

# Proposal for Funding of Health Spoken Tutorial

## Introduction

Nutritional status of children is a critical determinant of a society's human development. Globally in 2018, at least 1 in 3 children under 5 years of age was not growing well due to malnutrition in its more visible forms: stunting, wasting and overweight and, at least, 1 in 2 children suffers from hidden hunger due to deficiencies in vitamins and other essential nutrients. In 2018, almost 200 million children under 5 years of age, suffered from stunting or wasting while at least 340 million suffered from hidden hunger. In 2019, stunting affected 21.3% or 144 million children under age 5 globally and wasting affected 6.9% or 47 million children under 5 globally. The problem of undernutrition however is starker among the children below 2 years of age with only 2 in 5 children under 6 months being exclusively breastfed globally, while only 1 in 5 children aged 6 to 23 months from the poorest households and rural areas is fed the minimum recommended diverse diet for healthy growth and brain development. Besides frequent infections, poor diets drive malnutrition in early childhood, 44 percent of children aged 6 to 23 months are not fed vegetables or fruits and 59 percent are not fed foods high in protein.

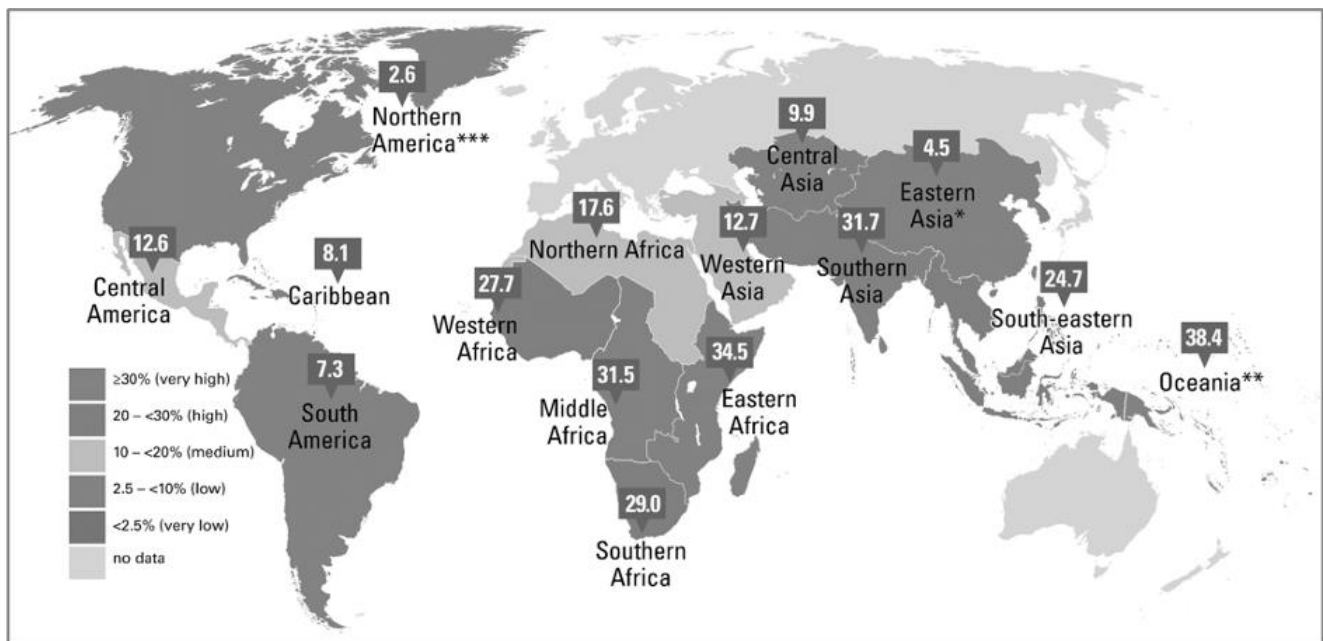


Figure 1: Percentage of stunted children under 5 in 2019, by UN sub-region [2]

## Growth Trend in context of India

An average birthweight of an Indian child is 2700 gram. As per NFHS 4 data, low birth weight in India is reported to be 18%. Thus, many of the babies born in India require catch up growth and prevention of growth faltering especially in the 1st year of life. As shown in Figure 2, the highest number of wasted children (34.3%) are between 0-2 months of age. Percentage of underweight children increases from 24.7 to 35.7 and stunting increases significantly from 19.7 to 43.8 from 0-

2 months to 13-24 months of age, respectively. Wasting rate is higher below 6 months of age. In fact, the rate of wasting in children is higher specifically between birth and 1<sup>st</sup> year (Figure 2). On the other hand, stunting and underweight prevalence is noted to increase with a child's age specifically after 12 months.

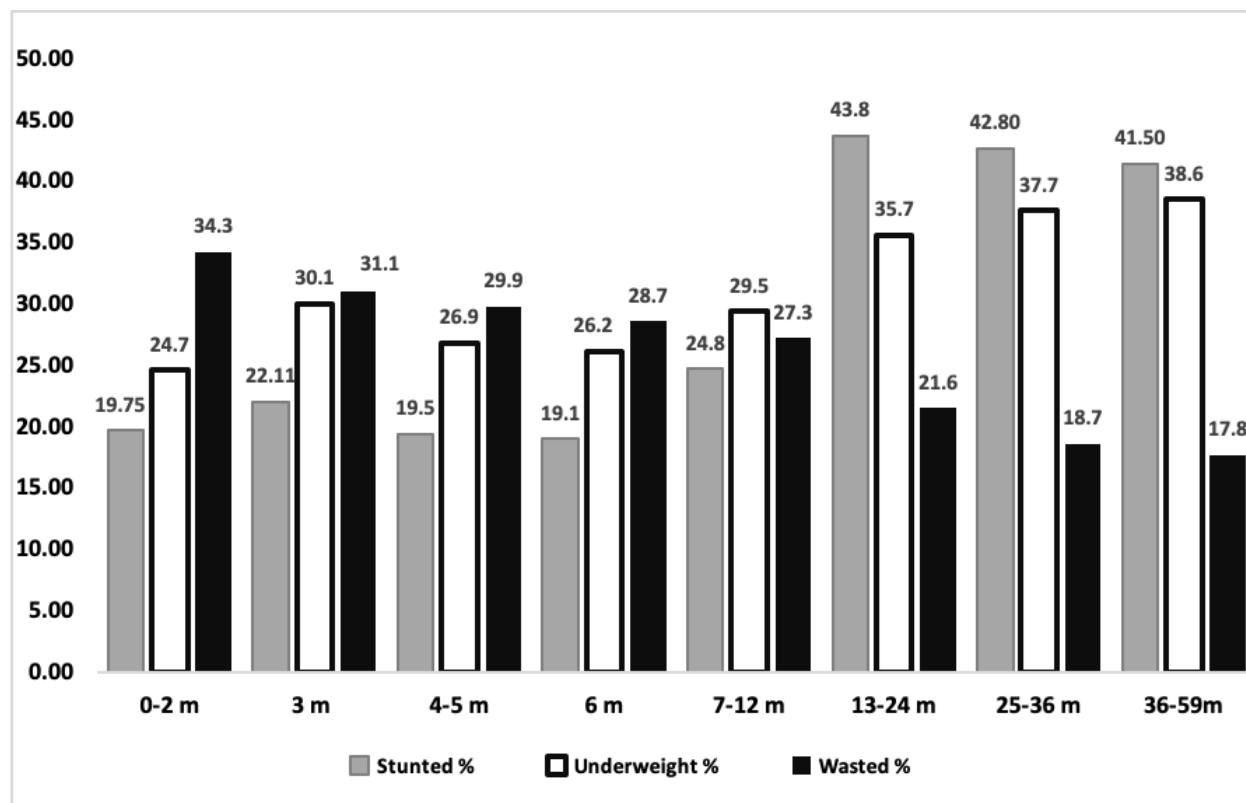


Figure 2: Nutritional Status of Children under the age of 5 as per NFHS 4 (All India)

It is important that nutrition interventions address the underlying causes of growth faltering to be effective in prevention. Prenatal and early-life interventions are needed to prevent the growth failure that mainly happens during the first two years of life, including the promotion of appropriate adolescent, maternal, infant, young child feeding practices (A-MIYCF) including effective breastfeeding practices.

### The Dearth of Technical Knowledge on A-MIYCF

Initiation of breastfeeding within an hour and exclusive breastfeeding are conventional indicators used in all countries to measure determinants for child malnutrition. These indicators do not inform of the effectiveness of breastfeeding or if enough milk transfer had taken place. If the mother is exclusively breastfeeding for 6 months and the baby is noted to have growth faltering then breastfeeding skills need to be assessed and improved. Teaching correct techniques of breastfeeding is extremely critical especially when we need catch up weight gain in the baby. Mothers have very poor support and knowledge on breastfeeding attachment and positioning techniques. Only 7.5% of the mothers are reported to be practicing correct breastfeeding techniques in urban slums of East Delhi in one of the studies. Even though breastfeeding is often described as “natural,” it is also an art that has to be learned

by both the mother and the newborn. Skills regarding how to hold and position a baby at the breast, how to achieve an effective latch, and other breastfeeding techniques may need to be taught. Not surprisingly, some women expect breastfeeding to be easy, but then find themselves faced with challenges. What mother expects about breastfeeding and the reality of the mother's early experiences with breastfeeding her infant has been identified as a key reason that many mothers stop breastfeeding within the first two weeks postpartum. Similar findings were seen in complementary feeding data from NFHS4 where only 9% of children between 6-23 months were receiving a minimal acceptable diet.

### **The Spoken Tutorial Project**

The Spoken Tutorial (ST) project is a method developed by Prof Kannan Moudgalya at IIT Bombay for training and for capacity building. ST method is also successfully being used for IT training in India. ST team has already trained 48,00,000 IT students and faculty members in about 5,000 colleges, free of cost. There are at present about 1,100 ST in English, and about 9,000 tutorials, including those dubbed into our regional languages.

### **The Health Spoken Tutorial**

In 2017, ST project decided to start a series on health and nutrition named Health Spoken Tutorial. They are free short animated videos available online ([YouTube](#) and [Website](#)) and offline. These videos are on correct techniques of breastfeeding and complementary feeding for the first 1000 days of life, adolescent nutrition, pre-pregnancy, pregnancy and lactation nutrition can empower millions of people with the knowledge of life-saving skills. Through this series, the Spoken Tutorial project at IIT Bombay aims to reach out to scores of people for spreading awareness on malnutrition and reducing infant mortality drastically in India and globally as well. Field-tested, time-tested, scientifically accurate and expert-approved protocols for mother and child nutrition are provided in these tutorials. The tutorials help not only the urban parents, doctors, dietitians, nurses but also the people having no formal education such as rural mothers, tribal health workers, Anganwadi workers, ANMs and ASHAs to easily understand and grasp the most important practical details of breastfeeding, complementary feeding & general nutrition. The entire series is created using graphics, animation with simultaneous narration in simple words and a carefully scripted logical sequence to demonstrate each step of the topic with maximum clarity. They are made for self-learning. These videos are accurately translated and dubbed in 15 officially recognized Indian languages and a few foreign languages to overcome the language barrier. The videos are supported by a toll-free helpline called "Maa aur Shishu Poshan" helpline (1800 267 7782) available in 5 Indian languages. Doctors, lactation consultants, dietitians, nurses are available 24/7 on this helpline to answer any doubts.

As of today, we have 36 English tutorials (Total 300+) and they have been translated and dubbed into 15 regional and 3 foreign languages. There is a request from the local government from the tribal region of Dharni, Maharashtra and their team has started translating and dubbing ST tutorial in Korku language which would be our first translation in tribal language. Total of 75 English tutorials have been planned with subsequent dubbing in all constitutional languages and possibly other international languages.

★ *Benefits of these tutorials are stated by many beneficiaries through [video testimonials](#).*

## Tutorials Ready in Health Spoken Tutorial

1. Cross Cradle	2. Breastfeeding Latching
3. Cradle Hold	4. Football Hold
5. Sideline Hold	6. Laidback Hold
7. Breast Crawl	8. Kangaroo Mother Care
9. Physical Methods to increase breast milk supply	10. Hand Expression of Breastmilk
11. Storage of Breastmilk	12. Feeding Expressed Breast Milk
13. Breast Condition	14. Nipple Condition
15. Basics of Newborn	16. How to Bathe Newborn
17. Type 1 Type 2 Nutrients	18. Junk Food
19. Reasons to Increase Junk Food Consumption	20. Personal Hygiene
21. Safe Preparation of Baby Food	22. Veg recipes for Adolescents
23. Non-Veg Recipes for Adolescents	24. Pre-pregnancy Nutrition
25. Importance of Magnesium	26. Calcium rich Veg Recipes
27. Calcium rich Non Veg Recipes	28. Vitamin C uncooked Recipes
29. Veg Recipes for 6 Months old	30. Non Veg Recipes for 6 months old
31. Veg Recipes for 7 Months old	32. Nutritious Powder for 6-24 months old
33. Non Veg Recipes for Pregnancy	34. Veg Recipes for Lactating Mothers
35. Non Veg Recipes for Lactating Mothers	36. Breastfeeding During Covid

### Workshops using Spoken Tutorials on health and nutrition:

MIYCN for master trainers (Mother, Infant and Young Child Nutrition): 2000 and counting.

Only mothers: 10,000+ and counting.



Benefits of these tutorials are stated by many beneficiaries through testimonials:

[https://drive.google.com/drive/folders/13fzXj9uuFOMHi-c\\_0\\_V2mapj5uAs-2P0s/13fzXj9uuFOMHi-c\\_0\\_V2mapj5uAs-2P0?ogsrc=32](https://drive.google.com/drive/folders/13fzXj9uuFOMHi-c_0_V2mapj5uAs-2P0s/13fzXj9uuFOMHi-c_0_V2mapj5uAs-2P0?ogsrc=32)

### Media coverage

1. [Breastfed Right: How Shirampurs Babies Escape Malnutrition. Swagata Yadavar, IndiaSpend, 16 May 2019](#)
2. [How women can be empowered on Malnutrition, Disha Shetty, The NEWS Minute, 20 August](#)



2018

3. [For a healthy tomorrow, Geetanjali Minhas, Governance Now, 20 Feb. 2019](#)

- *ST videos on the first 1000 days of life have been recognised by the Ministry of Health and Family Welfare and by the Ministry of Women and Child Development.*

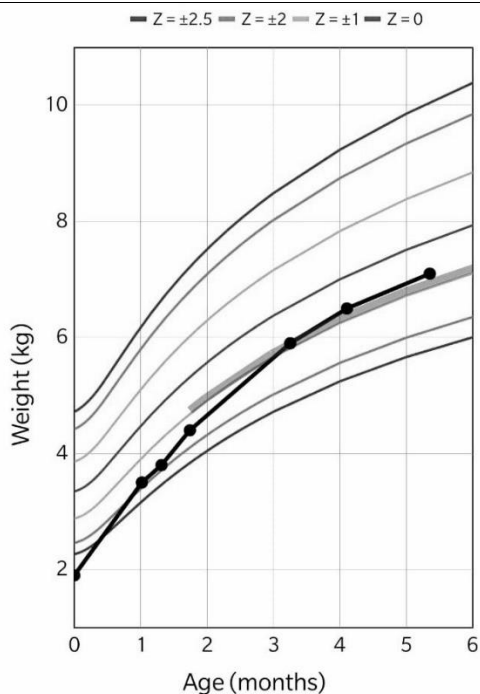
**Some of the babies benefited by MIYCF skills shown in MIYCF**



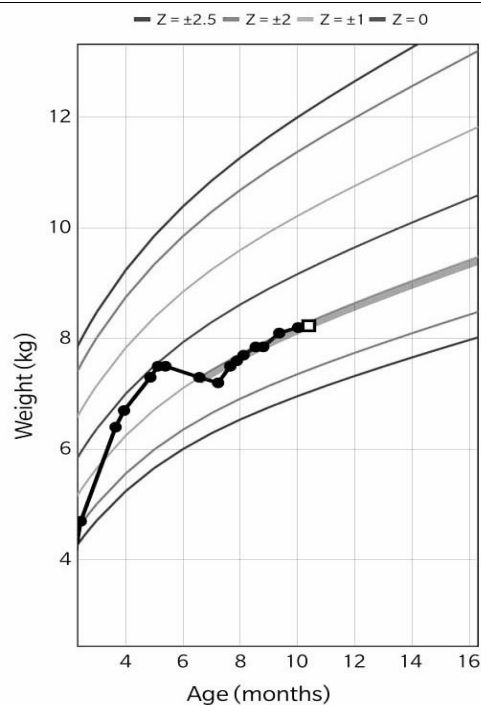
Our tutorials are not only helpful for disadvantaged mothers in urban slums and rural/tribal area but it is also very beneficial to educated mothers of India. Sharing 2 of the success stories with babies growth charts and their case studies to show how these low birth weight babies born to urban elite mothers and with the help of spoken tutorial, mothers were guided on proper breastfeeding technique and babies immediately caught up on their weight Z score.

Case studies of growth catch up in low birth weight babies in educated urban mothers

Baby 1: Weight for Age WHO Z Score



Baby 2: Weight for Age WHO Z Score



This baby was born full term to a mother who was a graduate in Physics, working mother from one of the urban area. Baby's birth weight was 2.1 kg. which was low birth weight. Mother was taught breastfeeding skills before delivery using Spoken Tutorial (ST) videos, the link of which was sent by her brother who was CTARA student IIT B who is now an engineer at Boeing. As we can see from the growth chart, baby was born less than - 3 SD, but because of mother's understanding of cross cradle hold and latching skills, baby has a tremendous growth catch up in just the matter of 3 months. Latest weight at 8 months is 8.1 kg and he is on -0.6 SD. He is on mother's

This baby was born full term with a birth weight of 2.3 kg to a mathematics post-graduate mother from Indore, MP. Here again, baby is born low birth weight. Once mother started watching ST videos at birth, baby gained excellent weight gain from birth to about 4 months. Between 4-6 months of age, child had 2 bouts of diarrhea, so baby had a growth faltering as seen in this growth chart. Mother was giving monotonous foods at 6 months of age as per her mother-in-law's advice but because of persistence growth faltering, she was advised to start an egg a day in baby's diet at around 7 months of age and again we see growth catch up. As seen from the chart, there are important phases

<p>milk and home cooked complementary foods and mother is prepared all the nutrients dense powders shown in ST videos and is using it in child's complementary foods. She also watched other videos made on complementary food recipes. Mother is working now so, grandmother prepares food and she also learns about child nutrition using ST videos.</p>	<p>in baby's 1<sup>st</sup> year of life, which are at risk of growth faltering. Most important of them are breastfeeding phase if mother is using faulty skills and during complementary feeding phase when she uses monotonous watery food which lacks protein, good fats and other essential nutrients required for baby to grow. The same CTARA student who helped mother of baby number 3 also helped this mother.</p>
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### **Some of the users of Health Spoken Tutorials**

1. Sabarkantha District, Gujarat, officially uses Spoken Tutorials in 48 Public Health Centres.
2. Samta Foundation, Maharashtra, has trained 1,000 ASHA workers using Breastfeeding Spoken Tutorials, who have in turn trained 10,000 mothers with babies of 0-6 years of age.
3. Seva Mandal Nursing College, Sewri, uses Spoken Tutorials to train its nursing students.
4. Mumbai based 60-year-old NGO, Shrimati Malati Dahanukar Trust, uses Breastfeeding Spoken Tutorials extensively.
5. IIT Bombay hospital uses Breastfeeding Spoken Tutorials.
6. Various NGOs and organizations like Action Against Hunger, Tata Trust, L&T PCT and various other organizations use ST videos in their programs.
7. Goa Government

### **Benefits/Anticipated Outcomes**

- Empowerment of the whole community with the understanding of the importance of early nutrition, knowledge and skills of best practices for adolescent, maternal, infant and young child nutrition to promote and maintenance of health
- Evidence-based skill building of breastfeeding and appropriate complementary feeding thereby preventing devastating acute as well chronic malnutrition in children
- Improvement in hygiene and sanitation due to the understanding of the correlation between diarrhoea and malnutrition
- Decrease in consumption of junk food & empty calories thereby improving the health outcome in short as well as in long term
- Children will be more likely to reach their physical and intellectual potential
- Increased chances of coming out of poverty due to improved cognition and IQ
- Reduction of maternal, infant and child mortality rate
- Decreased incidence of chronic conditions like high blood pressure or diabetes mellitus in adulthood



- Our generation will be empowered with the knowledge to improve the health and nutrition of their children and thus will pass on this knowledge to generations to come

## BUDGET

- **Rs. 3,01,000/- per tutorial with 10 dubbed languages**

### Break-up of budget for creation and translation-dubbing of a tutorial

Script writer (incl. OCA)	43,000
Graphic designer (incl. OCA)	60,000
SPM	91,000
PM	67,000
Translation and dubbing into 10 languages	40,000
<b>Total</b>	<b>3,01,000</b>

### S. No. Title of the upcoming tutorials

- 1 Non veg recipes enriched with magnesium recipes
- 2 Nutrient count of day to day food
- 3 Importance of protein
- 4 Vegetarian recipes rich in protein
- 5 Non veg recipes rich in protein
- 6 Importance of potassium
- 7 Potassium rich veg recipes
- 8 Vegetarian recipes for 12 to 18 months baby
- 9 Importance of choline
- 10 Importance of Calcium
- 11 Importance of vitamin C
- 12 Importance of folate
- 13 Vitamin C rich cooked recipes
- 14 Folate rich vegetarian recipes
- 15 Non-vegetarian recipes for 7 month old babies
- 16 Essential nutrition actions for young children
- 17 Essential nutrition actions for pregnant women
- 18 Vegetarian recipes for 8 to 11 month old babies
- 19 Importance of Breastfeeding
- 20 veg recipes for pregnant woman -part 1
- 21 veg recipes for pregnant woman-part 2
- 22 Importance of sulfur
- 23 veg sulfur rich recipes

- 24 Importance of immunization
- 25 Types of immunization
- 26 Complementary feeding for 6 to 24-month babies
- 27 General guidelines for complementary feeding
- 28 preparation for breastfeeding after C-section.
- 29 procedure for skin-to-skin contact after C-section.
- 30 Continuation of skin-to-skin contact after surgery.
- 31 The IMS Act (The Infant Milk Substitutes, Feeding Bottles and Infant Foods Act, 1992 and 2003)
- 32 Growth charts
- 33 Comparative study between breast milk and formula milk
- 34 Vegetarian recipes rich in choline
- 35 Potassium rich non veg recipes
- 36 Importance of b12

#### **Health tutorials statistics on ST website and YouTube**

<http://tinyurl.com/yavdr7sc>

The link has details for the following -

- List of published and upcoming tutorials
- Overall stats of English and Hindi tutorials
- Stats in descending order for English tutorials
- Stats in descending order for Hindi tutorials