

# Reducing risk of mortality for sick and malnourished children

The risk of dying during and after childhood illnesses like diarrhoea, pneumonia, overwhelming infection, and malaria is high in low- and middle-income countries. The Childhood Acute Illness & Nutrition ("CHAIN") Network wants to improve the care of children and understand the factors increasing their chances of dying. The CHAIN study:

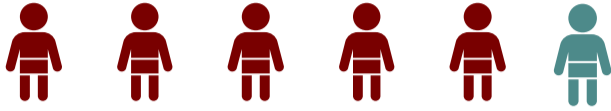
- Enrolled children aged 2-23 months who were sick at admission to nine hospitals in four African and two South Asian countries
- Collected information on children's clinical, nutritional and social situation
- Followed up with children during their hospital stay and for six months after discharge

The CHAIN Study was made possible by the children and their caregivers who voluntarily participated in the study, engagement and support from community members and local Ministries of Health, and the leadership of health workers and researchers from all over the world.

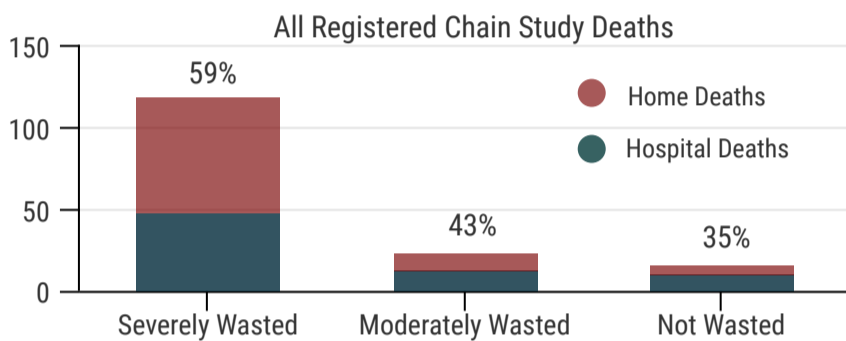
## FINDINGS OF THE CHAIN STUDY - ADDRESSED TO POLICY MAKERS

### KEY RISKS AND COMPLICATIONS

Hospital / after discharge deaths



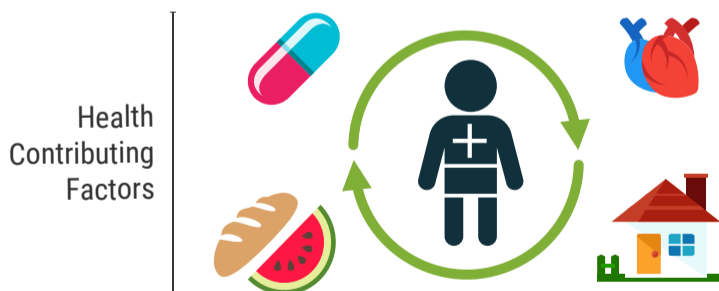
Despite following treatment guidelines, CHAIN found severely malnourished children 5 times more likely to die within 30 days of hospital admission compared to better-nourished children.



Children who are discharged from hospital are still at risk of death. CHAIN found half of all study deaths occurred after post-discharge.



A small number of sick children left the hospital against medical advice and had 2 times the risk of death post-discharge compared to children who did not leave against medical advice.



Malnourished children don't only suffer from a lack of food. Their nutrition, health, and risk of dying are influenced their caregiver's social and home environments.

### ADMISSION



### ACUTE CARE



### DISCHARGE



### BACK HOME



### KEY TAKEAWAYS AND RECOMMENDATIONS

All children should be screened for malnutrition at presentation to any health facility. If a malnourished children is admitted to hospital, structured treatment protocols and more frequent monitoring should be done.



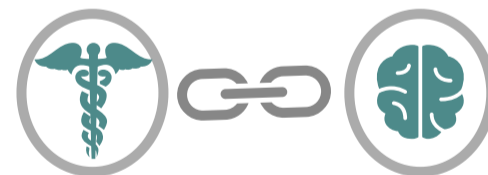
Children diagnosed with malnutrition and recently discharged from hospital require more than just nutrition clinic follow-up, including:

- Easily available contact with health services
- Family training for danger signs
- Clinician training to support special attention for recently discharged children

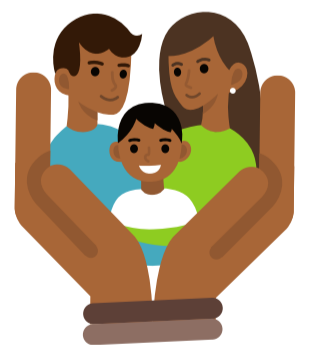


Follow-up for recently hospitalized children can be strengthened. For example:

- Formal process of 'down-referral' to a community clinic or health worker at discharge from hospital
- Facilitated access to emergency care for recently discharged children, including patients who leave against medical advice
- Scheduled medical follow-up a few days after discharge for high-risk children



Prioritizing medical and psychological assessments and care for mothers and caregivers is likely to improve child survival.



"I met the doctor, and I told him/her to look at my child, and s/he started asking me [in front of every-body], "do you even take the time to feed this child?" I told her/him yes, "then comparing your child with other children, are they of the same size?" Ah, I walked out and came back home."  
**Mother – Kenya**

"While I was staying in the hospital, my ability to care for my husband and elderly mother-in-law were disrupted, and also my rearing of domestic animals [for income]. So, I decided I had to take my child home against the doctor's advice."  
**Mother – Bangladesh**

"What could I feel when I have failed to get what I was supposed to give my child? Yes, I will have to give some of his food to his siblings to eat... honestly speaking right now while I am here getting him checked up, I am not doing any work. So, where will I get that money to buy chicken at fifty shillings for him or fish, when they other siblings need to eat too?"  
**Mother – Kenya**

This is our much waited for boy having already given birth to two girls. Recently, my son was admitted to the hospital twice for his illness. We had to spend a lot of money to cover his treatment. His father sold his agricultural land in our rural home to cover it, and he took an urgent loan from a local NGO. We sacrificed our own foods, sometimes eating less and missing out on other basic needs."  
**Mother Bangladesh**