FLETCHER D-PRIZE COMPETITION

2017-2018 Academic Year

Identify Patients Needing Simple Corrective Interventions

While cost-effective early interventions or surgeries can correct damaging health conditions like obstetric fistula, cervical cancer, club foot and cataracts, 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 of a program to reach 3,000 patients over two years.

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

1. Obstetric fistula is a pregnancy complication that causes a woman to be incontinent for the rest of her life. Women who suffer from OF are highly stigmatized by society. Each year, up to 100,000 women worldwide develop obstetric fistula. Sadly, current capacity can manage just 16 percent of cases.[1, 2]
2. Cervical cancer is the second most common form of cancer for women in developing countries, even though effective screening interventions exist.[3] There are 266,000 deaths from cervical cancer worldwide in 2012, and 87 percent occurred in less developed regions.[4] 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.[5] 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.[6]
4. Cataracts, which is responsible for 51 percent of world blindness, is also easily correctable.[7] There are roughly 5 million new cataract cases each year, 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.

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[1] http://www.who.int/features/factfiles/obstetric_fistula/en/

[2] http://www.fistulafoundation.org/pdf/GlobalProblemofObstetricFistula.pdf

[3] Data comparing more and less developing countries. World Cancer Research Fund International. http://www.wcrf.org/cancer_statistics/developed_countries_cancer_statistics.php#WOMEN

[4] global.cancer.org

[5] Our Work. Ponseti International. http://www.ponseti.info/about-us/ponseti-international/our-work.html

[6] http://www.ponseti.info/clubfoot-and-the-ponseti-method/what-is-clubfoot/clubfoot-faqs.html

[7] Priority Eye Diseases. WHO. http://www.who.int/blindness/causes/priority/en/index1.html

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 less than $450, has a cost per DALY of $40, and is successful over 90 percent of the time.[8, 9]
2. Cervical cancer can be prevented using a visual inspection and cryotherapy technique (VIA).[10] 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. In this case, early identification (within 1-2 years of life) is crucial before the condition becomes neglected club foot, which requires surgical intervention.
4. Cataracts can similarly be corrected with a surgery that is over 90% effective and costs as little as $35.[11]

Your Challenge: We will award up to $20,000 to a social entrepreneur who can create a new organization that identifies at least 3,000 patients who are in need of a proven treatment within two years. A three-month trial should identify and ensure successful treatment for at least 100 patients.

Additional Information:

- A successful proposal must ensure that bottlenecks are resolved throughout the entire treatment cycle.
- 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, with a male to female ratio of 2:1.[12] 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.[13]
  - 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.[14]
- Other cost bottlenecks exist. Patients must be able to find affordable treatment, and pay for transportation for their treatment and follow-up appointments. One clinic in India doubled treatment rates once they began covering the $35 cataract surgery via mobile money.
  - One possible opportunity may be partnering with groups like the Fistula Foundation, the world's largest fistula treatment provider. This foundation offers free surgeries, but does not manage patient transportation, food, of housing. A venture that supplements these services could be highly successful.
- There are also behavioral bottlenecks. Patients may also lack family encouragement, may not understand the importance of treatment, or may fear a hospital environment.

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[8] http://www.fistulafoundation.org/

[9] http://www.givewell.org/files/DWDA%202009/Fistula%20Foundation/Fistula%20Foundation%20Letter%2002-09-12.pdf

[10] http://apps.who.int/iris/bitstream/10665/75250/1/9789241503860_eng.pdf

[11] http://www.aaos.org/news/aaosnow/apr13/youraaos10.asp

[12] 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.

[13] "Cure". Ponseti International. http://www.ponseti.info/about-us/ponseti-international/our-work.html

[14] Obstetric Fistula Needs Assessment: Findings from Nine Countries. UNFPA. 2003. Page 3.

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