

A conversation with the Fred Hollows Foundation, March 3, 2016

Participants

- Kirsten Armstrong – Global Lead, Development Effectiveness, The Fred Hollows Foundation
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Note: These notes were compiled by GiveWell and give an overview of the major points made by staff from The Fred Hollows Foundation.

Summary

GiveWell spoke with Kirsten Armstrong and Kate Proud from the Fred Hollows Foundation as part of its investigation into cataract surgery. Conversation topics included the organization’s comprehensive eye-care programs, measuring the impact of cataract surgeries, and the foundation’s capacity for additional funding.

The Fred Hollows Foundation

The Fred Hollows Foundation works to end avoidable blindness. It attempts to balance service delivery with demonstration models, building efficient systems and then encouraging local resources to take over.

For example, the Fred Hollows Foundation was one of three organizations that worked with the government of Pakistan to halve the country’s rate of avoidable blindness due to cataracts.

Its major areas of activity are:

Comprehensive eye care programs (40% of the total budget)

Because cataracts are a naturally-occurring condition which will arise in most older people and are generally not preventable, the Fred Hollows Foundation focuses on building sustainable systems for delivering cataract surgeries, not on prevention.

Cataract surgeries are delivered as part of what The Foundation calls a “comprehensive eye care” program. When people present to an eye health service or outreach camp, they may present with many conditions, including cataract and refractive error. The Foundation’s philosophy is to ensure that treatment is provided for other eye health conditions, not just cataract, as this is more cost-effective, equitable and often the health professionals who are there to deliver cataract services can treat many other conditions. Because cataract and refractive error are by far the two most significant causes of blindness and visual impairment, these are the two most important conditions treated by the “comprehensive eye care” programs.

The prevalence and impact of cataracts are well-evidenced (cataract is one of the top two causes of avoidable blindness, along with refractive error), as is the delivery of cataract surgeries. The field continues to benefit from innovation. The invention of implants called intra-ocular lenses (IOLs) and their wide-spread and low-cost availability have been the two most important innovations making cataract surgery affordable and accessible in low resource settings. The Foundation played a key role in making IOLs affordable and available, by establishing IOL factories in Nepal and Eritrea.

Trachoma (40%)

In contrast to its comprehensive eye care programs, The Foundation's trachoma programs are focused particularly on service delivery, including antibiotics and surgeries, with the goal of eliminating trachoma. The approach is different to comprehensive eye care, because unlike cataract, trachoma is an infectious disease which can be eliminated, both through treatment and prevention, by implementing the ICTC (International Coalition for Trachoma Control) approved SAFE strategy (Surgery-Antibiotics-Facial cleanliness-Environmental hygiene).

Other (20%)

The Foundation also supports school eye health screening and education programs in places like Cambodia, where it is piloting the inclusion of eye health in the local curriculum and in the annual student health check, and lobbying for national roll-out.

It is also working to develop and pilot innovative models of care for diabetic retinopathy which could ultimately be affordable and accessible in low resource settings. Individuals with diabetes should receive annual checks for retinopathy (otherwise they risk rapid degradation and blindness), but lower- and middle-income countries may lack the systems and the workforce needed to deliver screenings. There are only about 200,000 ophthalmologists worldwide and it would be impossible for them to undertake all the screening required to detect those at risk of vision loss and in need of treatment, so The Foundation is piloting models of care which involve different technologies, workforces, and care settings in the screening and care of DR.

Comprehensive Eye-Care Programs

The Foundation works across the WHO's six building blocks of a strong health system to deliver its programs: service delivery, health workforce, information, medicines, financing and governance.

Funding for The Foundation's comprehensive eye care programs is spread approximately equally among three components:

- ***Service delivery and medicines*** – transporting people to facilities where treatment is available, performing surgery, and purchasing the consumables used in surgery.

- **Human resource development** – training doctors, nurses, optometrists and refractionists, as well as primary care workers, community health volunteers, and teachers in eye health prevention, management and treatment.
- **Equipment and infrastructure** – supplying surgical, screening, and testing equipment, and building or refurbishing facilities.

These elements are all essential to the program’s success.

The Foundation also invests a relatively modest amount to help build better health management information systems, collect data to better plan for interventions, and strengthen local governance of eye health systems. These elements are essential to ensure long-term sustainability of the health system, so that it can continue to function once The Foundation’s projects are complete.

Cost of services

Comparing costs is challenging because program delivery varies among countries, but by comparing total program costs to program catchment areas, staff estimate that The Foundation spends \$1-\$2 per capita to build a sustainable eye care system.

They also estimate that individual screenings cost the foundation \$3-\$5 per person screened, depending on local resources. In some places, the government has systems in place to co-fund service delivery. Approximately 20 percent of those screened receive cataract surgery, while 80 percent receive other interventions.

These estimates represent the costs to the Fred Hollows Foundation; total costs vary widely among countries, but cataract surgery can be performed in some countries for around \$25.

Measuring impact

Baseline data collection

Baseline data collected by the Fred Hollows Foundation includes:

- **Cataract surgical rate (CSR)** – the number of surgeries performed per million people; CSR is the key metric for evaluating cataract surgical programs
- **Number of cataract surgeries performed at individual facilities**
- **Situation analysis** – studies on the quality and composition of the local eye care workforce; the quality of local facilities; community-level understanding, knowledge, and practices related to eye health; and barriers to accessing eye care

Common barriers include:

- **Workforce availability** – A properly trained workforce is one of the biggest barriers to accessing cataract surgeries. Even when a community has an ophthalmologist, there is often no support staff, which makes the provision of eye care inefficient.

- **Cultural barriers** – Community members may not be aware that services are available. They may fear surgery.
- **Costs** – Both direct and indirect costs (including the cost of transport) are sometimes prohibitive.

Follow-up data collection

The Foundation follows up primarily with hospitals rather than individuals, counting additional activity in the facilities and working to ensure that changes are sustainable, that hospitals have the appropriate equipment and infrastructure, and that the patients who need care can access the facilities through community outreach campaigns or referrals.

Using a standardized template maintained by the head office, the Foundation's country staff collate data from their hospital partners on a quarterly basis for two years following the conclusion of a project. This project-level data is underpinned by facility-level data. The Foundation supports roughly three projects per country, some of which are comprehensive eye care programs. Each comprehensive eye care project can be supporting a large number of primary care facilities and hospitals across a wide population. For example, a recent project in Bangladesh supported 10 district hospitals to deliver high quality comprehensive eye care for their communities. These hospitals are now self-sustaining.

The Fred Hollows Foundation encourages the partner hospitals and facilities with which it works to collect data on The Foundation's behalf, as this helps build sustainable health systems, but will directly collect data for its projects where necessary. It also encourages governments to collect countrywide data on the number of cataract surgeries performed (reporting on this indicator is part of the World Health Organization, or WHO, Global Action Plan for eye health). In most countries this data is available nationally.

Currently, follow-up focuses primarily on output, but The Foundation is working toward a more outcome-oriented approach. The Foundation has also supported targeted cross-country research to understand the social and economic outcomes of cataract surgery on individuals and families.

Follow-up results

The magnitude of the increase in the CSR following a project varies significantly by country and by project.

For example, The Foundation worked with 10 district level hospitals in Bangladesh between 2010 and 2012, and followed up for two years after the end of the project to confirm that the increase in activity in these hospitals had persisted. Few of the hospitals were equipped to deliver any cataract surgeries prior to The Foundation's project, and when The Foundation followed up in 2014, they were doing in total over 7,000 cataract surgeries per annum.

Additional follow-up data suggests that the ophthalmologists The Foundation trains are likely to continue to provide services well beyond the life of the programs which The Foundation directly supports. Evidence from Pacific countries, as well as anecdotal evidence from several other countries shows that, once trained as an ophthalmologist, these people tend to stay in their profession, delivering around 700 or more cataract surgeries a year. With ophthalmologists potentially working 20 to 30 years after they're trained, the impact of The Foundation's work to train new ophthalmologists could be considerably more than the 2-years follow-up currently used.

Reporting surgical outcomes

Evaluating surgical outcomes is challenging. The WHO's clinical guidelines call for the measurement of visual acuity immediately after surgery and again at three months, and the Fred Hollows Foundation works with hospitals to ensure that they have a system in place that adheres to these guidelines.

However, The Foundation does not always receive this data. Some hospitals still use paper-based record-keeping systems, and while others may have more accessible data from electronic monitoring systems, surgical outcome information can be sensitive and governments in most countries are reluctant to share it with external parties.

Improving outcome reporting

While some countries have launched mandatory surgical quality reporting initiatives (the National Prevention of Blindness Committee in Bangladesh may start to compel reporting of surgical outcomes), most governments cannot force doctors to report on surgical outcomes.

The Fred Hollows Foundation is encouraging doctors to self-monitor by investing in tools that facilitate data capturing, sharing, and benchmarking. As part of a consortium of eye health organizations, The Foundation is developing an app called BOOST (Better Operatives Outcomes Software Tool) that allows doctors to voluntarily and confidentially report outcomes on their last 20 patients. Doctors receive information on whether their surgical outcomes are above or below average and, if below average, are asked for additional information to help identify major issues, with advice on what to do to improve outcomes.

The organization developed the app in conjunction with Orbis International and with Aravind Eye Hospitals, which will maintain the data repository.

The Foundation is also promoting the uptake of health management information systems within hospitals that include surgical outcomes in their reporting and monitoring, and is trialing one such system in Vietnam.

Room for more funding

The Foundation previously invested in research ("The Price of Sight" by PwC and Three Rivers) to estimate the global cost of eliminating avoidable blindness, which

identified a considerable gap in the funding currently available to address avoidable blindness.

The Foundation does not have a strong presence in a number of countries with evidence of high cataract rates. Additional funding could allow them to expand to these countries, as well as expand its work in countries where its investments are relatively modest.

In Myanmar, for example, The Foundation has just begun to make progress working with the government to develop a national blindness prevention plan. Staff hope a draft will be approved soon.

If The Foundation has the necessary funding, staff plan to continue working with the government to conduct a national rapid assessment of avoidable blindness (RAAB) study, a survey that measures the prevalence of blindness. The results allow The Foundation to provide region-specific estimates of the most prevalent eye health problems. The last such survey was conducted over a decade ago, which presents a challenge. With adequate funding, the next step would be to plan and implement new comprehensive eye care programs in Myanmar to start the journey to build a sustainable eye health system.

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