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Addressing the Health Needs of the Extreme Poor

A Desk Study by shiree

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October 2008

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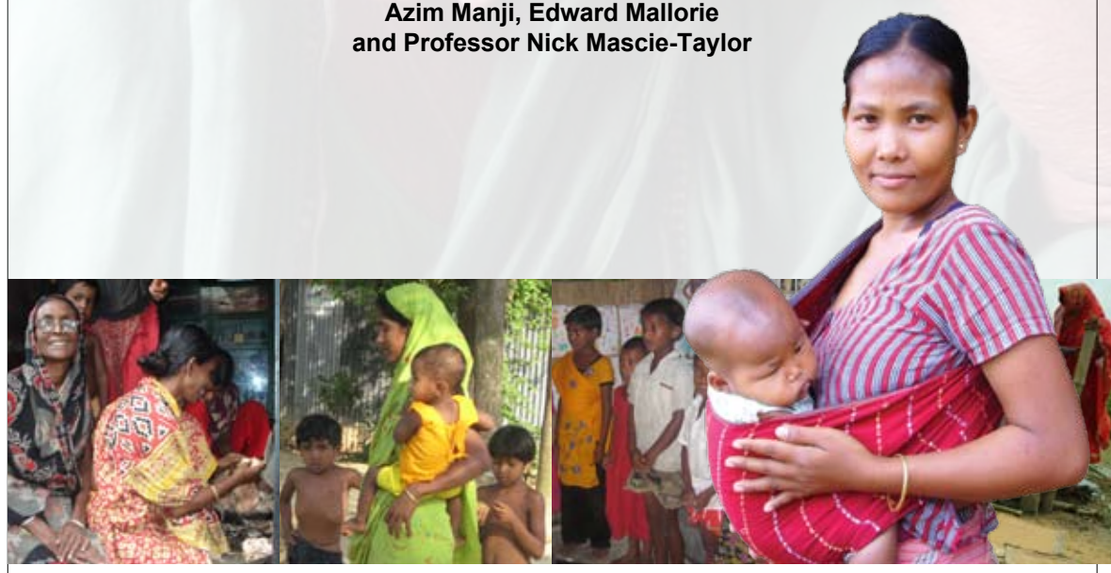

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Addressing the Health Needs of the Extreme Poor

1.0 Purpose of This Note[1]

Reducing the risks and addressing the effects of ill health are essential if the extreme poor are to improve their lives and livelihoods. Health components of extreme poverty programmes can act as safety nets by minimising the income erosion effects of illness and enabling the extreme poor to engage in livelihood activities. A more explicit focus on the needs and rights of the extreme poor within broader health interventions can also draw greater attention and resources to these populations and in turn help to increase their demand for services.

The purpose of this note is to

1) Provide guidance to assist in the design of health related interventions within poverty reduction programmes that are better able to reach and benefit the extreme poor
2) Address the potentially impoverishing effects of ill health on the already poor

Of these two the primary focus is on the former.[2] The note is also intended to assist in the screening process for challenge funds. By identifying key issues that need to be addressed in design and implementation, it provides guidance on the assessment of health focused or health inclusive proposals to DFID-sponsored programmes.

[1] This note builds on the initial work of Dr, Rebecca Calder, DFID Bangladesh and others.

[2] This means that there is a straightforward assumption that financing will be provided at least partly from external sources with perhaps some matching fiscal subsidy. The key issue, then, is what is the most effective way of using resources to help people exit from extreme poverty?

2.0 Who are the Extreme Poor and How do we Identify Them?

Extreme poverty can be defined in different ways. Income and consumption measures are one important way. But poverty, especially in its extreme form, also has many other sides to it. These include:

- ***Lack of access*** to adequate clothing, shelter, nutrition, health and education, sanitation and hygiene
- ***Extreme vulnerability*** and difficulty meeting minimum consumption needs (e.g. seasonal landless labour)
- ***Gender*** - the experience of poverty can be different for women and men
- ***Exclusion from social networks*** and ways of exercising citizenship

[3]Gender and Poverty: New Evidence from 10 Developing Countries. Agnes R. Quisumbing, Lawrence Haddad, and Christine Peña December 1995 IFRPRI Discussion Paper No. 9. This study found a consistent association between gender and greater poverty in two countries, one of them Bangladesh

In Bangladesh, ***programme-based definitions of extreme poverty*** include membership of a rural female-headed household and inability to earn a livelihood due to congenital or health-related disability. Other terms are also used for this group, such as ***hardcore poor and bottom poor***.[3]

These ways of defining poverty are focused on a particular point in time. The term ***'chronic' poverty*** overlaps with extreme poverty but refers to those who remain very poor throughout their lives and pass on their poverty to the next generation.[4]

Extreme Poverty in Bangladesh

In Bangladesh, estimates of the extent of extreme poverty depend on a number of definitions and a set of statistics. A recent review suggests:

- **About 30% of the rural population is in chronic poverty** and experiences low consumption, hunger and under-nutrition and lack of access to basic services.
- Of the total population, **about 24% live in extreme income poverty and about 10% survive on two meals a day or less for some part of the year.**[5]
- **Certain groups are also more likely to suffer extreme poverty.** These include people with physical and mental disabilities, unsupported elderly people and landless rural households with high numbers of young or older dependents.

In addition, in developing interventions it is important to bear in mind that:

- **The extreme poor are not all the same.** Urban street dwellers, landless seasonal labourers and female-headed households in rural areas may all be extremely poor, but the type of poverty, its health implications, and the kind of interventions which might work will vary.

[3] Nasrin Sultana Conceptualising Livelihoods of the Extreme Poor: Livelihoods of the Extreme Poor Research study: Working paper 1, Bangladesh January 2002. Livelihoods Connect IDS 2006, available on http://www.livelihoods.org/lessons/project_summaries/LEP_projsum.html

[4] Binayak Sen, David Hulme (eds) The State Of The Poorest In Bangladesh 2004/2005: Chronic Poverty In Bangladesh. Tales of Ascent, Descent, Marginality and Persistence. Overview. Bangladesh Institute of Development Studies, Dhaka, Chronic Poverty Research Centre, IDPM, University of Manchester, UK.

[5] Ibid

3.0 The Health Scenario of the Extreme Poor

The extreme poor and poor share similar health problems but ***the health problems of the extreme poor may have some distinctive features:***

- ***Levels of malnutrition are likely to be highest*** among this group. This particularly affects children, adolescents, reproductive-age women and the elderly[6]
- In Bangladesh, ***the extreme poor are less likely to use health services*** than the moderate poor and the non-poor, including preventive services[7]
- Their ***living conditions are usually of a very poor standard***. This increases their risk from some communicable diseases and from environmentally related causes of illnesses such as water, air and industrial pollution
- As they consume the least health resources of any group, ***they are likely to experience greater severity of illnesses and suffer worse outcomes***[8]

[6] Stunting and wasting effects can be lifelong: Prof Nicolas Mascie-Taylor (personal communication)

[7] According to the Bangladesh Demographic and Health Survey 2004, children in households in the highest wealth quintile are more likely to be fully vaccinated (87 percent), compared with those in the lowest quintile (57 percent).

[8] Generally, there is a lack of knowledge on the disease and morbidity status of the very poor. It is possible that they have very different disease profiles, including psychological ones.

Health shocks and stresses are closely linked to poverty. ***For those who are already poor,*** the high costs of treatment, particularly those associated with in-patient hospital care and long term management of chronic illness, are potentially catastrophic for poor households. Medical costs account for a significant share of average household expenditure. In Bangladesh, as in other developing countries, ***they are an important factor in pushing poor households into extreme poverty.*** This is because:

- The ***costs of treatment*** must usually be met at a time when a sick member of the household is less productive
- Households may have to ***sell productive assets,*** reducing capacity to negotiate their way out of poverty in the future
- ***Caring for a sick person*** may pull other household members away from income generating or otherwise productive activities
- Households suffer both ***direct expenditure and lost wage and production economic costs though ill-health.*** They also suffer social costs through ***decreased ability to participate*** in the social life of the community

If the affected person remains disabled or chronically ill, the negative social and economic impacts on the household become magnified.[9]

[9] Meeting the health-related needs of the very poor. www.eldis.org/healthsytems/dossiers/v_poor

For ***those who are already extremely poor,*** the ***frequent experience of health stresses*** can be as important as the sudden impact of health shocks ***in keeping the extreme poor from escaping poverty.*** This is because these have a cumulative economic and social impact on people's lives. Extremely poor households with few assets are likely to struggle to meet even small additional health expenses and can rarely access hospital care. Even where services are provided free of charge, there are usually ***informal payments*** to be made or a need to purchase items not available at the facility.

3.1 Constraints and Barriers to Medical Care

The extreme poor face many barriers to using preventive and curative care as a direct consequence of their poverty and these are not only cost-related. The range of barriers to access and utilisation they experience means that they often simply do not seek healthcare when they need it. ***These need to be taken into account when designing programmes:***

- The extreme poor ***do not always live in a fixed place*** and so are unable to find appropriate facilities
- ***Extreme poverty often carries shame and stigma*** – people may have ragged clothing, lack access to washing facilities or have lifestyles that are stigmatised by the rest of the population and thus be deterred from seeking services
- When they try to access services, ***providers may treat them badly***, offer inferior service, or even refuse treatment
- ***Transport and other indirect costs*** may be even greater obstacles than the direct costs

Where the extreme poor do use services or purchase health goods, it is important to ***understand their pathways to health care.*** Decisions may be based on illness type and severity, beliefs about illness causation, range and accessibility and perceived efficacy, as well as convenience, cost and quality of service[10]. ***Bangladesh has a large informal market in health care*** with lots of different kinds of providers operating. The very poor are much more likely to use these informal providers than the public system. A lack of information combined with limited influence and purchasing power may make poor households more likely to spend money on inappropriate or ineffective health care. This problem requires approaches that can help users be better informed in making decisions about health care[11].

[10] Muela et al. 2003, *Health seeking behaviour and the health system response.* DCPP Working Paper No.14.

[11] Standing, H. 2004, *Understanding the 'demand side' in service delivery: definitions, frameworks and tools from the health sector.* DFID Health Systems Resource Centre.

4.0 Programme Responses: the Global Perspective

4.1 Health Risks and Shocks among the Extreme Poor

Internationally, studies show two main kinds of programme response to protect the poor against health risks and shocks: The first focuses on reducing risk through various preventive measures. The second focuses on coping with shocks and stresses when they arise.

The aim of ***risk reduction*** is to lessen the avoidable burden of disease through ***promotive, preventive and curative services.*** Examples include:

- ***Effective health education,*** such as awareness of the symptoms of TB and where to seek care
- **Prevention,** e.g. antenatal care and immunisation
- **Nutritional interventions,** e.g. micro-nutrient supplementation
- **Basic curative services** such as timely provision of ORS, deworming programmes

The aim of providing mechanisms for ***coping with health-related shocks*** is to protect individuals and households from adverse social and economic impacts, such as loss of livelihoods. Examples include:

- ***Subsidies, exemptions or loans*** to assist with the high costs of hospital treatment (e.g. emergency obstetric care)
- ***Cash transfers*** to offset the costs of health-related conditions
- ***Subsidised or exempted treatment*** for specific illnesses or emergencies
- ***Risk pooling*** through, for example, community-based health insurance

In practice, these types of responses overlap, as ***risk reduction***, especially for the poorest, often requires a ***safety net*** or other protective mechanisms in order for people to be able to access services.

We now look at each of these in more detail.

5.0 Risk Reduction

The extreme poor live in environments that are full of risks and have few if any resources to combat these hazards. They are rarely reached by the kinds of services which would promote healthy behaviour or receive quality information to enable them to make better-informed choices. One important programme response to risk reduction among the extreme poor is to focus on broader low-cost preventive actions to reduce risks at the household and community level. Measures for which there is evidence of effectiveness include:

- Encouragement to ***wash hands*** before food preparation and after using toilets[12] through provision of soap and/or education on existing cleansing materials
- Encouragement of ***early, inclusive breastfeeding***
- Selective ***micro-nutrient supplementation*** among pregnant women and young children (see Annex 1)
- General ***dietary and calorie improvement*** through support to setting up kitchen gardens or providing subsidised basic foodstuffs
- Basic ***water and sanitation*** measures, both communal and household-based
- Provision of ***insecticide treated*** nets in malaria prone areas
- Provision of ***accessible information*** on self-treatment, when to seek medical help and how to find quality, affordable local health services

As noted, both supply and demand side barriers limit their access to mainstream services, even if they are present where the extreme poor live. Measures to address these barriers include:

- ***Target priority/highest disease burdens*** among the poor generally (e.g. diarrhoeal diseases through deworming programmes) and specifically (e.g. TB and locality specific conditions such as malaria) and ensure a focus within these programmes on outreach to the very poorest[13]
- Use existing poverty programmes to add basic preventive and curative health care for already identified extreme poor populations[14]
- Give incentives to existing or new providers to reach out to and serve these populations[15]
- Provide dedicated services for the poorest, such as street clinics, outreach facilities with locally recruited community health workers and volunteers, specialist mobile camps, e.g. for eye care and dentistry[16]

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[12] A study in Pakistan (Luby et al., 2005) showed that regular handwashing with soap prevents diarrhoea and acutely lower respiratory infections.

[13] For example, the collaboration between the Bangladesh Government and NGOs in a public-private partnership for tuberculosis control has enabled a stronger focus on remote and hard to reach populations where NGOs already have a base. A N Zafar Ullah et.al. Government–NGO collaboration: the case of tuberculosis control in Bangladesh Health Policy and Planning 2006 21(2):143-155

[14] For instance, in Bangladesh, the CHARS Livelihoods Programme provides small denomination vouchers to the poorest beneficiaries to purchase government approved drugs from clinics run by private providers (paramedics). These are given incentives to attend training and to be subject to some auditing of their practices. Referral systems are also being set up for urgent cases requiring complex care.

[15] For example, the Urban Primary Health Care Project (UPHCP-II) in Bangladesh, which is delivered through NGO providers, contains specific requirements for 30% of services to be provided to the poor and extreme poor through targeted entitlement cards.

[16] For example, the NGO Friendship runs a hospital ship which caters specifically to the large chars population in the upper Jamuna River, providing high quality tertiary care to a hard to reach population.

6.0 Coping with Health Shocks and Stresses

International experience with providing coping interventions for the extreme poor for health shocks and stresses is limited. Social protection interventions to help the extreme poor cope with health shocks and stresses face particular challenges. ***The extreme poor tend to be excluded from forms of institutional life that facilitate social protection***. For instance, they often have no fixed address, or means of identification, or even minimal resources to contribute to a risk pooling or co-payment scheme such as community-based insurance. For such populations, ***basic, targeted safety net interventions are needed.*** These will involve provision of a straight subsidy either paid to the person or household directly (such as food, supplements or cash) or paid on their behalf to a health facility or executing agency for specified services. Examples of programme responses include:

- Provision of ***free or subsidised treatment*** for specific diseases or health conditions such as fractures, burns, or emergency obstetric care which can prevent a slide into extreme poverty
- Use of ***demand-side financing mechanisms such as voucher schemes*** for targeting health services or products to specific population groups and potentially helping households avoid catastrophic expenditure on specific types of health care such as emergency obstetric care[17]
- Use of ***cash transfers.*** Based on experience in Latin America, and recent experience in a number of African countries, these have been shown to have a positive effect on both the health and poverty status of the very poor.

Overall, experience suggests that to address the problems of ***health care-induced poverty*** (rather than ill-health itself), a straightforward transfer of resources to the poor is needed. Depending on the scheme, transfers may be ***unconditional or conditional*** on beneficiary investment in health and nutrition.

[17] Ensor, 2003:4

Box 2: Demand-Side Financing for Reaching the Extreme Poor (DSF)

Recently, there has been considerable interest in the lessons for health from other social sectors on the use of ***demand-side financing*** (DSF) mechanisms for reaching the poorest. ***DSF can be used both for risk reduction and for risk mitigation strategies.*** In the health sector, financing generally works through providing resources (inputs) to facilities and providers. DSF operates by providing funds instead to service users to reimburse the facility or provider. It often involves giving vouchers, coupons or conditional cash transfers directly to users. Community-based health insurance and health equity exemption funds are also forms of DSF[18]. ***Demand-side financing mechanisms can be used to:***

- Increase demand for services by giving a direct incentive to the user to take up services, combined with incentives to the provider to offer more responsive services in order to obtain payment.
- Target social sector resources to specific populations, particularly the poor and excluded, by linking demand to supply
- Promote competition by offering a choice of provider and making provider behaviour more responsive to users[19]

For reaching the poorest with health care, DSF is probably most appropriate in the form of vouchers or conditional cash transfer schemes.

These target particular population segments or conditions (such as pregnancy) and offer specific goods or services that can be redeemed against the transfer at an approved provider.[20] Vouchers have been successful in increasing the consumption of key services and in targeting vulnerable groups where demand is predictable and the target group is relatively easily identified. For the poorest, vouchers are mainly used to:

- create higher demand for services among groups with low usage
- change health seeking behaviour and increase utilisation of specific services
- increase coverage in underserved areas[21]

DSF interventions, such as voucher schemes, must be accompanied by a study of other barriers to demand, as cost may be only part of the reason for low utilisation of institutional services. Factors such as decisions within the household on how resources are allocated and cultural constraints can be as or more important than cost. [22]

[18] Community-based health financing also provides a mechanism for community-level pooling of risk in relation to sickness. What evidence exists suggests that the extreme poor are often excluded. BRAC experimented with this in their poverty programmes and found that large scale health insurance is probably too ambitious and too complex a component to include in projects designed to tackle extreme poverty in Bangladesh

[19] Standing, H. 2004, Understanding the 'demand side' in service delivery: definitions, frameworks and tools from the health sector. DFID Health Systems Resource Centre.

[20] There is not much experience of cash transfer schemes to support health interventions for the extreme poor in Bangladesh, and vouchers or entitlement cards are more commonly used.

[21] Standing, H. 2004, Understanding the 'demand side' in service delivery: definitions, frameworks and tools from the health sector. DFID Health Systems Resource Centre.

[22] Ibid

7.0 Risk Reduction and Coping with Health Shocks for the Extreme Poor - Lessons from Existing Programmes

International findings show that ***both risk reduction and risk mitigation and coping are essential parts of any health-related intervention for the extreme poor.*** General lessons learned highlight the importance of:

- ***Reducing harm and risk*** in people's daily lives by improving access to preventive services and health promoting infrastructure such as clean water and sanitation
- ***Assisting poor people with information*** on how to obtain competent health services and products
- Protecting households from the immediate and longer term ***financial consequences*** of illness
- Providing tools such as ***identity cards*** for facilitated access to government or other accredited health facilities
- Providing appropriate and ***relevant health promotion*** that relates to things that people can do something about
- ***Mobilising*** community support for improving access to health care (including that of community elites)

Programme experience suggests that ***interventions for risk reduction and coping with shocks*** need to:

- ***Respond to community or target group-identified health shocks and stresses*** to reduce risk and cope with shocks and stresses.
- Ensure a strong focus on ***gender-related barriers*** within the household and other cultural and social constraints
- Recognise that promotion and information are key: ***health knowledge*** plays an important role in influencing individuals' interpretation of illness conditions and in their capacity to make informed decisions
- ***Provide appropriate and relevant health information*** based on the particular context and understanding of the many factors that influence health and treatment seeking behaviour
- Consider a range of approaches to addressing both health shocks and health stresses: "***one size does not fit all***"
- Learn from experience of ***other kinds of social transfers*** such as food and cash in designing interventions
- ***Look outside the health sector:*** interventions outside the health sector often benefit the extreme poor most, for example building latrines, or kitchen gardening to improve both incomes and household nutrition

7.1 Identifying and Targeting the Very Poorest

In order for programmes to be effective in reaching the very poorest, ***decisions are needed about how to identify them and what targeting mechanisms to use.*** This is a complex area. Annex 2 summarises key issues on identification and targeting of the poor and the advantages and disadvantages of taking a targeted approach. In Bangladesh, where many programmes targeting the extreme poor already exist, those planning new programmes should look for opportunities to ***merge health interventions with existing poverty reduction programmes*** that have already identified the extreme poor.

8.0 Principles for Designing Health Interventions with the Extreme Poor: Deciding on the Right Type and Design of Programmes

The aim of the design process is to answer the question, ***"what exactly are we trying to do with a health intervention?"*** This will assist in deciding the balance between risk reducing and socially protecting interventions and in ***determining the indicators for monitoring and evaluation*** (see Annex 3).

Designs should start with three key steps:

Step 1 is a ***participatory community assessment*** of the key health concerns of the target population to determine their priorities and how these fit with any proposed intervention. This often results in ***communities identifying health problems that are not "fashionable" compared to those typically targeted in standard health programmes,*** but they may be critical to local livelihoods, such as fractures, burns and blindness. The community assessment does not have to be the only deciding factor – ***communities may not always pick up on urgent health needs, especially preventive ones*** – but this assessment will help in working out an appropriate approach to raising awareness of a perhaps unrecognised need and how meeting it can bring health benefits. Other issues to be included are:

- Community and household self-care practices
- Experience with service providers and barriers in access to services
- Community views on identification of the extreme poor and appropriateness of targeting strategies

Step 2 is an initial ***mapping of services and service providers*** (formal and informal and including traditional systems). This can determine who they are and whether they are accessible to or used by the extreme poor. If possible, an assessment of quality of services using a few basic indicators will help to determine realistic approaches to using local providers.

Step 3 is to identify ***who should benefit from the programme***. Is the population already self evident or easy to identify, e.g. pregnant women? Or will it require survey or other work to identify and target beneficiaries? (See Annex 2 for further guidance).

Institutional design issues to take into account include:

- Are there opportunities for ***partnerships, innovation, and joint approaches*** to programming, such as the NGO-Government TB programme partnership and the CLP's use of incentives to private providers to serve poor and remote populations?
- Are there ***NGOs or private sector service delivery organisations with a track record*** in the areas required and the capacity to fulfil contractual obligations?
- Is there ***sufficient capacity on the supply side*** to meet any service needs? Is it of sufficient ***quality and competence*** and, if not, what would be needed to improve this?
- Is there an existing evidence base on ***causes, extent and depth of poverty*** and are there systems and capacities to enable the ***identification of target groups?***[23]
- Where vouchers, cash transfers or other demand-side transfers are used, is there ***adequate administrative capacity*** for implementation?

In identifying the right type and mix of responses it is important generally to:

- Ensure that while ***participation*** is central to assessment, design and implementation, it does not overload the poor, especially women [24]

[23] Meeting the health-related needs of the very poor. www.eldis.org/healthsytems/dossiers/v_poor

[24] Standing, H. 2004, Understanding the 'demand side' in service delivery: definitions, frameworks and tools from the health sector. DFID Health Systems Resource Centre, p.21

- ***Prevent capture of benefits by the non-poor, but not exclude those who are poor but not extreme poor*** – the poor are vulnerable to sliding into extreme poverty as a result of health shocks and stresses
- Think about whether ***targeting the extreme poor may prove to be socially and politically unacceptable*** if there is widespread generalised poverty [25]
- Consider the ***financial sustainability*** of any schemes involving significant resource transfers, such as vouchers – who may be willing to guarantee long term financing?

Scaling Up Interventions for the Extreme Poor

Successful initiatives aimed at meeting the health needs of the extreme poor are often smaller scale, as the strength of these organisations lies in their capacity to work long term and in-depth with populations to generate trust and build capacity. But this makes interventions for this group challenging to scale up. If small-scale initiatives are to expand and be sustained, then ***other kinds of partnership to build capacity between small and large established organisations are required.*** Useful lessons from the wider literature on scaling up health interventions from small scale[26] to institutional scale offer the following guidance:

- ***Start gradually,*** use a step by step approach to build capacity
- ***Mobilise community actors*** and local champions
- ***Use existing structures*** before creating new ones
- Create the ***simplest possible institutional arrangements***
- Be prepared to ***adapt continuously to local circumstances*** while retaining the basic model

[25] Ibid

[26] Simmons, R and Shiffman, J. (2006) Scaling up health service innovations: a framework for action. In Simmons, R, Fajans, P, Ghiron, L (eds) Scaling up health service delivery: from pilot innovations to policies and programmes. Geneva: World Health Organization

ANNEX 1

Main Features of Morbidity and Mortality in Bangladesh of Particular Relevance to the Very Poor

Malnutrition and Disease Interactions

Malnutrition in Bangladesh is among the highest in the world; 60% of young children are underweight and 55% are stunted, 42% of mothers have chronic energy deficiency (defined by a Body Mass Index <18.5 kg/m2) and 17% of mothers with children under 5 years of age are less than 145 cm tall, an indication of malnutrition. National surveys conducted in 2001 and 2004 indicate that anaemia is worsening92. In 2004, 68% of children aged 6-59 months were anaemic, 92% among children 6-11 months and 85% among 12-23 months old; 46% of non-pregnant women and 39% of pregnant women were anaemic. The prevalence of severe anaemia (haemoglobin <70g/L) was 3% among 6-59 month olds and the highest prevalence was found in 12-23 month group (5.7%) followed by those 6-11 months old (3.9%). Bangladesh started a nutrition program in 1997 and pregnant women with BMI <18.5, and infants with insufficient weight gain were admitted into a food (mainly carbohydrate) supplementation programme. Independent evaluations showed that the program is ineffectual; food supplementation does not lead to enhanced pregnancy weight gain or infant weight gain, nor does it reduce the prevalence of low birth weight.

The prevalence of roundworm is up to 85%, whipworm 40%, and hookworm species 70%. Polyparasitism is also common and one study showed that only 10% of adult females were free of worm infestation, 27.5% had a single infection, 33.2% double infection and 26.6% were infected with all three worms. Soil-transmitted helminths in pregnancy are correlated with anaemia and greater risk of low or very low birth weight babies.

Anaemia in pregnancy associates with preterm delivery and LBW. Daily or weekly antenatal iron supplementation increases haemoglobin levels in maternal blood, antenatally and postnatally. Meta analyses do not suggest that taking vitamins A, B6, C, D and E supplements prior to, or in early pregnancy, prevents miscarriage or stillbirth; but zinc supplementation alone leads to a 14% reduction in preterm birth compared with placebo controls and multiple-micronutrient supplementation leads to a statistically significant decrease in maternal anaemia, small-for-gestational age babies, and the number of low birth weight babies.

Infectious Diseases

Diarrhoeal disease and Respiratory Tract Infections are very common in Bangladesh and diarrhoeal diseases are estimated to be the fourth biggest killer of children aged between one and 17 years of age. The prevalence of TB is 391 per 100,000 and mortality is 45 per 100,000. Of added concern are serious diseases which remain a problem in Bangladesh, such as measles, for which affordable vaccines are under-utilised as well as hepatitis B, typhoid and pneumococcal diseases, for which there are safe and effective vaccines, but cost is a barrier to their introduction, acceptance and use.

Non-Communicable Diseases and Environmental Causes

Vector-borne diseases such as dengue, malaria, cerebral leishmaniasis (kala-azar) and Lymphatic Filariasis are common in Bangladesh. Lymphatic Filariasis is endemic in half (32) of the country's 64 districts. The malaria situation in Bangladesh is worsening, particularly in the 13 high endemic areas. Drug resistant infectious diseases will continue to strain resources and threaten existing methods for effective therapy. More than 70 million people in Bangladesh are estimated to be exposed to toxic levels of arsenic found in drinking water. Long-term exposure leads to sores, gangrene and cancers of the bladder, skin, lungs and liver. In children, exposure is also thought to lead to learning disabilities and other neurological effects. Cyclones also disrupt livelihoods and most recently, Cyclone Sidr lead to dramatic increases in diarrhoea, skin disease, eye infections, pneumonia, fever and typhoid.

Other factors impacting morbidity and mortality in Bangladesh are burns, drowning and natural disasters. Burns are emerging as a major child health problem and the rate of non-fatal burns among children under 18 years of age is 288.1 per 100,000 children/year and the rate of disability is 5.7/100.000 children.

Cause of death data among women aged 10-50 years of age in Bangladesh between 1996 and 1997 has recently been published. Half of all female deaths are not directly caused by infectious diseases. Main causes are:

- Pregnancy related factors, 29.5%
- Chronic infections, 11.7%
- Suicides, 10.7%
- Accidents, 3.5%.

Additional References

Begum,H.A. Mascie-Taylor,C.G.N., and Nahar,S. (2007) The impact of food supplementation on infant weight gain in rural Bangladesh; an assessment of the Bangladesh Integrated Nutritional Program (BINP). *Public Health Nutr.* **10** (1), 49-54.

BINP (2000) Bangladesh Integrated Nutrition Project. Ministry of Health and Family Welfare, Government of Bangladesh.

Gilgen, D. and Mascie-Taylor,C.G.N. (2001) The effect of anthelmintic treatment on helminth infection and anaemia. *Parasitology* **122 (Pt 1)** 105-110

Gilgen, D.D., Mascie-Taylor,C.G.N., and Rosetta,L.L. (2001) Intestinal helminth infections, anaemia and labour productivity of female tea pluckers in Bangladesh. *Trop.Med.Int.Health* **6** (6), 449-457.

Haider, B.A. and Bhutta,Z.A. (2006) Multiple-micronutrient supplementation for women during pregnancy. *Cochrane.Database. Syst.Rev.* (4), CD004905.

Hall, A. and Holland,C. (2000) Geographical variation in Ascaris lumbricoides fecundity and its implications for helminth control. *Parasitol Today* **16** (12), 540-544.

Hall, A. and Nahar,Q. (1994) Albendazole and infections with Ascaris lumbricoides and Trichuris trichiura in children in Bangladesh. *Trans.R.Soc.Trop.Med.Hyg.* **88** (1), 110-112.

HKI and IPHN (2001) T*he Nutritional Surveillance Project in Bangladesh in 1999*. Dhaka.

HKI and IPHN (2006) The burden of anemia in rural Bangladesh: the need for urgent action. *Nutritional Surveillance Project Bulletin* **16** 1-4.

Luby S.P, Agboatwalla, M., Feikin, D.R., Painter, J., Billhimer, W., Altaf, A., and Hoekstra, R.M. 2005 Effect of handwashing on child health: a randomised controlled trial. Lancet, 336, 225-233.

Mascie-Taylor,C.G.N. (1996) Intestinal parasite control in Bangladesh: a pilot study. *Environ Sci* **4** S95-S108.

Mahomed, K., Bhutta,Z., and Middleton,P. (2007) Zinc supplementation for improving pregnancy and infant outcome. *Cochrane.Database.Syst.Rev.* (2), CD000230.

Rasmussen, K.M. (2001) Is There a Causal Relationship between Iron Deficiency or Iron-Deficiency Anemia and Weight at Birth, Length of Gestation and Perinatal Mortality? ***J.Nutr.*** **131** 590S-603S.

Yusuf, H,R., Akhter, H.H., Ckowdhury, M.E. and Rochat, R.W. (2007) Causes of death among women aged 10-50 years in Bangladesh, 1996-1997. J. Health Popul Nutr 25, 302-311.

ANNEX 2

Identifying and Targeting the Very Poorest

To Target or Not?

Evidence from low and middle-income countries, including Bangladesh, suggests that the more affluent receive a disproportionate share of public health spending at the expense of poor and vulnerable sectors of the population.[27] The very poor and vulnerable are widely acknowledged – for the reasons summarised above – to be the most difficult to reach through mainstream sectoral policies and programmes and associated models of health financing.[28] This has led to interest in improved ways of identifying and targeting the very poor and a continuing debate about the appropriateness of targeted versus universal interventions.[29] Overall, findings suggest that the distributional benefits of at least some types of targeting in the health and social sectors in developing countries outweigh the disadvantages.[30]

The advantages of targeting are:

- It supports redistribution of resources towards the least advantaged
- It can be closely tied to specific, measurable health objectives and outcomes and represent a more cost-effective use of resources

The disadvantages of targeting are:

- The high costs in time and resources of setting systems up
- The difficulty or unacceptability of distinguishing between the poor and extreme poor
- In areas ehere everyone is poor, targeting of the poorest may lead to protests and problems in implementation

Some kinds of intervention may be best left untargeted because of the ***'public good' benefit*** of covering the broader population. One example is communicable disease control. Others, such as interventions to improve maternal health, ***cost and capacity constraints,*** and existing use of services by other groups, may determine whether it is more cost effective to just target extremely poor pregnant women. Other potential problems are ***leakage of benefits to the non-poor and governance***

[27] Gwatkin, DR (2003) Free Government Health Services: Are they the best way to reach the poor? World Bank: Washington

[28] Ensor, T. (2003) Demand side financing for publicly financed services: an international review Oxford Policy Management: Oxford

[29] Ravallion, M (2003) Targeted Transfers in Poor Countries: Revisiting the Trade-offs and Policy Options World Bank: Washington

[30] Gwatkin ibid.

problems in maintaining the financial integrity of targeted schemes. ***Fund flows*** can be complex to monitor and ***oversight*** can be difficult to maintain. Programmes need to weigh and assess these different factors in deciding whether and where to target.

And how?

From a health perspective, ***geographical and community-based targeting*** is most relevant to:

- Settings where particular types of poverty or vulnerability are known to be geographically concentrated
- Where there are clear challenges from high levels of diseases which disproportionately affect the poorest

Household and individually-based targeting is more appropriate where:

- Extreme poor populations are mixed in with others and need to be identified for specific interventions
- There is an existing infrastructure for identifying beneficiaries. Backing health interventions onto existing targeted poverty reduction programmes which have already developed mechanisms for identification of the extreme poor can be a cost-effective way of establishing a health intervention for this group.[31] An example from Bangladesh is BRAC's experience in backing a microcredit programme for the extreme poor onto the World Food Programme's Vulnerable Group Feeding Programme; this demonstrated that adding a longer term pro-poor intervention onto an emergency relief programme can provide an easy entry point from which the programme can refine the targeting mechanism over time (Matin, 2002)[32]

Targeting based on a specific characteristic such as pregnancy or being a female child is a common and readily available way to reach specific vulnerable populations. There will need to be further decisions on whether to cover all, or specifically target the poor or very poorest.

[31] E. Kirk and H. Standing (2006) Institutional issues in scaling up programmes for meeting the health related needs of the very poor. Background paper for "Meeting the needs of the very poorest in service delivery" International Conference, BRAC, Dhaka 3-5 December 2006

[32] The accuracy of the targeting mechanism in the Income Generation for Vulnerable Group Development (IGVGD) programme has been independently assessed to be high (Matin, 2002:17), despite issues of equity of access to the programme's benefits among those in the poorest groupings (see section 4 below).

ANNEX 3

Health-Related Extreme Poverty Indicators

There are no systematic assessments of health indicators designed specifically for monitoring health-related programme outcomes for the extreme poor. To an extent, this reflects the fact that indicators need to reflect programme goals and objectives. But it also reflects a more general absence of poverty-disaggregated population data in health and related areas.

Programmes in Bangladesh which focus on the extreme poor and incorporate health-related interventions use a limited and similar range of indicators. These can be broken down into nutrition, disease/ health condition, health practices and service-related indicators:

Nutrition	**(Target group)**
• Stunting	
• Wasting	Children
• Underweight	
• BMI	Women
• Micronutrient status - anaemia	Women, children
• Consumption frequency of food groups	Women, children
Disease/health conditions	
• Wormload	Children, adults
• Upper respiratory tract infections	Children

Health practices

- Knowledge of handwashing and other hygiene practices, such as trimming nails, wearing shoes or sandals
- Use of sanitary latrines

Services

- Antibiotic use
- Preventive services, e.g. immunisation, ante-natal care

Programmes which develop new financing and service delivery models also need to develop indicators which can monitor their effectiveness for the extreme poor.

Examples include:

- Extent that vouchers, entitlement cards, cash transfers are effectively utilised by the identified extreme poor
- Facility and services utilisation rates by the extreme poor
- Experience of the extreme poor of provider behaviour towards them (compared to the less poor/better off)









Option # 1