



MIRACLEFEET

Executive Summary

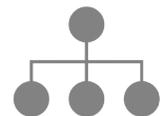
MiracleFeet is ending a leading cause of physical disability in low-income countries by tackling the issue of untreated clubfoot. Clubfoot, a common birth defect that is routinely fully treated in the developed world, affects one in every 800 children worldwide. It causes one or both feet to point upwards and inwards making it difficult and painful to walk. Ninety percent of children born with this common birth defect live in countries with limited access to proper treatment. By providing treatment to children born with clubfoot MiracleFeet enables them to live active, healthy lives, fully participating in their families and communities, instead of living with the pain, stigma, marginalization and lifelong poverty that often comes with being unable to walk properly. MiracleFeet creates and supports comprehensive clubfoot programs in low-income countries, building the capacity for each country to manage clubfoot disability on an on-going basis. Their model leverages partnerships with local healthcare providers in public hospitals, utilizing innovation and technology to facilitate efficient and effective service delivery while monitoring treatment quality and evaluating impact. To date, MiracleFeet has enrolled more than 35,000 children in treatment in 26 countries in Africa, Asia and Latin America.

Website www.miraclefeet.org

- Recognition**
- Featured in New York Times, PBSNewsHour and BBC
 - Tech Award Laureate 2017 for MiracleFeet brace
 - 2019 Goldman Sachs Intriguing Entrepreneur
 - Top 81 in MacArthur 100 & Change



YEAR FOUNDED
2011



TYPE OF ORG
NON-PROFIT



OFFERING
CARE DELIVERY



COUNTRIES

UNITED STATES,
BANGLADESH, BOLIVIA,
BRAZIL, CAMBODIA,
REPUBLIC OF THE CONGO,
ECUADOR, GAMBIA,
GUATEMALA, GUINEA,
INDIA, INDONESIA, LIBERIA,
MADAGASCAR, MALI,
MYANMAR, NEPAL,
NICARAGUA,
NIGERIA, PARAGUAY,
PHILIPPINES, SENEGAL,
SRI LANKA, SUDAN,
TANZANIA, UGANDA,
VIETNAM, ZIMBABWE

THE STORY BEHIND MIRACLEFEET

MiracleFeet was founded thanks to a timely and fortuitous convergence of people and interests. While working at The University of Iowa, current Executive Director Chesca Colloredo-Mansfeld learned of Dr. Ponseti's groundbreaking treatment* for clubfoot and the need for it in the developing world. A video of a Ugandan boy watching from a doorway, his feet twisted inward, as his peers played soccer outside, inspired Chesca to do something about a problem that on the surface seemed solvable, fulfilling a lifelong desire to make a difference in sub-Saharan Africa, where she had lived as a child. At the same time, Roger and Bridget Ryan Berman, parents to a child born with clubfoot, had been amazed to learn that the treatment their son had received to completely cure his clubfoot was not available to children born outside the U.S. and Europe. They had started to work on a plan to help bring the Ponseti Method to the rest of the world. Fortunately the Bermans, Dr. Josh Hyman, the orthopedic surgeon who treated the Berman's child, and Chesca were able to connect, and MiracleFeet was created.

*The Ponseti Method

The Ponseti method is a non-surgical procedure which results in full correction of clubfoot in 95 percent of cases. Treatment involves the patient wearing a series of casts for up to eight weeks. In most cases, the Achilles tendon is then lengthened in an out-patient procedure using local anesthesia. Once the foot is corrected, the child wears a brace for 4-5 years when sleeping to reduce risk of relapse. Ideally, the Ponseti method is used in infants in their first few months of life when the feet are most flexible but can be used to treat children as old as 14 successfully.

CHALLENGE

Clubfoot, a common birth defect causing one or both feet to turn inwards and upwards, is routinely treated at birth in the developed world. However, 90 percent of children born with clubfoot live in low- and middle-income countries where access to proper treatment is limited or non-existent. In addition to limited availability of treatment, few people in these countries understand that clubfoot is even treatable. As a result, most children born with clubfoot grow up unable to walk properly. It is well documented that people with disabilities in low-income countries are among the most vulnerable in the world, excluded from participating in social, education or employment opportunities; many live in poverty, begging on the streets, or depending on family and neighbors. Disabled children in low-income countries also face higher rates of neglect, malnutrition and physical and sexual abuse due to attitudes towards disability. All of this suffering and inequity can be avoided by ensuring children born with clubfoot can access a very simple, highly effective, and inexpensive treatment in the first year of life. This \$250 treatment also unleashes \$120,000 of potential lifetime earnings.



SOLUTION

The MiracleFeet model is a comprehensive approach, creating systems for early identification and referral, delivery of high-quality treatment and continued follow-up to ensure children fully complete treatment according to the Ponseti method. The model leverages existing public health infrastructure to reduce costs and ensure long-term sustainability, as well as pushing for policy change within the Ministry of Health. MiracleFeet couples this now proven model with use of technology and design thinking to support scaling. This includes development of 1.) a low-cost, but easy-to-use, clubfoot brace designed specifically to meet the needs of low income countries, 2) a mobile phone-based app, called

CAST, to facilitate data collection and analysis as well communication with families via phone or SMS, and 3) ongoing development of an online training course including the first 3D simulation of a clubfoot to improve training outcomes while keeping costs low. Much of these innovative solutions have been developed in partnership with Stanford's d.school, funding from Google.org, and creative corporate partnerships with industry leaders in mhealth, medical simulation, shoe design, and plastics manufacturing. MiracleFeet's newest innovation is a partnership with Acumen's Lean Data to determine long-term impact at low cost using phone surveys.



OPERATING AND BUSINESS MODEL

MiracleFeet distributes its services through partnership with local-NGOs and public hospitals in low-and-middle-income countries. After signing a memorandum of understanding with the in-country partner, MiracleFeet staff provide logistical, financial and training support to the clubfoot care providers, as well as engaging in dialogue with local ministries of health to increase local involvement and ownership of the program.

While each country program is adapted to meet local needs, MiracleFeet typically:

- Provides training for healthcare providers (but does not pay their salaries, since they are government employees)
- Hires and pays a local country coordinator to manage the program; hires, trains, and pays clinic assistants who educate parents; collect data at the point of treatment; and follows up with families to ensure treatment completion
- Provides training and tools (phones) to ensure each clinic collects patient data (electronic medical record) for monitoring and evaluation (M&E) and follow-up with families
- Provides free braces for all patients (often reused) and any other medical supplies that are not available in the clinic

95% Success RATE



\$250

treats one child, unleashing \$120K in future earnings.

Innovator Profile

- Creates early detection and referral systems and works to raise awareness of clubfoot
- Advocates for policy change at the national level

Programs usually start in a major city and then additional clinics are added around the country to create a national network, ensuring that families do not have to travel such long distances. Clinic locations are determined by mapping population and determining which areas are underserved.

MiracleFeet has shown this model to be scalable (within countries and across new countries) and sustainable by leveraging existing infrastructure and working with each country's Ministry of Health and public health system. MiracleFeet hopes to eventually withdraw from each country leaving behind a fully functioning clubfoot program; however, there is additional work needed in proving this aspect of the model.

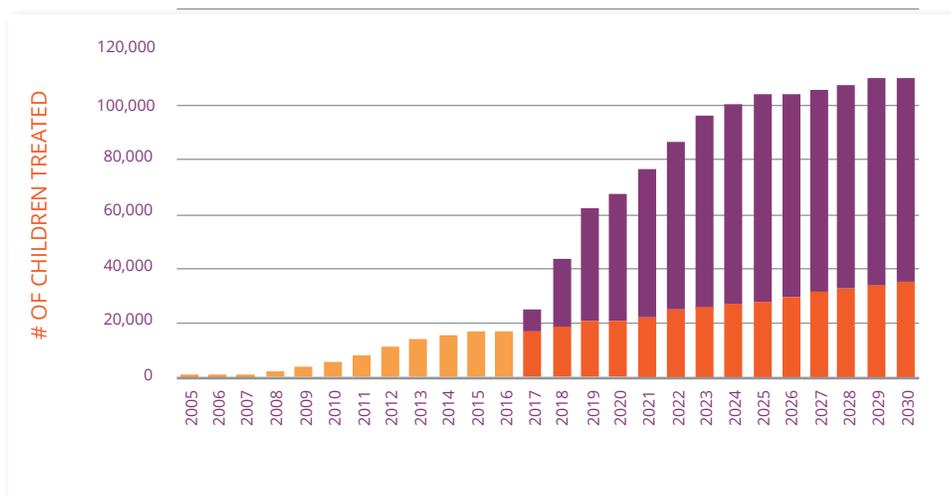
IMPACT

MiracleFeet has transformed the lives of 35,000 children in 26 countries around the world since it started 9 years ago. MiracleFeet scaled its programs within countries to reach up to 60% of all children born with clubfoot in several countries as well as successfully launching in several new countries every year. Recent Lean Data impact surveys indicate that:

- 64% of children treated over 3 years ago in MiracleFeet's Tanzania program are "completely cured" with 33 % reporting that their kids are "somewhat cured". 93% can walk and 77% can wear shoes with no modification.
- 82% of MiracleFeet partners surveyed reported that their ability to treat children born with clubfoot had "very much improved" while 86% reported that they were treating more children thanks to MiracleFeet support.

MiracleFeet has rolled out its innovative brace to 22 countries and CAST, its data collection app, to 18 countries to date.

MiracleFeet has worked closely with the Global Clubfoot Initiative to develop a roadmap for ending clubfoot disability globally by 2030. With a total investment of \$160M spread over 15 years, MiracleFeet believes it is possible to solve the issue of clubfoot forever by creating national clubfoot programs in every LMIC, treating over 1.2M children and generating over \$100B in additional earnings.





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MiracleFeet provided the source data for this document and is responsible
for the accuracy of the content.

