A stable but inherently unjust equilibrium exists in eye care in developing countries, causing exclusion, marginalisation and suffering for both patients with eye disease and eye-care providers who lack the authority, autonomy, resources or political power to change the situation. Patient choices include an unaffordable private sector or an inherently inefficient public system. The medical profession controls the private sector, government bureaucracy controls the public sector and donors control the charity sector, and each has different priorities. Within the government sector, ophthalmologists can choose to remain in an inefficient, unproductive and non-autonomous system; the alternative is to leave government service for private practice because they lack the authority and investment to undertake a social enterprise. Those in private practice lack the investment power and vision to expand and include a social side. The worst-case scenario is when ophthalmologists feel that they have no choice but to leave their country of residence altogether.

Worldwide, there are 37 million blind people and 124 million people living with low vision (World Health Organization [WHO] 2002), 90% of whom live in developing countries and can only be treated when the quality of eye care is such that patients will seek, accept and be willing to pay for it. While private practitioners attract the wealthy few and the government serves the poor, the middle classes who are able to pay feel neglected because their choices are few. More ophthalmologists are needed, but addressing inefficiencies, poor quality and under-utilisation resulting from poor management and lack of financial sustainability is essential. With the world’s population growing to a predicted two billion and ageing to include an estimated 7.9 billion people above 45 years of age by 2020, simply training more ophthalmologists to work in poorly functioning institutions will not meet these needs.

The International Eye Foundation’s Strategy
In the mid-1990s the International Eye Foundation (IEF) began thinking about why eye clinics and hospitals in developing countries function at only around 40% of their capacity, lack critical resources and are dependent on government budgets and external donors. Working closely with David Green, a social entrepreneur, and the Lions Aravind Institute for Community Ophthalmology in India, the IEF developed the SightReach® Management model that could be utilised outside the Indian subcontinent. The SightReach Management model transforms eye-care institutions into social enterprises with business plans that put profit towards operational costs and growth and subsidise services for the poor. Donor funds can then be put towards areas of donor interest and services that are self-sustaining, leading to a more comprehensive service delivery spectrum. Using quality, efficiency, productivity and revenue metrics, the IEF can maximise existing resources to increase services. In 1999, with support from the US Agency for International Development (USAID), the IEF launched SightReach Management with seven hospitals in six countries in Africa, Central America and India, putting us firmly on the path to changing how eye care is delivered throughout the developing world.

SightReach Management
The SightReach Management model combines the best of clinical eye-care practice with business planning and management systems to create a hybrid social-entrepreneurial approach to eye-care delivery. When an eye clinic asks for assistance, the IEF’s sustainability specialist asks the clinic to complete an initial self-assessment using a standardised data collection form to gather information on needs, constraints, competition, market, infrastructure and human resources. This is followed by a site visit to review the assessment, evaluate the structure and leadership and talk to the staff to understand the strengths, weaknesses and constraints that are likely to be faced. Most importantly, there must be a willingness on the part of the clinic leaders to change the way in which it operates, and they should have the ability to control their own resources and the authority to make decisions.

Plans and Investments
If the potential for success exists, the IEF develops a business and marketing plan that includes ‘return on investment’, break-even point, duration of IEF investment and exit strategy. The IEF then invests US$80,000–200,000 over two to four years and provides technical assistance in a comprehensive redesign, enabling the clinic or hospital to undertake organisational and infrastructure changes. This ‘safety net’ covers the initial costs of instituting standards, protocols and tools for accounting, equipment, data collection and reporting. It also covers the costs of staffing the clinic with management personnel and patient counsellors.

Leadership
Clinic leaders, whether they are ophthalmologists, administrators or owners, must be committed to the social enterprise approach, which targets all levels of society including the poor. They must be committed...
to the transition process so that when internal and external challenges arise, the process is not thrown off track. The leader also must ensure that the quality of care and services are maintained. Without quality results, patients will not seek or accept eye care, even if it is free.

Management and Accountability
Strong management is critical to success. Ophthalmologists should focus on treatment and surgery and ensure that professional eye-care managers handle the administrative and management responsibilities. The IEF’s initial investment supports the creation of manager positions until income sustains their costs. Quality service is critical to customer satisfaction, ensuring that patients are seen in a timely fashion, are treated with respect and will recommend the service to their friends and family. Quality indicators monitor surgical and visual outcomes and efficiency metrics. Efficiency strategies focus on all areas, especially patient flow-through in the outpatient department and turnaround time between surgical patients in the operating room. The standards and protocols monitor progress and accountability.

Patient Counsellors
Counsellors are introduced to advise patients, alleviate anxiety and address needs contributing to overall patient satisfaction. They are the liaison and face of the organisation within the community. Our experience shows that patient counsellors significantly increase acceptance rates of patients needing treatment, surgery and optical services. The costs of counsellors are also supported by the IEF until they can be covered by earned revenue.

Outreach
Community outreach programmes are critical to increasing patient volume and marketing services to communities. They also establish the hospital’s credibility, accountability and confidence at the community level. Outreach programmes are established to identify the unreached and increase the number of patients examined and referred. Well-planned screening campaigns enable the highest visibility and immediate return of patients to the base hospital with their friends and neighbours for further treatment and/or surgery. By alleviating fears related to travel, surgery and cost, women, children and the elderly are more easily able to access care.

Revenue Generation
Activities to earn income are introduced in government and charity hospitals, where all care was traditionally provided free of charge. The IEF’s public sector partners in Malawi now earn some revenue and still treat the majority (over 90%) of their patients for free. Major revenue sources include new optical services for eye patients and the general public. A sliding fee scale with “zero cost” as a price is established and is based on the lowest 60% of the population’s ability to pay. The fee scale may be stratified into different pricing categories with added value and amenities at each price. The IEF invests in establishing other revenue-generating services such as a cafeteria that is owned by the eye clinic. Earned income covers expenses and profit is put towards patient care costs, in effect stretching the budget to treat more people.

Optical Services
In many countries, optical services are separated from ophthalmology and operate independently in the private sector. The IEF establishes optical services as an integral part of the eye-care service itself. Optical services can be a great income generator if managed professionally. Profit can cross-subsidise the outreach and eye-care services for patients at the lower end of the economic scale; this way, no-one is denied service. Additionally, the ophthalmic service can control the quality of frames, lenses and prescription spectacles, and also contain prices.

About Visualiza
In 2002, Mariano and Nicolas Yee, ophthalmologist brothers, had a two-room private practice in a shopping mall in Guatemala City. They wanted to incorporate services for the poor, but wondered how to afford it. They invited the IEF to help, and over the next three years the IEF’s technical assistance and an investment of US$180,000* transformed their practice, Visualiza, into a social enterprise. The needs assessment and business plan included a move to a larger facility in 2002 in order to have their own operating room instead of losing revenue by renting space at another hospital. A social side was established with a walk-in clinic, counsellors and a sliding fee scale. Between 2002 and 2007, outpatient exams increased by 344%, from 6,312 to 28,040. All surgeries increased by 761%, from 464 to 3,997; paediatric surgeries increased by 211%, from 27 to 84; and cataract surgeries increased by 573%, from 255 in 2002 to 1,717 in 2007 (see Figure 1). Guatemala has 150 ophthalmologists and a reported cataract surgical volume of 11,000 annually. Therefore, Visualiza now performs 16% of all cataract surgery in the country. Revenue increased by 1.024% in the five years, from US$168,316 in 2002 to $1,064,122 in 2007 (see Figure 2). After all expenses, cost recovery in 2007 was 109%. Of revenue earned in 2007, 14% came from outpatient exam fees, 40% from surgical fees, 35% from optical services and 11% from other sources such as pharmacy (see Figure 3). In December 2007, with 48 staff including five ophthalmologists, two optometrists and two administrators, Visualiza moved again, to a large building with two operating rooms in order to accommodate their growing practice. The business plan requires that 80% of profit is reinvested in the practice. In 2005, Visualiza hired a full-time qualified paediatric ophthalmologist. Now, children with congenital cataract and glaucoma, squint and eye cancers do not have to be referred to a specialist, who was previously often unaffordable for the family. Visualiza’s initial goal of incorporating poor patients into their practice has been achieved. Approximately 80% of patients were subsidised by earned revenue (see Figure 4). There is a roughly equal distribution of male and female patients (see Figure 5). The IEF elevated Visualiza to a “Regional Demonstration Centre” in 2006 to provide workshops and backstop new clinics in IEF’s SightReach Management network.

*Part of grant funds awarded to IEF’s SightReach Management programme from USAID and the de Beaumont Foundation recognising effective use of donor dollars.

Standards and Protocols
It is important to have a standardised protocol for every activity, with clearly defined roles and responsibilities. It is also important that the clinical team get involved in planning and implementation. They should have the opportunity to come up with ideas for change, and
how and what tools they should be given to implement the plan. Clear indicators, outputs and goals should be reviewed at meetings, and any issues should be documented and discussed to reach solutions. Standards and protocols help the staff monitor quality, efficiency, customer satisfaction and financial sustainability, whether improving public sector hospitals to introduce innovative income generation while still treating the poor, or encouraging private clinics to subsidise poor patients while remaining financially viable.

**Tools**

Various tools demonstrate what can be achieved to clinic staff. They can demonstrate market potential, gather baseline data and make projections for the next three to five years. Tools can demonstrate that unmet needs exist and that services provided are under-utilised and do not match potential. Data can often disabuse staff of the belief that the only way they can achieve better results is with increased infrastructure, staffing and equipment instead of working more efficiently. In many cases, a few changes produce significant results at very little cost. Accounting tools are introduced to track use of funds, revenue and expenditure. The business planning tool helps staff to understand pricing strategies, how volume reduces cost, utilisation status and return on investment. This is essential for budgeting and demand forecasting.

**Exit Strategy**

Donors should describe a clear exit strategy at the very beginning of a project, stating their expectations and when support will end or change. The organisation should be aware of exactly what kind of support will be provided, for how long and for what purpose. This ensures clinic leaders have an understanding that support for each specific activity will stop and know when this will happen.

**Risk of Failure**

Success is not easy. No-one likes change, and sceptics will always arise to say ‘it will never work in my clinic or in my country’. Expected and unforeseen barriers suddenly appear, whether they are political, external – involving other donors and stakeholders – or internal – involving staff. The role of the IEF’s sustainability specialist is critical in skillfully building a team that has confidence and accepts the planned changes from the beginning. Staff must participate in the entire process. Leaders must pay attention to all suggestions and issues that are faced over the transition process. Initially, any small change resulting in a positive impact helps the team to take ownership of the model. Most importantly, the IEF’s role is to monitor the transition process closely, providing inputs where necessary and suggestions when required, with a clear exit strategy that has been shared with the team from the outset.

**Achievements**

SightReach Management results reflect increased productivity, greater equity due to an increased number of poor patients served and financial self-sufficiency. Aggregate results from the period between 2002 and 2004 show that the IEF’s first seven hospitals in eight countries were a huge success. Increases were made in the number of patients examined (from 19,814 to 182,763) and surgeries undertaken (from 5,140 to 15,585). Simultaneously, the percentage of people subsidised or treated for free increased from 45 to 70%, revenue increased from US$7,010 to $1,762,346 and costs recovered increased from 6 to 130%. Results varied according to country and partner, but each demonstrated marked improvements in all areas.

Revenue generation lessens dependency on government budgets and external donors, improves accountability and satisfaction and provides choice of service to all populations, wealthy and poor alike. In government eye clinics, programmes provide alternatives for African countries and break down false arguments of ‘free versus paying’ and ‘wealthy versus poor’, which are barriers to change. Reforms at the Ridge Hospital in Ghana led to increased revenue, from US$12,579 to US$49,067 (an increase of 290%), in less than three years. In Malawi, IEF optical centres broke even in six months, and consistently achieve 160% cost recovery, serving over 20,000 patients annually. Revenue provides a US$19,000 subsidy annually to the eye clinics to expand clinical services.

Of the non-governmental organisation (NGO) eye hospitals in Egypt, the Magrabi Eye Hospital increased cataract surgery by 240% between 2002 and 2005, providing a new model to expand services with dramatically lower prices for the majority of the population and free services for the indigent. The Magrabi ‘low pay’ hospital’s success challenges management to reform all of its hospitals in Egypt and state governments.
to redesign extremely inefficient systems. In Latin America, private eye clinics have realised that the majority of the population is not served. By reducing costs and setting prices to serve the lowest 60% of the population (the working class and rural poor), partners now out-perform the larger hospitals and institutions on all metrics.

Scaling Up

To increase the number of clinics and hospitals in the SightReach Management network, the IEF elevated two of its original seven partners to become ‘Regional Demonstration Centres’. The Magrabi Eye Hospital in Cairo and Visualiza in Guatemala City now hold workshops in local languages to introduce new clinic teams to the critical roles of management, quality, efficiency, outreach and revenue generation. The IEF and staff from the Regional Demonstration Centres monitor and mentor hospital teams for two to four years until they have achieved their goals and budgeted for revenue-maintained expanded services. This ripple effect is creating momentum in the number of new clinics wishing to adopt the SightReach Management model.

Conclusion

Why has the IEF moved to a business approach from the traditional charity approach to increase eye-care services? We found that clinics and hospitals developed dependencies and, when funding ended, they could not sustain services. We began to look at all of the components necessary to achieve quality sustainable services, and not just in the clinical area. This led to the SightReach Management model, with standardised principles and concepts that have been demonstrated successfully with governments, NGOs and private practitioners. The business management approach increases the chances of clinics becoming self-sustained. When sustainable for core costs, new donors have become interested in supporting IEF partners because their money will be well spent. Also, programme expansion is driven by need and not by donor agendas. Transforming eye clinics and hospitals in the developing world to sustainable social enterprises serving all economic levels of society, especially the poor, will better meet the growing needs for eye care in the 21st century.

Attacking the Backlog of India’s Curable Blind: The Aravind Eye Hospital Model


The authors describe a system of high-quality, high-volume, cost-effective cataract surgery, using screening eye camps and a resident hospital to enable them to provide efficient low-cost cataract surgery in southern India. The authors located patients with treatable eye problems, educated them about the availability of ophthalmic care and provided free eye care. The authors stress community involvement, efficient screening, efficient utilisation of both medical and paramedical personnel and a streamlined approach to screening patients. This system may be capable of modification for use in other developing areas to decrease the backlog of cataract blindness.

Outcomes of High-volume Cataract Surgeries in a Developing Country


The authors reviewed the surgical outcomes of 593 patients with cataract operated upon by three high-volume surgeons on six randomly selected days. There were 318 female and 275 male patients, with a mean age of 59.57 years. Best corrected visual acuity of 6/18 was achieved in 94% of the 520 patients who could be followed up on the 40th post-operative day. Intraoperative and immediate post-operative complications occurred in 11 and 75 patients, respectively. An average surgical time of 3.75 minutes per case was achieved. Statistically significant risk factors for outcomes were found to be age >60 years, sex and surgeon. The authors concluded that high-volume surgery using appropriate techniques and standardised protocols does not compromise the quality of outcomes.

Editor’s Recommendations