Project Healthy Children (PHC) increases access to foods fortified with key micronutrients in an effort to combat micronutrient deficiency, which is a leading cause of various debilitating conditions and mortality. PHC works directly with both large- and small-scale millers to provide micronutrient-fortified flour to people in low income countries. PHC also works with developing country governments to establish national food fortification programs and enact legislative change to make food fortification mandatory. These efforts have been successful in Zimbabwe, Burundi, Malawi, Liberia, and Rwanda.

What’s the need?

- According to the WHO, some 2 billion people throughout the world suffer from micronutrient deficiency and anemia. Iron deficiency is the greatest contributor to this problem globally. As of 2014, 162 million children under the age of 5 were suffering from stunted physical development due primarily to insufficient nutrition.
- PHC has identified iodine deficiency as the leading global driver of intellectual disability among children; Vitamin A deficiency as the leading driver of preventable blindness; iron deficiency as the leading cause of maternal death during childbirth; and folic acid deficiency as a leading cause of fatal birth defects known as neural tube defects.
- Iodine deficiency can reduce a child’s IQ by as much as 13 points.
- Up to half a million Vitamin A deficient children become blind every year, half of them dying within a year of losing their sight.
- According to Project Healthy Children, 200 million children suffer from mental impairment before the age of 5, and 375,000 children become blind each year due to insufficient Vitamin A consumption.

What they do (program details)

- Large-scale food fortification (EnAct Monitoring) - PHC’s EnAct program works with host governments to develop national food fortification programs and to ensure compliance with food fortification guidelines among large-scale producers. EnAct trains government workers in 15 different countries to effectively monitor national food fortification programs, saving valuable healthcare dollars by reducing the prevalence of the highly preventable consequences of micronutrient deficiency. By mobilizing
consultants and providing online software programs, EnAct builds the capacity of governments to ensure that national fortification programs deliver the intended amount of micronutrients. To date, PHC’s large-scale fortification program has reached over 31 million people globally at an estimated cost of less than one-tenth of one cent per person each year.

- **Small-scale food fortification (Sanku)** - PHC’s Sanku program provides small-scale producers with fortified flour to distribute to their customers, thereby increasing access to quality nutrition in rural areas isolated from large-scale producers. The Sanku program also supplies millers with the Sanku dosifier, a device which ensures the correct micronutrient composition of flour and allows for remote monitoring of mill operations. PHC has made this transition to small-scale producers, previously thought financially impractical, by stepping into the flour bag wholesaling business. By buying bags in bulk at 16 cents apiece, Sanku is able to provide small-scale millers both the fortification nutrient premix and the bags at 21 cents apiece -- the same price the millers were previously paying for the bags alone. This means that the cost of the Sanku dosifiers is essentially the only funding gap for Sanku. Sanku plans to operate independent of philanthropic support by 2021-2024. It will be able to achieve this with another $5.3m in funding, and by 2024 hopes bag revenues will be sufficient to support financial independence.

- **Refugee and At-Risk Communities (RAC)** - Begun in 2017, the RAC program works in refugee communities to ensure that residents are afforded equal access to quality nutrition. The program currently reaches 70,000 children in the Kenyan Kakuma Refugee Camp and plans to expand to serving 1 million refugees by 2020.

**Evidence of impact of intervention**

- The [Copenhagen Consensus of 2008](#) deemed Vitamin A and zinc supplementation to be the best investment for development, estimating that supplementation serving 80% of the then-140 million children suffering from micronutrient deficiency would cost $60 million per year and yield economic benefits of more than $1 billion per year. Food fortification with iron and iodine was deemed the third most efficient intervention, with an estimate that each dollar spent on food fortification would lead to $9 of economic benefit. The [most recent Copenhagen Consensus](#) in 2012 recommended a bundle of micronutrients and medicine as the most efficient intervention. PHC focuses on iron, folic acid, zinc, iodine, and Vitamins A and B fortification.

- GiveWell has compiled a comprehensive range of research on salt iodization, concluding that iodization seems to be effective for increasing childhood IQ and reducing the incidence of goiter (thyroid enlargement due to iodine deficiency).

- GiveWell also rates [Vitamin A supplementation](#) highly, concluding that high-quality programs in areas with high child mortality rates may be one of the most cost-effective interventions available, although a recent large-scale study in India has cast some doubt on the validity of prior Vitamin A research.

- We have also seen (currently unpublished) research by GiveWell that concludes that
iron and folic acid fortification are promising interventions.

Evidence of impact of charity

- According to PHC, the EnAct large-scale program has reached 30 million people and was expected to reach 45 million people by the end of 2017.
- The Sanku program currently delivers fortified flour to 350 thousand people in East and Southern Africa, and expected to reach another 1 million over the same period and 100 million by 2025.
- The RAC program currently reaches 70,000 child refugees in Kenya, with the goal of reaching 1 million refugees by 2020.
- Helen Keller International found that Sanku’s bag-based model increased daily consumption of fortified flour in the Morogoro region of Tanzania from 64% to 96% among surveyed households. In 2015, before Sanku started scaling its operations, this figure was apparently 0%.
- Food fortification has been made mandatory in Zimbabwe, Burundi, Malawi, Liberia, and Rwanda with PHC’s involvement.

Plans for 2018

- Project Healthy Children plans to continue scaling up its Sanku small-scale program, which it hopes will reach 20 million people by 2021 and 30 million people by 2022.
- Sanku believes that its revenue stream will sustain its operations by 2022 -- it plans to reduce costs sufficiently to fund operational expenses via bag revenue by 2021, and by 2024 expects bag revenue to also cover capital expenditures (principally the cost of dosifiers).
- Additional funds will mostly fund the purchase of more dosifiers.

Remaining uncertainties

- GiveWell has not yet published intervention reports for fortification with some micronutrients (iron and folic acid), though unpublished research indicates that these programs are promising.
- Current methodology for examining impact of iodization seems a little dated (see GiveWell’s criticisms), and studies of Vitamin A supplementation recently called into doubt by new findings.
- Isolating the impact of PHC on food fortification legislation is challenging -- GiveWell notes that iron deficiency levels fell in Rwanda prior to the passage of fortification legislation. (PHC claims that none of these countries had fortification legislation prior to its involvement).
Sources and more information

- GiveWell review of PHC: https://www.givewell.org/charities/project-healthy-children
- TLYCS information sheet on PHC
- Investing in the Future: A united call to action on vitamin and mineral deficiencies
- Food Fortification Initiative -- fortifying to prevent anemia
- Food Fortification Initiative -- fortifying to prevent birth defects of the brain and spine
- Food Fortification Initiative -- food fortification’s utility in pursuing UN Sustainable Development Goals.
- WHO e-Library of Evidence for Nutrition Actions
- WHO micronutrient page
- WHO micronutrient deficiency page
- WHO Guidelines on food fortification with micronutrients