

Poster Child for Healthy Growth

Simple, low-cost growth charts can reduce stunting.

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Summary

- In-home growth charts **reduced stunting among previously malnourished children** by 22 percentage points.
- Community-based growth monitoring, in contrast, **did not** produce significant improvements.
- Neither program was found to impact cognitive development.
- Growth charts appear to be **a cost-effective tool** for reducing stunting.



Child stunting is pervasive

- Chronic malnutrition has **adverse long-term effects** on cognitive, physical and mental development
- Stunting is **pervasive**
 - Up to 45% of children in Zambia
- **Progress limited**, particularly in rural areas
- 2011 National Food and Nutrition Strategic Plan
- What could limit progress?
 - **Lack of parental knowledge** about stunting
 - **Lack of tools** for parents to assess child's growth
 - **Lack of household resources**



Growth Charts



- Easy-to-use growth chart installed in homes
- Locally developed and tested a few versions
- Separate poster for boys and for girls



Community Meetings

Three rounds of meetings

Study team implemented four activities at meetings:

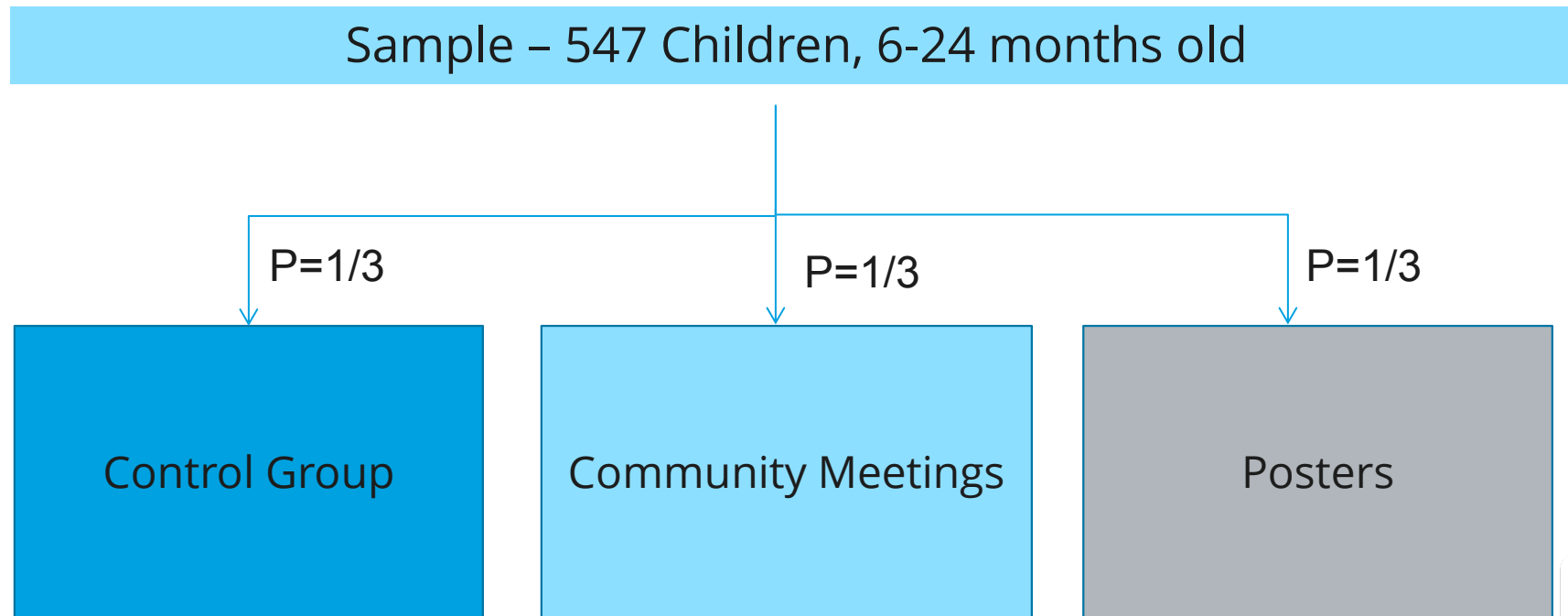
1. Community sensitization on malnutrition
2. Measurement of height, weight, and MUAC
3. Distribution of protein (Yummy Soy) supplements to stunted children younger than 30 months old
4. Refer children with acute malnutrition to health center



Study Design

IPA worked with researchers to test these two interventions.

- Different methods of disseminating knowledge
- Different tools for assessing growth



Evaluation Details

- 127 rural, subsistence farming communities in Chipata District
- 2014-2015
- To assess **impact on stunting**: measured impacts on children's height-for-age and overall development
- To assess **impact on parental behavior**: administered a detailed food questionnaire for parents about child's consumption

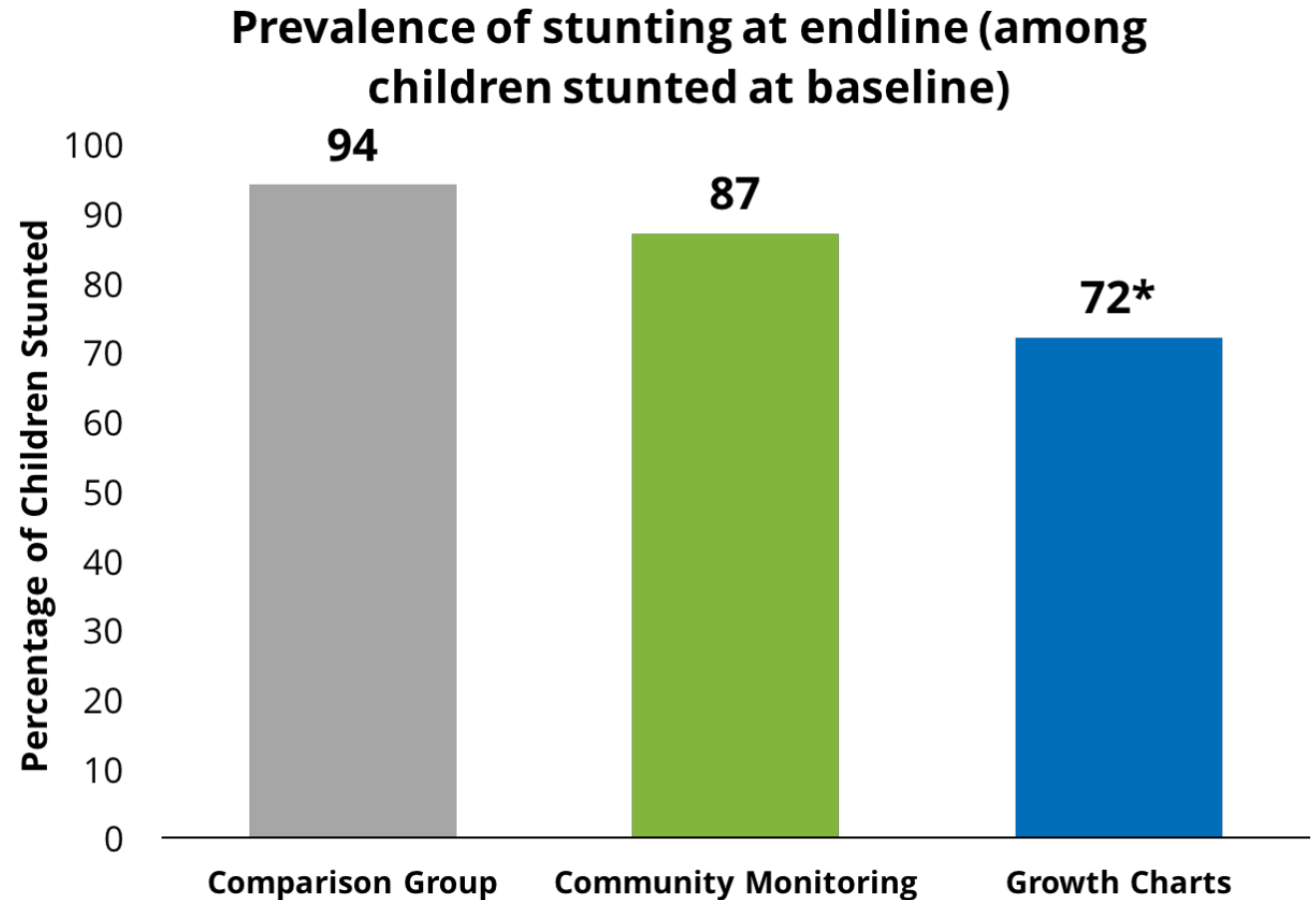


Results

Impacts on Stunting

In-home growth charts improved growth among malnourished children, **reducing stunting by 22 percentage points.**

Community-based growth monitoring with nutritional supplements, on the other hand, **did not have significant impacts.**



Results

Impacts on Child Development and Parent Behavior

- Neither program was found to impact children's cognitive development.
 - These benefits may still occur over a longer timeframe than the study covered.
- Caregivers in both groups reported feeding their children more protein-rich foods than caregivers in the comparison group.
 - The growth charts program achieved larger impacts on all observed behaviors.
- Parental aspirations may have played a role.



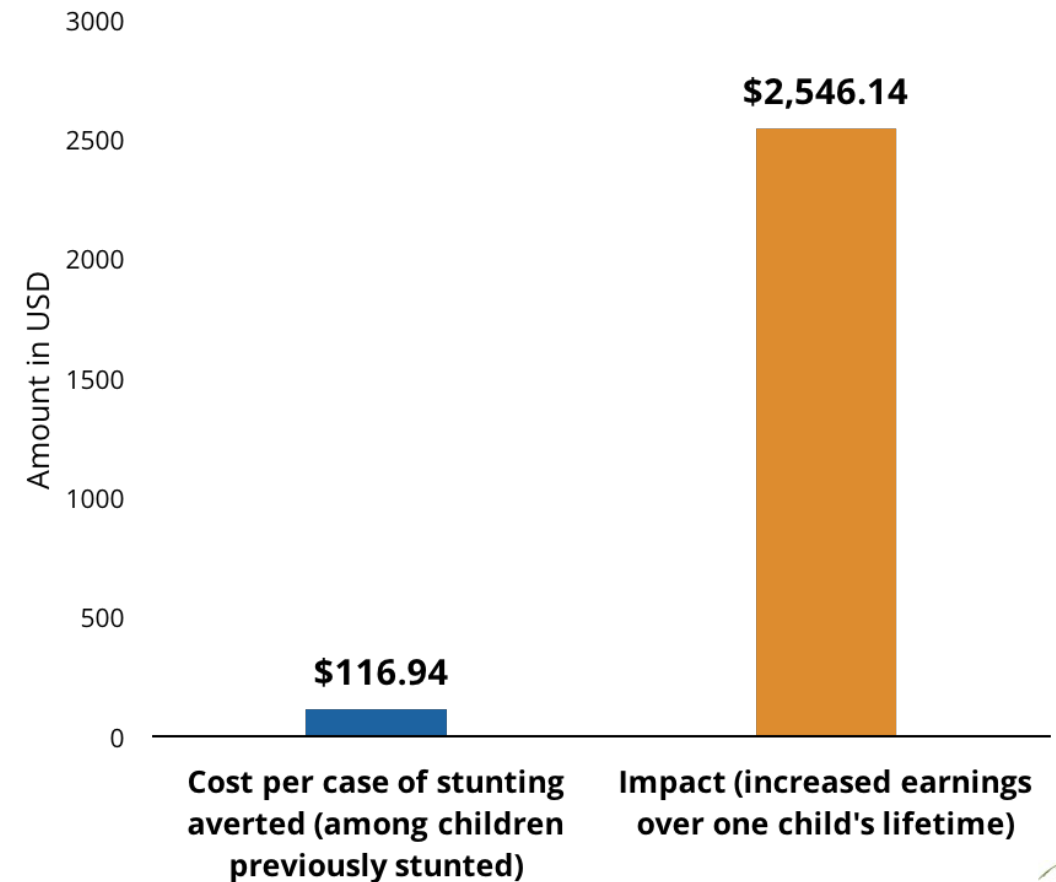
A Cost-Effective Program

Growth charts appear to be a cost-effective tool for reducing stunting.

For every dollar that was invested in growth charts, children who otherwise would have been stunted gained an estimated \$22 in additional lifetime wages.

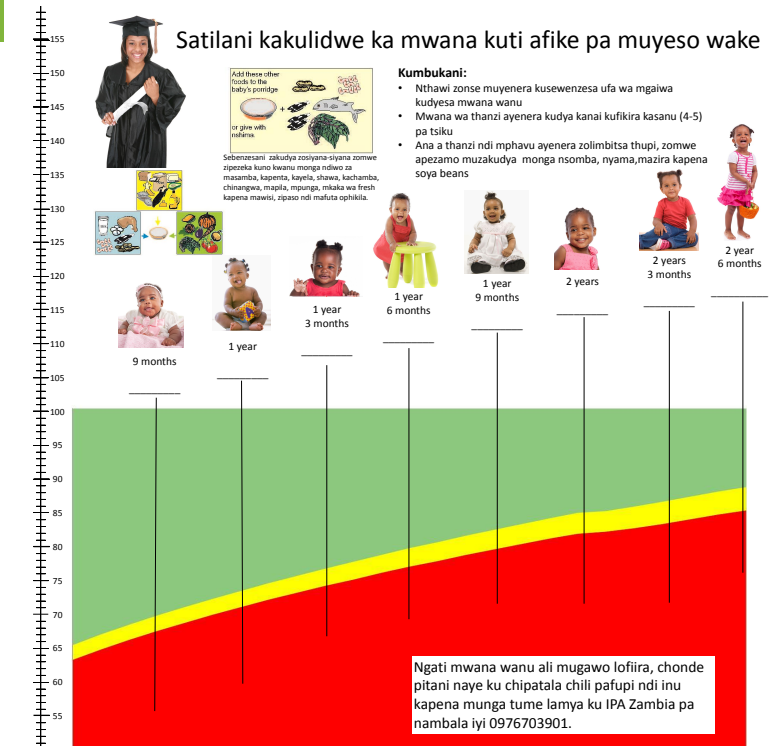
Return on investment calculated from Fink, G., Peet, E., Danaei, G., Andrews, K., Charles McCoy, D., Sudfeld, C. R., Smith, M., Ezzati, M., Fawzi, W. W. 2016. "Schooling and wage income losses due to early-childhood growth faltering in developing countries national, regional, and global estimates." *American Journal of Clinical Nutrition*, 104 no. 1 (July): 104-12.

Return on Investment: Returning One Stunted Child to Normal Growth Using Growth Charts



Policy Lessons

- Growth charts installed in homes appear to be a cost-effective tool to reduce stunting in Zambia, and should be **evaluated at scale**.
- **Further studies are needed** to determine whether this intervention would work elsewhere.
- More research is needed on **longer run impacts**.
 - To what extent do impacts last during lean season?



Thank you



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