



NOURISHING OUR FUTURE

TACKLING CHILD MALNUTRITION IN URBAN SLUMS



In Sanskrit, Dasra means “Enlightened Giving”

Dasra is India's leading strategic philanthropy foundation. Dasra works with philanthropists and successful social entrepreneurs to bring together knowledge, funding and people as a catalyst for social change.

We ensure that strategic funding and capacity building skills reach non profit organizations and social businesses to have the greatest impact on the lives of people living in poverty.

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The Piramal Group sponsored Dasra to write this report in order to identify non profits in urban India that are working in slums to tackle child health and malnutrition.

Aiming to offer sustainable support to populations in need through programs in disease prevention, education, hygiene and access to healthcare the Piramal Group is wholly committed to the fight against poverty and exclusion.

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Table of Contents

●	Executive Summary	4
1	The State of the Malnutrition in Urban Slums: An Overview of Malnutrition and its Impact on Children 0-36 Months	5
	Overview of feeding requirements, challenges in Mumbai and New Delhi slums, malnutrition indicators, and the impact of malnutrition	
	Key Take Aways	11
2	The Cornerstones for Tackling Child Malnutrition: Overview of Best Practices for Improving Nutrition	12
	Effective childcare practices	
	Key Take Aways	18
3	The Role of the Government and the Non Profit: Evolution of Nutrition Policy and Interventions	19
	History of policy driven initiatives in nutrition and the role of non profits	
	Key Take Aways	25
4	Overview of High Impact Interventions for Tackling Child Malnutrition	26
	Analysis of non profit interventions	
	Training Community Link Workers	27
	Training Public Healthcare Workers	29
	Advocacy	31
	Enhancing Access to Healthcare	33
	Action Research, Monitoring and Evaluation	35
	Delivery of Healthcare Product or Service	37
	Key Take Aways	39
5	Mapping Non Profits and High Impact Interventions	40
	Ten non profits analyzed	
	Apnalaya	41
	Breastfeeding Promotion Network of India (BPNI)	42
	Committed Communities Development Trust (CCDT)	43
	Center for the Study of Social Change(CSSC)	44
	Delhi Mobile Crèches	45
	HOPE Worldwide	46
	MAMTA	47
	Mumbai Mobile Crèches	48
	Smile Foundation	49
	Society for Nutrition Education and Health Action (SNEHA)	50
	Key Take Aways	51
6	Concluding Thoughts	52
●	Appendices	
	Appendix A Health and Nutrition Schemes in India	53
	Appendix B Dasra's Methodology and Selection Criteria	55
	Bibliography	58
	Glossary	60
	Acknowledgements and Database of Organizations	62
	Endnotes	63



Photo: CHRP Jamkhed

Executive Summary

Over the next twenty years, 41% of India's population will live in cities. This fast pace of urbanization poses a significant challenge to the health of the poor urban slum dweller because their habitations lack quality healthcare services, adequate public transport systems, clean water supply, sanitation and electricity. Furthermore, basic human needs such as clean air, water, food and housing are constrained, increasing the burden of disease on slum populations.

The most vulnerable in these urban slums are children; especially newborns and infants (0-36 months) whose health entirely depends on the availability of the mother to breastfeed, the ability of the care taker and household to provide nutritious meals, the quality of the public healthcare system and overall community support. According to a recent study by the Institute of Development Studies, 6,000 children in India die per day; 2,000-3,000 of these deaths are linked to malnutrition. In Mumbai, over 26,000 children die per year due to malnutrition.

Nourishing Our Future focuses on the issue of malnutrition for infants aged 0-36 months in urban slums. This age group is the 'window-of-opportunity' where the foundation for physical and cognitive growth potential is established. Despite it being widely known that after 36 months, the long-term effects of malnutrition are irreversible, mainstream efforts to reduce malnutrition are mainly targeted at children between 3-6 years. One example is the midday meals program that is supported by the government and further enhanced by the support of philanthropists.

Over the past decade, scientific evidence-based research on best practices for improving nutrition has been generated. *Nourishing Our Future* has established five cornerstones for tackling child malnutrition: enhancing newborn care, influencing infant and young child feeding behaviour, widening coverage of micronutrient supplements, treating childhood diseases and expanding primary immunization. In recent years, non profits have focused on implementing these cornerstones to improve child health and nutrition in urban slums. Given the multidimensional nature of child malnutrition and the numerous stakeholders involved—both at a community and at the healthcare system level—the evolution of non profit interventions in tackling malnutrition has become more dynamic and responsive to the needs of the community. These interventions include: training community link workers and public healthcare workers, advocacy, enhancing access to the public healthcare system, action research, monitoring and evaluation, and providing healthcare products or services. Upon analysis of these interventions and the five cornerstones, it is evident that training community link workers and public healthcare workers have the greatest impact on improving children's nutritional status in urban slums.

Dasra evaluated 100 non profits tackling child malnutrition. Based on scaling potential and impact, *Nourishing Our Future* highlights ten innovative organizations that can further leverage their model throughout urban slums. These organizations include Apnalaya, Breastfeeding Promotion Network of India, Committed Communities Development Trust, Center for the Study of Social Change, Delhi Mobile Crèches, HOPE *worldwide*, MAMTA, Mumbai Mobile Crèches, Smile Foundation and SNEHA. Each of these organizations has at least two or three focus areas within child health and nutrition.

Non profits are being recognized as a critical link between the government and communities. The Government of India is creating an opportunistic environment that fosters effective collaboration through the potential launch of the National Urban Health Mission, as well as the focus on universalizing the Integrated Child Development Scheme (ICDS) in urban India. Leveraging on-the-ground knowledge and models that can be scaled to the entire public health system and/or communities, will lead to large-scale improvement of nutritional status. Strategic philanthropy is required to support the scaling of non profits who are working to address, specifically, the nutritional status of children aged 0-36 months. Tackling child malnutrition for newborns and infants is a crucial public health issue that has direct economic implications on national growth.

The State of Malnutrition in Urban Slums:

An Overview of Malnutrition and its Impact on Children 0-36 Months



Photo: SNEHA, Hersh Kumbhani

Urbanization is a global phenomenon. Most cities in developing countries are witnessing explosive growth where up to three million people are added every week.ⁱ By 2030, 60% of the world's population will be living in cities, by which time India expects to have over 41% of its population or 575 million as urban dwellers, nearly double the present level of 286 million or 28% of the population.ⁱⁱ Currently, 24 million people in Mumbai and New Delhi live in urban slums, and that equates to 50% of the population of these cities.ⁱⁱⁱ

Unfortunately, this fast pace of urbanization poses a significant challenge to the health of the poor urban slum dweller, due to a lack of quality health care services, adequate public transport systems, clean water supply, sanitation and electricity. Basic human needs such as clean air, water, food and housing are hence difficult to access in slums. Furthermore, inadequate water supply and sanitation cause breeding grounds for transmission of water borne disease. Infestations of insects and rodent pests increase the incidence of vector borne diseases (malaria), acute respiratory infections (ARIs) and skin problems. Poor health is compounded by over crowding and the lack of a suitably built environment. As an example, the population in Mumbai hosts 22 people per square meter, a density that causes extreme environmental issues and congestion.^{iv}

The most vulnerable in these urban slums are children; especially newborns and infants whose health entirely depends on the availability of the mother to breastfeed, the ability of the care taker and household to provide nutritious meals, the quality of the public healthcare system and overall community support. According to a recent study by the Institute of Development Studies, 6,000 children in India die per day; and 2,000-3,000 of these deaths are linked to malnutrition.^v In Mumbai, over 26,000 children die per year due to malnutrition.^{vi}

Addressing the issue of malnutrition requires a particular focus on infants aged 0-36 months since this age group is the 'window-of-opportunity' where the foundation for physical and cognitive growth potential is established. Despite it being widely known that after 36 months (three years), children's nutritional status is irreversible, mainstream effort to reduce malnutrition is mainly targeted at children aged 3-6 years. For example, the midday meal program, supported by the government or non profit feeding programs supported by philanthropists are delivered to children of this latter age group.

Overview of Feeding Requirements for Children 0-36 Months

A child's nutritional foundation is established in the first 36 months of life. However, this is extremely challenging since in the first 36 months of life, a child's diet is not similar to the regular balanced diet consumed by adults. In fact, children require different types of food at different stages:

- **0-6 months:** The most nutritious form of food for children is breast milk alone, through which they receive all essential nutrients to grow and develop healthily. Ideally children are to be exclusively breastfed up to 6 months of age. This depends entirely on the availability of the mother, which is challenging in urban slums where women need to resume work to minimize lost wages.
- **6-24 months:** Breastfeeding is recommended for up to 24 months. In addition, complementary foods are introduced during this period, that are energy-dense (bananas, potatoes, lentils etc.) rich in proteins (fish, eggs, milk, lentils etc.) and micronutrients (vitamin A, iron, iodine, zinc). At this stage, most foods are consumed in a semi-solid state up to 6-7 times a day. The feeding at this stage depends on the ability of the caretaker to provide regular meals, their knowledge of nutrition and the availability of nutrient-rich foods.
- **24-36 months:** After 24 months children's diets consist wholly of solid foods. Children also typically start eating on their own but continue to require balanced nutritious diets to enhance cognitive and physical growth. Meals at this stage are more similar to those consumed in adulthood.

To maintain health and growth, children need 40 essential nutrients, which are generally absorbed through their diet consisting of age appropriate foods as described above. These include the right blend of high quality proteins, essential fats, carbohydrates, vitamins and minerals. In the absence of these, a child becomes malnourished. Malnutrition is the absence of the adequate nutrients to resist infection, disease and illness and maintain growth.



Photo: RIVER, Charlotte Anderson

Using Nutrition Indicators to Evaluate Child Malnutrition

Over the past decade, malnutrition has fortunately been a focus area for evidence-based researchers, which has resulted in establishing clear benchmarks for both evaluating impact and determining best practices which curb malnutrition. Currently, nutritional status is evaluated on three indicators: Stunting, Wasting and Underweight.

- Stunting:** is a measure of height to age. Stunting is a measure of chronic malnutrition or linear growth retardation that results from a failure to receive adequate nutrition over a long period and may be exacerbated by recurrent or chronic illnesses. 48% of children in India under the age of five are stunted. This is 20 times more than the expected level according to the WHO growth standards. In Mumbai 47% of slum children under the age of five are stunted, while in New Delhi, 51% of slum children under the age of five are stunted.^{vii}
- Wasting:** is a measure of weight to height. Wasting is a measure of acute malnutrition that results in a child being too thin for his or her height. Consequently, the body starts consuming its own tissues and muscles. Wasting represents a failure to receive adequate nutrition and may be affected by recent episodes of diarrhea and other acute illnesses. One out of five children in India under the age of five is wasted. In Mumbai 16% of slum children under five are wasted and in New Delhi 15% of slum children under five are wasted.^{viii}
- Underweight:** is a measure of weight to age. Often used as a basic indicator of the health status of a population, this condition can result from either chronic or acute malnutrition or both. In India, 43% of children under-five are underweight, which is 20 times more than the expected level according to the WHO growth standards. In Mumbai and New Delhi 35% and 36% of slum children under the age of five are underweight.^x

Mumbai and New Delhi suffer from an extremely high incidence of malnutrition especially when compared to 1.0-2.5% nutritional indicators prevalent in developed countries such as United States and Italy. In fact further comparison of stunting status in developing countries indicates that Mumbai and New Delhi children are twice as likely to be stunted as children in Pakistan and China where stunting indicators are 27% and 11%, respectively.^x High levels of malnutrition have a significant impact not only on the life of a child, but also on overall development.

CHILD MALNUTRITION INDICATORS FOR SLUM CHILDREN UNDER 5 YEARS

	STUNTED	WASTED	UNDERWEIGHT
Mumbai	47%	16%	35%
New Delhi	51%	15%	36%

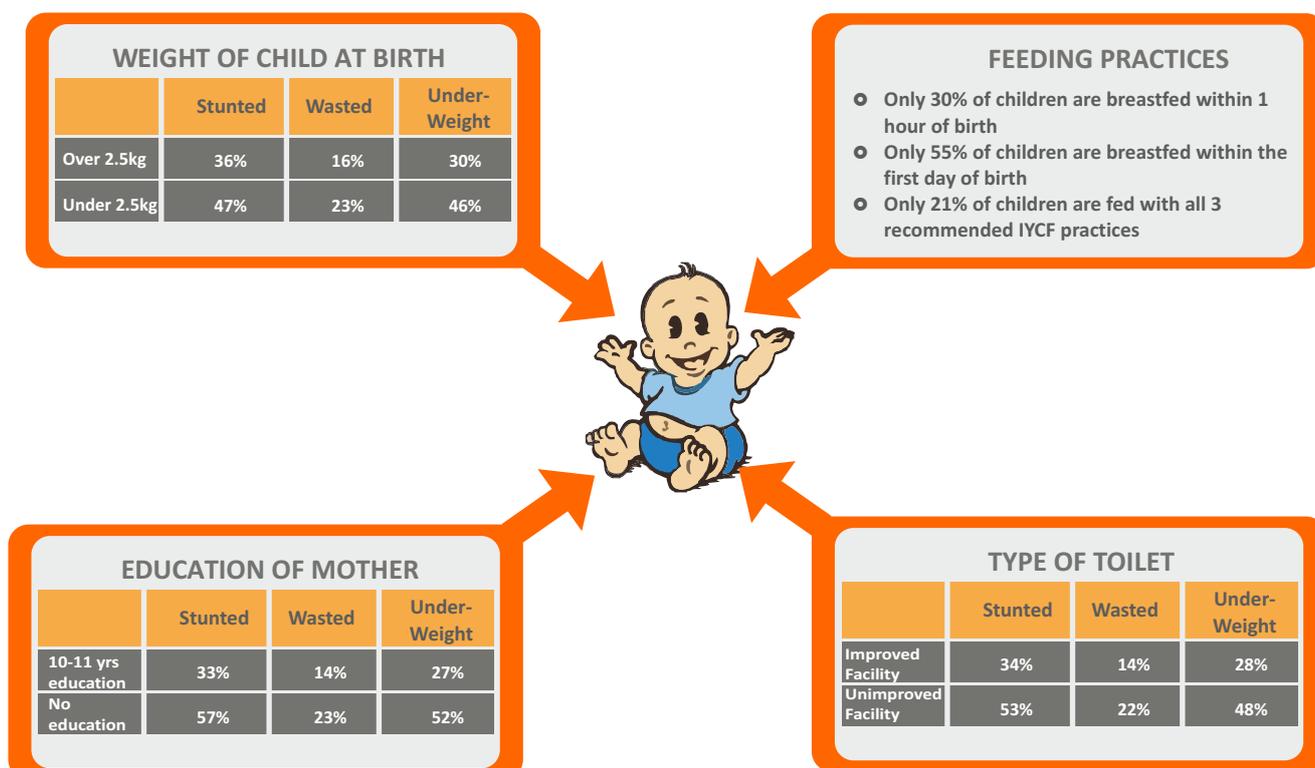
Source: National Family Health Survey (NFHS-3) 2005-2006

Mumbai and New Delhi's Challenges to Child Health and Nutrition

Mumbai and New Delhi are India's largest and fastest growing cities, with annual population growth rates of 4%. However, slum populations in these cities grow at a faster pace (5%) per year, putting children living in these environments at significant health and nutrition risks.^{xi}

In India's two mega cities, “the urban advantage” in terms of greater socio-economic infrastructure, eludes poor children and reduces their chances of pursuing healthy and economically productive futures. The extremely harsh living conditions in slums make the urban poor a highly vulnerable group in terms of economic and physical security. In Mumbai, the size of typical home in a slum ranges between less than 10 sq.m and 20 sq.m^{xii} at the most. Urban slums are characterized by their appalling lack of sanitation facilities and poor access to clean and safe drinking water. This increases the physical vulnerability of children to diseases and consequently malnutrition. To illustrate, children with access to an unimproved toilet facility are almost twice as likely to be malnourished than children with access to an improved toilet facility.

CHALLENGES TO CHILD HEALTH AND NUTRITION IN INDIA FOR CHILDREN UNDER 5 YEARS



Source: National Family Health Survey (NFHS-3) 2005-2006; Based on a pan India survey of children under 5 years.



Photo: SNEHA, Hersh Kumbhani

It is evident that improving the nutrition of children 0-36 months requires a holistic approach since the child is entirely dependent on the ability and availability of the mother and/or caretaker. The attitudes and behavior of the urban poor towards healthcare are shaped by the fact that the majority of the urban poor have had little or no exposure to any formal education. In particular, the education of the mother has a strong correlation to the nutritional status of children. In India, a child born to a mother with no education is nearly twice as likely to be malnourished as a child born to a mother with 10-11 years of education. As a result of little or no exposure, urban poor slum dwellers are simply unaware of effective home based healthcare practices such as the need for immunization or preventive steps against diseases such as diarrhea, etc. In terms of child nutrition, only 21% of children in India are fed with all appropriate Infant and Young Child Feeding (IYCF) practices.^{xiii} Furthermore, only 30% of children are breastfed in the first hour after birth whereas breast milk and particularly the first breastfeed (colostrum) is the most nutritious form of food for newborns.^{xiv}

Because slum dwellers are predominantly engaged in the informal work sector, their incomes are highly insecure. Poverty and low daily-wage earnings mean that the urban poor live without safety nets and are an extremely vulnerable group. Because they cannot afford quality private healthcare, they require a robust public healthcare system. Unfortunately, slums in Mumbai and New Delhi are characterized by the total absence or shortage of healthcare infrastructure. In fact, due to complex issues of land ownership, some slums are not even officially recognized and are entirely excluded from the purview of municipal public healthcare system.

The Impact of Malnutrition on Overall Development

The impact of malnutrition is not confined to childhood since its prevalence during the newborn and infancy stage significantly influences health into adolescence and adulthood. Research has related early onset of malnutrition and its effects to increased mortality, morbidity, limited cognitive and physical growth, decreased productivity and lower incomes in adulthood; hence, slower economic growth. Therefore, tackling child malnutrition is a crucial public health issue that has direct economic implications on national growth. Five key effects of malnutrition are:

- **Child Mortality:** Child malnutrition is a leading cause of child mortality. Estimated to play a role in about 50% of all child deaths, malnutrition can have fatal effects on children when they contract diseases and illnesses. More than half of child deaths are from malaria (57%), diarrhea (61%) and pneumonia (52%).^{xv} Diseases compromise nutritional status and immunity, which means children are more susceptible to malnutrition, which in turn weakens immunity towards disease.
- **Morbidity:** Morbidity refers to the susceptibility to diseases and chronic illnesses. Overall, child malnutrition is a risk factor for 22.4% of India's total burden of disease.^{xvi} Malnutrition weakens resistance to disease, which in turn can result in further malnutrition through a variety of mechanisms including loss of appetite and ability to absorb nutrients.
- **Cognitive and Physical Growth:** Malnutrition can affect cognitive development by causing direct structural damage to the brain. This in turn affects infant motor development. Studies have shown that stunting affects school or cognitive test performance later in life. Better nutrition means better cognitive development which increases a child's potential to learn. Studies from the Philippines have shown that well-nourished children repeat fewer grades, achieve better learning outcomes and have higher school completion rates than malnourished children.^{xvii}
- **Productivity and Income:** Iron deficiency has long lasting repercussions though life. In India, it is estimated to decrease productivity by 12% depending on the severity. Studies from other developing countries such as Zimbabwe have shown that childhood malnutrition results in a reduction in lifetime income of 10%.^{xviii}
- **Economic Growth:** According to World Bank data, in low-income agricultural Asian countries, malnutrition is estimated to cost more than 2-3% of GDP per annum. In India, one study estimates malnutrition related productivity losses at US\$ 114 million between 2003 and 2008. Another study estimates the productivity losses associated with foregone wages resulting from child malnutrition to be US\$ 2.3 billion, and productivity losses from stunting at almost 3% of GDP per annum.^{xix}

Targeting children aged 0-36 months in this population group enables a more focused approach to malnutrition that includes all key stakeholders. The implementation of globally recognized best practices can form the basis for improving nutritional status for this age group.

Key Take Aways

- **The health of the urban poor will continue to be compromised if urban slum populations are expected to more than double by 2030** – Considering the dismal living conditions in the urban slums of Mumbai and New Delhi, it is essential to innovate development efforts for improving urban health.
- **40-50% of children in Mumbai and New Delhi slums are stunted and/or underweight** – Malnutrition is an important public health issue considering half of urban slum children under the age of 5 are malnourished. This is significantly higher than both developed (United States and Italy) and developing countries (Pakistan, China).
- **Mother and care taker (typically siblings or grandparent) are key influencers** – Newborn and infant health entirely depends on the availability of the mother to breastfeed, the ability of the care taker and household to provide nutritious meals, quality of public healthcare system and overall community support.
- **Nutrition efforts are most effective for children 0-36 months** – Targeting this age group is essential to solving the urban malnutrition problem. It is widely known that this age group is the critical 'window-of-opportunity' to establish a strong nutritional foundation after which certain growth parameters are irreversible.
- **Malnutrition decreases GDP by 2-3% annually** – Improving the nutritional foundation of a child 0-36 months leads to not only a healthier life but also improved cognitive and physical development, greater productivity and overall stronger economic growth.

The Cornerstones for Tackling Child Malnutrition: Overview of Best Practices for Improving Nutrition

Although it is challenging to isolate one cornerstone as the most effective in tackling child nutrition, the following five cornerstones, when holistically addressed have shown positive outcomes on child mortality and morbidity. Studies demonstrate that coverage of all cornerstones can reduce child deaths by 25% at 36 months as well as stunting by 36% at 36 months; indicating significant impact on child health and nutrition.^{xx}

1. **Enhancing Newborn Care**
2. **Changing Infant and Young Child Feeding (IYCF) Behavior**
3. **Widening Coverage of Micronutrient Supplements**
4. **Treatment of Childhood Diseases**
5. **Widening Coverage of Primary Immunization**

1. Enhancing Newborn Care

An infant up to the first 28 days of life is referred to as a newborn. This first month of life is perhaps the most fragile and necessitates vigilant and rigorous care both institutionally and within the home. Effective newborn care includes a set of five internationally validated best practices and interventions impacting both the mother and child.

- **Institutional Delivery:** A safe, clean and hygienic environment for child delivery is essential to prevent infectious diseases and facilitate effective and appropriate care for the newborn. Around 17% of women in Mumbai have home deliveries, in extremely unhygienic slum environments, placing their health as well as that of their children at considerable risk of infection.^{xxi}
- **Cord Care:** Studies have demonstrated that there is a correlation between the methodology used to clamp the umbilical cord and the nutritional status of a newborn. Typically, the umbilical cord is clamped immediately when the child is born. However, delayed cord clamping has the potential to positively impact the iron status of the newborn as there is more time allowed for placental transfusions of iron.^{xxii}
- **Early Breastfeeding:** Breastfeeding is internationally recognized as a best practice in strengthening immunity, as it is the most nutritious form of food for newborns. In fact, breastfeeding within the first hour of birth decreases neonatal deaths by 33%.^{xxiii} In New Delhi, only 20% of mothers breastfeed within the first hour.^{xxiv}



Photo: SNEHA, Hersh Kumbhani

- Extra Care for Low Birth Weight Babies:** Babies born at term (37 weeks) but weighing less than 2,500 grams are more susceptible to malnutrition and infectious diseases, which compromise their nutritional status from birth. Babies weighing 1,500-1,999 g at birth are 8.1 times more likely to die from all causes and 4.2 times more likely to contract infectious diseases within the newborn period.^{xxv} Those weighing 2,000-2,499 g at birth are 2.8 times more likely to die of all causes and twice as likely to contract infectious diseases within the newborn period. In Mumbai, 72,000 babies are low birth weight per year.^{xxvi}
- Postnatal Care within two Days:** Birth asphyxia and infections such as sepsis, diarrhea and pneumonia account for 60% of neonatal deaths.^{xxvii} Effective care practices at this extremely fragile stage of life mean reducing the chances for neo-natal death, disease and illness. In Mumbai, only 62% of women seek adequate postnatal care after childbirth.^{xxviii}

2. Changing Infant and Young Child Feeding (IYCF) Behavior

After the newborn stage, children have different nutritional requirements that are age specific. Ideally, food is the best source of micronutrients and energy, without which physical and cognitive development is compromised. Interventions that strategically target Infant and Young Child Feeding behavior have a direct impact on nutritional status of children i.e. stunting, wasting and underweight. There are broadly three major internationally recommended IYCF best practices, each of which is strategically targeted at different age groups between 0-36 months. These best practices are:

- Exclusive Breastfeeding between 0-6 Months:** Breast milk is the most important source of micronutrients at this age since it includes vitamin A, iodine, thiamin, riboflavin, pyridoxine and cobalamin. Breastfed infants have the tendency to gain more weight at six months and older, than non-breastfed infants. Amongst the urban poor, anecdotal trends indicate that most babies are unfortunately first fed a spoon of honey or some sugar dissolved in water before breast milk which makes them extremely vulnerable to infection and disease. Exclusive breastfeeding between 0-6 months decreases under-five mortality by 13-15%.^{xxix}

- Breastfeeding and Complementary Foods between 6-24 Months:** Typically, at six months of age solid and semi-solid foods should be gradually introduced into a child's diet. Experts recommend that babies be fed frequently with small quantities of energy-dense nutritious foods. Certain foods like lentils, ghee, pureed vegetables and fruits are high in nutrients as well as calories, promoting healthy growth and development. Until 24 months, a child continues to require breast milk as an essential part of her/his diet, but the frequency of breastfeeding decreases.^{xxx}
- Supplementary Food between 24-36 Months:** In nutritionally insecure environments such as slum populations, while the urban poor may have access to food, these might not be the best sources of nutrition. As a result, the nutritional status of children is compromised since they are not eating nutritious foods. In such cases, food supplementation is a requirement to improve nutrient intake.¹

3. Widening Coverage of Micronutrient Supplements

Micronutrients are essential in building immunity as well as physical and cognitive growth potential. Ideally, micronutrients are absorbed by the body through food. Different foods have different contents of the various micronutrients required by the human body. In poor populations, micronutrient-rich foods are rarely found in staples, which are typically high in starch. Due to lack of knowledge about the nutritional value of different foods, or lack of access to nutritional foods, micronutrient intake is inadequate for families in urban slums. In this context, micronutrient supplementation is essential in order to make poor populations especially those in urban slums, nutrition secure.¹

Globally, amongst micronutrients, vitamin A and zinc deficiencies have the largest impact on increasing the disease burden.^{xxxi} In some cases, especially when mothers are severely malnourished, stores of essential micronutrients in breast milk are low, which in turn means a deficiency in micronutrients for a child. In other cases, women simply do not breastfeed enough, which means children are not, in fact, getting their required doses of micronutrients. Insufficient micronutrients are a direct risk factor for stunting. Best practices in micronutrient supplementation include:



Photo: SNEHA, Hersh Kumbhani

¹ Food security: Food security is defined as the physical availability of food in quantities that can meet caloric consumption standards and a community's access to that food.

Nutrition Security: Nutrition security is measured by the access people have to food that is not only calorically sufficient, but to food that provides the nutritional foundation for a healthy body and life.

- Vitamin A:** Doses of Vitamin A have been shown to reduce mortality between 0-6 months by 21% in Asian countries as well as reducing the incidence of diarrhea in the first year of life.^{xxxii} Fortification of monosodium glutamate with Vitamin A has shown to reduce mortality by 30%.^{xxxiii}
- Iron:** A study from India showed that iodine and zinc fortified milk reduced the odds for severe illnesses by 15%, the incidence of diarrhea by 18% and the incidence of acute lower respiratory illness by 26%.^{xxxiv} Iron supplementation benefits children with an increase of 1-2 IQ points.^{xxxv}
- Iodine:** Lack of iodine results in goitre. However, in India and globally with large-scale salt fortification programs, iodine deficiency is not as common as other micronutrient deficiencies.
- Zinc:** While there is little evidence to correlate the supplementation of zinc to nutritional status, zinc supplementation has been shown to reduce severity of diarrhea by up to 24%.^{xxxvi}

There are broadly two ways in which micronutrients can be supplemented:

- Fortification of foods**

Any food commodity, be it sugar, milk, pulses, rice or condiments can be fortified with micronutrients. Despite instances of success, overall there is little evidence to correlate the success of fortification specifically on the nutritional status on children under the age 36 months, as this age group requires more targeted interventions that are non-food specific to improve their nutritional status. At present fortification of food commodities in India is being increasingly driven by the corporate sector.

- Dispersible micronutrient preparations**

Micronutrients can be dispersed in different forms other than fortification such as capsules or sprinkles. However, these interventions must be extremely targeted. For instance, iron supplementation to avoid anemia has been demonstrated to have negative repercussions in malaria-ridden countries. Nevertheless, prepared sachets of micronutrients that can be added to homemade food have shown success in reducing iron-deficiency anemia as well as increasing haemoglobin in mothers and girls.

According to a study conducted in 36 developing countries, a micronutrient intervention reduces deaths by 10% and 12% between 12 months and 36 months of age.^{xxxvii} The relative decrease in prevalence of stunting has been estimated to be between 10% and 18% for the 12 months and 36 months age group respectively.^{xxxviii}

4. Treatment of Childhood Diseases

In slum environments, children are especially susceptible to a host of diseases and infections that compromise their health and immunity and, in turn, their nutritional status. The relationship between malnutrition and childhood diseases is an interconnected and mutually reinforcing one. It is therefore, extremely important that childhood diseases are identified, and appropriately treated, so as to contain the effect of the disease on child health. In Mumbai and New Delhi slums, and perhaps all over India, diarrhea and acute respiratory illnesses are the two most common forms of childhood disease.

- **Diarrhea:** *The passage of three or more watery liquid motions or more than nine motions of normal consistency in 24 hours.* Due to unsanitary, unhygienic living conditions and a sub-optimally built environment, children are at a huge risk of contracting diarrhea from unclean, unsafe drinking water and foods, and dirty hands that spread germs etc.
- **Acute Respiratory Illnesses (ARIs):** *Cough or nasal discharge present for three days or more accompanied with chest congestion.* The most common forms of ARIs in Mumbai and New Delhi are tuberculosis and pneumonia. Children in Mumbai and New Delhi slums are prone to ARIs due to congested living environments, where indoor air pollution (caused by burning unclean forms of fuel, cook stoves etc.) is high. In addition, most household slums are in close physical proximity to informal semi-industrial manufacturing processes.

Two broad types of best practices are necessary to contain the effects of diseases on malnutrition:

- **Preventive**

Given the degraded and often unsanitary living environments in urban slums as well as the lack of civic amenities such as piped water and access to toilets, awareness of sanitary and safety in households demands preventative practices (such as washing hands and maintaining sanitary environments in the home etc.) to ensure that children do not contract multiple diseases which weaken immunity and increase the risk of malnutrition.

According to a study of nutrition-based interventions in 36 developing countries, disease control interventions reduced deaths by 3% and 2.6% between 12 months and 36 months of age respectively;^{xxxix} and a reduction in the percentage of stunting by 3.7% at 12 months of age.^{xi}

- **Treatment**

In urban slums, due to inadequate public health infrastructure and poor knowledge, childhood diseases often go untreated until the last minute when hospitalization is required. Data from Mumbai and New Delhi shows that very few children with diarrhea are given Oral Rehydration Salts (ORS), which is an effective treatment for diarrhea at its onset. In contrast, in cases of acute diarrhea and acute respiratory infections the trend suggests that children are taken to a medical facility. However, delaying treatment until acute stages often increases the risk of malnutrition.

The worst cases of childhood diseases often translate into severe malnutrition. In these circumstances, effective case management and treatment for severely malnourished children is necessary so as to avoid mortality. If the guidelines set by the WHO for effective case management are followed, there is an estimated reduction in mortality by 55%.^{xii}



Photo: SNEHA, Hersh Kumbhani

5. Widening Coverage of Primary Immunization

Immunization is a fundamental cornerstone of any child's health, poor or non-poor. Amongst the urban poor knowledge of the importance and benefits of immunization is extremely limited. Due to high population densities, and migratory trends, outbreaks of vaccine preventable diseases are extremely common in urban slums. Effective immunization ensures that children are protected against preventable diseases that weaken immunity and increase the risk of malnutrition.

Typically children are vaccinated against six serious preventable diseases via four types of immunization:

- **BCG:** This vaccination against tuberculosis is crucial in urban slums, where due to indoor air pollution, outdoor pollution, cramped and congested living environments, tuberculosis is a serious health risk for children and adults. Due to the highly contagious nature of advanced stage tuberculosis, children are extremely susceptible to contracting the disease. Typically when children contract tuberculosis, immunity is further compromised, often resulting in malnourishment.
- **Polio:** This oral vaccine is recommended every two months from 2 to 6 months of age, once at 18 months and once at school entrance (4-6 years of age). India is one of the few countries where polio has not yet been eradicated and poses a serious threat to the healthy growth and development of children.
- **DPT:** This vaccine against diphtheria, pertussis (whooping cough) and tetanus are recommended at 2 months of age with a booster shot at 15 months of age. Typically inoculations against all three are given in the same dose. Children in urban slums are particularly susceptible to these diseases due to overcrowding, and unsanitary environments.
- **Measles:** This vaccine is typically recommended at 12 months and stimulates the body to build its own immunity towards measles. Although seemingly harmless, measles can cause serious complications including pneumonia, ear infections and permanent brain damage.

Key Take Aways

- **Breastfeeding is critical to improving malnutrition in children 0-36 months** – It is internationally recognized as a best practice in strengthening immunity. In fact, breastfeeding within the first hour of birth decreases newborn deaths by 33%; exclusive breastfeeding for up to 6 months decreases under-five mortality by 13-15%.
- **Poor urban slum households cannot afford nutrient rich foods** – Nutrient intake is largely determined by the food consumed at the household level. Children older than 6 months require nutrient rich foods to promote immunity and growth.
- **Micronutrients such as vitamin A and zinc supplements build immunity and increase growth** – Children that lack adequate micronutrients are at a higher risk for stunting. Fortification programs have decreased mortality and improved immunity (fewer illnesses).
- **Decreasing the burden of disease significantly improves nutritional status** – Prevention and treatment of diarrhea and acute respiratory infection is critical to maintaining strong nutritional status. Also, efforts towards greater immunization coverage strengthen immunity.

The Role of the Government and the Non Profit: Evolution of Nutrition Policy and Interventions



Photo: SNEHA, Hersh Kumbhani

Policy Driven Initiatives Targeting Child Health and Nutrition

India's first comprehensive policy for children was adopted in 1974 through its National Policy for Children under which the state became responsible for providing adequate services to children both before and after birth—ensuring physical, mental and social development. This was implemented through the launch of the well-known Integrated Child Development Services (ICDS) program. The provision of maternal and child health services through primary health centers and sub-centers and other agencies was also adopted in this policy. The ICDS was conceived as a rural scheme to service the maternal and child health, nutrition and education needs in underserved villages through *anganwadis* or daycare centers. The expansion of ICDS to urban areas is extremely recent and dates from the early 2000s when cases of severe malnutrition in urban areas and particularly government institutions became the focus of media attention.

Subsequently, the National Policy on Education, 1986 emphasized early childcare and education (ECCE) and its importance in supporting primary education and working women. ECCE involves the total development of the child, i.e. physical, motor, cognitive, linguistic, emotional, social and moral. At this time, there was a dramatic shift in priorities of the ICDS program from a child and maternal health program to becoming mainly an ECCE program. A target was set that 70 per cent of all children in the 0-6 years age group would be covered by the ICDS by the year 2000^{xiii}. In the same year, the national plan of action incorporated expansion of early childhood development activities including appropriate low-cost family and community-based interventions into the ICDS program. It also made a commitment to reduce by half severe and moderate malnutrition among children under 5 years of age between 1990 and 2000, to reduce the incidence of low birth weight babies and to control vitamin A deficiency and its consequences.^{xiii} A decade later, in the Tenth Five-Year Plan (2002-07), it set out to achieve universalization of ICDS in all the blocks of the country.^{xiv}

At a policy level, the focus on the past decade has predominately been at a rural level. The National Rural Health Mission, launched in 2005, placed a heavy emphasis on child health and nutrition in rural areas and created effective mechanisms to address issues and challenges. In particular, the creation of a centrally coordinated tiered public healthcare system including primary healthcare centres and outreach workers or Accredited Social Health Activists (ASHAs) has enabled better linkages between communities and public healthcare. This has enabled child health and nutrition to be addressed at different levels including *anganwadis*. However, for the past three years, a similar National Urban Health Mission, that specifically addresses the health of the urban poor including child health and nutrition, has been repeatedly taken back to the drawing board. At the time of writing this report, NUHM is expected to be finalized and launched in 2012.^{xiv}

Implementation Efficacy of Policy Driven Initiatives Targeting Child Health and Nutrition

The institutional arrangement to implement the policy objectives of the ICDS program is through the Women and Child Welfare Department. In urban areas, healthcare is delivered through the Municipal Health Department through tertiary hospitals, maternity clinics, urban health centers and health posts. These institutions are expected to provide different healthcare services such as, antenatal and postnatal care for pregnant women and children in urban slums, immunization drives, treatment of malnutrition, diseases etc. Success of the different healthcare programs including the ICDS requires institutional coordination between the two departments enabling proper service delivery and utilization of services, materials and other supplies. However, in urban slums, there is very little if any coordination between the municipal health authorities and ICDS authorities.

The ICDS is in effect delivered through a network of *anganwadis*. These are community-based daycare centers for children between the ages of 0-6 years; staffed by *anganwadi* workers, and *anganwadi* helpers. To realise all that the policy-makers envisaged for improving child and maternal health, the ICDS program depends entirely on service delivery through the *anganwadi* worker. This program was designed to ensure comprehensive delivery that includes critical components of health, nutrition and education for children 0-6 years.



Photo: SNEHA, Hersh Kumbhani

In addition to providing support in these areas, the *anganwadi* worker is also expected to maintain the data that feeds into the statistics of the government on births, deaths, growth of children, records for supplies of food, educational materials and lists of women who could access the innumerable schemes for issuance of doles, stipends, and other “schemes”. Any new idea or agenda for action towards improving child and maternal health/education is expected to be delivered by the *anganwadi* worker.

Anganwadi workers, are neither professionally trained nor paid even the minimum wages according to law, for their services, despite the enormous burden of responsibilities. Further, there are layers of officials supervising and monitoring their work at the block, district and state levels. There is a huge administrative edifice of clerks, officials, researchers, and institutions operating at the national level, and consultations at the state, national and international levels all direct their attention to what “more” could be added to the activities of the *anganwadi* worker's already overflowing timetable. Currently, the ICDS program suffers from poor quality, mainly due to the demands on the *anganwadi* worker to deliver too many services for the community on behalf of the government.

Currently, the ICDS claims to provide education, health and nutrition services to 47 million children and 9.5 million pregnant and lactating mothers. In Mumbai and New Delhi ICDS coverage is through a network of 4,500 *anganwadis* reaching 500,000 children under 6, which is only 40% coverage.^{xlvi} The central government's budget for this scheme has increased from ₹1.54 crores in 1975 when it started to ₹1,000 crores in 2001 but actually requires ₹9,600 crores for universal coverage.^{xlvii}

Multi and Bilateral Agency Support

Between the late 1990s and early 2000s the international community as a whole and specifically multi-lateral and bi-lateral aid agencies like the World Bank, World Health Organization and United Nations Agencies invested huge resources (financial and knowledge) into the study of malnutrition. Focuses included consequences of malnutrition and scientific evidence based interventions that are effective in tackling moderate or mild forms of malnutrition. The frequently cited Lancet Series was a result of these initiatives. In addition, these agencies have been extremely active in supporting (financially and otherwise) malnutrition interventions conducted by non profits, specifically in rural India. As a result, rural non profits have been able to pilot, implement and scale effective interventions as well as generate and disseminate best practices for tackling malnutrition in rural areas.

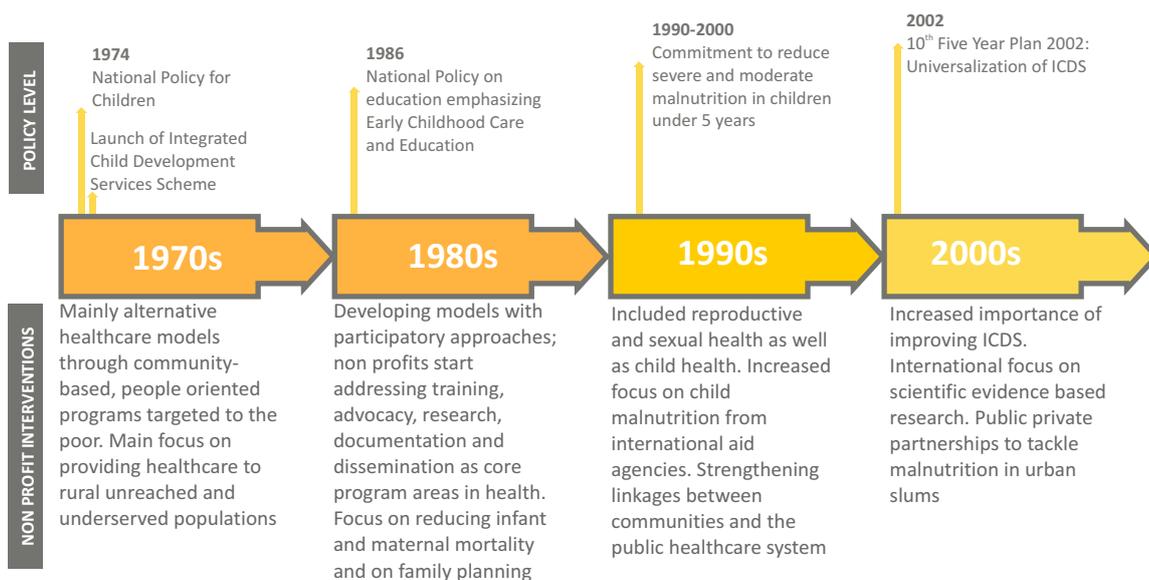
The Rise of Non Profit Initiatives in Tackling Child Malnutrition

As a result of all the challenges faced by the government, there is an essential role non profits play in improving child health and nutrition. This role has evolved over the past 40 years - from delivery of healthcare to unreachable rural populations in the 1970s, modifying health seeking behavior in the 1980s, and increasing community involvement in the 1990s to strengthening linkages between the community and the public healthcare system in 2000s.^{xlviii}

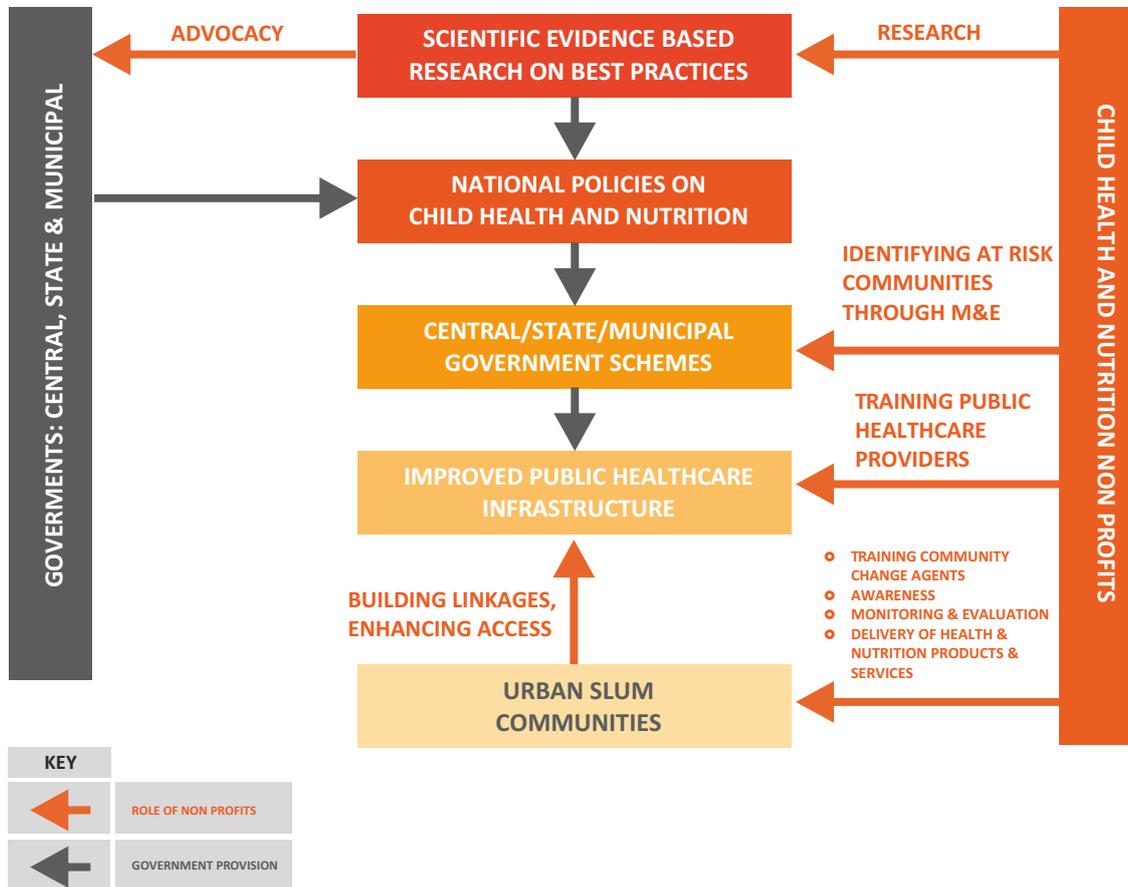
In recent years, there has been an increasing focus on child health and nutrition in urban slums both by public healthcare providers as well as by non profits. Given the multidimensional nature of child malnutrition and the numerous stakeholders involved, both at a community and at the healthcare system level, the evolution of non profit interventions tackling malnutrition has been dynamic and responsive to the needs of the community.

Early non profit interventions in healthcare were mainly focused on providing services to communities which had absolutely no access to any form of healthcare. The 1970s witnessed a large number of non profits specifically in rural areas that implemented alternative low cost models of healthcare mainly funded by individual philanthropic contributions. In the 1980's macro changes in the policies demonstrated the importance of attitudinal changes towards child health within both the political and social structures and the need for a community-based approach to influencing policy. This transitioned a large number of non profits to include research, advocacy and documentation in their core activities. During this decade the major focus of non profit activity was in reducing infant and maternal mortality and in family planning.

KEY MILESTONES IN TACKLING CHILD MALNUTRITION



ROLE OF NON PROFITS IN TACKLING MALNUTRITION



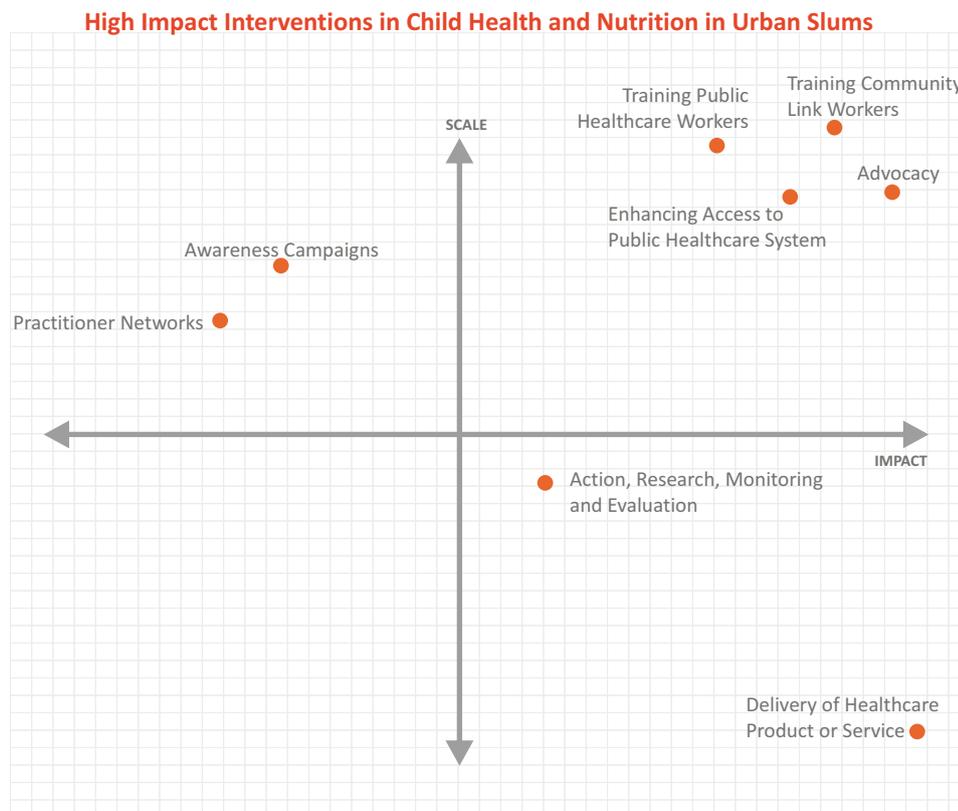
During the 1990's non profit interventions in healthcare broadened their scope to include reproductive and sexual health as well as child health. At this point, bilateral and multilateral aid agencies started to give more attention to child malnutrition, as they tackled nutritional issues of antenatal woman, and the high levels of severe malnutrition in children specifically in rural areas and in emergencies. Due to the successes of non profits tackling health issues within communities, from the 7th Five Year Plan (1989) onwards, governments have increasingly consulted with non profits to access a robust and extensive body of knowledge base on overall community health needs. In particular the 10th Five Year Plan specifically addressed India's malnutrition issue and encouraged participation of non profits to strengthen linkages between the community and the public health system.

In India, the 2000's witnessed the launch of the National Rural Health Mission and an increased importance was placed on enhancing the ICDS and *anganwadis* in rural areas. Despite the rural focus of policymakers, non profit interventions continued to flourish in addressing the growing child health concerns in urban areas. It is only in the last decade that non profits and the government have been working towards tackling malnutrition in urban slums through a public private partnership model.

Evaluating Scalable and High Impact Interventions Tackling Malnutrition

Non profit interventions are crucial because they fill in critical gaps in child health and nutrition by addressing both community-level challenges (health seeking behavior and demand for health and nutrition services) as well as systemic challenges (provision of health and nutrition services). The most important 'value add' of non profits in healthcare is both their reach to and profound understanding of urban slum communities otherwise isolated from mainstream public healthcare provision and also their knowledge of effective home based healthcare practices. While early interventions were mainly focused on delivery of products or services, in the course of time non profits have scaled by working with public healthcare systems, conducting trainings for multiple stakeholders, advocacy, research and monitoring and evaluation and building awareness within the community.

Dasra's research has revealed a set of eight malnutrition-related interventions typically carried out in urban slums by non profits in Mumbai and New Delhi. The following matrix provides a landscape on malnutrition interventions, with a relative measure on the potential to scale of each intervention and its impact on tackling child malnutrition in urban slums.



It is evident from the matrix above that the most scalable and impactful interventions are training of public healthcare providers and community link workers. Over the past decade, there has been a shift towards focusing on strengthening linkages that enhance access and quality of the public healthcare system. The role of the non profits in advocating for the rights of communities and their needs is also seen as a scalable and high impact intervention.

Key Take Aways

- **The ICDS only has 40% coverage and is poor in quality** – Despite the ICDS scheme mandating health support for children 0-36 months, *anganwadi* workers are both resource and time constrained. The government needs to increase budgets from ₹2,500 crore to ₹9,600 crore for full coverage.
- **The government encourages a community-based approach to influencing policy** – Realizing the importance of addressing the health needs of communities, the government leverages on-the-ground knowledge that non profits have, to ensure schemes are relevant, monitored and evaluated. This offers an opportunistic environment that fosters effective public private partnership.
- **Non profits are a critical link between the community and government** – Over the past 40 years, non profits have evolved from focusing on delivery of healthcare to underserved communities to improving linkages between the community and the public healthcare system.
- **Training of public healthcare workers and community link workers is most impactful** – Significant research has provided scientific evidence that demonstrates the best practices that improve child malnutrition. Capacity building and raising awareness of best practices will ensure better care of newborns, infants and toddlers.

Overview of High Impact Interventions for Tackling Malnutrition

Over the past decade, national and local non profits have generated a deeper understanding of the current gaps within the community and in the public healthcare system that impact malnutrition. For these non profits, the key challenge is to educate, empower and mobilize communities in urban slums with best practices in early childcare and build strong linkages between communities and the public healthcare system. Dasra evaluated over 100 non profits in maternal and child health and identified six common interventions that are both scalable and significantly improve child health and nutrition. These are:

1. **Training Community Link Workers (CLWs):** to create sustainable ways of ensuring that communities are more educated about home based care practices as well as more proactive in their health seeking behaviour.
2. **Training Public Healthcare Workers (PHWs):** to ensure a systemic shift in prioritizing child health and nutrition within the public system.
3. **Advocacy:** to create a policy environment that is in tune with the realities of urban slums and thereby enable effective implementation of policy.
4. **Enhancing Access to the Public Healthcare System:** to link communities with the appropriate points in the public healthcare system and thereby better leverage the existing system without overburdening hospitals.
5. **Action Research, Monitoring and Evaluation:** to inform policy, create successful pilots and be the basis for roll out and scaling of government schemes.
6. **Delivery of Healthcare Product or Service:** to provide child health and nutrition services in completely marginalized slum communities where the public healthcare infrastructure is inadequate or ineffective.

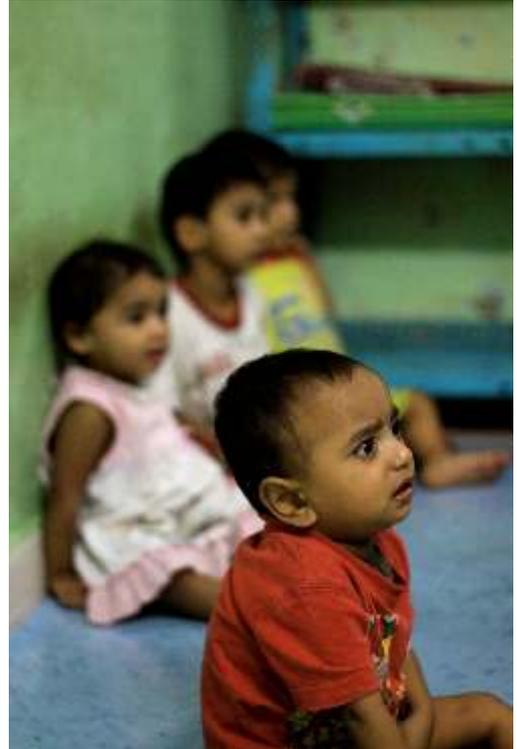


Photo: SNEHA, Hersh Kumbhani

1. Training Community Link Workers

Community Link Workers are individuals in communities who are by and large recruited by non profits as volunteers, with the aim of inducing positive change in communities. Since child health and nutrition interventions are largely behavior change initiatives, community-based link workers can be most effective in improving awareness.

Typically established as an alternative to the inefficient or non-existent public health nutrition programs, the community linkage model has been used by a number of non profits all over the world. Tackling malnutrition can only be addressed by the public health system in a limited way, as it is heavily dependent on health seeking behavior of individuals and communities. Training link workers from communities on effective child care practices and health education is the most sustainable way to ensure that communities and individuals are empowered with the knowledge to improve the health and nutrition status of their own children.

Empowering local community members as agents of health and nutrition related knowledge, means positively impacting the core of urban slum communities. Non profits have developed innovative training programs for local women that not only educate them on the cornerstones and best practices, but also on accessing the public health care system, identifying malnutrition and working with other individuals in communities to spread health and nutrition knowledge. This is perhaps the most sustainable intervention in health and nutrition as it gives communities ownership of making a positive impact, which is entirely driven by local individuals. In addition it is an extremely effective tool for empowering women to learn and gain confidence in their ability to translate health knowledge into practice.



Around 17% of women in Mumbai slums deliver their babies at home, which means around 32,000 children a year are born in slums.^{xix} This means that a significant number of children are born in unhygienic environments with little attention to newborn care best practices like early breastfeeding and postnatal care. The role of a Community Link Worker in such a scenario is crucial. Being strategically placed within communities, the link worker has the potential to encourage practices such as breastfeeding within the first hour of birth, which decreases neonatal deaths by 33%.¹

Community Link Workers can also be instrumental in linking communities with public healthcare systems as well as educating slum populations on home-based management of childhood diseases.

- **The Smile Foundation** in New Delhi has worked closely with communities to build capacities for improved childcare. This was adopted as a clear strategy for scaling up as it helps in creating a cadre of locally trained community women aware of best practices for early childcare. The training initiative has expanded its mandate to integrate the Rights perspective with partners where awareness on state obligations and children's entitlements are core elements.
- **SNEHA** in Mumbai is scaling its work by creating community-owned and led Community Resource Centers which serve as a focal point for all child health and nutrition needs as well as a referral points to the public healthcare system.

SUMMARY

Being based in communities, link workers can reach a number of stakeholders - mothers, pregnant and lactating women, children etc. In doing so they have the potential to deliver multiple child health and nutrition messages and thereby positively influence the nutrition status of children. Community Link Workers are a sustainable way of ensuring that communities are more aware of home-based care practices as well as more proactive in their health seeking behavior.



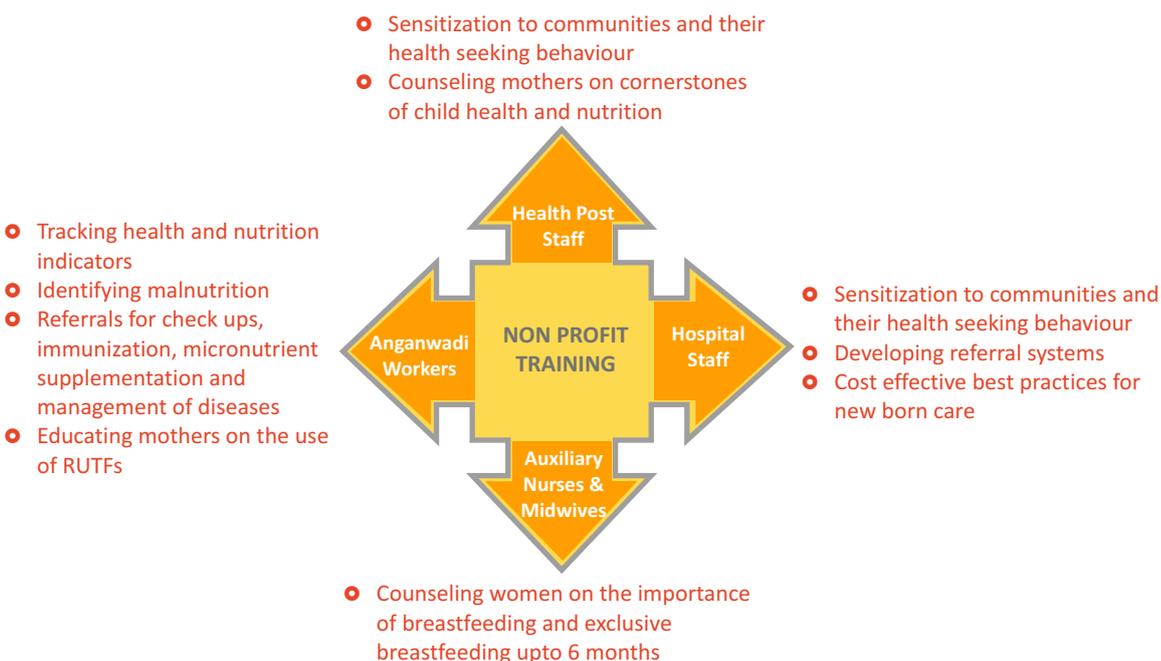
Photo: SNEHA, Hersh Kumbhani

2. Training Public Healthcare Workers

Public healthcare providers such as doctors, nurses, health post staff, *anganwadi* workers, auxiliary nurses and midwives all work at different levels of the public healthcare system from health posts to hospitals. These individuals are more often than not overburdened and are forced to focus on providing basic healthcare. Considering the ideal doctor to patient ratio is 1:500, Mumbai is significantly understaffed, with a ratio of 1:1,588 - three times the acceptable amount. This is further constrained by the availability of hospital beds; the WHO recommends one hospital bed for 550 people.ⁱⁱ In New Delhi there is one hospital bed per 500 people, well within the WHO norms.ⁱⁱⁱ However, in Mumbai there is one hospital bed per 3,000 people. This limitation on staff and healthcare infrastructure places immense strain on health providers within the institutional public healthcare system.

As a result, malnutrition often goes unnoticed and nutrition related health interventions (immunization, home-based treatments of childhood diseases etc.) cannot be given adequate focus when treating individuals from urban slum communities. Since individuals from urban slums will at some point visit a health facility (for antenatal check-ups, child birth, postnatal check-ups, illnesses etc.), training public health providers in effective ways to sensitize individuals to essential health and nutrition practices (breastfeeding, complementary foods, completing immunization courses, how to use micronutrients etc.) has the potential to improve health behavior and nutrition outcomes without placing added pressure on an already overburdened system.

At present there are virtually no refresher courses for public health providers that update them on effective strategies to tackle malnutrition or a practical approach to incorporating the cornerstones for effective child health and nutrition. Non profits have developed innovative scalable training programs that can help public health providers effectively address health and nutrition needs of communities.



- **Breastfeeding Promotion Network of India** has a cascade training program for public healthcare workers where master trainers are developed at the country level who then train state level trainers who in turn train district level trainers. Those district trainers then work directly with public healthcare workers on best practices for breastfeeding.
- **SNEHA** has an awareness program targeting public healthcare workers, sensitizing them on the best practices for ensuring child health and nutrition, especially on new-born care. Dr. Fernandes, the founder is a pioneer in having created the first human milk bank for premature babies in the country and the kangaroo care method for keeping newborns warm.

SUMMARY

Training public healthcare workers is critical to ensuring a systemic shift in prioritizing child health and nutrition within the public health system. There is growing evidence that training within the current system has tremendous impact on nutrition, especially as institutional births increase where babies are delivered by an aware doctor that can ensure best practices in newborn care, breastfeeding, immunizations; all necessary for improving nutrition in children 0-36 months.



Photo: CORP, Kim Seidl

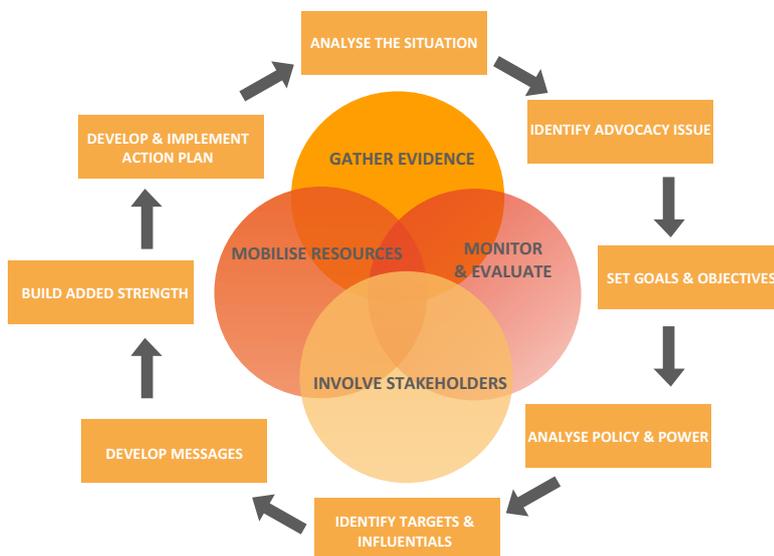
3. Advocacy

Advocacy is strategically using information to influence policies and actions of governments and civic authorities with the aim of positively improving the quality of people's lives and bringing about social change. This can be done in a number of ways like lobbying, campaigning, raising awareness etc. which are targeted at international levels (treaties, conventions), regional levels (regional bodies and common national policies), national levels (central and state government) and local levels (municipal corporations).

In child health and nutrition, the main purpose of advocacy is:

- Ensuring the availability of adequate public health and nutrition services (*anganwadis*, health posts, etc.) in urban slums for underserved populations
- Ensuring the quality of services provided in the public healthcare system for the urban poor
- Lobbying for the policy that ensures maternal and child health support

Advocacy is often misinterpreted as activism. However as shown below, advocacy relies on knowledge creation based on evidence, resource mobilization and the involvement of stakeholders to develop effective policy and action plans.



Source: O'Flynn, M., *Tracking Progress in Advocacy: Why and How to Monitor and Evaluate Advocacy Projects and Programmes*, International NGO Training and Research Center, M&E Paper 4, October 2009

Since non profits hold extensive knowledge of communities and on-the-ground interventions, they often play a key role in ensuring evidence of critical factors which are the basis for appropriate and adequate policy. As stated earlier, non profits are often the voices of communities and as such have the potential to demand greater rights and entitlements for communities by achieving a critical mass. Non profits are involved in catalyzing action groups and facilitation discussions with key authorities, fostering an environment where the public healthcare system is in tune with community needs, strengthened with collaborative action and improved accountability monitored by non profits. For instance, in Mumbai and New Delhi, non profits are extremely involved in the demand for more *anganwadis* as well as additional capacity for existing *anganwadis* ensuring adequate coverage in urban slums.

Typically, in Mumbai and New Delhi as well as more generally in India, advocacy in child health and nutrition is conducted on the following issues:

- 1. Support to mothers:** The current policy environment lacks support for women's proximity to their babies during the first few months. Women from the urban slums, often return to work soon after they give birth. The longer women stay at home after delivery, the longer they are able to breastfeed their children. Advocating for maternity entitlements can help ensure mothers are able to breastfeed.
- 2. Improvement of the ICDS:** Non profits in Mumbai and New Delhi as well as academics, experts and nutrition networks have been lobbying for a second *anganwadi* worker in every *anganwadi* center to overcome capacity related issues. Better staffed *anganwadis* mean that the nutrition needs of children can be addressed and malnutrition tackled. ICDS advocacy has also included pressurizing government to split the ICDS program into (a) one meant for improving nutrition levels of children 0-36 months; and (b) the other for looking after the needs of the 3-6 year olds.

Many non profits tackling child health and nutrition in urban slums are involved in some form of advocacy. However, these two play an integral role in influencing the policy landscape which improved nutrition of children 0-36 months:

- **Breastfeeding Promotion Network of India's** advocacy efforts as part of the Prime Minister's Council for India's Nutrition Challenges, resulted in the Government of India setting up a ₹1000 crore fund to support women in 52 districts with a small cash assistance of ₹4000 (to be launched in January 2011) and in organizations providing longer maternity leave to its female employees.
- **Delhi Mobile Crèches** has demonstrated that it is possible to provide high quality early childhood development services to migrant children of construction workers through an integrated program. Their field experiences and advocacy resulted in the landmark policy change which mandates that construction companies provide a crèche at construction sites with 50 women that provides maternal and child healthcare services.

SUMMARY

Governments are key stakeholders in public health and allocate significant amounts of funding to public health. In India, over the past decade, the focus on public health has been targeted at rural areas. Non profits advocacy efforts are effective since they are based on community needs and therefore can specifically improve child health and nutrition support and positively impact the nutrition status of children living in urban slums.

4. Enhancing Access to the Public Healthcare System

Given the complexity of public healthcare delivery in Mumbai and New Delhi, communities simply do not know how and where to access healthcare. As a result even where there is some amount of public health infrastructure, it is not adequately and appropriately utilized. For example, in Mumbai and New Delhi, tertiary hospitals are overcrowded and overburdened with cases that can easily be treated at other levels of the healthcare system. For instance, a child suffering from acute diarrhea, can be adequately treated at a health post. People are less inclined to visit crowded public clinics since they are often turned away and/or since fights break out while patients are waiting their turn to see the doctor. Creating linkages not only reduces the burden placed on certain parts of the public healthcare system, but also encourages improvements in health seeking behavior of slum communities.

Typically non profits create linkages between urban slum communities and public healthcare in the following ways:

- **Creating a referral system:** Individual counseling within communities effectively directs them to appropriate public health structures (health post, maternity clinics, hospitals) depending on the medical case. Typically hospitals in Mumbai and New Delhi are overburdened with cases that could be treated at health posts and maternity clinics. Embedding a referral system within communities is an effective way of reducing this burden and utilizing resources effectively.
- **Community outreach:** Non profit staff extend their services into the community by conducting door to door visits that enable them to monitor child and maternal health, identify cases of malnutrition as well as raise awareness at the individual household level.
- **Improving co-ordination between ICDS and municipal healthcare infrastructure:** Due to lack of co-ordination between central/state authorities and municipal authorities, entire communities get left out of immunization drives, health days, and provision of healthcare infrastructure. At times, there is even duplication, for instance in micronutrient supplementation, and that can be quite harmful. Non profits play a crucial role in coordinating public healthcare activities as they are often closer to the communities and to authorities, ensuring the central/state and municipal authorities are accountable for delivery of services.

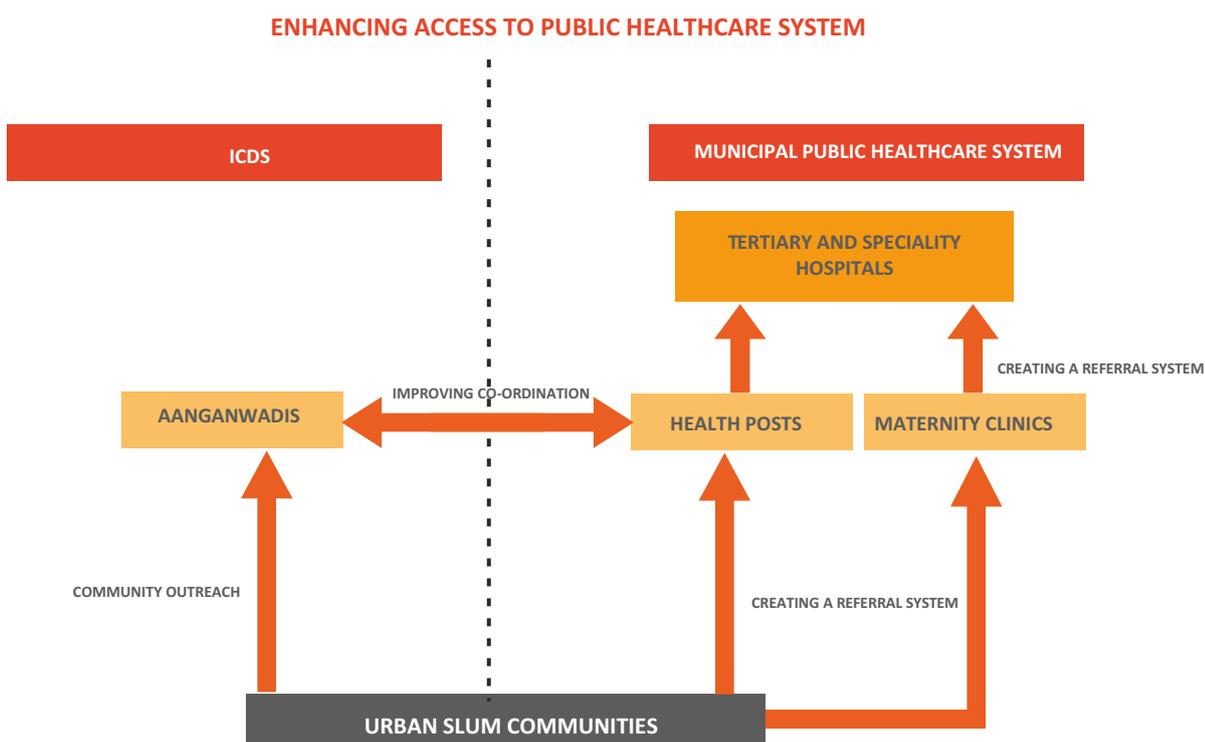


Photo: Lotus Hospitals, Charlotte Anderson

- **HOPE worldwide** in New Delhi is implementing a referral system to ensure that patients go to the appropriate health center for treatment. This has increased patient satisfaction, by including an innovative registration system, crowd management protocol, health education and counseling sessions, increased seating capacity, customer-friendly staff, and immunization/ANC tracking.
- **Apnalaya** in Mumbai holds regular meetings between *anganwadi* workers and the municipal corporation health workers that enable them to align their activities and ensure that adequate, mandated child health and nutrition services are delivered.

SUMMARY

In urban slums, lack of awareness on the public healthcare system necessitates not only linking communities with the public healthcare system, but also running awareness programs to make urban slum dwellers understand how best to utilize the various healthcare levels for specific medical cases. The combination of improving health seeking behavior and providing linkages to leverage the existing public healthcare system, shows significant impact on urban health. The role of non profits in enhancing access to the public healthcare system is therefore integral to ensuring child health and nutrition is adequately addressed.

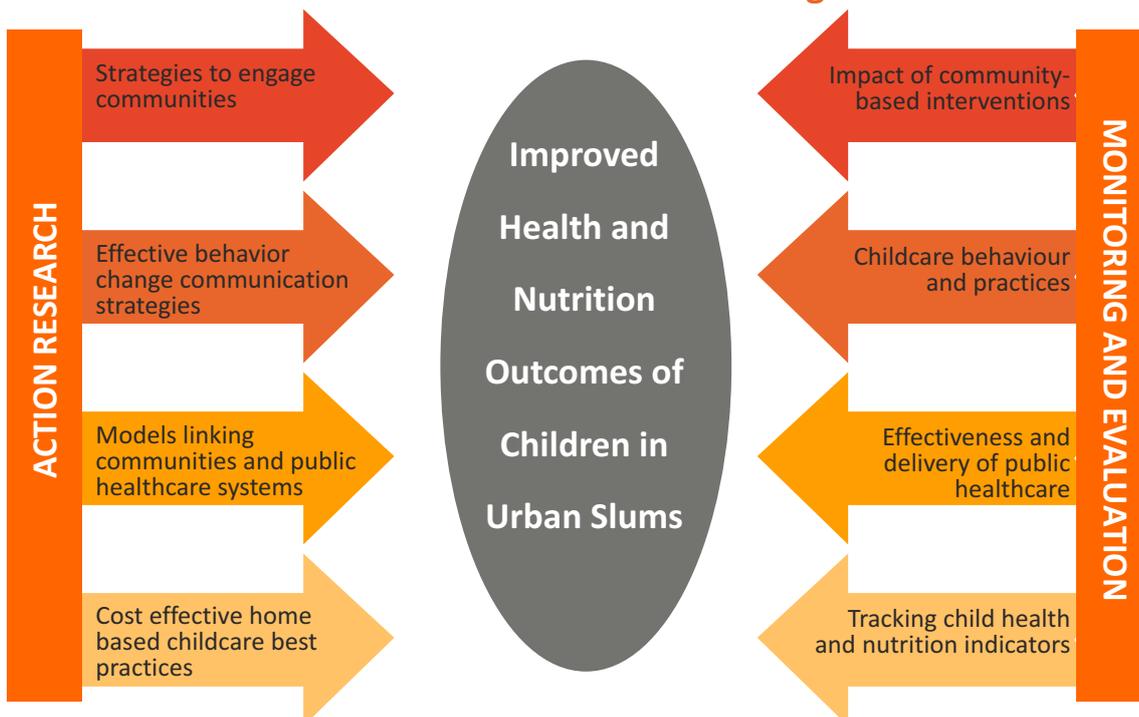


5. Action Research, Monitoring and Evaluation

The status of knowledge and practice in the area of child health and nutrition is constantly evolving, as are the nutritional status and needs of communities in urban slums. Globally there are significant scientific evidence-based best practices that can tackle malnutrition. However, in terms of specific interventions that incorporate these practices and achieve impact in urban slums, there remains a significant amount of knowledge that still needs to be captured, documented and mainstreamed. Rigorous action research continuously addresses critical knowledge, practice gaps and advances innovation. Research enables the creation of collaborative spaces where contextually informed and practice-oriented knowledge can be disseminated to governments as well as other non profits.

At present, there is no system of data collection or analysis at an urban level specific to child health and nutrition. While the National Family Health Survey is conducted every five years and provides a general indication of the child health and nutrition status, most of the data is aggregated and does not adequately reflect the situation in slums. As a result, serious child and maternal health issues tend to get overlooked at a policy level since they are hidden by the higher performance on indicators amongst better off communities. In addition, the unorganized, migratory people in isolated slum communities or living near construction sites, often get excluded from official numbers. Since most slums are illegal structures, there is a significant absence of civic amenities. By virtue of their proximity to communities, non profits have 'mapped out' entire slum communities. This information can be leveraged to advocate for adequate coverage from government authorities.

The Role of Action Research and Monitoring and Evaluation



Monitoring and evaluation is mainly done through the tracking of health indicators (immunization status, low-birthweight, stunting, wasting, underweight etc.) Some non profits are particularly advanced in monitoring and evaluation and have developed successful models on the basis of which roll-out programs have been conducted by the municipality. As shown by the diagram above, action research and monitoring and evaluation are therefore the basis on which effective child health and nutrition interventions can be strategized, piloted and scaled.

- **SNEHA**, in Mumbai, conducts extensive research in the communities in which they intervene to continuously create new knowledge on the status of child health and nutrition as well as on effective practices by which health and nutrition outcomes can be improved.
- **MAMTA**, in New Delhi, based on the success of their previous work, is currently developing a program that will provide evidence on the effectiveness of the intervention in the Indian setting (and also, under which local specific conditions). In addition, this research will improve the effectiveness of the baseline interventions and protocols for a mechanism of learning to ensure further implementation and scaling.

SUMMARY

Action research, monitoring and evaluation are critical interventions in urban slums as they give non profits and governments an accurate idea of ground level realities on the basis of which future policy and funding decisions can be modified. Also, action research can lead to evaluation of successful pilot programs where the government can be encouraged to support roll-out and scaling.



Photo: SNEHA, Hersh Kumbhani

6. Delivery of Healthcare Product or Service

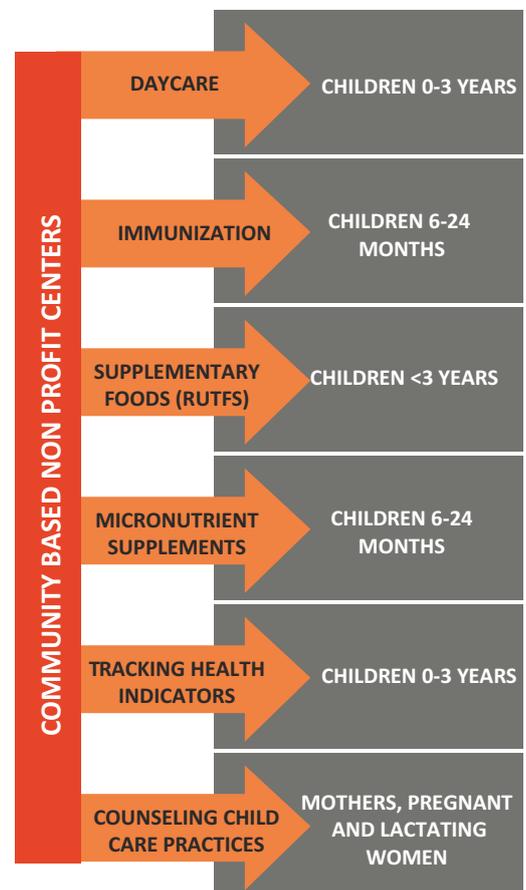
Non profits play a crucial role in providing healthcare products or services to communities or areas that are isolated from the public healthcare infrastructure or are inadequately serviced by public healthcare workers. Typically, non profits provide healthcare services through community-based centers that provide one or more of the following healthcare products or services:

Daycare for children under 36 months: At present, the public early childcare system (ICDS) caters to children under 6 as a uniform age group, despite their specificities in terms of nutritional requirements and childcare practices, which significantly differ especially for children 0-36 months. There is no dedicated public daycare service for children under 36 months. Due to the predominant focus of *anganwadis* being pre-school education for children older than 36 months, younger children get left behind. There are currently 4,907 *anganwadis* in Mumbai catering to a population of 478,696 children under 6, which is a ratio of one center per 1000 children and insufficient in meeting the needs of the community.ⁱⁱⁱ Consequently, there are close to a million children under 6 that are not covered by *anganwadis*. In such a context, most community-based non profits in Mumbai and New Delhi slums have evolved center-based models, which provide daycare as well as a range of other child health and nutrition services.

Immunization drives: Due to a lack of reach and inadequate infrastructure in urban slums, the public healthcare system is characterized by inadequate immunization coverage. On the supply side, in Mumbai and New Delhi, a large number of slums are simply left out of immunization drives as they are unrecognized slums, or there are areas within slums that are difficult to reach. Hence, the public healthcare system immunization service needs rigorous improvement especially in active outreach, tracking and monitoring as well as follow up to ensure universal coverage for all slum children, which many non profits support.

Food supplementation & micronutrient distribution: Internationally and nationally, food supplementation is considered most effective when families are provided Ready-to-Use-Therapeutic-Foods (RUTFs) or protein and energy enriched foods through home-based therapy. In India, the ICDS includes a food distribution component, which, via *anganwadis*, distributes packaged RUTFs that are 50% of a child's daily energy requirement. However, due to inherent flaws in the ICDS support system, many families do not consume these packages as they simply do not receive them, or do not know how to use them.

DELIVERY OF HEALTHCARE PRODUCT OR SERVICE



Non profits play a key role in ensuring distribution as well as administering RUTFs to severely malnourished children. In addition to RUTFs, non profits typically provide micronutrient supplements to children who they reach out to in the day care centers. Prepared sachets of micronutrients that can be added to food at home, have shown success in reducing iron-deficiency anemia as well as increasing haemoglobin concentrations in children.

Tracking health indicators of children under 36 months:

Community-based non profits have excellent reach to communities that are otherwise excluded from official data gatherings. Since they are in close contact with these excluded communities, they are better placed to track health indicators and thereby identify cases of malnutrition as well as trends in nutritional status of children in urban slum communities which suffer from limited government support due to lack of inclusion.

Counseling on childcare practices: Typically, non profits provide individual counseling services to mothers. These include: counseling sessions for pregnant women on safe motherhood focusing on health and nutrition for mothers that will directly impact her unborn child, counseling sessions for lactating mothers whereby mothers of newborns are made aware that breastfeeding builds immunity and nutrition.

- **Apnalaya** intervenes in Mumbai's worst slums in terms of Human Development Indicators, where they provide comprehensive services to slum communities such as immunization and counseling.
- **Delhi Mobile Crèches and Mumbai Mobile Crèches** have an extremely codified center model, which they set up on construction sites to target otherwise extremely marginalized and overlooked sections of the urban poor.
- **Center for the Study of Social Change** has primary health centers that operate during off-hours in existing *anganwadis*.
- **Committed Community Development Trust** operates three centers called HAMSAB (Help a Mother Save a Baby) which target at risk women in urban slum communities.

SUMMARY

In Mumbai and New Delhi's most marginalized slum communities, the public infrastructure is entirely absent or ineffective. As a result it is essential that non profits take on the role of delivery. In Mumbai and New Delhi non profits have developed excellent community-based center models which have proven to be effective ways of providing health and nutrition services.

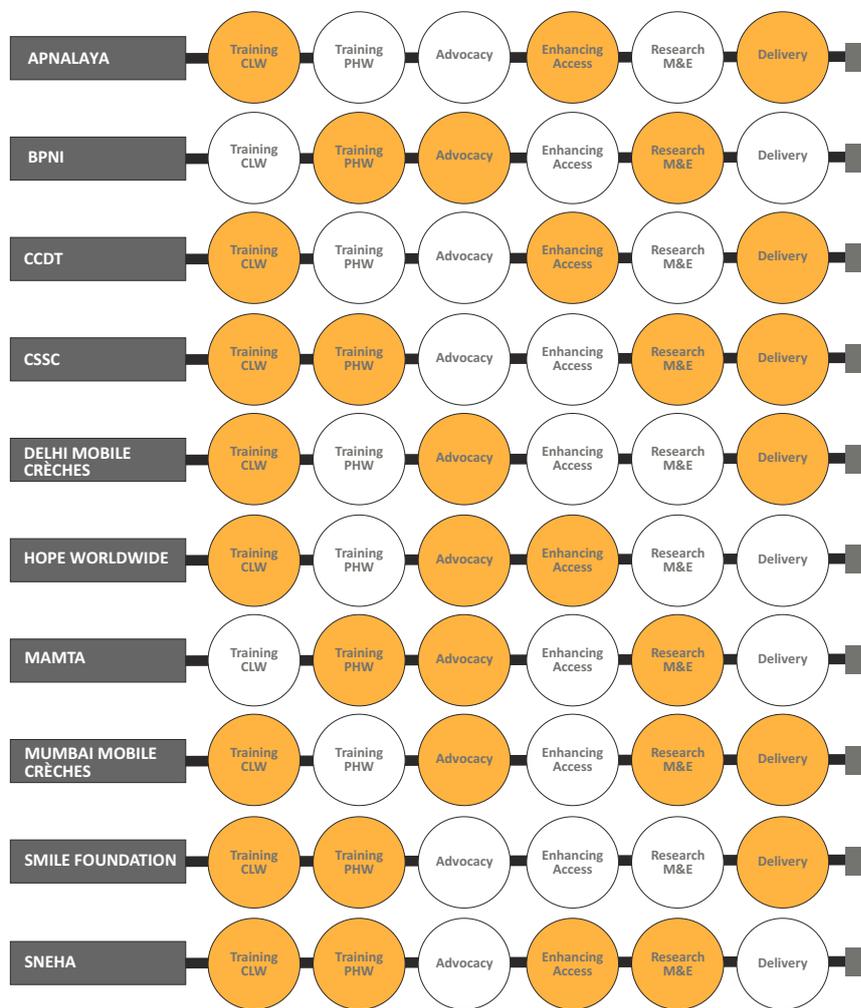
Key Take Aways

- **Training public healthcare providers and community link workers is the most scalable and high impact intervention in tackling malnutrition for children 0-36 months** – Awareness on best practices within the public health care system ensures strong coverage since institutional delivery is high in urban slums.
- **Non profits play a critical role in representing the needs of urban slum communities** – The government is challenged by urban slum communities that fall outside the legal frameworks and government support, yet are faced with severe child and maternal health issues. Non profits locate themselves within these communities and are able to advocate for their needs.
- **Action research, monitoring and evaluation help advocacy efforts towards improving child and maternal health policy** – The community-based approach which many non profits in child health pursue creates an ideal environment for establishing best practices, scientific evidence for evaluating impact and gathering child specific data for monitoring.
- **Linking the community with the public healthcare system requires an improvement in the health seeking behavior and in the provision of follow up support at the household level** – Non profits have played a critical role in providing this linkage; however, there needs to be a shift to supporting linkage systems such as referrals, awareness etc.
- **Many non profits have a community-based center model which helps in delivering healthcare products and services to underserved communities** – However, the center-based approach is high cost limiting its scalability. There is the opportunity to subsidize the cost of operating centers through applicable government schemes.

Mapping Non Profits and High Impact Interventions

During the process of writing this report, Dasra evaluated over 100 non profits in Mumbai and New Delhi; and their innovative approaches which incorporate best practices from the five cornerstones tackling malnutrition in children 0-36 months. Ten are highlighted as high potential non profits with innovative, scalable models in child health and nutrition who are working within the community and the public healthcare system.

Several of the following organizations have a much broader focus and mission than child health and nutrition as well as numerous other programs. For the purpose of this report, Dasra has chosen to focus only on the child health and nutrition programs that these organizations provide.



● Current Program

KEY	
Training CLW	Training Community Link Workers
Training PHW	Training Public Healthcare Workers
Advocacy	Advocacy
Enhancing Access	Enhancing Access to the Public Healthcare System
Research, M&E	Action Research, Monitoring and Evaluation
Delivery	Delivery of Healthcare Product or Service

Apnalaya

The Basics

CEO: Dr. Leena Joshi

Website: www.apnalaya.org

Founded: 1973

Location: Mumbai

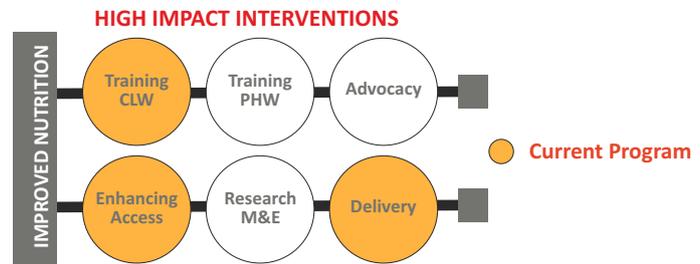
Total Budget: ₹ 1.2 Crore (\$267,000)

Health and Nutrition Budget: ₹ 14 Lakh (\$31,000)

Apnalaya is a unique organization which began its work in Mumbai over 35 years ago and has effectively phased out its interventions in several areas. Today, Apnalaya provides health education, creates awareness on child health and nutrition and operates clinics in Mumbai's poorest and most deprived slum communities of Mankhurd and Shivaji Nagar.

Door-to-Door and Self Help Groups – In each community it enters, Apnalaya begins by training community women as link workers for four months. Once trained, community link workers begin by mapping out existing households and groups (chawl committees, rag-pickers groups etc.), and form new self-help groups, which serve as touch points for delivering health education. Link workers also focus on improving health seeking behavior by educating community women on their rights *vis-à-vis* the public health system.

Clinical Facilities – Due to the complete lack of public health facilities in Shivaji Nagar, Apnalaya runs 2 general clinics, 3 gynaecological clinics and 2 immunization clinics, reaching out to approx. 6,600 households. Depending on the type of service, these clinics are held twice a week to twice a month.



While Apnalaya's programs cover several interventions known to have a high impact on child health and nutrition, their main focus has always been on providing health education and awareness through home visits and self-help groups. Apnalaya also has an intensive four month training program to create community link workers, who implement their programs and serve as role models in their communities.

Scalability

Over the past 35 years, Apnalaya has replicated its model across 4 slum communities in Mumbai, namely Tardeo, Malad, Mankhurd and Shivaji Nagar. Apnalaya's model is scalable because it focuses primarily on health education and awareness, not direct provision of products and services (Shivaji Nagar being the only exception). Apnalaya's senior team believes direct provision of health services builds dependency in slum communities, on a system parallel to public healthcare.

Apnalaya is also unique in being the only organization reviewed that has sustainably phased out of communities, after ensuring complete adoption of its interventions.

QUALITY INDICATORS

Impact on Child Health & Nutrition

In 2009-10, Apnalaya's health education intervention ensured that 81% of deliveries were institutional and only 19% took place at home. In 3 out of 4 communities, 99% of women registered for antenatal care in government and private hospitals, compared with only 50% in 2002-03. Apnalaya has ensured that 80% of children in its areas of operation are immunized.

Leadership & Team

Apnalaya has a staff strength of 70, which is headed by Dr. Leena Joshi (Director). She is supported by five program heads. Dr. Joshi and Mr. Tarwade, head of the health program, have been with the organization for over 20 years. They bring tremendous experience in implementing programs and interfacing with government health officials.

Third Party Endorsements

Over the years, Apnalaya has received financial support from respected donors, like Action Aid, Save the Children and Plan India. Apnalaya's work has been covered by reputed newspapers and in research reports. Most recently, the Hindustan Times sought the advice and opinion of Apnalaya's senior management during its Tracking Hunger Campaign.

Linkage between Community and Public Healthcare System

Apnalaya community link workers adopt a rights based approach in delivering health education to community members – content goes hand-in-hand with information on their rights in accessing the public healthcare system. Link workers also handhold mothers and children to ensure they receive the appropriate quality of care through the public healthcare system.

Breastfeed Promotion Network of India

The Basics

CEO: Dr. Arun Gupta

Website: www.bpni.org

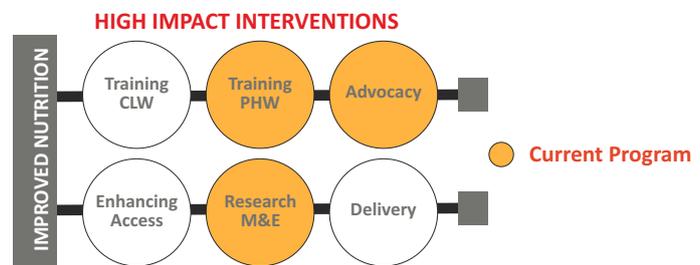
Founded: 1992

Location: New Delhi

Total Budget: ₹ 1.8 Crore (\$400,000)

BPNI is a national network of organizations and individuals dedicated to promoting mother and child health through protection, promotion and endorsement of breastfeeding. BPNI is the Regional Focal Point for the World Alliance for Breastfeeding Action (WABA) and International Baby Food Action Network (IBFAN). BPNI works pan-India educating people and health workers, leading policy advocacy, training, sharing information and monitoring the compliance of the 'Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act 1992' (IMS Act).

The organization firmly believes that by advocating for and promoting optimal breastfeeding practices, particularly of exclusive breastfeeding for the first six months, diarrhea, pneumonia and other newborn infections can be avoided, thereby saving the lives of thousands of babies and preventing childhood malnutrition. Moreover, the organization supports state governments in building the skills of health workers to support women through their breastfeeding period.



BPNI conducts action research and has recently completed an international study comparing breastfeeding practices in different countries. Using this research, BPNI plays a key role in advocating breastfeeding which has led to the organization's inclusion in the Prime Minister's Council for India's Nutrition Challenges. Through its advocacy efforts, BPNI protects mothers and children from the onslaught of baby food promotions.

Scalability

BPNI's training program has tremendous scaling potential. Their courses create a cadre of national and state-level trainers who then train field workers to enhance their efficacy in dealing with problems faced by women who are breastfeeding. With the necessary funding for the implementation of this program and a robust MIS system, there is potential of institutionalizing a national level training program that can train thousands of mothers on proper breastfeeding practices. Additionally, through their presence on several government committees, BPNI could lobby the government to earmark funding for the promotion of breastfeeding in the 11th 5-year plan.

QUALITY INDICATORS

Impact on Child Health & Nutrition	BPNI has no formal system in place to track their impact. However, the organization credits the following positive developments to its advocacy efforts: The Government of India set up a ₹1000 Crore fund to support women with cash vouchers of ₹4000 which ensures that women could stay at home with their infants during the breastfeeding period. Preventing the repeal of the IMS Act, thus ensuring that corporations cannot mis-lead the community about substitutes for breast milk.
Leadership & Team	A Central Coordination Committee manages BPNI and advises on how to achieve its goals and objectives. This committee consists of a Chief Coordinator, Central Coordinator, Financial Coordinator and five executive members; BPNI members select them on the basis of an election for a period of 3 years.
Third Party Endorsements	BPNI is the Asian coordinator of IBFAN, and received the Right Livelihood Award in 1998, which is popularly known as the "Alternate Nobel Prize".
Linkage between Community and Public Healthcare System	BPNI has evolved a course to facilitate the capacity building of health professionals and health workers at all levels to provide skill counseling to women for effective breastfeeding. This course creates a cadre of trainers who train field workers to enhance their effectiveness in dealing with problems faced by women who are breastfeeding.

Committed Communities Development Trust

The Basics

CEO: Tinku Biswal

Website: www.ccdtrust.org

Founded: 1991

Location: Mumbai

Total Budget: ₹ 3.6 Crore (\$800,000)

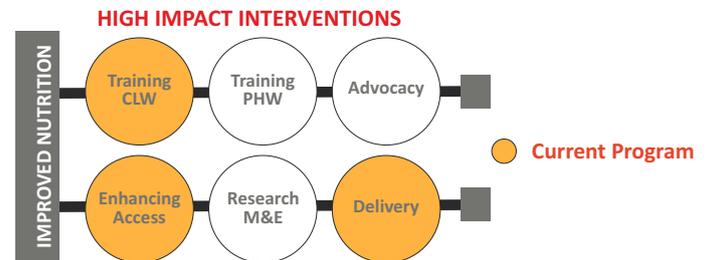
Health & Nutrition Budget: ₹ 2.2 Crore (\$480,000)

Committed Communities Development Trust (CCDT) works with a rights based approach in the fields of health and education. Its programs address the health and nutrition needs of pregnant mothers, children aged 0-3, and vulnerable and HIV/AIDS affected children. CCDT also empowers youth to become catalysts for social change.

Managing Health Post – for the past 20 years, CCDT has run a health post in Dahisar on behalf of the MCGM. It has institutionalized systems and processes, and assumed all operating costs, including training and staffing of over 20 public healthcare workers. MCGM compensates CCDT for drug purchases.

Community Health Development Program (CHDP) – CCDT's community link workers conduct door-to-door and group health education sessions in Borivali, Dahisar East and Nala Sopara, educating women and children on nutrition, ANC and PNC, and general health, hygiene and sanitation.

HAMSAB – CCDT runs three clinics for at-risk pregnant mothers and mothers with children 0-3 years of age. Community link workers conduct nutrition demonstrations and provide mothers three nutritious meals a week. Mothers also receive health counseling and psychological support.



CCDT began operations with the establishment of a health post in Dahisar. In its early years, direct provision of healthcare products and services formed a major part of CCDT's intervention. More recently, CCDT has transitioned its focus towards community outreach by hiring and training community women as link workers. In addition to providing intensive health education, these women raise awareness of communities' rights *vis-à-vis* the public healthcare system.

Scalability

Over the past two decades, CCDT has greatly expanded its health and education programs, and today reaches a beneficiary base of approx. 3.5 lakh individuals.

To continue expanding in a sustainable manner, CCDT will integrate its health and education programs, streamline its project teams, and focus on community mobilization. Together, these measures will ensure that CCDT standardizes its interventions in every slum and does not staff multiple teams in a given community. Importantly, increasing awareness and mobilizing community members to access the public healthcare system will lead to community uptake of the process for social development.

QUALITY INDICATORS

Impact on Child Health & Nutrition	A recent evaluation report found that CCDT's Community Health Development Program complements the government's provision of ANC and PNC; has achieved birth weight recording for 95% of children; helped ensure normal birth weights for almost 70% of newborns; and nearly 90% immunization.
Leadership & Team	CCDT has a team of 218 members, with a well defined organizational structure. Sara D'Mello, previously principal at Green Lawns School in Mumbai, founded CCDT in 1973. She now serves as Managing Trustee. The management team is led by Tinku Biswal, CEO, who has a post graduate degree from Princeton University and brings over 13 years of development experience as an IAS officer. Tinku is supported by four directors and deputy directors, and several mid level managers.
Third Party Endorsements	Over the past few years, CCDT's work has been supported by several reputed donors, including UNICEF, Plan India and USAID. CCDT has also received several awards in recognition of its work, including the "Civil Society Award" by UNAID in 2006, and Sara D'Mello, founder, was named woman of the year in 2004 by the Blue Drop Group.
Linkage between Community and Public Healthcare System	CCDT's community link workers map and communicate the location of public healthcare facilities in the areas they work. They also forge linkages between the public healthcare system and the community to improve responsiveness, accountability and transparency.

Center for the Study of Social Change

The Basics

CEO: Dr. Ramesh Potdar

Website: www.cssc.org.in

Founded: 1972

Location: Mumbai

Total Budget: ₹ 6.9 Crore (\$1.5M)

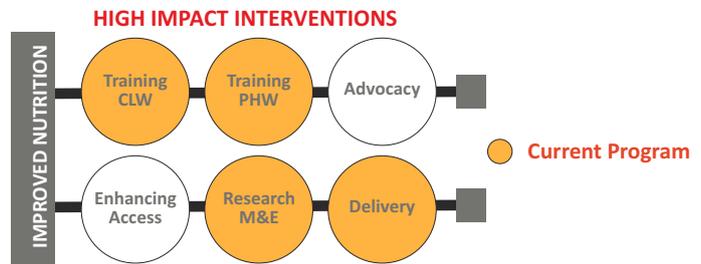
Health & Nutrition Budget: ₹ 46 lakh (\$100,000)

Over the past 10 years, Center for the Study of Social Change (CSSC) has worked extensively towards complete coverage of slum communities in Bandra E, Khar E and Santacruz E. CSSC seeks to empower community women through integrated health education and training.

Women of India Network (WIN) Health Centers – CSSC operates 20 health centers through existing community centers or *anganwadis*. From 3-5 PM daily, women bring their children for height and weight monitoring, immunizations, and weekly or monthly pediatric and gynaecological check-ups. Off center hours, CSSC's community link workers conduct home visits and group sessions on reproductive health, child health and survival, family planning, income generation, and SHG formation.

Health Volunteer Training – CSSC runs a structured training program for community women interested in becoming link workers. Training is conducted 3 times a year, for approx. 20 women per batch, and is used for internal employment needs.

Research: Mumbai Maternal Nutrition Project – CSSC is conducting a 4 year randomized trial to test whether enhancing food-based micronutrient supplements in pre-conceptual and pre-natal mothers decreases the incidence of LBW deliveries, improves foetal growth and functional outcomes.



The centerpiece of CSSC's interventions is creating awareness, through health education, amongst a target population of 100,000 in Bandra E, Khar E and Santacruz E. To achieve this goal, CSSC has trained over 300 women as community link workers over the past 5 years. Recently, CSSC leveraged its community outreach and goodwill to carry out highly relevant research on the relationship between micronutrients supplements, low-birth weight and foetal growth.

Scalability

Drawing on the success of the WIN Project, CSSC is piloting an augmented model, which it believes is more replicable. The new model will provide a continuum of care for community members aged 3 months to 60+ years. It includes preventive care through home visits and community awareness; and curative care through primary care centers, and a primary care hospital at CSSC's campus. CSSC will develop an online database and system of referrals to map community households to the nearest health center and to nearby public healthcare facilities. This will ensure community members receive healthcare through CSSC's facilities or through the public healthcare system in a timely and efficient manner.

QUALITY INDICATORS

Impact on Child Health & Nutrition	CSSC has a comprehensive tracking system, which records in detail the type of care received by community members through WIN clinics. Although CSSC does not, at present, have data on outcomes of its interventions, this will become available in 2011, during the analysis phase of its 4 year Mumbai Maternal Nutrition Project.
Leadership & Team	CSSC has a staff strength of 62. It is headed by Dr. Ramesh Potdar, a renowned pediatrician with over 30 years of experience as a volunteer doctor in Mumbai's slums. Dr. Potdar is supported by Honorary CEO Vivek Deshmukh, who has over 25 years of banking experience, and a team of director level staff, including Dr. Denny John, Dr. Sanjay Ojha and Gayatree Sathe.
Third Party Endorsements	CSSC's work has been recognized by reputed media sources, like Times of India and Hindustan Times, and it has received support from credible donors, like the International Foundation for Population and Development (IFDP). Additionally, CSSC has partnered with the University of Southampton and the Environmental Resource Unit of Medical Research Council, UK, to carry out the Mumbai Maternal Nutrition Project.
Linkage between Community and Public Healthcare System	Many of CSSC's health centers are set up in existing <i>anganwadis</i> and employ <i>anganwadi</i> workers and helpers after hours. This build familiarity and trust between communities and public health workers. CSSC also conducts immunization camps, in conjunction with health post officials, for children who are unable to access, or have been left out of, regular camps.

Delhi Mobile Crèches

The Basics

CEO: Mridula Bajaj

Website: www.mobilecreches.org

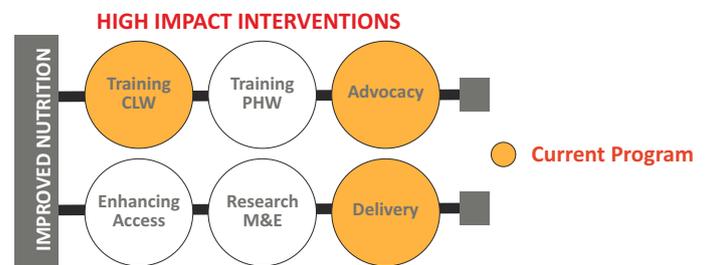
Founded: 1969

Location: New Delh

Health and Nutrition Budget: ₹ 3.42 Crore (\$767,000)

Meera Mahadevan, set up the first "mobile crèche" in 1969 as a spontaneous response to the neglected children she saw on the site of the Gandhi Centenary Exhibition, in Delhi. From that rudimentary shelter, the journey began towards gaining entry into other construction sites and ensuring basic minimum care for the children of the vast migrant labor force belonging to the poorest strata of society.

As more crèches were set up across the construction sites and slums of Delhi, Mobile Crèches (MC) became a trusted presence among the women who toiled for a living, building houses or selling vegetables. Construction workers left their young ones in the care of the "didis" (older sister) who fed, nurtured and tutored them, sowing the seeds of a secure childhood and a confident adulthood. More recently, MC has made a quantum shift in its approach from a "provider of quality care services" to a "facilitator for providing care services to the young child". This approach and strategy of MC has moved a rights discourse and advocacy for the rights of young children especially of migrants in urban slums.



The primary components of the Mobile Crèches' program include:

- Daycare centers on construction sites: The MC day care center is a flexible model, working with minimal facilities and low cost material.
- Building community capacities in urban settlements: MC mobilizes communities around the issue of the young child, to facilitate them to demand for and access State services. Furthermore, the organization trains community women to set up their own crèches.

Scalability

As part of the organization's strategy to scale, going forward, MC does not plan to open crèches in urban settlements and intends to focus primarily on developing training partnerships to encourage community women to open their own crèches. This has meant restructuring the organization, re-training human resources and redefining and developing relationships with the community and other stake holders. However, MC will continue to setup and operate crèches at constructions sites on a needs basis. Given the high spurt of urban development in Delhi, especially in the upcoming Gurgaon area, there is a strong need for these crèches.

QUALITY INDICATORS

Impact on Child Health & Nutrition	MC has a robust MIS system and track their impact on 31 different indicators. A snapshot of MC's impact is as follows: <ul style="list-style-type: none"> • 58% of deliveries took place in government institutions • 90% of children were age-appropriately immunized • 72% improved their nutritional grade or retained normal grade • 85% offered colostrum to their newborns
Leadership & Team	Mridula Bajaj, is a specialist in child development with 30 years of experience in program management, research and training. She leads a qualified team of 140 people together with a band of 50 volunteers to work under three primary organizational verticals: Field Operations, Resource Mobilization, Advocacy and Training.
Third Party Endorsements	MC has built a solid reputation over the past 41 years of operations. Instead of approaching builders to advocate for their presence, MC is now invited by builders to open crèches at construction sites and also by government officials to assist with the drafting of national policies and plans of action.
Linkage between Community and Public Healthcare System	MC estimates the demand for the holistic development of children under 6-years-old through research studies, focused group discussions, and public meetings. Additionally, MC has highlighted the issues of quality services in the Primary Health Centers through public hearings and has an application pending with the Delhi Health Services Department to open a Primary Health Center in Dwarka Sector 20.

HOPE *worldwide*

The Basics

CEO: Ian Correa

COO: Gimms Andrews

Website: www.hopeworldwide.org.in

Founded: August 2000

Location: Slums in north-east district of New Delhi

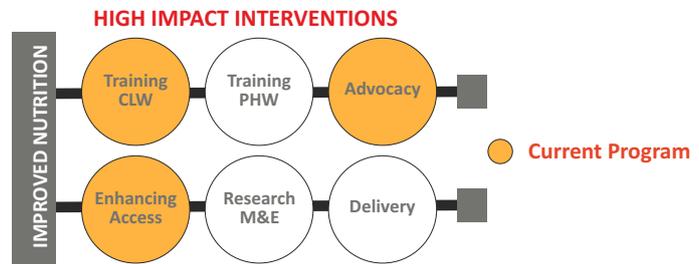
Annual Overall Budget: ₹ 13 Crore (\$2.88M)

Health and Nutrition Budget: ₹ 1.15 Crore (\$250,000)

HOPE *worldwide* (HWW) has successfully implemented the 'Chotton Ki Asha' (CKA) child survival program in Sonia Vihar and Rajeev Nagar, two slums in Delhi's largely impoverished northeast district.

Many lessons have been learned in this venture to increase access and improve the quality of slum dwellers' health. One of the lessons learned is recognizing the lack of a referral management system to reduce unnecessary utilization of larger tertiary hospitals and improve care at health centers in the community. To fill this gap, HWW developed a program to facilitate referrals related to maternal and child health.

HWW also aims to continue Positive Deviance (PD)/Hearth programs, initially tested in the CKA program, to identify techniques practiced by caretakers of well-nourished children from poor families and to transfer such positive practices to others in the community. These practices of the "positive deviants" become the basis for nutrition education and demonstration to other caregivers in the community.



HWW aims to improve the health and nutrition of mothers and children aged 0-3 years by:

- Drafting policies and guidelines on referrals
- Promoting cooperation between primary, secondary and tertiary healthcare facilities
- Building referral stations and placing trained Referral Coordinators at these facilities
- Developing community health teams to improve knowledge and practices of mothers and caregivers. The organization's community link workers work alongside ICDS *anganwadi* workers and ASHAs.

Scalability

HWW implemented the CKA program in Delhi's slums from October 2006 to September 2010 and improved the nutritional status of 34,390 children aged under 3 years and 36,211 women of childbearing age. Leveraging the relationships built with the community and government, HWW aims to sustain the improvement of the health of 44,247 women of reproductive age and 21,602 children aged 0-3 years by implementing a referral program and a refined PD/Hearth program in Delhi's northeast slums that already has the support of various stakeholders. As such, the proposed programs do not deliver a medical service that requires skilled practitioners.

QUALITY INDICATORS

Impact on Child Health & Nutrition	An analysis, performed using the Bellagio Group Methodology, to quantify the number of children benefitted by the CKA program indicated a 26% reduction in under 5 child mortality and estimated that 80% of the lives saved was due to breastfeeding and diarrhea interventions.
Leadership & Team	HWW employs a staff of 35 people for their health programs. This includes their administrative staff, who liaise with government officials and other non profit organizations operating in the healthcare sector, and their field staff, who work alongside ICDS <i>anganwadi</i> workers and ASHAs.
Third Party Endorsements	The CKA program was the first public private partnership for health service delivery in Delhi. The success of the program and lessons learned led to the Delhi government requesting HOPE <i>worldwide</i> to develop the referral program. Additionally, the organization has received substantial funding from USAID, Walmart, Manpower Inc., SAP Labs, G4S, United Way Worldwide, etc.
Linkage between Community and Public Healthcare System	HWW's experience in Delhi has indicated that the fear of long lines and rejection from public healthcare staff members are frequent reasons mothers report for not going to health facilities. Alternatively, these mothers seek out a local, often unregistered medical professional, which results in increased morbidity and mortality. The referral program will ensure that mothers and children get access to the appropriate healthcare facility.

MAMTA

The Basics

CEO: Dr. Sunil Mehra

Website: www.mamta-himc.org

Founded: 1990

Location: New Delhi

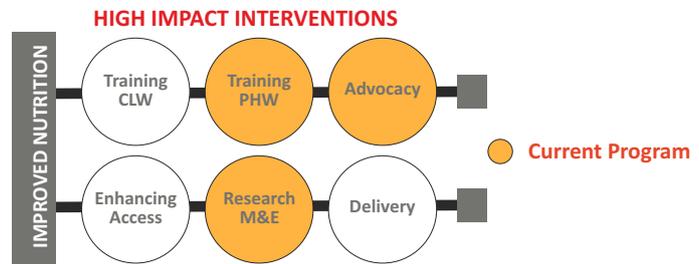
Annual Overall Budget: ₹ 17,26 Crore (\$4M)

Health and Nutrition Budget: ₹ 45 Lakh (\$1.1M)

With the vision to reduce maternal and infant morbidity and mortality, MAMTA initiated its Mother and Child Health (MCH) program in few slums and resettlement colonies of Delhi. The aim of the MCH program was “to create an environment for women, children and young people to access the public health system and improve their health conditions through a community empowerment process and integrated health and development approach”.

This program includes three projects covering seven intervention sites in Tigr, Sangam Vihar, Nihal Vihar, Tikri Khurd, Holambi Kalan, Nizamuddin and Zaffrabad addressing a population of approx. 224,000 beneficiaries. MAMTA entered into a partnership with 4 NGOs to implement the program in 4 sites while also implementing programs themselves at additional sites.

A ‘Gender Resource Center’ (GRC) was linked in one of the slums with the support of the Government of Delhi to strengthen women’s linkages to various government schemes and programs on health and economic empowerment.



MAMTA improves MCH services provided by the government by working with public and private health providers as well as with ICDS functionaries. The organization also works with community members to improve the utilization rate of the MCH services provided by the government.

Scalability

MAMTA aims to develop a standard set of protocols required to implement a healthcare program that will improve the health of mothers and children aged 0-3 years. This framework will be developed while ensuring the flexibility to adapt to local conditions. The 10K Club intervention aims to target 40 districts whose populations have had the least access to healthcare reaching 1 lakh population, with 10,000 children in the age groups 0-2 years and 10-19 years. One of MAMTA’s existing programs will pilot this framework among a subset of women and children who will be tracked over the complete program to generate the evidence of impact.

These standardized protocols can be used by the government or any other institution ready to address the nutritional needs of children under 2 years.

QUALITY INDICATORS

Impact on Child Health & Nutrition	Data (last quarter-Dec. 2010) from three intervention sites shows that <ul style="list-style-type: none"> ● Pregnant women accessing complete ANC increased from 42.94% to 63.43% ● Institutional delivery increased from 36.70% to 79.13% ● Mothers initiating early breastfeeding increased from 71.23% to 78.49% ● Increase in immunisation: BCG (88.7 % to 98.2 %), DPT-3 (77.8 % to 96.9 %) and OPV-3 (73 % to 96 %), Measles the rise is 3.8 % points ● 33.3 % of identified cases were given ORS and 90.6 % of identified ARI cases were treated
Leadership & Team	Dr. Sunil Mehra, a practicing pediatrician for over three decades, founded MAMTA in 1990. MAMTA is a multi-specialist team of 196 professionals. The multi-disciplinary team is a blend of experts from public health, social sciences, population studies, social work, IT and financial management, and administration.
Third Party Endorsements	MAMTA enjoys decadal and sustained patronage of Sida, MacArthur, Actionaid, Ausaid, EU. It also has developed recognition within the UN system (UNICEF, UNFPA, UNAIDS), WHO and the public health system. The organization is represented in an advisory capacity on many national and international committees and taskforces. As Regional Resource Centre of Haryana, Punjab and Chandigarh the organization is supporting state governments and mother NGOs in RCH component of NRHM since 4 years.
Linkage between Community and Public Healthcare System	MAMTA mobilizes community level stakeholders to increase demand for maternal and child health services. Additionally, regular capacity development activities are conducted with CBOs to recognize pregnancy complications and prevent maternal and neonatal deaths and bring the community nearer to the public health system. The organization at ‘supply side’ also builds the knowledge and skills of public system service providers and frontline functionaries.

Mumbai Mobile Crèches

The Basics

CEO: Vrishali Pispati

Website: www.mumbaimobilecreches.org

Founded: 1969

Location: Mumbai

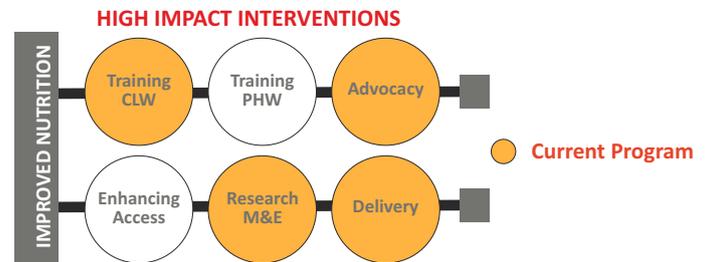
Annual Overall Budget: ₹ 1.8 Crore (\$400,000)

Mumbai Mobile Crèches (MMC) runs daycare centers on large construction sites across Mumbai, and has been advocating for the rights of migrant construction workers – ignored by the public health system – for over three decades.

Daycare Center – MMC’s on-site daycare centers are standardized, with separate sections for 0-3, 3-6 and 6-14 year olds. Children are provided three nutritious meals, daily iron and multivitamin supplements; and are monitored for height and weight, immunizations and chronic health problems. Daycare center teachers create awareness amongst parents through monthly sessions and interactive exercises.

Bal Palika Training – Since 1982, MMC has conducted a year long training program for care givers and teachers. The program involves a mix of lectures and practical experience on child health and nutrition; 40% of women trained are from construction sites and are able to find employment at MMC and other health and education based non profits.

Research and Advocacy – MMC conducts research projects in collaboration with private and public organizations to understand the education and health needs of construction workers, and uses the findings to advocate for their rights.



Most large construction sites in Mumbai do not have crèches, despite a law mandating it. Therefore, Mumbai Mobile Crèches’ main intervention is providing health, nutrition and education to the children of construction workers. MMC also trains women laborers to become care givers and teachers, and uses research projects to lobby for equal access to public health and education for migrant workers

Scalability

MMC has successfully standardized and replicated its day care center model to 30 construction sites across Mumbai. However, continued expansion remains a challenge. To enhance scalability, MMC is advocating a cost sharing model with the ICDS, which has already been piloted successfully in 2 centers; and is developing an alternate model, which will reach a greater number of small and large construction sites via a mobile van.

MMC’s Bal Palika Training is also being codified after many years of practice and is applicable beyond construction sites. Today, MMC trains approx. 15 care givers and teachers annually, who are successfully placed in MMC centers and other non profits. There is significant potential to expand this training program.

QUALITY INDICATORS

Impact on Child Health & Nutrition	Based on a research project carried out in collaboration with Bhavishya Alliance and the ICDS, 88.5% of children were grade I & II malnourished, and 11.5% were grade III & IV at the start. After 2 years of intervention, 32% were normal, 64.5% were grade 1 & II, and only 3.5% were grade III & IV. Based on these findings, the MCGM Commissioner issued an order to all Child Development Project Officers (CDPO) to establish <i>anganwadis</i> in large construction sites.
Leadership & Team	MMC has a total staff strength of 120, with a clearly defined organizational structure. Devika Mahadevan, who was CEO for 4 years, stepped down in February 2010 and has joined the board as Director. Vrishali Pispati, who worked with MMC for 3 years in the past, took over as CEO in March 2010. She holds a degree in Management and Law, and has 5 years of corporate experience. Vrishali is supported by a very competent team of second-line managers.
Third Party Endorsements	MMC have received financial support from reputed donor organizations like The British Asian Trust, UK; Sri Dorabji Tata Trust; Global Fund for Children; and Charity Aids Foundation, Australia. MMC has also collaborated with well known academic institutions, like the University of Auckland, to conduct pilot research projects at its centers and their work has been recognized by national newspapers and magazines, like Indian Express, DNA and People, UK.
Linkage between Community and Public Healthcare System	By referring members of the construction worker community to the appropriate level of public healthcare, MMC is able to enhance their access to the public healthcare system, from health posts up to tertiary hospitals.

Smile Foundation

The Basics

Executive Trustee: Mr. Santanu Mishra

Websites: www.smilefoundationindia.org
www.swabhiman.net

Founded: 2002

Location: New Delhi (Head Office)

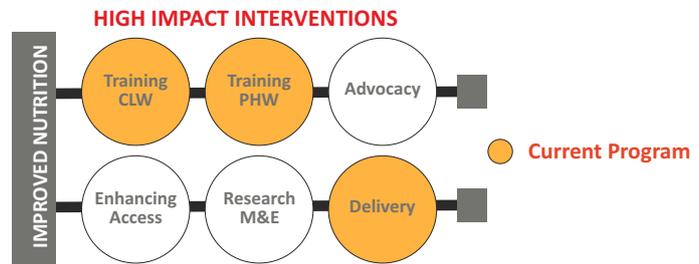
Annual Healthcare Budget: ₹ 13 Crore (\$2.9M)

Annual Budget for the Swabhiman program: ₹ 33 Lakh (\$73,000)

Formed in the year 2002, by a group of young corporate professionals with a philanthropic bent of mind, Smile Foundation finds innovative solutions to social issues in alignment with the business needs of companies and willingness of goodhearted individuals and institutions across the globe.

The organization deems one of the central issues in healthcare as child malnutrition because the nutritional status of a child depends on the health and nutritional status of the mother.

In 2007, the Foundation initiated a 3-year integrated project in partnership with Population Foundation of India (PFI) titled, "An urban Reproductive and Child health and development project with an empowerment approach". Since then, the program has assumed considerable significance addressing concerns like safe motherhood, breastfeeding, health and nutrition, anemia, HIV/AIDS, RTI/STI, child immunization, early marriage, family planning, etc.



Under Swabhiman program, the following interventions have been implemented in Delhi's slums, which directly or/and indirectly impact the health and nutritional status of the children aged 0-3 years:

- Operating Swabhiman Intervention Centers within slums
- Providing health services through Mobile Medical units
- Promotion of positive family planning practices (through household surveys, counseling sessions, etc.)
- Carrying out advocacy campaigns and organizing meetings with stakeholders to increase awareness on women and child-related diseases and concerns
- Dissemination of IEC Materials for increasing awareness and knowledge related to child health and nutrition
- Referrals of emergency cases to healthcare systems

Scalability

Swabhiman program has impacted the lives of 1,50,000 mothers, children and adolescents in Delhi's slums through a cadre of more than 200 Community Link Workers, developed from these slums themselves. After three years of structured interventions, Smile Foundation intends to replicate the model in more slums or rural areas, based on past lessons learnt. Smile Foundation seeks financial support to do so.

QUALITY INDICATORS

Impact on Child Health & Nutrition	Encouraging health seeking behaviour amongst women (family planning, child immunization, health and hygiene, nutrition, etc.), pregnant women (adequate iron, calcium supplements), and lactating mothers (appropriate breastfeeding) led to overall improvement in nutritional status of the children residing in slums of Delhi.
Leadership & Team	The foundation formulated an advisory committee of Smile and PFI members under whose guidance the project management team (comprising of director, manager, field associate and coordinators), along with 10 community educators, 40 health volunteers and 120 peer educators worked to ensure effective implementation and monitoring of these programs.
Third Party Endorsements	Several public figures, such as Dr. Kiran Bedi (retired IPS officer), Nisha Verma (Master Trainer-Reebok), Aruna Mukim (member, Film Censor Board), Reeta Dutta (Chief Public Prosecutor), etc. got associated with the project during various activities and programs. Additionally, a consequence of joining hands with various organizations and communities was the formation of an organized referral network.
Linkage between Community and Public Healthcare System	The Smile Foundation collaborates with <i>anganwadi</i> workers, who are part of the ICDS scheme, to ensure pregnant women receive adequate nutrition during their pregnancy and nursing periods. Women and children are also often referred to nearby government dispensaries.

Society for Nutrition Education and Health Action

The Basics

CEO: Dr. Wasundhara Joshi

Website: www.snehamumbai.org

Founded: 1999

Location: Mumbai

Total Budget: ₹ 2.4 Crore (\$533,000)

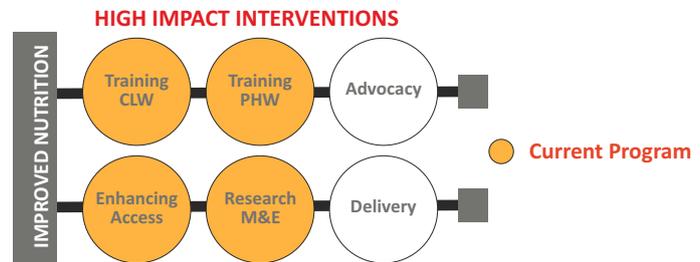
Health & Nutrition Budget: ₹ 1 Crore (\$233,000)

Over the past 10 years, Society for Nutrition Education and Health Action (SNEHA) has addressed the health and nutrition needs of Mumbai's neediest slum communities in Dharavi, Santacruz, Ghatkopar and Kandivali, while also enhancing the quality of care provided by the public health system.

Maternal & Neonatal Health – SNEHA trains community link workers, called Sakhis, who map out slum communities, identifying women of child bearing age. Intensive health education commences from pregnancy up to when a child is 28 days old, to ensure healthy mothers give birth to healthy babies.

Child Health and Nutrition – SNEHA provides a continuum of care by running two daycare centers for malnourished children aged 0-3 years, and training caregivers on infant and young child feeding practices. Sakhis form Nutrition Committees in the community, which provide supportive supervision to ICDS staff in ensuring monitoring indicators are being measured and reported; Sakhis also train *anganwadi* workers to strengthen their implementation.

Training of Public Health Providers – SNEHA trains public healthcare workers and community members on a referral protocol, which ensures efficient utilization of public health infrastructure.



While SNEHA's program areas cover a wide range of important interventions, the bulk of its experience and strength lies in creating awareness of good health and nutrition practices in communities, as well as enhancing access to the public healthcare system by reducing the burden on health posts, maternity clinics, peripheral and tertiary hospitals. SNEHA has also developed a strong research focus, which enables rigorous evaluation of their models and policy discourse.

Scalability

SNEHA has demonstrated the ability to operate at scale by providing health education to over 25,000 households, influencing feeding practices in 500 families, training over 100 community link workers and training ICDS staff at 10 *anganwadis*. Going forward, SNEHA seeks to expand its Child Health & Nutrition program by monitoring and strengthening the implementation of 300 *anganwadis* across Dharavi, through which it will reach approx. 300,000 households. To ensure sustainability at this scale, SNEHA will hire and train approx. 300 sakhis, and establish many more nutrition committees, which will facilitate community ownership of all *anganwadis* in Dharavi.

QUALITY INDICATORS

Impact on Child Health & Nutrition SNEHA has reduced the rates of malnutrition amongst day care center children by over 60%; educated 500 young mothers on correct feeding practices; established 10 nutrition committees in two vulnerable slum pockets of Dharavi; and trained adolescent girls as nutrition counselors.

Leadership & Team SNEHA's board and senior management bring tremendous experience and leadership to the organization. Both Dr. Armida Fernandez, Founder Trustee & Chairperson, and Dr. Wasundhara Joshi, Executive Director, have over 15 years experience working in public hospitals. Priya Agrawal, Director of Operations, has over 10 years of experience in senior management roles with non profits. They are supported by a strong team of program directors and field staff.

Third Party Endorsements SNEHA is a member of the Reproductive and Child Health Committee of the MCGM and is an implementation and training partner in all maternal and child health programs. SNEHA has been invited to present papers for four successive years at the International Conference on Urban Health. SNEHA's papers have been published in several peer reviewed medical journals.

Linkage between Community and Public Healthcare System Through intensive health education, awareness in communities, and training of public healthcare workers, SNEHA works effectively with both the demand and supply side in ensuring the health and nutrition needs of women and children living in slums areas are met.



Photo: SNEHA, Hersh Kumbhani

Concluding Thoughts

Tackling malnutrition in urban slums requires a holistic approach especially when targeting children 0-36 months. This is the 'window-of-opportunity' where promoting the five key cornerstones of child health has the most impact on improving nutrition and ultimately a child's cognitive and growth potential. Implementing this approach in urban slums has required that non profits provide three to four interventions, with a significant community-based component which often includes the training and development of Community Link Workers. Often located in community-based daycare centers, which provide both health and education to mothers and children, these Community Link Workers not only enhance access to healthcare for the entire community but are also seen delivering healthcare services where the public healthcare system is absent.

Tackling child malnutrition in urban slums requires a strengthening of the linkages between key stakeholders- communities, non profits and the public healthcare system which the community based approach aims to achieve. *Nourishing Our Future* focuses on six high impact interventions that are scalable. The scalability of non profit interventions are crucial because they fill in critical gaps in child health and nutrition by addressing both community-level challenges (health seeking behavior and demand for health and nutrition services) as well as systemic challenges (provision of health and nutrition services). The most important 'value add' of non profits in healthcare is both their reach to and their profound understanding of urban slum communities otherwise isolated from mainstream public healthcare provision and also their knowledge of effective home based healthcare practices. While early non profit interventions were mainly focused on the delivery of products or services, the past decade has seen scaling of interventions by working with public healthcare systems, conducting trainings for multiple stakeholders, advocacy, action research, monitoring and evaluation and building awareness within the community.

During the process of writing this report, Dasra evaluated over 100 non profits in Mumbai and New Delhi; and the innovative approaches which incorporate best practices for tackling malnutrition in children 0-36 months. Ten are highlighted as high potential non profits with innovative, scalable models in child health and nutrition who are working within the community and the public healthcare system. These include: Apnalaya, Breastfeeding Promotion Network of India, Committed Communities Development Trust, Center for the Study of Social Change, Delhi Mobile Crèches, HOPE *worldwide*, MAMTA, Mumbai Mobile Crèches, Smile Foundation and SNEHA. Although, *Nourishing Our Future* recommends the prioritization of Training Community Link Workers and Public Healthcare Providers as the most urgent and high impact interventions; there are several essential interventions that non profits will continue to deliver to tackle child malnutrition in urban slums that require philanthropic support.

Strategic philanthropy for improving child malnutrition must target the most effective non profits that are developing a scalable institutionalized model and have the potential to be replicated across urban slums. The impact of malnutrition is not confined to childhood and its prevalence during the newborn and infancy stage significantly influences health into adolescence and adulthood. Therefore, solving child malnutrition requires a new breed of philanthropists that prioritize child nourishment as a leading development issue which currently plagues the success of future generations and overall economic growth.

Appendix A

The Integrated Child Development Scheme (ICDS), 1975

The ICDS is the world's largest and oldest food supplementation program. Launched in 1975, the ICDS is the only major national program that addresses the needs of children under six. The services offered under the ICDS are:

	SERVICES	ACTIVITIES	BENEFICIARIES
Nutrition	Supplementary Nutrition	<ul style="list-style-type: none"> • A hot meal cooked at the <i>anganwadi</i> • Take home Ready to Use Therapeutic Foods (RUTFs) for children under 3 • Distribution of Micronutrient Sprinkles 	Children under 6 years
	Growth Monitoring Promotion	<ul style="list-style-type: none"> • Children under 3 are weighed and measured once a month to track health and nutrition status 	Children under 3 years
	Nutrition and Health Education	<ul style="list-style-type: none"> • Counseling sessions • Home visits • Demonstrations • Covers: infant feeding, family planning, sanitation, utilization of health services, etc. 	Mother, pregnant and lactating women
Health	Immunization	<ul style="list-style-type: none"> • Assist the Municipal Health staff to maintain records • Motivate and educate parents • Organize immunization sessions 	Children under 6 years; parents
	Health Services	<ul style="list-style-type: none"> • Health checkups • Postnatal care • Recording weight, management of undernutrition and treatment of minor ailments 	Children under 6 years, mothers, pregnant and lactating women
	Referral Services	<ul style="list-style-type: none"> • Link sick, undernourished children and those requiring medical attention with the public healthcare system 	Children under 6 years, mothers, pregnant and lactating women

Under the ICDS, the central government funds provision of these services through centers known as *anganwadis*. These are day care centers of sorts for children between the ages of 0-6 years and are staffed by *Anganwadi Workers*, and *Anganwadi Helpers*. Each *anganwadi* is supposed to cater to a population of 1,000 persons (200 families). Currently, the ICDS provides health and nutrition services to 47 million children in India and 9, million pregnant and lactating mothers around India. The central government's budget for this scheme has increased from ₹1.54 crores in 1975 to ₹1000 crore in 2001. In Mumbai ICDS coverage is through a network of 4,907 *anganwadis* reaching 478,696 children under age six and in New Delhi through a network of 3,842 *anganwadis* covering 461,000 children under six.

Appendix A

The National Rural Health Mission & The National Urban Health Mission

The National Rural Health Mission (NRHM), launched in 2005, placed a heavy emphasis on child health and nutrition in rural areas and created effective mechanisms to address issues and challenges. In particular, the creation of a centrally coordinated tiered public healthcare system including primary healthcare centers and outreach workers or Accredited Social Health Activities (ASHAs) has enabled better linkages between communities and public healthcare. This has enabled child health and nutrition to be addressed at different levels including *anganwadis*.

However, for the past three years, a similar National Urban Health Mission (NUHM), that specifically addresses the health of the urban poor including child health and nutrition, has been repeatedly taken back to the drawing board. At the time of writing this report, it is estimated that the NUHM will potentially be finalized and launched in 2012.

The Right to Food Act

The idea of the Right to Food Act evolved in 2001 when the People's Union for Civil Liberties (PUCL) from Rajasthan submitted a petition to the Supreme Court, demanding that India distribute its national food stocks as a strategy to protect its citizens from hunger. The PUCL petition led to prolonged litigation rather than to concrete results. Consequently, the small petition evolved into a larger public campaign for the right to food, also known as the Right to Food Campaign (RFC), a cause championed by myriad non profit and corporate organizations and individuals who believe in a fundamental right to food. The Supreme Court also postures that the right to food should be interpreted as the right to 'live with human dignity', which encompasses not only the right to food, but also the right to other basic necessities. The government constituted a National Advisory Counsel (NAC), comprising eminent civil society representatives, to navigate issues of food rights and advise the drafting of the National Food Security Bill. It is anticipated that this bill will either be passed or denied in late 2011.

Malnutrition and the Millennium Development Goals 2000

From the 1960s to the 1990s, numerous UN conferences took place with the intended goal to understand and fight world poverty. After the Millennium Summit 2000, 192 UN member states collectively created The Millennium Development Goals (MGDs), comprising eight international development goals that each nation aims to achieve by the year 2015. One of these primary goals is to eradicate extreme poverty and hunger. Other goals, such as reducing child mortality, improving maternal health, and empowering women are also highly correlated with the battle against malnutrition. Each goal is assigned with a set of targets and indicators designed as a road map for how to achieve success. These targets were drafted to measure the progress of each country on an international level.

Appendix B

Methodology: Dasra's Research Process

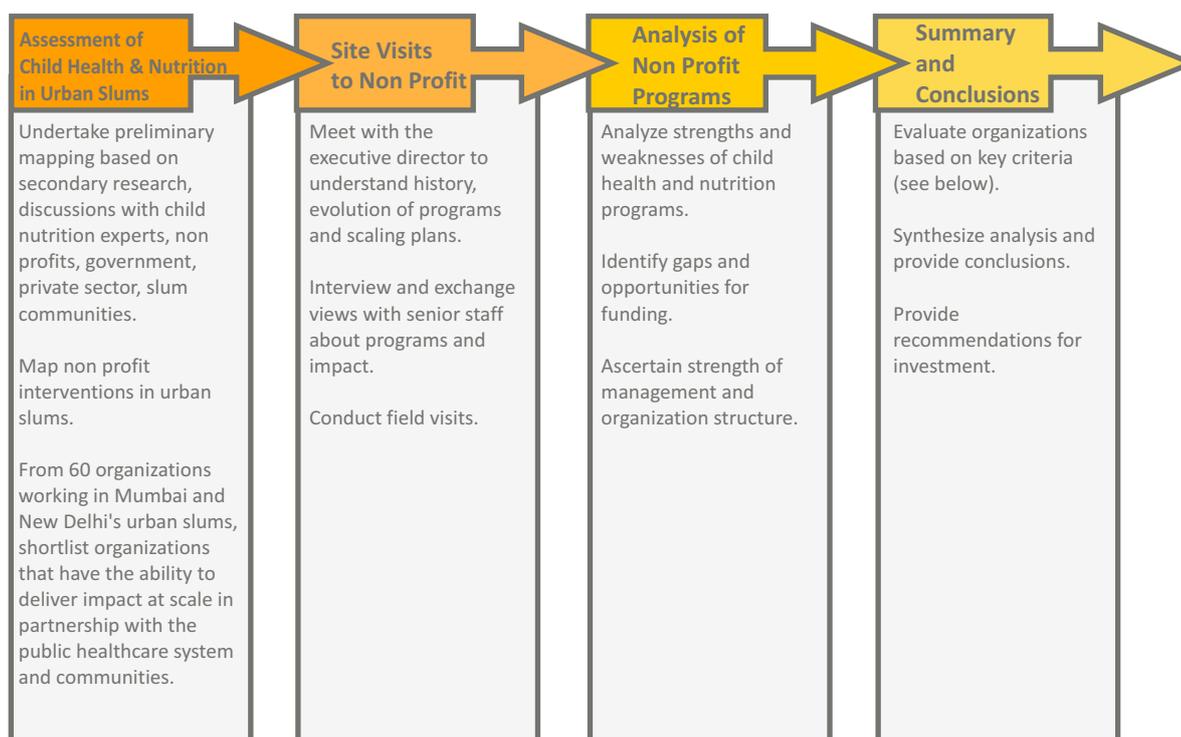
Dasra has over a decade of experience of researching the social sector in India. As an organization we pride ourselves on being analytical and research focused with many of our team coming from analytical roles in the financial and corporate sector. We transfer those well-honed skills to the social sector.

We are used to working on reports in sectors where access to reliable primary research can be limited and hard to verify. We have developed systems and processes to ensure we can paint an honest picture.

Dasra undertook 4 months of detailed interviews with experts, academics, non profits, women living in slums and public healthcare workers in order to understand the challenges and issues in tackling child malnutrition in urban slums and how these are addressed by non profits.

Our research was not just restricted to Mumbai and New Delhi; we looked at national and global best practices to benchmark them against the current state of child health and nutrition services in urban slums.

Dasra's research design followed a mixed approach including:



Appendix B

Selection Criteria:

In this study Dasra has focused on non profits that fulfill the following key criteria:

A. Impact on child health and nutrition – A number of non profit organizations evaluated in this report are not exclusively aimed at improving the health and nutrition of children aged 0-36 months. As much as possible, Dasra aims at focusing on critical interventions for this target group. As such the focus of Dasra's analysis and selection of non profits was their child health and nutrition programs for children aged 0-36 months which incorporate cornerstones and best practices.

B. Ability to reach high volumes – Slum communities are extremely dense populations that are in a constant state of flux due to migration. To create large scale impact, non profits need to reach out to large numbers within these communities.

C. Partnerships with the public healthcare system – Independent solutions that can be rolled out to the public system by building linkages with the system itself. The entire public system is a key stakeholder and cannot be excluded from the process of improving child health and nutrition.

D. Scalability – Dasra defines scalability as:

- The evident availability of required resources: for example, the need for skilled medical practitioners to provide a service in urban slums may be a constricting factor to scale; on the other hand training community members to provide a service is an example of a scalable intervention.
- Gestation period: the time required to realize impact from the start of the program.
- Cost per beneficiary.

Appendix B

Dasra's use of statistics

How reliable are the official statistics on child health and nutrition?

Reliable data on the health and nutrition status of slum children in India as well as effective interventions is hard to find. This is one of the biggest challenges facing the State and non profits who want to understand what works. Key issues include:

- Official data (including 'National Family Health Survey') only collects data on a state or national level. There are very few figures that are corroborated only for cities.
- National surveys do not typically include performance on all cornerstones and best practices. In addition, there are extremely few surveys conducted on the performance of *anganwadis* in cities.
- Data on health is generally not disaggregated for the urban poor, which means that extremely low performing health indicators often get masked by higher performing ones.
- Many slums are excluded from data collection, which makes it difficult to present accurate numbers of the health of the urban poor. In addition, due to frequent migration, it is nearly impossible for these numbers to remain up to date.
- There are massive discrepancies between official data and non profit and academic sources. Where possible we have tried to use official data so as to provide a basis for common understanding and cooperation between the government and non profits.

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Glossary

Acute Respiratory Illnesses (ARI)

Cough or nasal discharge, accompanied with chest congestion, that is present for three days or more.

Anganwadi

A community-based daycare center for children 0-6 years old through which the Integrated Child Development Scheme is delivered.

Anganwadi Worker

The staff who run the *anganwadi* centers and who are in charge of all service delivery. *Anganwadi* workers are assisted by *anganwadi* helpers.

Antenatal

Before birth; during or relating to pregnancy; prenatal.

BCG

This vaccination against tuberculosis is crucial in urban slums, where, due to indoor air pollution, outdoor pollution, cramped and congested living environments, tuberculosis is a serious health risk for children and adults.

Child Morbidity

Refers to the susceptibility to diseases and chronic illnesses in childhood. Overall, child malnutrition is a risk factor for 22.4% of India's total burden of disease.

Child Mortality

The incidence of death in children. Child malnutrition is a leading cause of child mortality, estimated to play a role in about 50% of all child deaths.

Colostrum

The first breastfeed that takes place after birth. Colostrum must be breast milk free of any blood or infection and is usually produced within six hours of giving birth. Any breast milk produced thereafter is referred to as transitional milk.

Diarrhea

The passage of three or more watery motions or more than nine motions of normal consistency in 24 hours.

DPT

This vaccine against diphtheria, pertussis (whooping cough) and tetanus are recommended at 2 months of age with a booster shot at 15 months of age. Typically, inoculations against all three are given simultaneously.

Early Childcare and Education (ECCE)

The National Policy on Education, created in 1986, emphasizes early childcare and education (ECCE) and the critical role it plays in supporting education and working women.

Infant and Young Child Feeding (IYCF)

A tool set forth by the World Health Organization (WHO) for assessing national practices, procedures, and programs associated with feeding infants and children appropriately on a global scale. Only 21% of children in India are fed in a way that complies with these guidelines.

Glossary

Micronutrients

Such as Vitamin A and Zinc build immunity and increase growth. When children lack adequate micronutrients, they are at higher risk for stunting.

Neonatal

Of the first 28 days of life. An infant upto 28 days is referred to as a neonate.

Oral Rehydration Salts (ORS)

ORS is an effective and low-cost treatment for diarrhea at its onset.

Polio

This oral vaccine is recommended every two months from 2-6 months of age, once at 18 months and once at school entrance (4-6 years of age).

Postnatal

Of, relating to, characteristic of, or denoting the period after childbirth.

Stunting

The measure of chronic malnutrition or linear growth retardation that results from a failure to receive adequate nutrition over a long period. Stunting is a measure of height to age.

Underweight

Often used as a basic health indicator of the health status of a population, this condition can result from either chronic or acute malnutrition or both. Underweight is a measure of weight to age.

Wasting

The measure of acute malnutrition that results in a child being too thin for his or her height. Consequently, the body starts consuming tissues and muscles. Wasting is a measure of weight to height.

Acknowledgements and Organization Database

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Apnalaya	www.apnalaya.org
BPNI	www.bpni.org
CCDT	www.ccdtrust.org
CSSC	www.cssc.org.in
Delhi Mobile Creches	www.mobilecreches.org
Deepalaya	www.deepalaya.org
Foundation for Mother & Child Health	www.motherandchildhealth.org/india.html
HOPE worldwide	www.hopeww.org
MAMTA	www.mamta-himc.org
Micronutrient Initiative	www.micronutrient.org
Mumbai Mobile Creches	www.mumbaimobilecreches.org
Navjyoti India Foundation	www.navjyoti.org.in
Niramaya	www.niramaya.org/index.html
Nutrition Foundation of India	www.nutritionfoundationindia.res.in
Population Foundation of India	www.popfound.org
Smile Foundation	www.smilefoundationindia.org
SNEHA	www.snehamumbai.org
Urban Health Resource Center	www.uhrc.co.in

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