



Cuddles Foundation

# Childhood Cancer in India: 2021–22

Analysing the impact of nutrition  
on children with cancer in India.





*Purnota*

With gratitude,

**Purnota Dutta Bahl**

Founder & CEO

Cuddles Foundation

# Thank you!

Your staunch support has helped us support our children despite the uncertainties of the pandemic last year.

There is hope and promise to live a fulfilling life in the West, where 80% of the children with cancer get cured.<sup>1</sup> However, in India, where the survival rate is a mere 40%, the unequal reality for these children is an uncertain future and immense emotional and financial strain on their families.<sup>2</sup> This inequality is unacceptable, and we must all do something about it!

That's where you come in. Food is a great leveller, and the funds you provide help us counsel and feed children and their families—you give children an opportunity for better treatment outcomes and a fighting chance of survival. Last year alone, we helped more than 12,900 childhood cancer patients with your support.

This year, we plan to reach eight more hospitals and 14,500 children and families—a step towards our 5-year goal of nourishing 80% of children with cancer in India. With hearts like yours by our side, we think bigger, and our children dream bigger! Some of our young beneficiaries hope to become doctors, police officers, or teachers. Your support means that they can dream of having a future beyond cancer.

Thank you for nourishing their dreams!

# Cuddles Foundation

Changing how childhood cancer is fought in India by bridging the gap between medicine and nutrition.

Since 2013, we have been working with government and charity cancer hospitals, enabling them with trained paediatric oncology nutritionists and food aid so that more children may win the battle against cancer. With the FoodHeals™ App, a first-of-its-kind tech platform that automates clinical nutritional functions, we are able to create an ecosystem that enables medical and nutrition teams to collaborate more effectively and make specialised nutritional care more accessible to children. We also freely share our breakthroughs and experience with healthcare practitioners so that they may use this knowledge to save thousands of more children.

## Our Reach\*

12

States

35

Hospitals

46

Nutritionists



► Recipient of the  
National Award for  
Child Welfare, 2015–16.

# The FoodHeals™ Program

Our program is customised to every child's medical condition to provide the right nutrition needed to complete treatment successfully. Here's how:

## Assess

We first assess and screen the nutritional status of every child seeking cancer treatment in our partner hospitals.

## Evaluate

We evaluate side effects that may negatively impact the child's nutritional status.

## Prescribe

We finalise the right nutrition therapy and prescribe a customised diet plan for the child.

## Provide

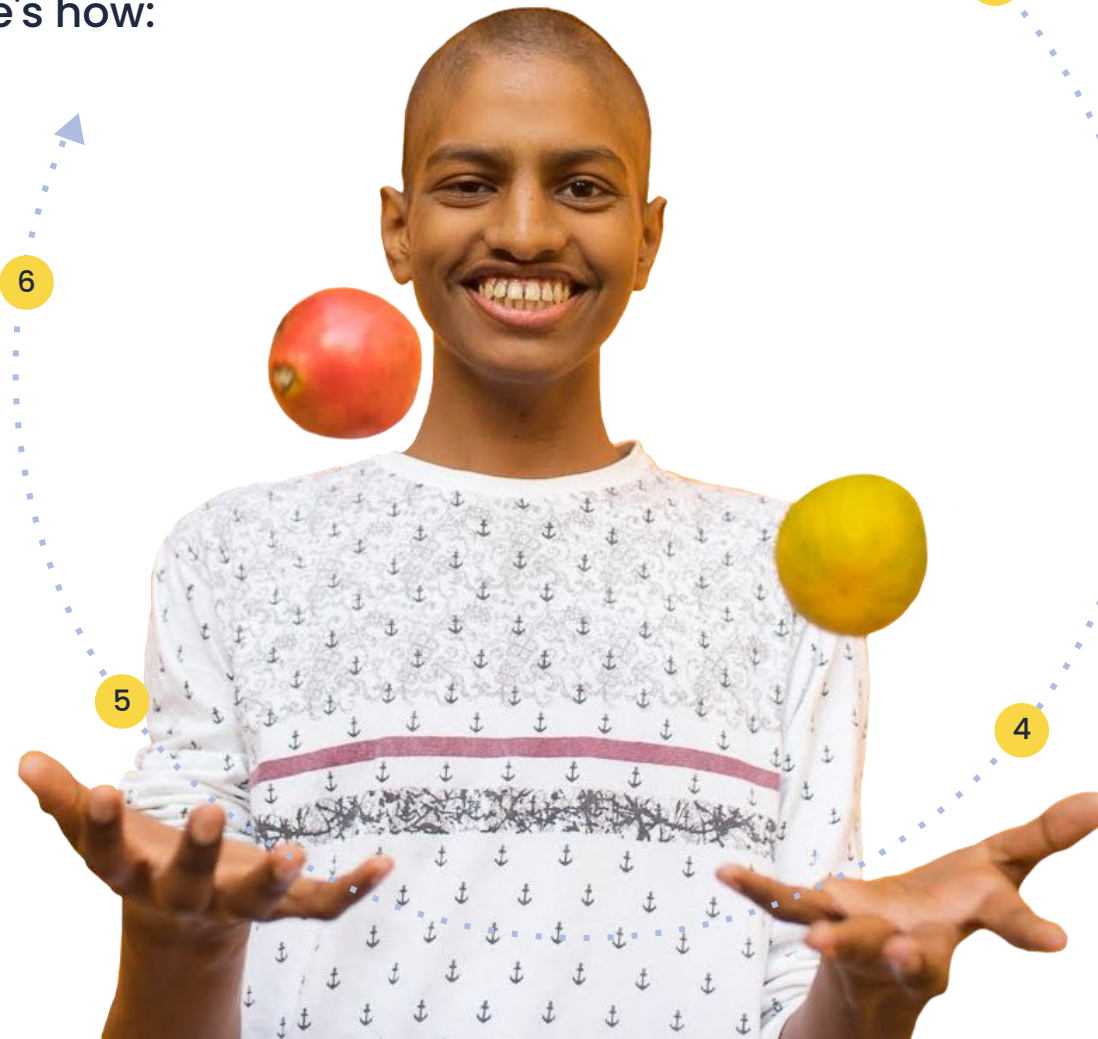
We aid and support the child and family by providing nutritional supplements, hot meals, in-meals, eggs, bananas and monthly ration bundles for a family of four.

## Support

We also support patient families with the knowledge to make healthier food choices by organising parent support group meetings, videos and educational talks.

## Monitor

We continuously monitor the child's nutritional status and reassess plans, if required.



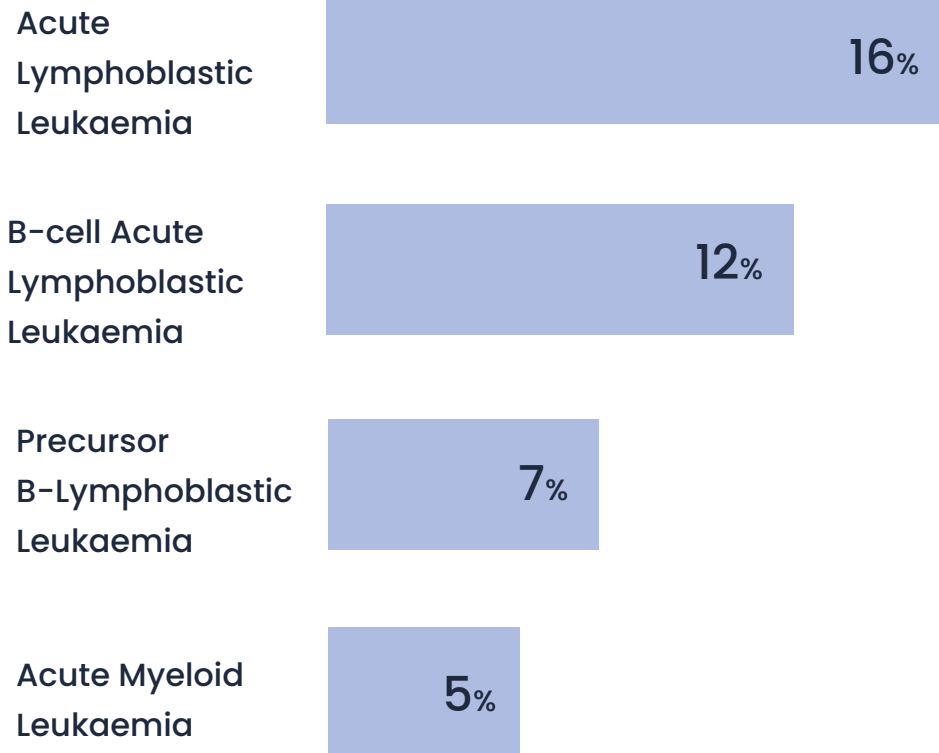


In the year 2021-22, we engaged with 12,900+ children across our 35+ partner hospitals. Here's what we found:

**12,900+**

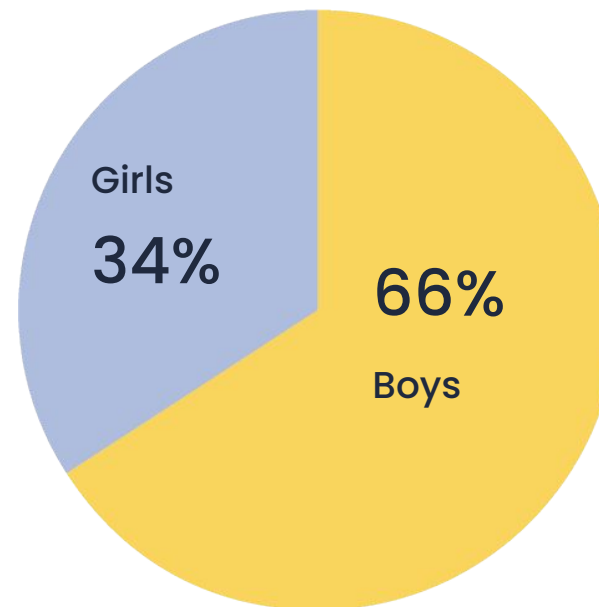
Patients engaged

## Top 4 Prevalent Cancers



**1,55,000+**

Counselling sessions conducted



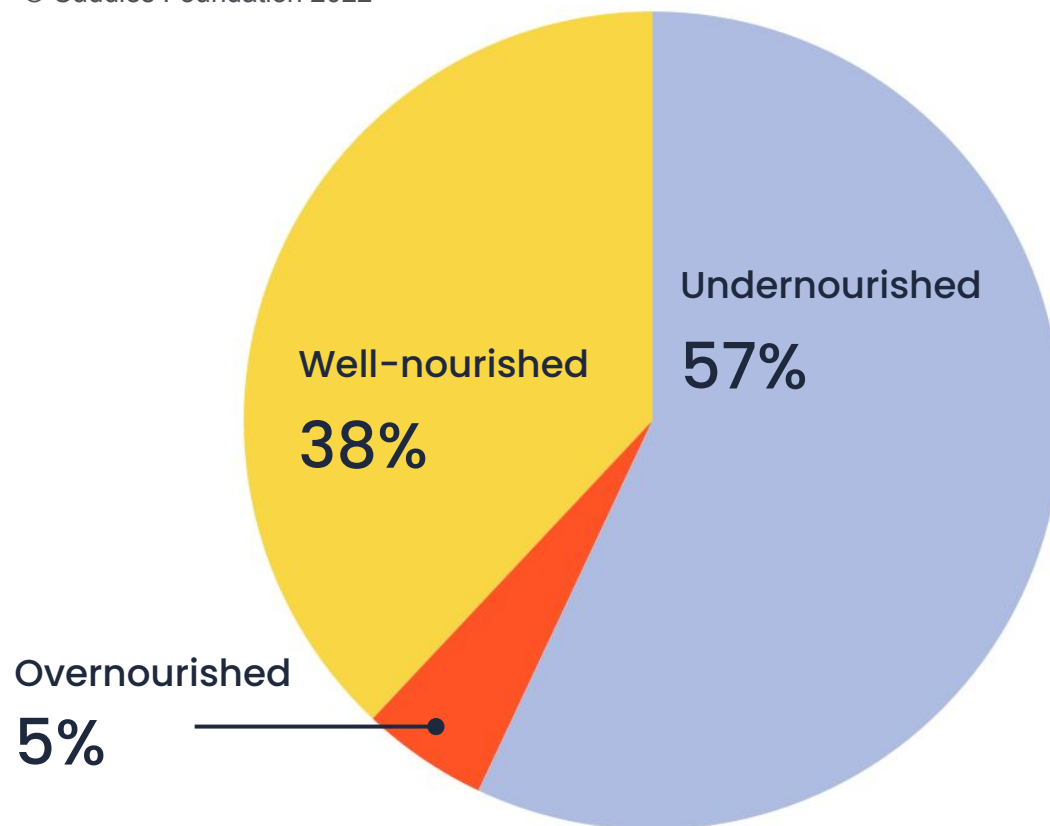
### Gender Ratio undergoing cancer treatment

The trend we see in our work seems to resonate with the ratio of cancer diagnosis amongst boys and girls in India which is 1.58.<sup>3</sup> This means that for approximately every 5 boys diagnosed with cancer only 3 girls are diagnosed. This gender imbalance is largely seen in poorer countries where girls are less likely than boys to be referred to a doctor when they fall ill.

57% of children were undernourished at their first visit to Cuddles Foundation. Of these children, 37% were severely undernourished.

## Nutrition status at first visit for children with cancer in India: 2021-22\*

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- ▶ Undernutrition is the most prevalent form of malnutrition in paediatric cancers, and poor socio-economic status can increase this risk irrespective of the type of cancer or stage of cancer. Constant monitoring of nutritional status and early intervention to correct malnutrition in paediatric cancer patients at diagnosis and throughout treatment could minimise the side effects of treatment, improve survival, and reduce the risk of nutritional morbidity with a positive impact on quality of life.

*\*Only Includes patients covered by the FoodHeals™ App*

- Impact on treatment follow-up

95% of children followed up on their treatment plan when nutrition was a part of it.\*



“

“I want everyone to be happy and smiling from their hearts. When I grow up, I want to become a doctor so I can save the lives of people who can't afford proper medical treatment”

says 9-year-old Athul, who recently completed treatment for Acute Myeloid Leukaemia at MCC (Malabar Cancer Center), Thalassery, Kerala. Athul, who was also mildly undernourished at diagnosis, was a beneficiary of our monthly ration program during the course of his treatment.

*\*Patients who returned for a second visit or continued treatment.*

► Impact on Nutritional Status

**81% of patients improved or maintained their nutritional status, despite cancer therapy like chemotherapy or radiation.**



"Nutrition support from Cuddles Foundation has helped improve the well being of our children and their parents. Children therefore are able to tolerate and complete treatment. The nutritionist supported by Cuddles adds value to this since she is on site, sees the children everyday, spends a lot of time educating parents and ensuring adherence to dietary recommendations. We are very grateful to the Foundation for supporting our small and young patients."

**Ravi Kannan R**

Indian Surgical oncologist based in Assam, India. He is the Director of Cachar Cancer Hospital and Research Centre, a nonprofit hospital that treats cancer patients, and the former Head of Department of surgical oncology at Adyar Cancer Institute in Chennai.





# Nutrition aid is as crucial as counselling.

Considering that a large majority of Cuddles' beneficiaries earn less than Rs. 10,000 per month, distribution of nutrition aid is essential.\*4

## ▶ Aid distributed in the year 2021-22

16k

Ration bundles distributed

4,400

Average kilocalories given per day with the ration program

₹4,600

Savings added on average to caregiver incomes per month\*\*

693k

In-meals

48k

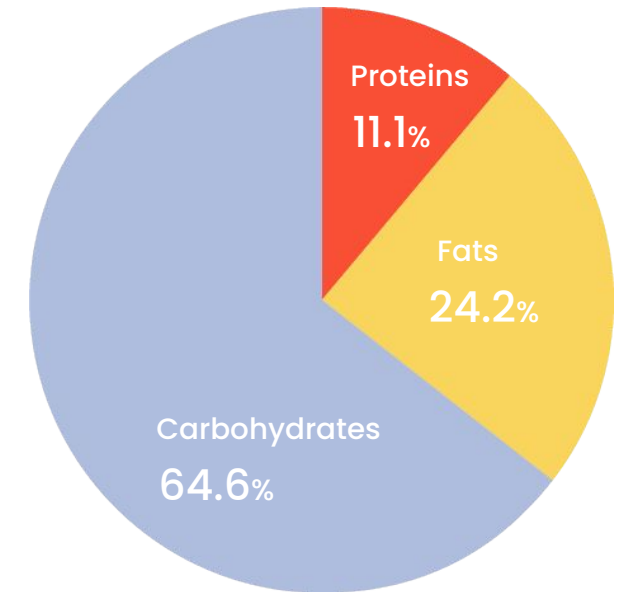
Hot meals

50k

Nutritional supplements

\*Responses were collected from 1,015 beneficiaries at over 30+ partner hospitals in June 2021.

\*\*Calculated basis a child availing of all 4 programs



## Nutritional composition of ration bundles disbursed

Our monthly ration bundles help feed a family of four. Each bundle contains cereals, pulses, millets, nuts and oilseeds, ghee, oil, spices, condiments and basic personal hygiene products.

At 4,400 kcal/day the ration bundle fulfills 100% of the total calorie requirement for the child per day and contributes to the nutritional requirements of the family members too.

# How your contribution to Cuddles helps achieve SDGs



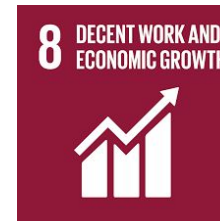
Financial protection from catastrophic illness like cancer reduces poverty



Promote access to care that is not discriminatory against girls and enables mothers and families.



Reducing hunger and malnutrition improves childhood cancer outcomes



Investing in diverse occupations such as nutritionists required for care stimulates local economic growth and employment.



Investing in childhood cancer supports attainment of multiple health related targets



Promote access to care for all communities to reduce catastrophic health expenditure and inequalities.

# Our Methodology:

## What We Measured

### Cases

Patients engaged at the partner hospital(s) are noted on a rolling basis, and the gathered data is analysed for the annual time period.

- # of patients engaged
- # of counselling sessions
- # of cases by ratios (male/female)\*
- # of cases by types of prevalent cancers\*

### Rate of Follow-up

This includes the percentage of patients who return for a second visit and/or continue treatment. This determinant is a reversal of the failure to start treatment, which is a subset of the standard measure of treatment abandonment.

- % of patients who did follow-up\*

### Nutrition Aid

We assess the nutritional support provided in two ways: in terms of value i.e., average kilocalories given per day; and average price of aid as savings to caregiver income; and in terms of physical quantities i.e., ration bundles, in-meals, nutritional supplements and hot meals disbursed and nutritional composition of the ration bundle.

- Average kilocalories per day
- Average savings added to caregiver incomes
- # of nutritional supplements distributed
- # of hot meals distributed
- # of in-meals distributed
- # of ration bundles distributed
- Nutritional composition per ration bundle

- ▶ In consultation with cancer and nutrition specialists and multidisciplinary experts, the following metrics were determined as appropriate to help us demonstrate the effectiveness and impact of the FoodHeals™ program:

### Impact on Nutritional Status

At every visit, nutritionists note patient MUAC or Body Mass Index (BMI), which is required to determine the patient's nutritional status. Impact on nutritional status covers change in patient's nutritional status from their first to last visit.

- % increased or no change\*

### Case Stories

This notes the qualitative impact of the FoodHeals™ program. Case stories highlight patients who have been engaged as part of the FoodHeals™ program, adhered to their treatment schedule and have benefited from the program.

*\*For these analyses, we've only included data from partner hospitals who've shared a minimum of six months of program data with us either via the app or registry.*

# References

1. Lam CG, Howard SC, Bouffet E, Pritchard-Jones K. Science and health for all children with cancer. *Science*. 2019 Mar 15;363(6432):1182-1186.
2. Ward ZJ, Yeh JM, Bhakta N, Frazier AL, Girardi F, Atun R. Global childhood cancer survival estimates and priority-setting: a simulation-based analysis. *Lancet Oncol*. 2019 Jul;20(7):972-983.
3. Bhopal SS, Mann KD, Pearce MS. Registration of cancer in girls remains lower than expected in countries with low/middle incomes and low female education rates. *Br J Cancer*. 2012;107(1):183-188.
4. Socioeconomic study of Cuddles Foundation beneficiaries June 2021, Cuddles Foundation internal document





Published in April 2022.

For more information, email:  
[programs@cuddlesfoundation.com](mailto:programs@cuddlesfoundation.com)  
[www.cuddlesfoundation.org](http://www.cuddlesfoundation.org)

## Feed a child. Starve cancer.

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