

# FLETCHER D-PRIZE COMPETITION

2023-24 Academic Year

## Health Access Challenges

### Identify Patients Needing Simple Corrective Interventions

*We challenge you to design a new social enterprise that identifies underserved patients in need of simple medical interventions or surgeries and connects them to free or inexpensive treatment. Fletcher D-Prize will award up to \$20,000 to teams with a plan to launch a pilot of this work with a vision to scale country-wide.*

#### The Poverty Problem

There are many health conditions that are easily correctable with early intervention or surgery.

**Obstetric fistula** is a pregnancy complication caused by prolonged obstructed labor and that leads to lifelong incontinence. Women who suffer from OF are highly stigmatized by society. Each year, up to 100,000 women worldwide develop obstetric fistula, mostly in developing countries.<sup>1</sup> Sadly, current capacity can manage less than half of cases.<sup>2, 3</sup>

**Cervical cancer** is the second most common form of cancer for women in developing countries, even though effective screening interventions exist.<sup>4</sup> There are 266,000 deaths from cervical cancer worldwide in 2012, and 87 percent occurred in less developed regions.<sup>5</sup> An estimated 445,000 new cases of cervical cancer occur in developing countries each year.

**Club foot**, a foot deformation that prevents a person from walking, is a condition that affects 200,000 babies each year.<sup>6</sup> 80 percent of cases worldwide are in developing countries and are

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<sup>1</sup> [http://www.who.int/features/factfiles/obstetric\\_fistula/en/](http://www.who.int/features/factfiles/obstetric_fistula/en/)

<sup>2</sup> Ibid.

<sup>3</sup> <http://www.fistulafoundation.org/pdf/GlobalProblemofObstetricFistula.pdf>

<sup>4</sup> Data comparing more and less developing countries. World Cancer Research Fund International. <http://www.wcrf.org/int/cancer-facts-figures/comparing-more-less-developed-countries#WOMEN>

<sup>5</sup> <http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-044738.pdf>

<sup>6</sup> Our Work. Ponseti International. <http://www.ponseti.info/learn-more.html>

mostly untreated. Neglected clubfoot is one of the most frequent causes of physical disability worldwide.<sup>7</sup>

**Cataracts**, which is responsible for 51 percent of world blindness, is also easily correctable.<sup>8</sup> There are roughly 5 million new cataract cases each year,<sup>9</sup> which builds on an even larger existing backlog of cases. A simple surgery could quickly prevent blindness in the lives of tens of millions of people.

### The Proven Intervention

Early interventions and ultra-cheap surgeries for these conditions are well known:

In the case of **fistula**, a trained surgeon can administer a corrective surgery that costs \$586 on average, has an incredibly cheap cost per disability-adjusted life year of \$40, and is successful approximately 86 percent of the time.<sup>10, 11</sup>

**Cervical cancer** can be prevented using a visual inspection and cryotherapy technique (VIA).<sup>12</sup> VIA can be administered by a trained nurse, requires only basic supplies – a speculum, cotton swabs, and vinegar – and offers an ultra-cheap diagnosis on the spot.

The most effective treatment for **club foot** in the developing world is through early treatment using the non-surgical Ponseti method. This ultra-cheap treatment has a 96 percent success rate.<sup>13</sup> Early identification (within 1-2 years of life) is crucial before the condition becomes neglected clubfoot, which requires surgical intervention.<sup>14</sup>

**Cataracts** can similarly be corrected with a surgery that is over 90% effective and costs as little as \$25.<sup>15</sup>

### Your Distribution Challenge

Fletcher D-Prize will award up to \$20,000 to teams that can create a new organization that identifies and connects patients needing one of these corrective interventions to existing treatment centers, who otherwise would not be treated.

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<sup>7</sup> <http://www.ponseti.info/what-is-clubfoot.html>

<sup>8</sup> <https://www.who.int/blindness/GLOBALDATAFINALforweb.pdf>

<sup>9</sup> <https://www.nature.com/articles/eye1999120.pdf?origin=ppub>

<sup>10</sup> <http://www.fistulafoundation.org/>

<sup>11</sup> <http://www.givewell.org/files/DWDA%202009/Fistula%20Foundation/Fistula%20Foundation%20Letter%2002-09-12.pdf>

<sup>12</sup> [http://apps.who.int/iris/bitstream/10665/75250/1/9789241503860\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/75250/1/9789241503860_eng.pdf)

<sup>13</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5478104/>

<sup>14</sup> <https://www.journalijar.com/article/5518/atypical-clubfoot:-early--identification-and-treatment-by-modification-of-standard-ponseti-technique./>

<sup>15</sup> <http://www.cureblindness.org/cause>

You must have a vision to identify and ensure treatments for all patients across a geographic region of 25 million (ie, nationwide for many countries) within five years. Our award is meant to enable the first step toward this vision by supporting a small test pilot of your idea, that identifies and ensures treatment for 100-500 patients.

## Designing Your Social Enterprise

We believe a successful distribution entrepreneur must have compelling answers to the following questions:

*(1) How will you identify the few patients needing treatment among a vast population? A major challenge with all of these corrective issues is that patients are scattered.*

- For instance, the incidence of congenital clubfoot globally is 1 per 1000 people.<sup>16</sup> According to Ponseti International, the leading NGO in this sector, approximately 160,000 children born with clubfoot annually will be in low and middle income countries.<sup>17</sup> Finding these patients among large populations may be a challenge.
- Fistula patients are also difficult to identify, as they are often shunned by their community. According to UNFPA, fistula is most common in rural areas - as women with obstructed labor can spend 2.5 days walking to health clinics. Prevalence is highest in impoverished communities in Africa and Asia and particularly areas where women give birth at home.<sup>18</sup>

*(2) How will you address the barriers to patients accessing treatment? There are many barriers to connecting an identified patient to an existing service.*

*Costs & logistics:* Even when the actual treatment is free or subsidized, patients must usually must still pay for transportation for their treatment and follow-up appointments, and make-up wages lost during treatment. A winning proposal will address these barriers.

- One possible opportunity may be partnering with groups like the Fistula Foundation, the world's largest fistula treatment provider, or Cure International. These foundations offer free surgeries, but do not manage patient transportation, food, or housing. A venture that supplements existing services could be highly successful.
- There may be other incentives to explore. For instance, one clinic in India doubled treatment rates once they began covering its \$35 cataract surgery via mobile money.

*Cultural, social, and behavioral:* Patients may lack family encouragement, may not understand the importance of treatment, or may fear a hospital environment. A successful pilot must identify solutions to behavioral constraints.

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<sup>16</sup> Naddumba, EK. "Preventing Neglected Clubfeet in Uganda: A Challenge to the Health Workers with Limited Resources." East African Orthopaedic Journal. Vol. 3, pp 23. January 2009.

<sup>17</sup> "Cure". Ponseti International. <http://www.ponseti.info/what-is-clubfoot.html>

<sup>18</sup> Obstetric Fistula Needs Assessment: Findings from Nine Countries. UNFPA. 2003. Page 3.

(3) *How will you measure the marginal impact of your work?* One challenge will be proving your work leads to *marginal* or *incremental impact*. Said another way, you must prove that your model led to *more patients accessing treatment* than if your organization did not exist.

(4) *Can your operation scale?* We seek ideas that will result in a substantial increase in the number of patients accessing treatment and include a plan to ensure treatment for all cases within a geographic reach of 25 million people in 5 years.

The ideal social enterprise will also have a plan to raise significant funding to scale, either through investment or philanthropy.

Past D-Prize winners include [SMS Care](#) (Ethiopia), [TextDirect](#) (Sierra Leone), and [Nena Foundation](#) (Kenya).

## Ready To Apply?

Download a First Round Application Packet and start creating your proposal at <https://sites.tufts.edu/dprize/>.

Questions? Email Ariane Theis at [Ariane.Theis@tufts.edu](mailto:Ariane.Theis@tufts.edu).