

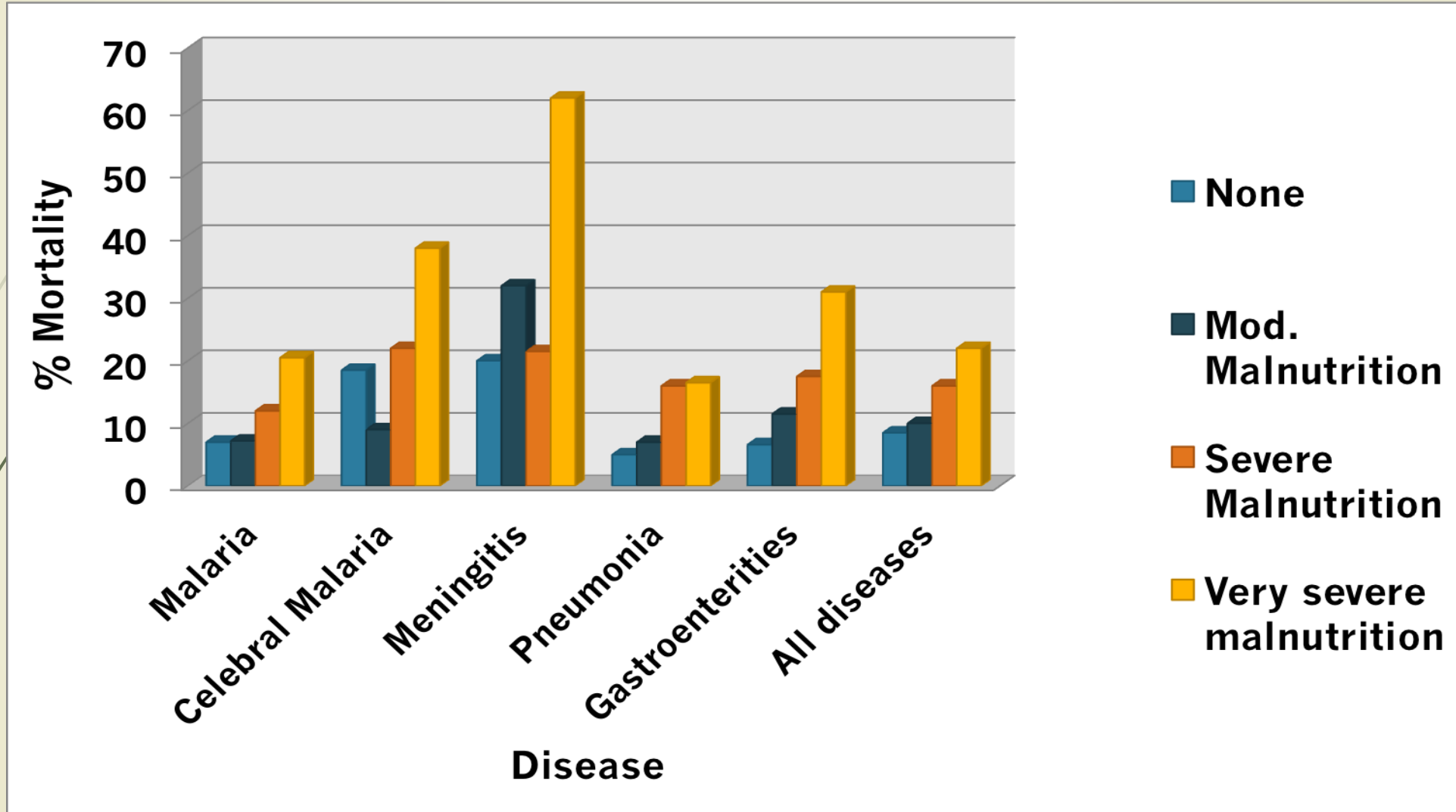
Childhood Malnutrition in India and Ways to Control Them



Presented By:
Debasrita Banerjee

Diseases, by level of Malnutrition

(WHO 2019)

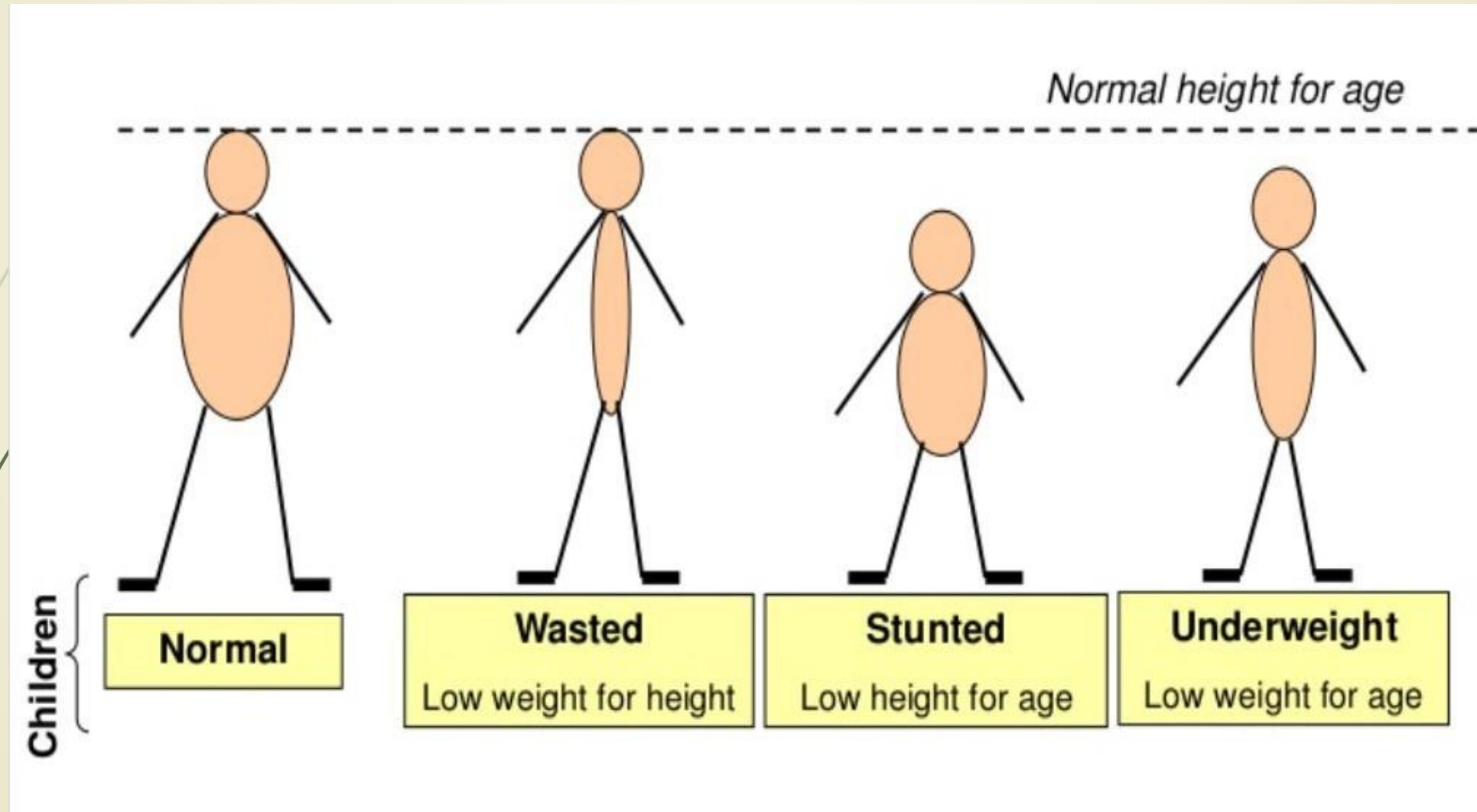




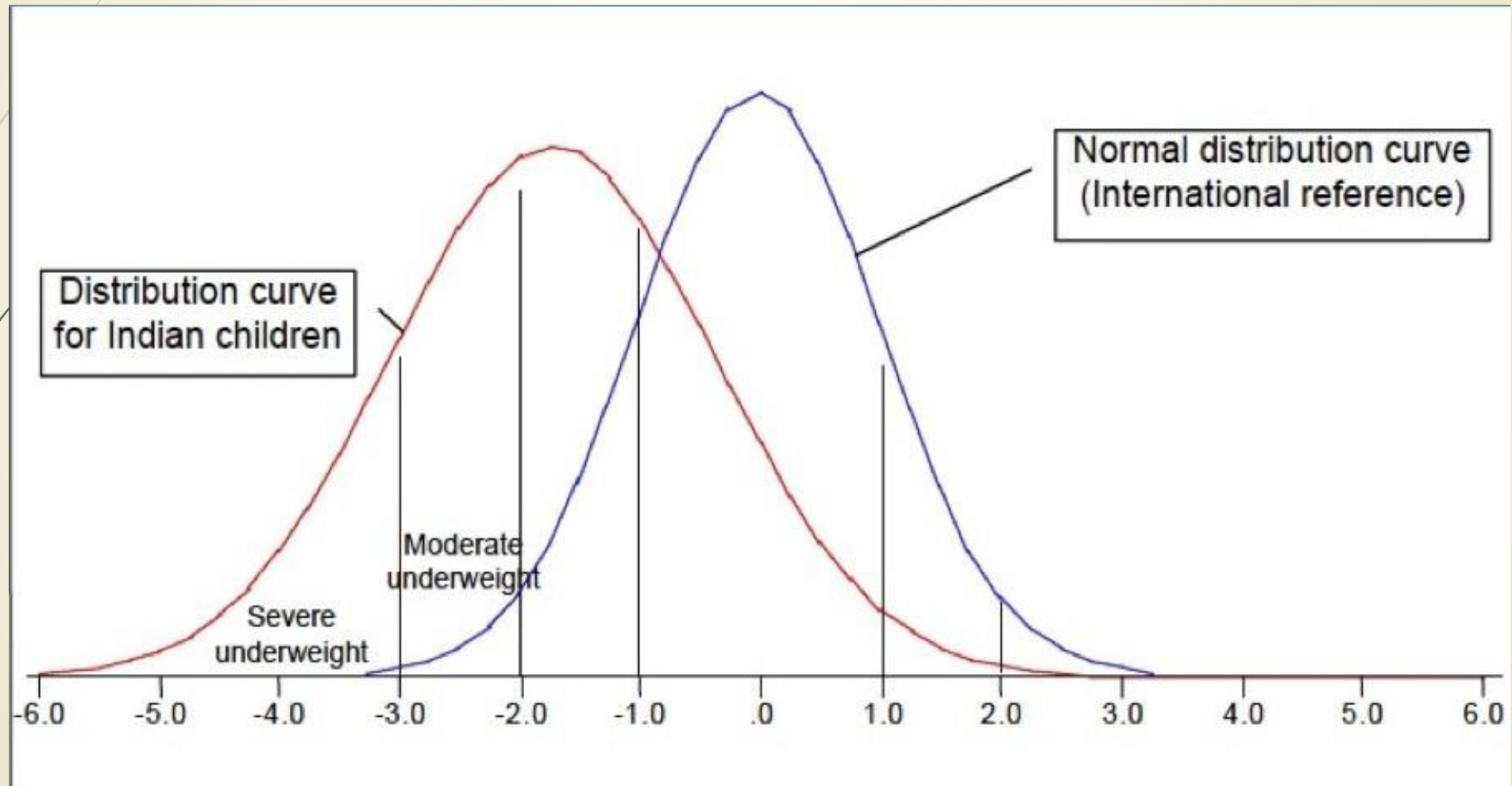
Malnutrition

It most often refers to **under nutrition** resulting from inadequate consumption, poor absorption or excessive loss of nutrients, but the term can also encompass **over-nutrition**, resulting from excessive intake of specific nutrients.

Different types of Malnutrition

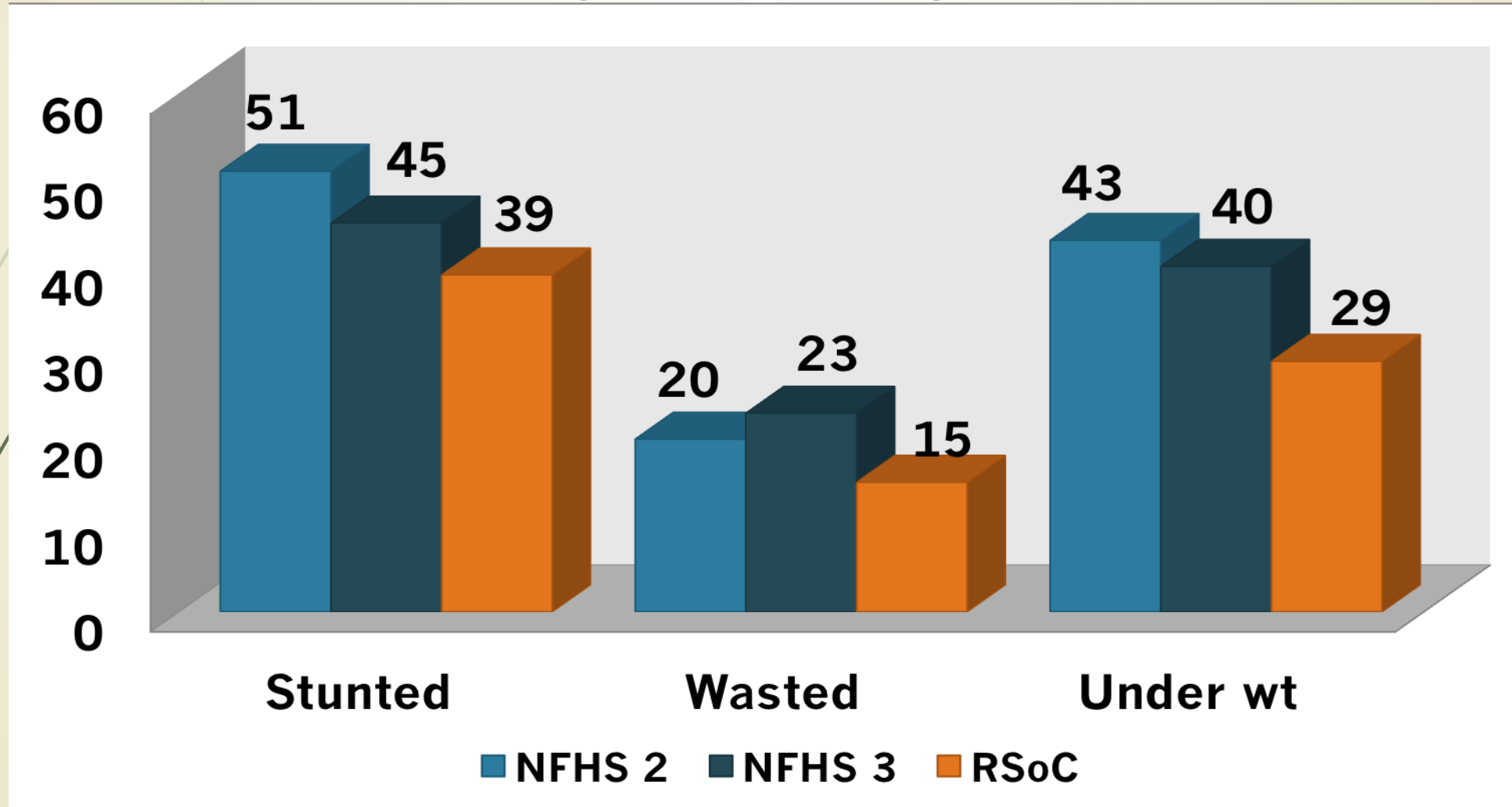


Comparison of distribution curve for India vs International standard (WHO-2018)

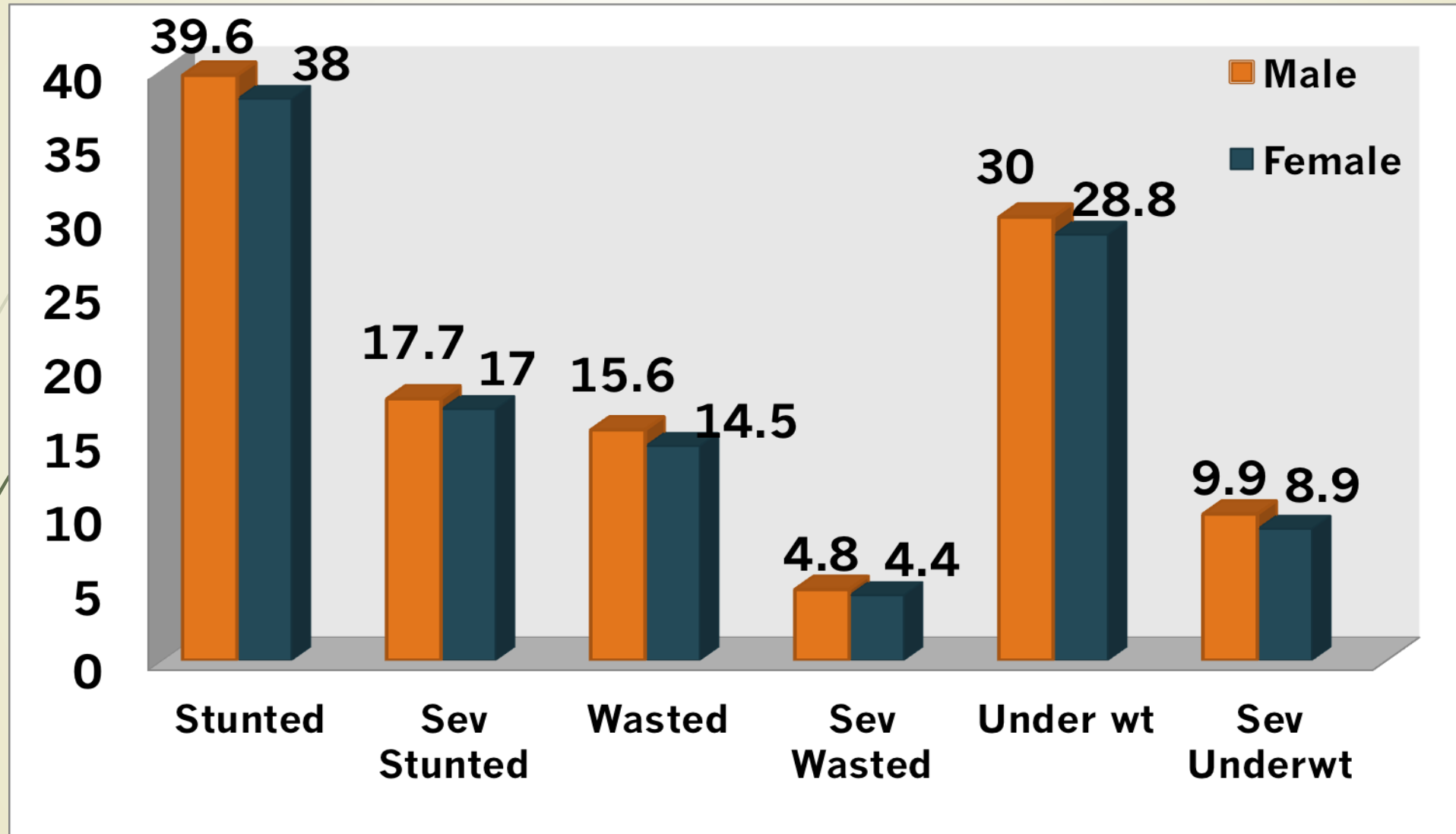


Debasrita Banerjee

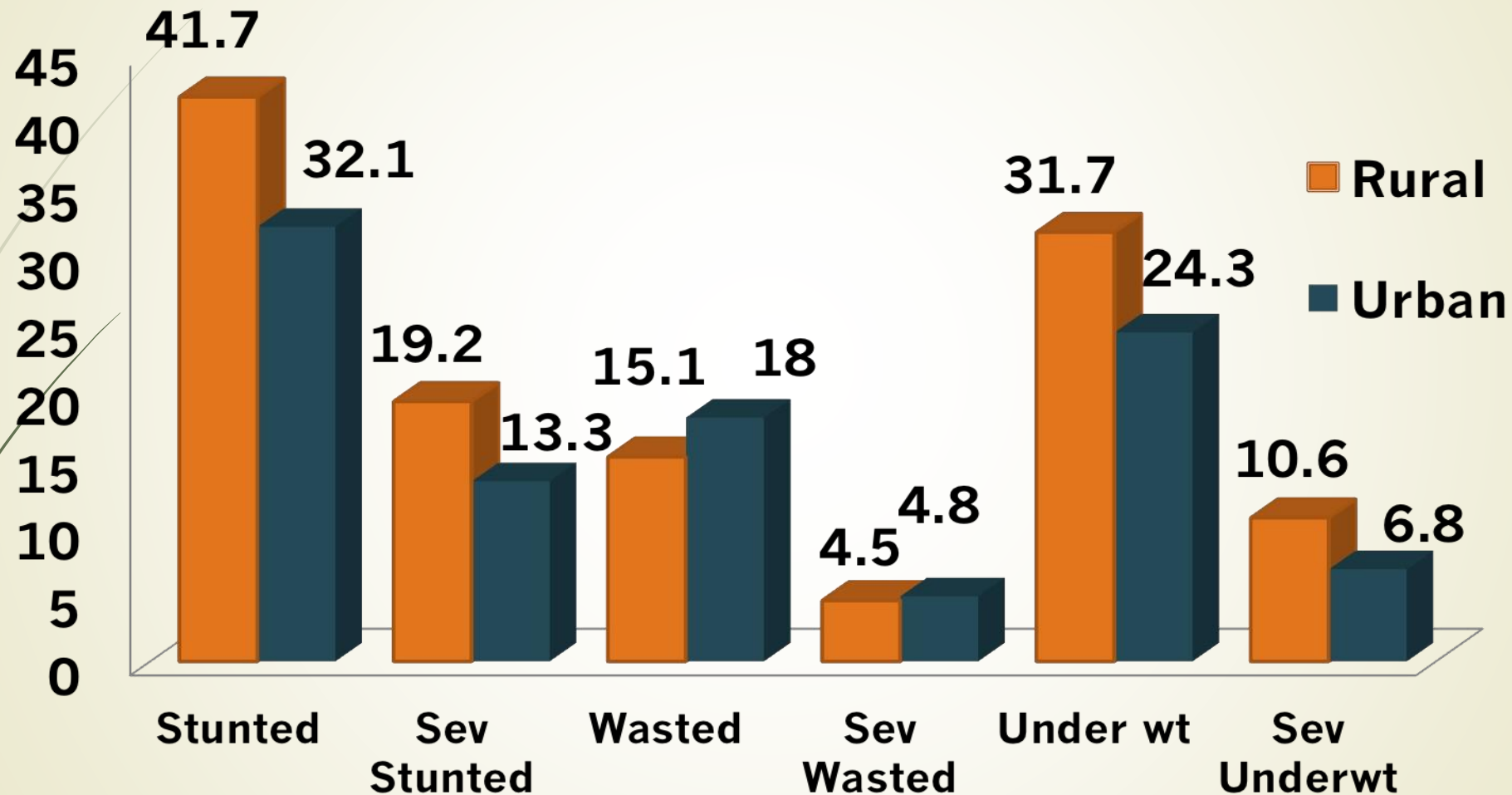
Trend of Malnutrition in India (2000-2015)



Sex distribution of Malnutrition in India (RSOC, 2016-17)



Distribution of Malnutrition as per residence in India (RSoC, 2013-14)



Micronutrients Deficiency (MDD)

- Micro-nutrients in the form of vitamins and the minerals, although are required in very less amounts are essential for maintaining a good health as they have a great impact on the normal body functions and physiologic processes.
- MDD are less visible but are equally dangerous.
- Micronutrient deficiencies are often called as **'hidden hunger'** as they may exist even when the macronutrient needs of an individual are being met.

Vitamin A Deficiency (VAD)

WORLD

- In 2013, VAD affected around one third (29%) of children in 6 to 59 months globally.
- VAD rates in sub-Saharan Africa and South Asia are 48% and 44% respectively and are highest in the world.

INDIA

- Keratomalacia and Bitot spots
- Because of the dramatic decline in prevalence of Bitot's spot, it is now recommended that the subclinical deficiency of Vitamin A, as assessed by serum retinol (SR) should be used as an indicator for determining the magnitude of VAD.
- According to WHO, 62% of the Indian population had

Iron Deficiency

WORLD

- In 2011, 273 million (242– 304 million) children were anemic globally.
- South Asia and Central and west Africa had lowest mean hemoglobin concentrations and highest prevalence of anemia.
- Global mean hemoglobin showed minimal improvement from 109 g/L (107–111) to 111 g/L (110–113) in children (1995 to 2011)

INDIA

- 7 of every 10 children in the age group of 6-59 months were anemic in India.
- 3% were severely anemic (less than 7.0 gms/dl), 40% had
- Moderate Anaemia (7.0-9.9 gms/dl) while 26% had mild anemia (10.0-10.9 gms/dl) (NFHS 3)

Iodine deficiency (IDD)

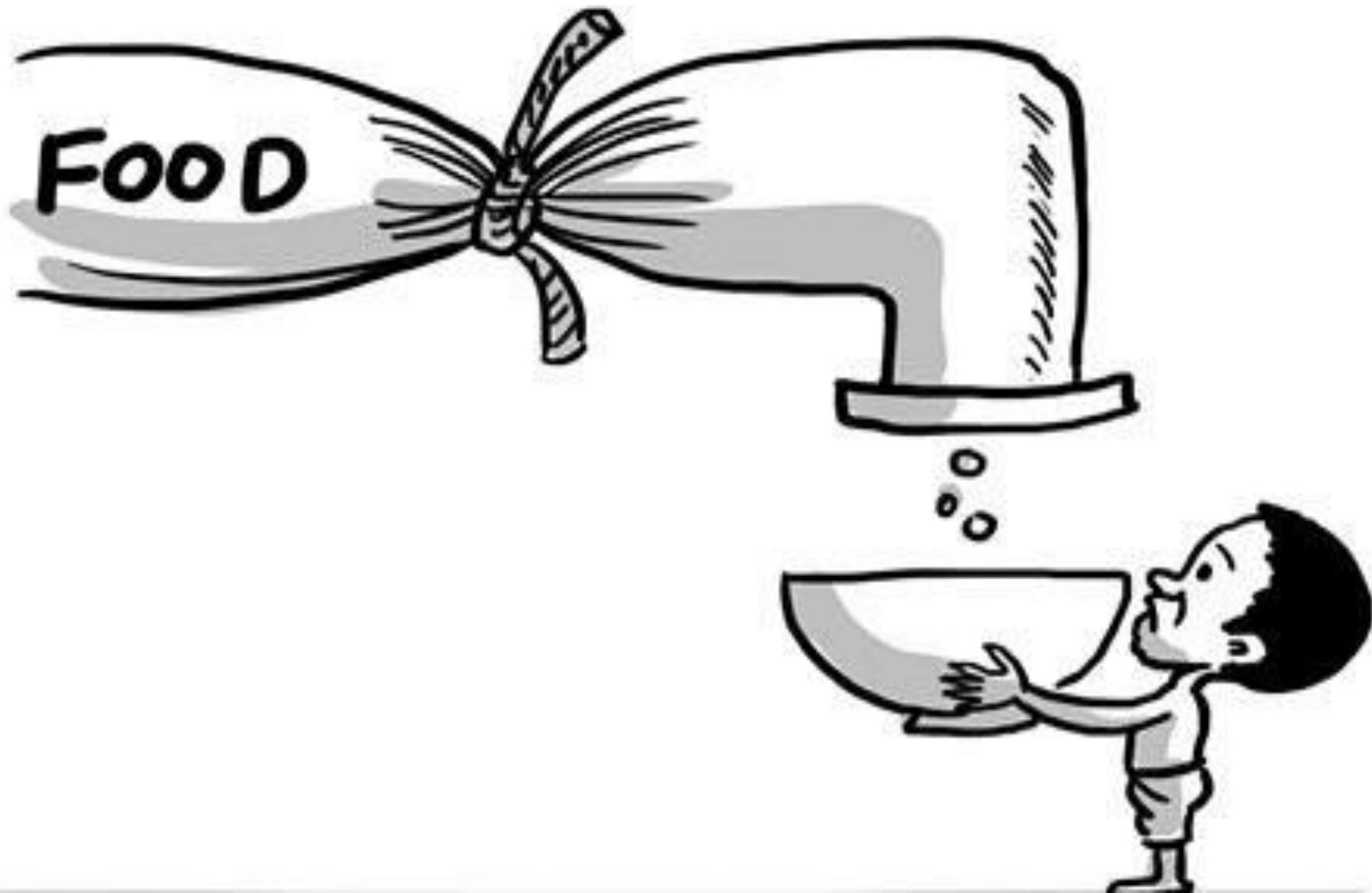
WORLD

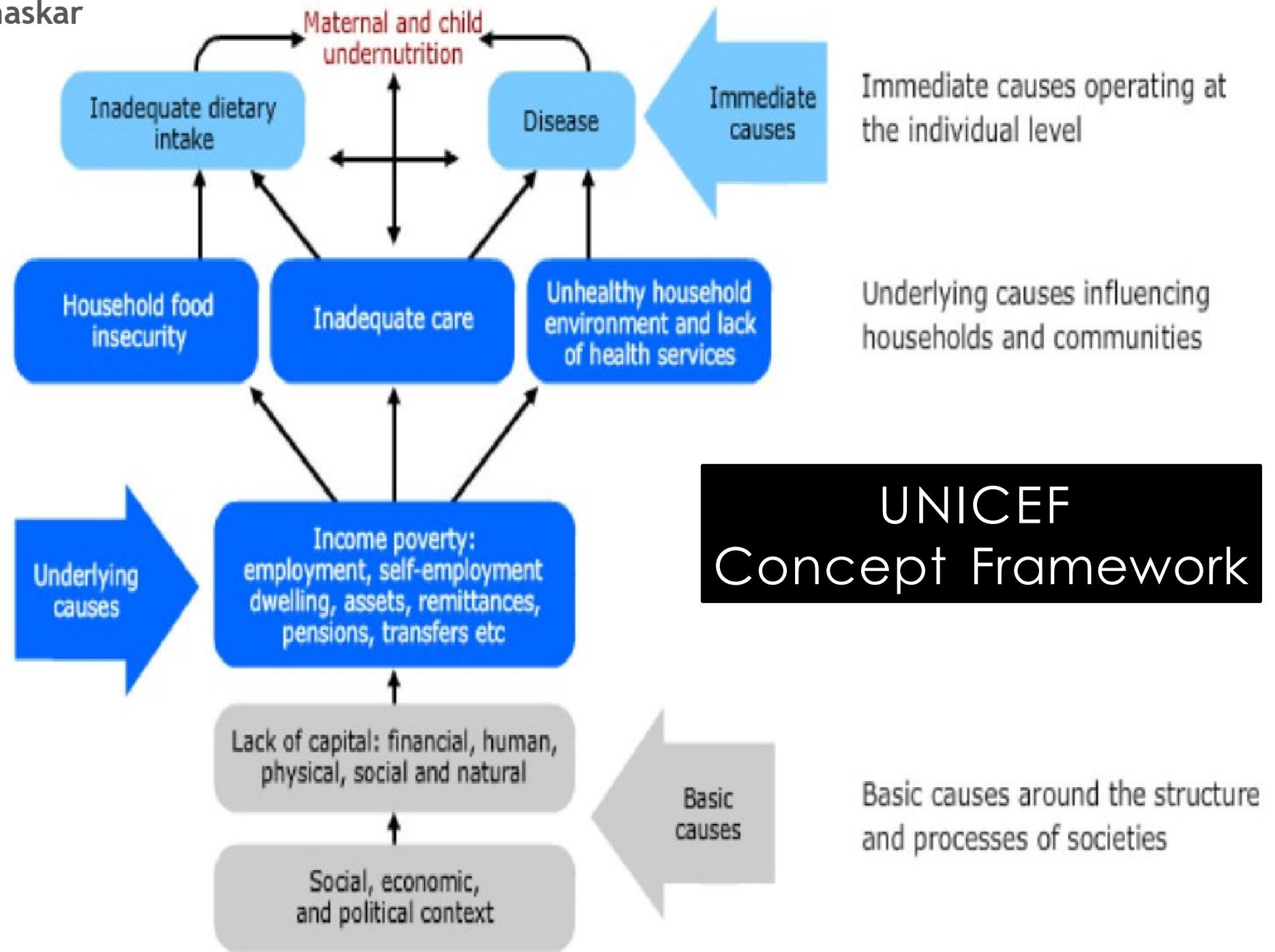
- Although Iodine deficiency has been halved through provision of iodized salt to around 2/3rd of world's household it still continues to remain an important public health problem
- Iodine deficiency during pregnancy is the commonest cause of mental impairment in 20 million babies born every year (UNICEF)

INDIA

- Goal was to reduce the prevalence of IDD to less than 10 percent by 2012. (NIDDCP).
- 263 districts were endemic for IDD with the prevalence of IDD being above 10%.
- The prevalence of goiter was highest in Maharashtra (11.9%) and West Bengal (9%) (GOI)

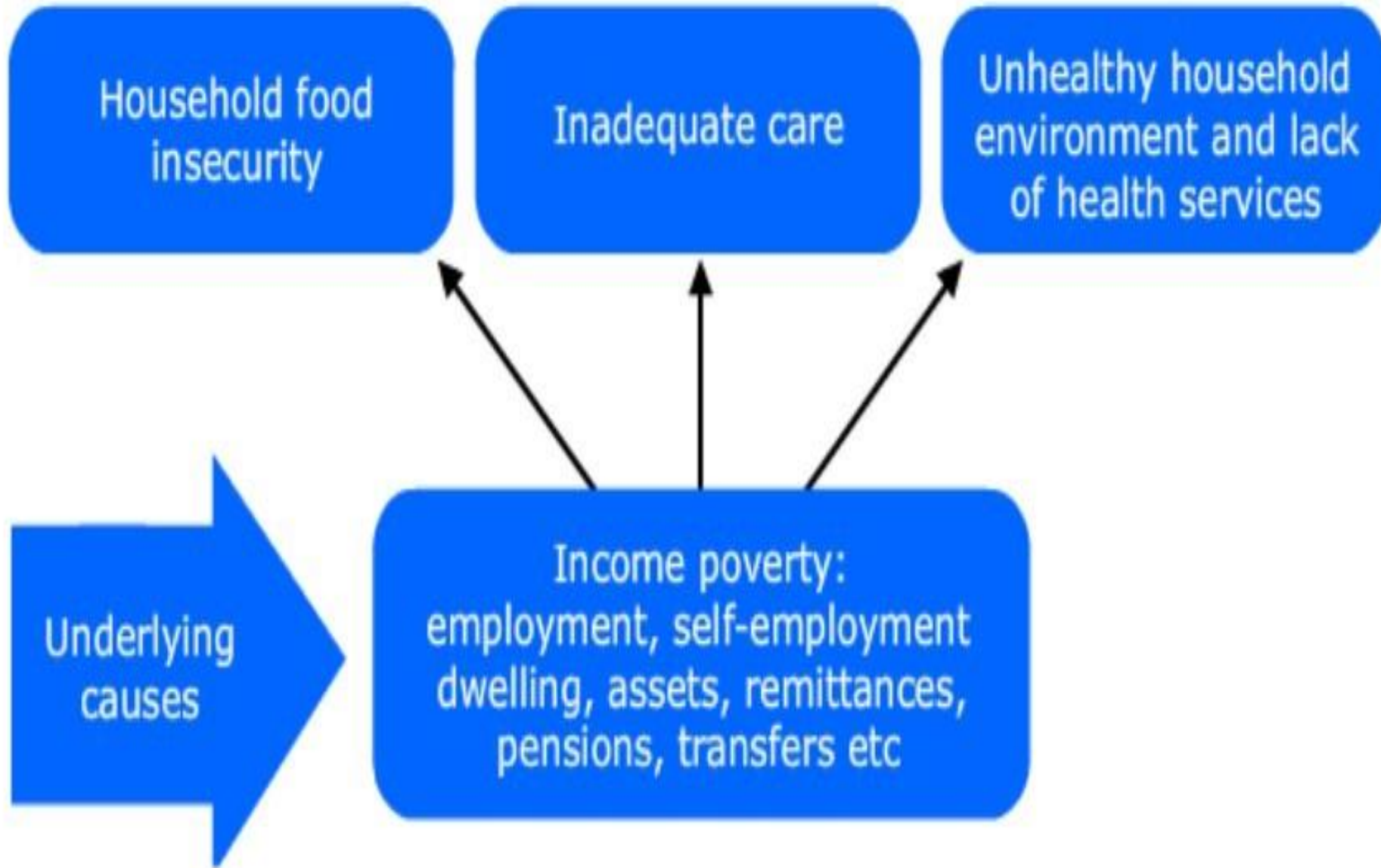
Why do Children become Uundernourished?





UNICEF
Concept Framework

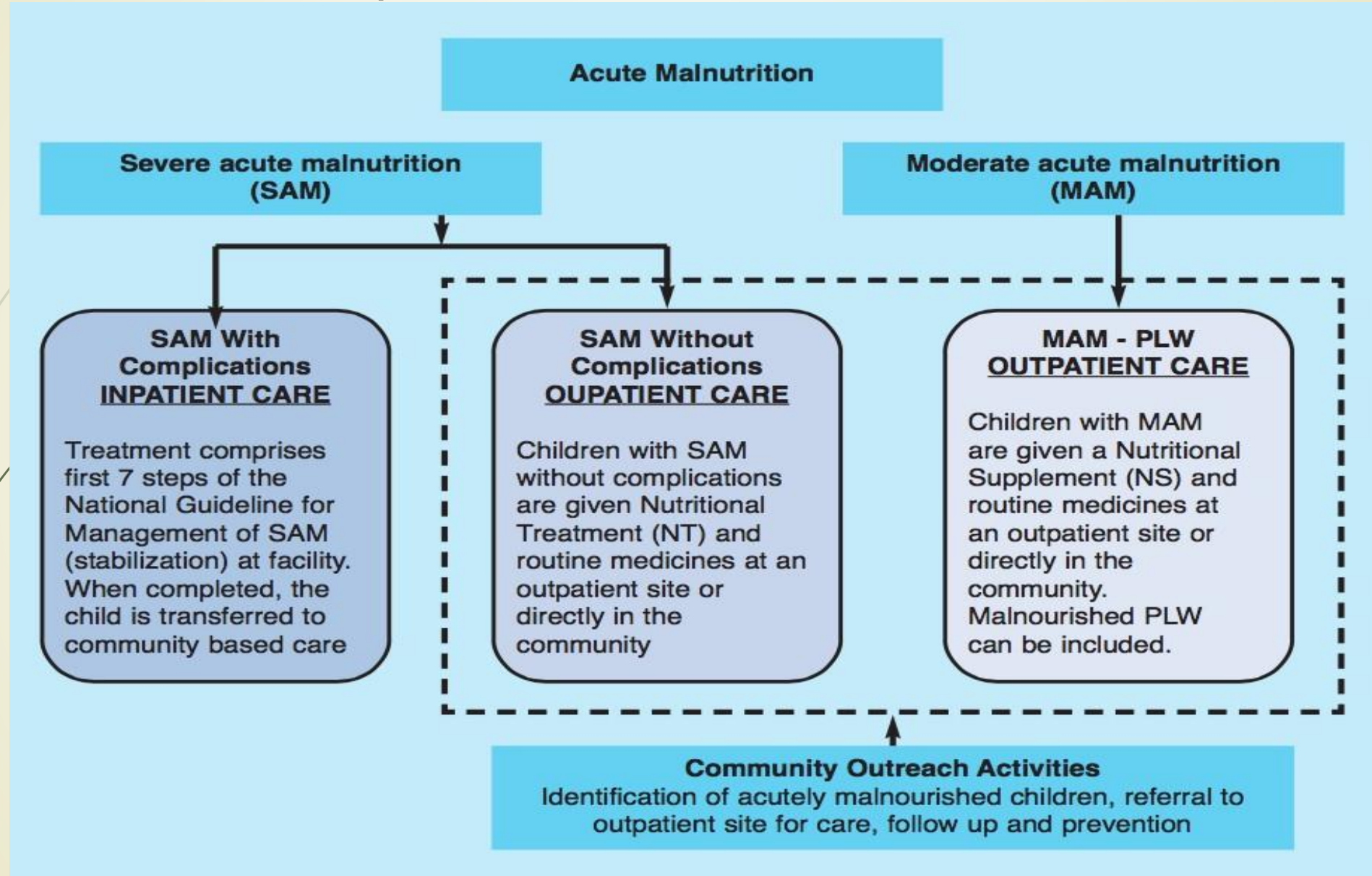
Disease	Impact of undernutrition	Impact of infection with regards to nutrition
Diarrhoea (e.g. shigellosis)	<ul style="list-style-type: none"> ● Increased duration ● Increased severity ● Increased mortality 	<ul style="list-style-type: none"> ● Malabsorption ● Appetite loss ● Loss of nutrients
Acute Respiratory Infection (lower tract)	<ul style="list-style-type: none"> ● Increased severity ● Increased mortality 	<ul style="list-style-type: none"> ● Appetite loss ● Metabolic effects resulting in muscle breakdown
Measles	<ul style="list-style-type: none"> ● Increased duration ● Increased severity ● Increased mortality 	<ul style="list-style-type: none"> ● Appetite loss ● Decreased availability of Vitamin A ● Reduced immune function ● Fever ● Muscle breakdown
Malaria	<ul style="list-style-type: none"> ● Some evidence of increased severity in deficiencies of Vitamin A and Zinc 	<ul style="list-style-type: none"> ● Iron deficiency leading to anaemia ● Impaired foetal development, low birth weight and growth faltering



Community based Management of Malnutrition (CMAM)

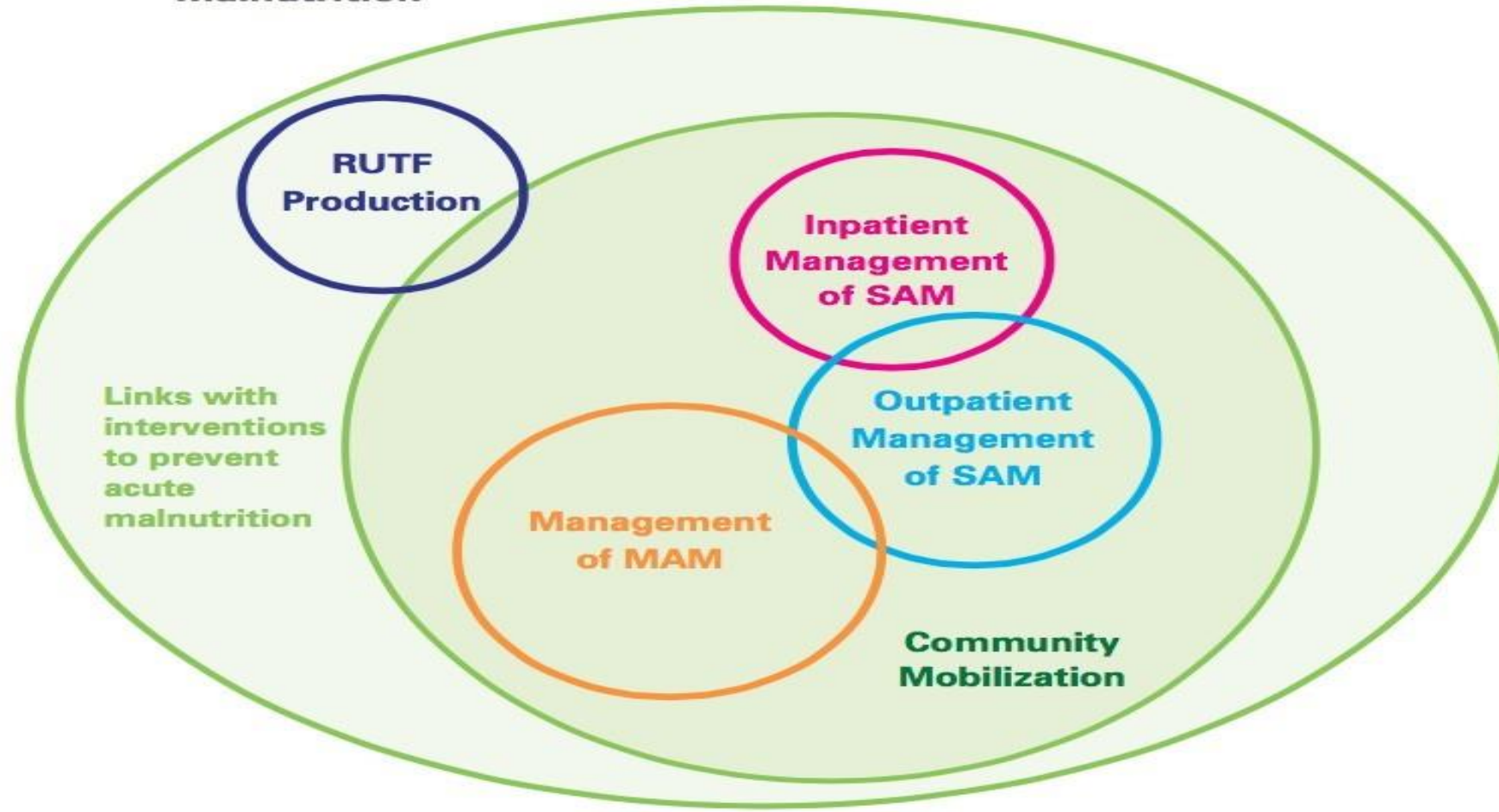
- **The community-based approach involves timely detection of severe acute malnutrition in the community and provision of treatment for those without medical complications with ready-to-use therapeutic foods or other nutrient-dense foods at home.**
- **If properly combined with a facility-based approach for those malnourished children with medical complications and implemented on a large scale, community-based management of severe acute malnutrition could prevent the deaths of hundreds of thousands of children.**

Component of CMAM



Community Based Management of Malnutrition

FIGURE 1 Components of community-based management of acute malnutrition



Integrated Child Development Services (ICDS)

Objectives-:

- Improve the nutrition and health status of the children.
- Foundations for proper physical, social and psychological development.
- Reduce the incidence of morbidity, mortality, malnutrition and school dropouts.
- Achieve effective coordination and amongst the various departments .
- Enhance capability of the mother to look after normal health and nutritional needs of child.

Integrated Child Development Services (ICDS)

Services through which to achieve Objectives of ICDS



Integrated Child Development Services

PACKAGE OF SERVICES

Beneficiaries	Services
Pregnant women	Health check up, immunization, supplementary nutrition, health and nutrition education
Nursing mothers	Health check up, supplementary nutrition, health and nutrition education
Other women 15 – 45 years	Nutrition and health education
Children less than 3 yrs	Health check up, immunization, supplementary nutrition, referral services
Children in age 3 -6 yrs	Health check up, immunization, supplementary nutrition, referral services, non formal education
Adolescent girls 11 – 18 yrs.	Supplementary nutrition and health education



Comprehensive Strategy to Control Malnutrition

- Considering the multi-factorial origin of the disease, the strategy to combat malnutrition should also be comprehensive and multi-pronged comprising measures to combat the condition at every level concurrently in the entire nation.
- The corrective policy essentially requires the coordinated approach of different stakeholders such as nutrition, food technology, health administration, health education, marketing.

Family Level

Community Level

National level

International level

Comprehensive Strategy to Control Malnutrition



Family Level

- Nutritional education (Food habits)
- Correction of faulty dietary practices
- Breastfeeding promotion
- Nutritional needs of pregnant/lactating mothers
- Kitchen gardening
- Counseling for availing benefits of MCH/
Family Planning/ Immunization

Community Level

- Assess the nutritional problem in terms of extent , distribution and types of nutritional deficiencies; Population group at risk
- Dietary & non dietary factors attribution
- Diet survey, Community based study
- The integrated child development services scheme (ICDS), mid-day meal scheme, specific nutrition supplemental strategies.

(Implementing cost-effective strategies such as direct nutrition intervention strategies targeted against the vulnerable population groups identified in the diet survey.)

National Level

- Ensuring socio-economic development of the rural/tribal sector.
- Augmenting agricultural production in proportion to the population needs.
- Strengthening of public distribution system to warrant easily accessible and equitably distributed food in different sections of society.
- Stabilization of population; implementation of nutrition intervention programs for the prevention and control of prevalent public health nutritional concerns like endemic goitre/ anemia/nutritional blindness, etc.
- Expanding the indirect health and nutrition benefits of other national health programs such as family welfare or malaria control program, etc.
- In addition, there is a need to develop nutritional policy addressing the nutritional concerns of all types of individuals across the country, to ensure food security, to provide training to the nutrition experts on a regular basis, and to devise newer technologies to aid vulnerable group of people in maintaining their nutrition.

International Level

- Food and nutrition are the global public health concerns.
- Establishing linkage not only with the local agencies or non-governmental organization but also with the international agencies like World Health Organization, United Nations Children's Fund, Food and Agriculture Organization, etc.

CONCLUSION

We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Many of the things we need can wait. The child cannot.

Right now, is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer "Tomorrow". His name is "Today"."

➤ *-- Gabriela Mistral, 1948*