capacity to support and ensure quality. We need to be smarter in deciding which facilities should offer various child delivery services, keeping in mind our health system’s ability to provide program support, including ensuring monitoring, supervision, and quality assurance. For example, before we move forward to provide delivery care at Community Clinics, we need to ask whether we can ensure and sustain the quality of care in these clinics at a level that will save lives. As a second example, only few of the nearly 300 facilities in Bangladesh designated as comprehensive emergency obstetric care services (CEmOC)<sup>1</sup> are able to provide true 24/7 services, reflecting the health system’s consistent inability to provide adequate program support.

The findings from the 2014 BHFS indicate that the task of ensuring well-functioning facilities to provide delivery services will not be easy. We strongly urge avoiding the temptation to expand beyond our need and capacity to manage and support. The draft of the updated Bangladesh Maternal Health Strategy provides good guidance in this regard, recommending a network of facilities that provide normal delivery within one hour of travel time for every family in the country and a comprehensive EmONC facility within two hours of travel for every family. One consequence of this recommendation is that an average district may only need two comprehensive EmONC facilities if travel time is reduced by having smart transportation options.

**Make “smart” choices on selection of strategies to deliver the newborn interventions.** Table 3 recommends delivery strategies for various newborn interventions. Here again, we should be smart in choosing strategies to deliver these interventions based on need, our capacity to support and ensure quality, and our ability to scale up fast enough to achieve targets. Table 3 also highlights key challenges to be addressed for these delivery strategies to be successful. This is not a comprehensive list of challenges but rather a list of serious bottlenecks to achieving high coverage.

To achieve greater coverage and impact for some of the intervention delivery strategies in Table 3, we recommend a strategy that identifies newborns at higher risk and provides targeted programming for these babies (e.g., referral for appropriate care and home follow-up visits). Recent work by colleagues at icddr,b and Save the Children International, Bangladesh (with support from USAID/TRAction) show a near doubling of appropriate care-seeking for sick newborns after adopting such a targeted approach to delivering interventions (unpublished, personal communication, Suman Chowdhury, icddr,b).



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

**Reinforce behavior change communications through various channels to improve parenting skills, including essential newborn care and careseeking behavior.** With rapid economic growth in the country, more families will have the resources to adequately meet basic livelihood needs and to minimize the underlying environmental risks. However, declining fertility means that more and more of the newborns will be born to first-time mothers (currently around 43%). Although the majority of these mothers are likely to be literate, they will not easily learn about child care from experience and/or from peers. Basic preventive newborn care at home, such as temperature maintenance, eye and cord care, early and exclusive breastfeeding, and early detection of problems or danger signs are critical components of essential newborn care.

We recommend scaling up interventions to improve parenting skills, particularly of first-time mothers. These should capitalize on high literacy rates and use multiple communication channels, including written materials, school-based education, television, the Internet, and cell phones (e.g., call centers). Effective behavior change communications, particularly through the mass media, should target both improved practices at home and also care-seeking for maternal and newborn health services.



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

### **Newborn Interventions: Investing in Quality of Services for Higher Levels of Effectiveness**

**Most facilities are not ready to provide critical care.** The 2014 BHFS illustrates the challenges to ensure quality of services. Only 23% of district and upazila public facilities, 5% of union facilities, and 10% of community clinics met the readiness criteria for child curative care. Only 7% of district and upazila public facilities and no union facilities and community clinics met the readiness criteria (physical and human resources, equipment, supplies) for providing normal delivery care. These are significant challenges, representing longstanding weaknesses in the system, and they will not be easy to address, although we must.

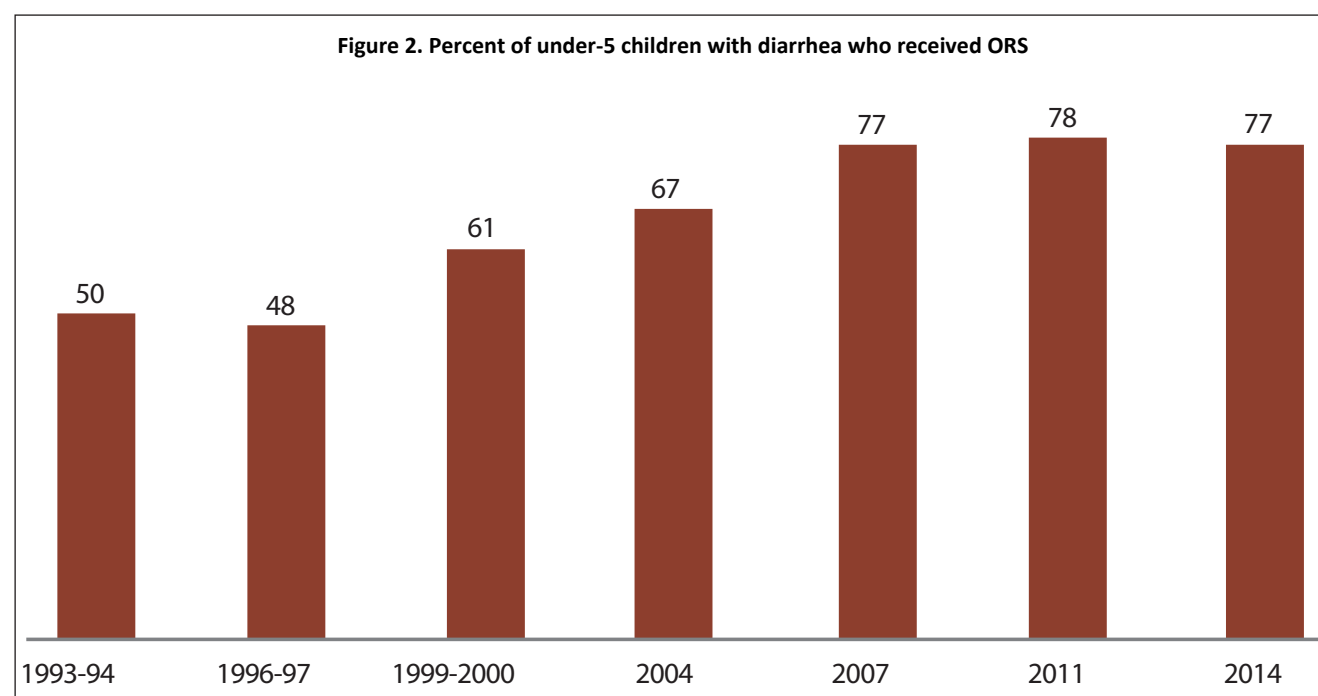
**The MOHFW should focus on sustained quality improvement rather than short-term initiatives. The usual response to quality of care issues tends to be one-time investments in equipment and staff training.** Such efforts, while essential, tend to have short-lived impact on quality of care in the absence of sustained efforts to implement standard operating procedures and effective monitoring and accountability mechanisms at scale. The new Quality Improvement Cell of the MOHFW, working in close coordination with the relevant technical programs, should focus on implementing sustainable and effective quality assurance processes.



**Improving the quality of care of delivery services from health facilities and providing good quality predischarge postnatal care is of critical importance.** With appropriate care and referral by skilled and experienced staff in facilities delivering babies, we should not only be able to provide adequate resuscitation of all asphyxiated newborns but also should be able to reduce the risk of asphyxia and thus substantially avert the need for resuscitation. Many early neonatal deaths and stillbirths from complications of labor and delivery may be averted with good quality health facility services. A critical intervention that should also be provided is high quality postnatal care and counseling of the mother and newborn prior to discharge.

### Looking Beyond the Neonatal Period

If the 2030 SDG target for reducing under-5 mortality is to be met, Bangladesh will need to reduce mortality after the neonatal period by 28% in the next 15 years. While this may seem an easily achievable target, failure to adequately address three dominant causes of deaths may interfere with the current rapid rate of decline.



**Stagnation of ORS use for child diarrhea needs attention.** Bangladesh has seen an exceptional reduction in childhood deaths due to diarrhea (2% of all under-5 deaths, 2011 Bangladesh DHS). However, we need to be very concerned with the stagnation of ORS coverage (Figure 2). ORS use rates have remained unchanged for almost a decade, with no explanation, the result primarily of a dangerous complacency. We can and should aspire to universal use of ORS in the coming years, starting first with understanding the reasons for this stagnation and then developing a strategy to further increase coverage.

**Effective approaches are needed to regulate the uncontrolled use of antibiotics for treatment of pneumonia.** Pneumonia remains the dominant cause of death among children after the first 28 days of life, causing 36% of deaths (2011 Bangladesh DHS). Two vaccines (Hib and pneumococcal conjugate vaccine [PCV]) that prevent major causes of childhood pneumonia have been introduced in Bangladesh, though we do not yet have any direct assessment of the impact of these vaccines on pneumonia-related mortality. The Hib vaccine was introduced in early 2009, but its impact may not have been fully measurable at the time of the 2011 Bangladesh DHS when we last measured causes of childhood deaths.

**Antibiotic treatment of children with pneumonia is a key strategy for preventing pneumonia related deaths in children.** According to the 2014 BDHS, only 42% of children ill with symptoms of acute respiratory infection (ARI) were taken to a health facility or an appropriate provider for treatment. For another 50%, care was sought from pharmacies or traditional doctors. Unregulated quality of care is a key challenge in this situation, particularly with overuse of antibiotics. Increasing resistance to antibiotics is a direct consequence and a key source of risk to our ability to continue to be able to effectively treat childhood pneumonia. We need effective approaches to regulate the uncontrolled use of antibiotics. There are examples of initiatives taken in many countries that we can learn from,<sup>2</sup> but we must find a solution that suits Bangladesh-likely involving the government, professional associations (e.g., pediatricians), and the pharmaceutical industry.

**Target parents of young children through mass communications on the risks of drowning and the importance of adult supervision. Drowning is the second most common cause of death among children after the first 28 days (23%) (2011 Bangladesh DHS).** Because most of these deaths occur in the second year of life, swimming lessons that target older children are unlikely to be an effective intervention in this age group. Studies are underway to test alternative intervention options (crèches and playpens), with results expected by mid-2016. Both of these interventions assist caregivers of young children in ensuring their safety, especially during the hours of the day when they are tied up with household or other work. The need to assist the caregiver (usually the mother) in securing the young child is particularly essential in households with four or fewer members (54% of households). In these households it will be difficult to have alternate adult family members to supervise the young child in times of need. While we wait for findings from ongoing intervention studies, we can initiate mass communications that target parents of young children with information on the nature of the risk from drowning (age group, time of day) and the importance of adult supervision.

*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*



## A Call for Change to Prevent More under-5 Deaths

It cannot continue to do business as usual if Bangladesh is to achieve the SDG targets to end preventable deaths of newborns and children under age 5. High coverage of prioritized interventions must be achieved. This will require adoption of appropriate and creative operational strategies to deliver these interventions, backed up with adequate and timely investments across all building blocks of the health system and with a focus on ensuring quality of services.



Courtesy: Shafiqul Alam Kiron, Save the Children/USAID

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*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

# Addressing Malnutrition in Bangladesh: Holistic Approach is Pivotal for Improvement

## Bangladesh National Commitments to Address Childhood Malnutrition

Bangladesh has agreed to the sustainable development goal of ending all forms of malnutrition by 2030. This goal depends on achieving, by 2025, the World Health Assembly (WHA) global targets on stunting and wasting in children under age 5 and also on addressing the nutritional needs of adolescent girls, pregnant and lactating women, and older persons. In line with the global agenda, the Ministry of Health and Family Welfare (MOHFW), Bangladesh, has been implementing the Health Population and Nutrition Sector Development Program.

Indicator	Current Status	4th HNP Sector Program 2016-2021	WHA Global Nutrition Targets 2025
Prevalence of stunting among children under age 5	36.1% (BDHS 2014)	25%	21.6% (40% reduction)
Prevalence of wasting among children under age 5	14% (BDHS 2014)	-	Reduce and maintain childhood wasting to less than 5%

## Malnutrition among Children and Women: Bangladesh Situation

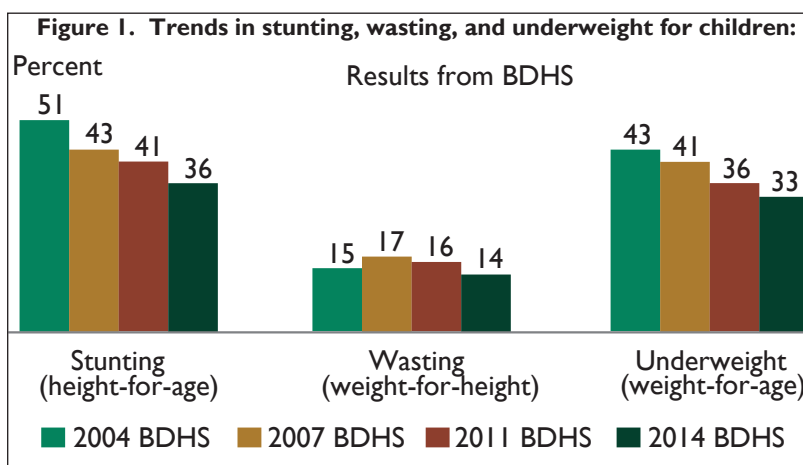
**Improving Malnutrition in Children: Still a Long Way to Go.** Despite laudable achievements in public health over the last couple of decades, Bangladesh still faces a huge burden of malnutrition. The numbers of malnourished children under age 5 are staggering—more than five million children have stunted growth while around 450,000 children suffer from potentially deadly severe acute malnutrition. Currently wasting, or acute malnutrition, affects 14% of Bangladeshi children, while one-third of children are also underweight, which is a composite of stunting and wasting. Low birth weight—a body weight less than 2500 g at birth—is an important risk factor for subsequent malnutrition and is still quite high at 25%-30% among Bangladeshi children.

The average annual rate of reduction (AARR) of stunting in Bangladesh is 2.7 which is much less than the required 3.3 AARR to reach the global WHA target. Thus, Bangladesh is not likely to achieve the WHA target for reducing childhood stunting.

### Improving Nutrition in Women: Seeking a Balance between Underweight and Overweight.

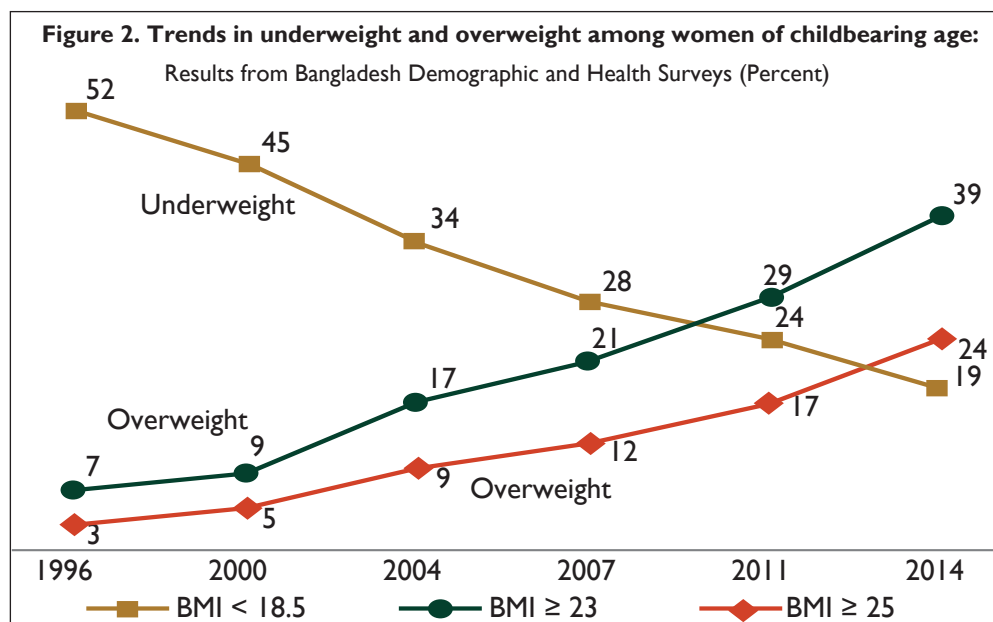
Over the last decade, the proportion of women with low body mass index (BMI < 18.5), an indicator of undernutrition, has decreased markedly from 34% to 19%. However, the proportion of overweight women (BMI ≥ 25) increased alarmingly from 9% to 24% over the same period. Thus, while undernutrition among women of childbearing age has declined, overall malnutrition status—with the rise of

overweight and obesity—has remained the same for the women. If the WHO cutoff for public health action (BMI ≥ 23) is used, the proportion of overweight women has increased from 17% in 2004 to 39% in 2014.



The increasing rate of obesity among women is a major challenge to obstetric practice since excess maternal weight can harm both women and fetuses. The risks for pregnant women include gestational diabetes and preeclampsia; the risks for the fetus are stillbirth, congenital anomalies, and autism. In the long term, children born to very overweight women also are at risk of future obesity, diabetes, hyperlipidemia, hypertension, and heart disease.

Two of the 169 proposed targets in the Sustainable Development Goals (SDGs) are to (1) reduce premature deaths from non-communicable diseases (NCDs) by one-third and (2) end malnutrition in all its forms. If obesity is not addressed properly, Bangladesh will not be able to achieve either of these two targets. In addition, Bangladesh will be unable to attain the “halting obesity” target of the NCD global monitoring framework of the World Health Organization.



### Holistic Approach is Pivotal

Given the current situation, the Government of Bangladesh has recently approved the National Nutrition Policy 2015 that highlights scaling up nutrition-specific and nutrition-sensitive interventions and focuses on multi-sectoral efforts to tackle malnutrition. Consistent with the 2015 policy, the following holistic approaches are suggested:

### Nutrition-specific interventions: Scale up effective interventions and initiate new efforts and approaches

Nutrition-specific interventions have a direct impact on nutritional status. These include breastfeeding, complementary feeding, micronutrient supplementation, adequate and balanced diet during pregnancy, and treatment of acute malnutrition. Coverage of these interventions is still not at scale. For example, 21% of under-5 children have moderate to severe vitamin A deficiency, and 56% have mild deficiency. Only 62% of children received a vitamin A capsule in the 6 months before the 2014 BDHS. It is imperative to increase the coverage of nutrition-specific interventions across the population through both public and non-government sectors.

**Counseling mothers is required to improve child feeding.** Only 55% of all Bangladeshi children under age 6 months are exclusively breastfed. After the first six months, appropriate complementary food is indispensable for optimum growth. This requires animal source food in the diet, which is expensive and not widely available. A meager 23% of young children are fed a minimum accepted diet in terms of dietary diversity and optimum meal frequency.

This situation can be improved through promoting and supporting optimum Infant and Young Child Feeding (IYCF) practices. An important intervention is counseling mothers of infants and young children on appropriate IYCF practices. Messages on cell phones, radio, and television are effective in promoting good practices. Mothers should be advised to start breastfeeding within an half hour of birth; provide only breast milk for the first six months; and provide complementary food, preferably animal source foods, fruits, vegetables, legumes, and oil/ fat, to infants two to four times per day, plus breast milk and snacks.



*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*

**Management of acute malnutrition should be institutionalized in the community.** Severe acute malnutrition (SAM), the worst form of undernutrition, affects 3.1% of children or approximately 450,000 children in Bangladesh. These children are 10 times as likely to die as children of normal weight children. Although community-based management of acute malnutrition (CMAM) has been highlighted in the National Nutrition Policy 2015 and national guidelines are available, to date there has been no program for the actual management of the child with SAM in the community. Appropriate community-based interventions for children with SAM must begin now.

**Calcium deficiency among adolescent girls and women must be prevented.** Intake of calcium-rich food is very low in Bangladesh. Even among high-income women, close to 50% do not meet the lowest requirement suggested by WHO, increasing their risk of osteoporosis. Poor calcium status during pregnancy can increase risks of gestational hypertension as well as preeclampsia/eclampsia. Calcium supplementation during pregnancy should be instituted nationwide. In addition, research is needed to identify inexpensive and widely available food-based alternatives to calcium supplementation.

### **Nutrition-sensitive intervention: Improve conditions that impact nutrition**

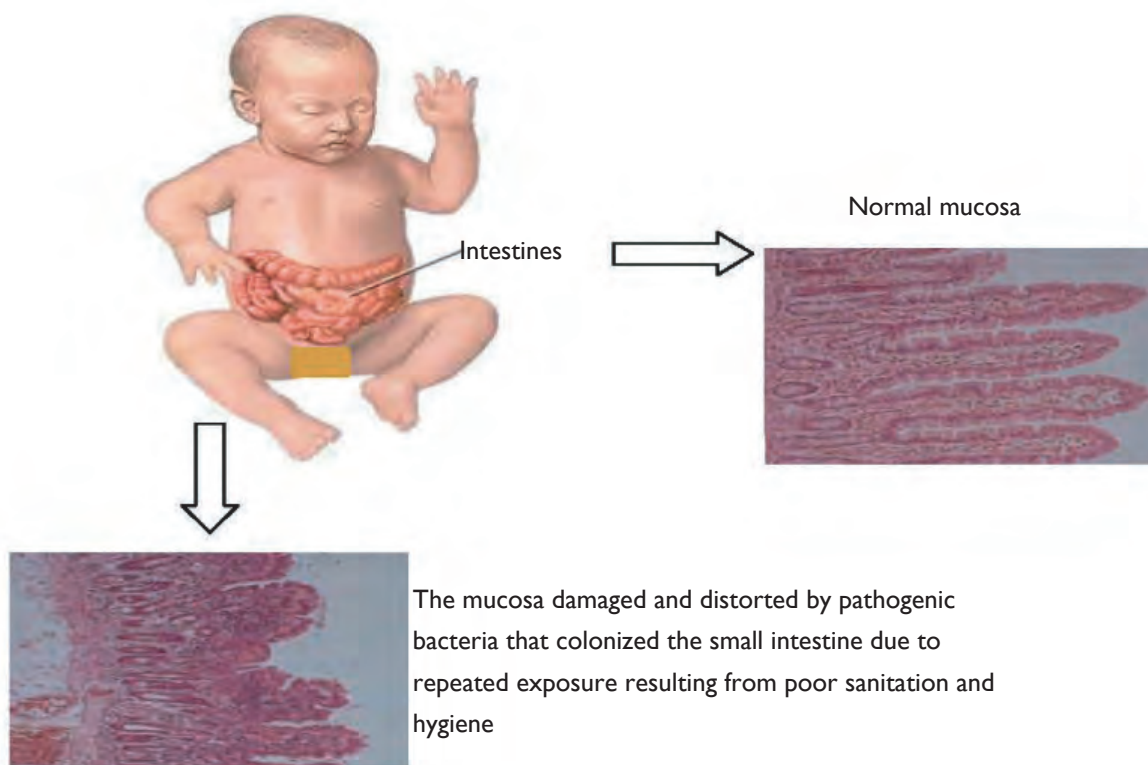
A substantial reduction in stunting can happen only when nutrition-specific interventions are coupled with nutrition-sensitive interventions that include food security, family planning, proper water, sanitation and hygiene, women's empowerment, and social safety nets for the extremely poor and vulnerable.

**Reduce extreme food insecurity.** Severe food insecurity still affects 27% of the population. Although the country now produces sufficient amounts of rice (35 million metric tons in 2015), supply is far short of demand for meat, milk, eggs, lentils, fruits, and vegetables. Critical interventions that must start now are growing more high-yield varieties of nutritious food, improving poultry and dairy producing practices, and introducing micronutrient rich rice through biofortification.

**Improve water, sanitation, and hygiene.** Recent evidence suggests that the number of different types of pathogenic bacteria in feces of children, rather than symptomatic diarrhea, is associated with stunting. This condition is called environmental enteropathy (EE). EE develops when young children are repeatedly exposed to pathogenic bacteria that colonize the normally sterile small intestinal mucosa. EE sets up a chronic inflammation in the small intestinal mucosa, damaging the mucosal villi that absorb nutrients and preventing proper absorption of nutrients leading to malnutrition.

Results of the Urban Health Survey 2013 reveal that just over half (51%) of children of poor families living in slums are stunted compared with 43% of non-slum counterparts of similar economic status. This suggests that it is the environment in a slum setting littered with pathogenic bacteria that predisposes a child to EE. To prevent EE, we need a revolutionary change for improved personal hygiene, functional latrines, and proper garbage disposal.

**Figure 3. Comparison of a normal mucosa and a damaged mucosa**



Environmental enteropathy: damage of the small intestinal mucosal lining by pathogenic bacteria that grow there as a result of repeated exposure that occurs because of poor sanitation and hygiene

**Combine nutrition with social safety net programs can bring change in the community.** High rates of childhood stunting and micronutrient deficiencies in Bangladesh could be reduced significantly if nutrition interventions including counseling are incorporated into different social safety net programs (SSNPs). This can include:

- Provision of micronutrient-fortified rice instead of the conventional rice
- Supplementation of pregnant and lactating women who are undernourished as well as acutely malnourished children with nutritious food
- Multiple micronutrient powders for home fortification of rice.



**Intervene now to halt the growing epidemic of overweight and obesity in Bangladesh.** There is an alarming trend of overweight among women in the country. This has serious implications; being overweight increases the risk of developing chronic, non-communicable diseases like diabetes—also on the rise in Bangladesh. According to the 2011 Bangladesh DHS, 11% of women age 35 and older had diabetes, and around 25% were considered to be pre-diabetic.

Overweight and obesity are still uncommon among under-5 children nationwide; only about 1.4% are considered overweight. However, recent reports suggest an increasing trend of overweight and obesity among school-age children in urban areas. Work to halt the increasing menace of overweight and obesity should start now with the following steps:

- Improve knowledge about balanced diet and the importance of physical activity through behavior change communication campaigns and discussions in educational institutions, health facilities, and the media
- Improve environment for physical activity by reclaiming playgrounds and parks in cities; keeping the footpaths clean and free from encroachment
- Discourage inappropriate eating habits, particularly the intake of junk food
- Emphasis on outdoor pursuits and exercise for children
- Encourage indoor physical activities such as rope skipping and restrict playing on hand held devices or watching television for prolonged time.

### Coordinated policy, strengthened capacity, and multisectoral implementation is crucial

Multisectoral efforts are essential and must be guided from the highest government office to be successful. Key nutritional problems such as stunting and anemia have complex origins. For example, only one-fifth of stunting or poor linear growth of children can be controlled by scaling up nutrition-specific interventions alone. Therefore, these interventions have to be coupled with nutrition-sensitive interventions which are largely implemented by ministries and sectors other than health. Harmonization of implementation of nutrition-specific and sensitive interventions can be done. Countries that have been successful in controlling malnutrition, for example, Thailand and Brazil, have relied on coordination of different ministries at the national level led from the highest public office. In consonance with the National Nutrition Policy 2015, the national nutrition council needs to be rejuvenated under the leadership of the Head of the Government. Only high level support and attention will trigger effective multisectoral efforts. Without this coordination, reducing malnutrition is impossible. A realistic national nutrition plan of action should be developed. The plan of action should focus on priority nutrition-specific and sensitive interventions and should be realistic, time bound, not overly ambitious, and carefully budgeted.

**Grassroot-level nutrition efforts need functional integration.** Integration/ mainstreaming is mostly talked about at the headquarters level; unfortunately, it is not always evident at the implementation level, calling for an urgent need for ‘functional integration’. The coordination between Directorate General of Health Services (DGHS), Directorate General of Family Planning (DGFP), and Community Clinics (CCs) has improved, but there is ample scope for further improvement. Because of their presence in the community, the CCs should be the cornerstone of delivery of public health nutrition interventions.

**The capacity of National Nutrition Services (NNS) must improve.** The NNS is a result of mainstreaming nutrition in 2012 and does not have any direct program- implementing functions. Rather the NNS provides guidelines on clinical and public health nutrition and serves as steward and coordinator in implementation of nutrition-specific interventions. The NNS lacks trained staff; there is an urgent need to place and retain nutritionists as well as the director and program managers.

**A health work force assessment is needed.** The gap between health human resources and population needs is a major deterrent to successful implementation of public health nutrition programs. Our health human resources should be reviewed to determine whether there are enough competent professionals to scale up nutrition interventions effectively. Results of the Bangladesh Health Facility Survey 2014 show that 62% of Community Clinics (CCs) provide growth monitoring, an essential service in Bangladesh; however, only one-third of CC health workers are trained in growth monitoring. The key to improving nutritional status of the population is effective communication for changing behavior, and this requires an adequate number of trained and competent health workers.

The inadequate ratio of trained health workers to population can be ameliorated if the work of the three categories of front line health workers working at Community Clinics, that is, Community Health Care Providers, Health Assistants, and Family Welfare Assistants are synchronized. This was suggested in the Annual Program Implementation Report 2015 for the Health, Population and Nutrition Sector Development Program.

### Good Nutrition is a Lifelong Goal

Addressing malnutrition now requires combating ‘malnutrition in all its forms’ to encompass nutritional problems at all stages of the life course. Malnutrition must be addressed now with integrated approaches rather than continuing to pursue the single-nutrient ‘magic bullet’ or ‘boutique’ interventions which prevail today. Action is required at all levels—starting from improving governance to scaling up nutrition-specific and nutrition-sensitive interventions.

*Courtesy: Shafiqul Alam Kiron, Save the Children/USAID*



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