

## **Pursuit Of An Ideal Model For Community Eye Health — Non-Governmental Organisations (NGOs)**

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Visual impairment is a crippling condition affecting quality of life and depriving patients of many opportunities. It is associated with increased mortality rates directly through occurrence of adverse events such as falls and impaired emotional well-being, and indirectly through visual impairment brought upon by systemic conditions such as diabetes and hypertension (Foong et al. 2008, Fong et al. 2014, Khanna et al. 2013, Song et al. 2014, Wang et al. 1999). The number of patients suffering from reversible causes of blindness is substantial. In 2010, World Health Organisation estimates that 285 million (4.25%) of the world's population is visually impaired, of which 39 million (14%) are blind. Approximately, 80% of the visual impairment is preventable. Notable causes of preventable blindness include cataracts (51%), glaucoma (8%), age-related macular degeneration (5%), corneal opacities (4%), trachoma (3%) and uncorrected refractive errors (3%) (WHO, 2015). These conditions can be easily diagnosed and treated by ophthalmologists if adequate resources are available.

It is increasingly challenging for the ophthalmologists and current healthcare systems to meet the ever-expanding demands of patients with reversible causes of blindness. Non-governmental organisations (NGOs) have a valuable role to play in overcoming barriers to healthcare and providing resources to needy areas. Common barriers to healthcare such as cost (Palagyi et al. 2008, Onwubiko et al, 2014), inaccessibility to healthcare facility (Schule Schwering et al. 2014), lack of basic health knowledge and misconstrued beliefs are often deep-rooted problems in an underprivileged society (Mehari et al. 2013, Dhaliwal and Gupta, 2007). Various NGOs have joined forces with local authorities to resolve these constraints and deliver basic healthcare via mobile eye clinics, eye camps, dispatching healthcare teams to less accessible areas, teaching locals basic eye care knowledge and empowering local ophthalmologists through training. However there is significant heterogeneity amongst the programs of NGOs and a lack of standard protocol. We reviewed some successful NGOs committed to providing free or heavily subsidized eye care services and amalgamated their best practices to come up with an ideal model (**Figure 1**) for potential NGOs seeking to tackle visual impairment and preventable blindness.

### **(1) Identifying needs**

First and foremost, the demographics and needs of target community should be identified through meticulous surveying and communication with local doctors. Simultaneously, the extent of NGO coverage in the area should be mapped out properly so that resources can be focused on needier areas with little NGOs' help.

### **(2) Resource pooling**

Sufficient funding and manpower are vital for a sustainable NGO. Apart from securing funds through monetary or tangible donations from external parties and NGO members, the NGO can consider establishing a paying class (fixed amount or pay-as-afforded) for beneficiaries who can afford it. Manpower-wise, the team should ideally consist of medical professionals, community educators, project managers, liaison personnel, publicity personnel, translators and others as needed.

### **(3) Service and Partnership**

After assembling the team, the organization can deliver its service by setting up temporary or permanent clinics or mobile healthcare facility (on cars/trains/ships/planes). The aim of providing community eye care is to have a screening model that has a good detection rate and allows on-site examination and treatment at the same setting to minimize patients lost to follow-up. Where appropriate, cases that cannot be managed in a rural screening setting should be referred to a tertiary health centre. Transport and accommodation can be covered or subsidized by the NGO. To render optimal on-site treatment, NGOs should prepare adequate number of cost-effective medicines for prescription based on the prior knowledge of local needs and enable simple surgeries on-site (e.g cataract surgeries). In doing so, NGOs need to ensure that quality control so that patients' safety will not be compromised. For follow-up, NGOs can form partnerships with local clinics and liaise with local ophthalmologists. If follow-up is only available in the hospitals, efforts should be focused on providing transport for the beneficiaries to the hospitals.

### **(4) Education**

Improving accessibility to healthcare alone is not sufficient; attitude and health-seeking behavior of local community need to be changed for a holistic outcome. This can be achieved via education to address misconceptions and increase health literacy. Educational content can be delivered in simple and pictorial ways in local language and make to be interactive like allowing locals to talk to those who have benefited from the NGO service.

### **(5) Sustainability and Empowerment**

The end goal of this NGO model is to ensure sustainability through empowerment. Empowerment can be in a form of knowledge and skills and/or infrastructure. NGO volunteer doctors can provide trainings for local doctors to bridge knowledge gaps so that they can confidently manage the follow-up cases when the team has left. After attaining necessary qualifications, the trained local doctors can educate more local doctors to expand the pool of skilled manpower. NGO can build new clinics, provide necessary medical supplies or equipment and set up technology for locals to seek

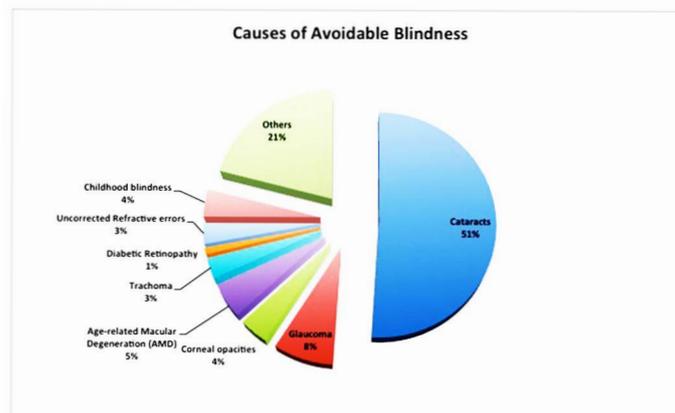
consultations from an overseas expert ophthalmologist if met with complicated cases. In parallel, NGOs themselves can establish partnerships with foundations offering advice and assistance to better improve the programs.

Our proposed model (**Figure 1**) serves as guidance and should be individualized based on the target community's needs. We believe that with advancing technology, there is so much promise in improving the healthcare quality and meeting the demands of needy areas in the world. NGOs are the cement in bridging the healthcare gaps to ensure that everyone deserving of healthcare will not be left out. Hence, we hope to encourage more NGOs to dedicate their efforts to fight against preventable blindness around the world.

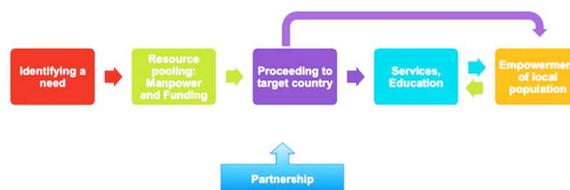
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**Figure 1:** A flow chart for proposed model and modus operandi of a non-governmental organisation

**Figure 1: Causes of avoidable blindness**



**Figure 2: Our proposed ideal model**



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