



## Global Health Challenges

Winter 2016

### Identify Patients Needing Simple Corrective Interventions

*There exist cost-effective interventions and surgeries that correct damaging health conditions like obstetric fistula, cervical cancer, club foot and cataracts; yet identifying individuals in need of treatment is challenging. In three months, identify and reach 100 patients with treatment for an easily correctable health condition as a pilot, then grow to reach 5,000 patients over two years. A successful model will be evidence-based, will include continuous monitoring and testing, and a commitment to change if evidence suggests your approach is not working.*

**The Problem:** There are many health conditions that are easily correctible with early intervention or surgery:

1. 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>
2. 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.
3. 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 mostly untreated. Neglected clubfoot is one of the most frequent causes of physical disability worldwide.<sup>7</sup>

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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>

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

4. 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 Solution:** Early interventions and ultra-cheap surgeries for these conditions are well known:

1. 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>
2. 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.
3. 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 club foot, which requires surgical intervention.<sup>14</sup>
4. Cataracts can similarly be corrected with a surgery that is over 90% effective and costs as little as \$25.<sup>15</sup>

**Your Challenge:** We will award up to \$20,000 to a social entrepreneur who can create a new organization that identifies at least 100 patients in need of a proven health treatment, and that connects them to available services. A winning proposal will also include a plan to scale up and help at least 5,000 patients nationwide within two years.

You must have a localized plan that can manage uncertainty, including:

- An evidence-based model which identifies the strongest factors limiting access to quality care, specific to the region in which you will operate
- An evidenced-based model of how and why your intervention will boost completion of simple corrective treatments and surgeries in the long run
- A plan for continuous testing and evaluation of the program
- A commitment to change the plan if the evidence suggests that the approach isn't working

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<sup>8</sup> Priority Eye Diseases. WHO. <http://www.who.int/blindness/causes/priority/en/index1.html>

<sup>9</sup> [http://www.nature.com/eye/journal/v13/n3b/pdf/eye1999120a.pdf?origin=publication\\_detail](http://www.nature.com/eye/journal/v13/n3b/pdf/eye1999120a.pdf?origin=publication_detail)

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

<sup>11</sup> <http://www.givewell.org/files/DWDA%202009/Fistula%20Foundation/Fistula%20Foundation%20Letter%202002-09-12.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> <http://www.healio.com/orthotics-prosthetics/diseases-conditions/news/print/o-and-p-news/%7B93ed917a-e967-4891-804a-46008616d20e%7D/ponseti-method-yields-high-success-rate-for-clubfoot-patients-older-than-12-months>

<sup>14</sup> <http://www.aaos.org/news/aaosnow/apr13/youraaos10.asp>

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

## Market Information:

- One major problem with fistula, cervical cancer, club foot, and cataracts is identifying the few needing treatment among vast populations:
  - For instance, the incidence of congenital clubfoot globally is 1/1000.<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 clinic. Prevalence is highest in impoverished communities in Africa and Asia and particularly areas where women give birth at home.<sup>18</sup>
- Cost is a second bottleneck. Patients must be able to find affordable treatment. They must also pay for transportation for their treatment and follow-up appointments, and make-up wages lost during treatment.
  - 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.
- There are also behavioral bottlenecks. 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.
- Past D-Prize winners include [SMS Care](#) (Ethiopia), [TextDirect](#) (Sierra Leone)

## Ready To Start?

Download a First Round Application Packet at [www.d-prize.org/application.pdf](http://www.d-prize.org/application.pdf)

Questions? Email the D-Prize team at [help@d-prize.org](mailto:help@d-prize.org)

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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.