Aravind Eye Hospital Synopsis

In Madurai, India, in 1976, a retired eye surgeon named Dr. Govindappa Venkataswamy ("Dr. V.") fulfilled a lifelong dream by creating a private, non-profit hospital to provide quality eye care to citizens of India. Motivated by a deep desire to "serve God and humanity," and guided by an acute business sense, Dr. V. eventually transformed a simple 20-bed unit into a technologically advanced, 1,224-bed complex—one of the biggest hospitals of its kind in the world. Primarily through cataract surgery, Aravind restores vision to some 75,000 individuals each year who hail from the elite and poor classes alike. Dr. V.'s inspiring leadership, combined with brilliant social marketing and excellence in operations, has turned Aravind into a self-sustaining social enterprise.

—adapted from HBS (1995) case study sources

The Blindness Problem

Millions of people around the world are blind. The prevalence of blindness varies globally, with an incidence rated in the industrialized countries of Europe and North America of 0.15–0.25% and nearly 1.5% in the developing countries of Africa, Asia, and Latin America. Age-related macular degeneration, diabetic retinopathy and glaucoma are the dominant causes of blindness in developed countries; *cataracts* are the major cause of blindness in developing countries (three-quarters of all cases in Asia).

With cataract blindness the naturally clear lens of the eye becomes clouded over time reducing vision. Surgical removal of the clouded lens is the only proven treatment. Ophthalmic surgeons in some developing countries usually prefer to remove cataracts only when they are mature (i.e., when they significantly impair sight), which means cataract suffers slowly lose more and more of their sight over time. However, cataract surgery is a fairly routine operation, usually performed under local anesthesia that enjoys high-success rates (>95%). Two surgical techniques are commonly employed, extracapsular surgery with intraocular lens (ECCE), and *intracapsular surgery without intraocular lens* (ICCE), with the former requiring the recovered patient to wear glasses with thick lenses in order to see properly. [For more details, refer to the HBS case study: *Aravind Eye Hospital*.]

More than 80% of cataract-blindness is age-related, generally not occurring in people below 45 years (but increasing dramatically in the over-65 age group). At the time the HBS case study was written, India had 20 million blind eyes, with cataracts as the main cause in 75–80% of the cases. The income of the average Indian, about Rs. 6,800 ($275) with >70% below the level of poverty of Rs. 2,500, precluded western-style corrections. Although India's 8,000 ophthalmologists performed nearly 1.2 million cataract operations a year, about 2 million new blindness cases developed annually, creating an increasing backlog of cases each year.

Dr. V.'s Operation

It is in this context that Dr. V. hatched a plan to help his fellow Indians regain their sight. In 1976, he opened the 20-bed Aravind Eye Hospital with the goal of offering quality eye care at

reasonable cost. The first three surgeons were Dr. V., his sister, and her husband. They performed all types of eye surgery. A 30-bed annex was opened in 1977 to accommodate patients convalescing after surgery. And in 1978 a 70-bed free hospital was opened to provide the poor with free eye care. Post-operative care for free patients was minimal (e.g., a mat instead of a bed), but completely professional and hygienic (and successful). In 1981 a main hospital with 250 beds (for paying patients) was completed, with the revenue from the paying customers used to support the free services provided to poor patients. The Main Hospital was well-equipped with modern equipment to provide the best possible eye care for its patients. In 1984 a new 350-bed free hospital was opened. This five-story hospital had nearly 36,000 square feet of space and its top story accommodated the nurses' quarters for the entire Aravind group of hospitals. The hospital had two major operating theaters and a minor theater for septic cases. On the ground floor were facilities for treating outpatients; in-patients were housed in large wards on the upper floors. The Free Hospital was largely staffed with medical personnel from the Main Hospital. Doctors and nurses were posted in rotation so that they served both facilities, thereby ensuring that nonpaying and paying patients all received the same quality of eye care. By 1988, in addition to the 600 beds at Madurai, a 400-bed hospital at Tirunelveli, a bustling rural town 75 miles south of Madurai, and a 100-bed hospital at Theni, a small town 50 miles west of Madurai, were also started. By 1992, there were about 240 people on the hospital's staff, including about 30 doctors, 120 nurses, 60 administrative personnel, and 30 housekeeping and maintenance workers. However, the cost of providing eye surgery at each hospital was kept low by utilizing a highly efficient production-line approach implemented by Dr. V and his colleagues.

In 1990, Aravind opened its Free Hospital to walk-in patients. Prior to that, all the patients in the Free Hospital were attracted from eye camps, which continued post-1990. Every week teams of doctors and support staff with diagnostic equipment fanned out to several rural sites to screen the local population. A local businessman or a philanthropic social service organization recruited prospective patients from surrounding villages who traveled by bus to the eye camps for screening; those selected for surgery were transported the same afternoon by bus to the Free Hospital at Madurai. Three days after surgery and recuperation they were taken back to the camp where family members picked them up, or provided return tickets to their appropriate destinations. Clinical teams returned to the camps after three months for a follow-up evaluation of discharged patients. By 1992, the Aravind group of hospitals had screened 3.65 million patients and performed some 335,000 cataract operations—nearly 70% of them free of cost for the poorest of India's blind population.

The Eye Camps

The eye camps were crucial for making contact with prospective eye-surgery patients. According to Dr. V.:

> *The concept of eye camp is not new. As the head of the government hospital, I used to go out with a team of doctors and support staff several times a year to screen patients in their own villages. Many of my colleagues in other parts of India also use this idea as part of their outreach programs. We were somewhat fortunate in the sense that we invested in the infrastructure, such as the vans and the equipment and committed doctors to support the demand we got from philanthropic individuals and organizations.*

In the formative years of Aravind, patients attending the screening camps were examined and those needing surgery were appropriately advised. Even though surgery was free, the patients had to come to Aravind at their own expense. Consequently, the response rate was less than 15%. Concerned by the low turnout, a research team from Aravind conducted in-depth home interviews with a randomly selected group of 65 patients for whom surgery was recommended but who hadn't responded for over six months. The study revealed the following factors hindering prospective patients from undergoing surgery:

- Still have vision, however diminished – 26%
- Cannot afford food and transportation – 25%
- Cannot leave family – 13%
- Fear of surgery – 11%
- No one to accompany patient – 10%
- Family opposition to procedure – 5%
- Other – 10%

In response, Aravind requested that camp philanthropic sponsors bear the costs of food, transportation and the cost of aphakic glasses to be worn by the patient after surgery. In order to reduce the fear of surgery, as well as to encourage a support group, patients were transported to Madurai as a group in a bus. Patients were asked to bring a small travel bag in case it was necessary to go to Madurai. A packed lunch was provided for those selected for surgery, and refreshments and a sit-in lunch for all the doctors and support staff participating in the camp. In addition, Aravind camp organizers, as well as local community elders, explained and reassured the patients regarding the importance of the surgery and the other logistics involved. Bus trips were so organized so that individuals from the same or nearby villages were always clustered in the same bus trip, which reduced the need for anyone to accompany the patients. They were all returned together after three or four days. This established a support group during their recovery phase. A team from Aravind visited for follow-up after three months.

Dr. V.'s Future Plans

The success of the Aravind experiment encouraged Dr. V. to expand his purview and to further develop his model. During an interview, Dr. V. expressed his vision this way:

> *Tell me, can cataract surgery be marketed like hamburgers? Don't you call it social marketing or something? See, in America, McDonald's and Dunkin' Donuts and Pizza Hut have all mastered the art of mass marketing. We have to do something like that to clear the backlog of 20 million blind eyes in India. We perform only one million cataract surgeries a year. At this rate we cannot catch up.*
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> *Modern communication through satellites is reaching every nook and corner of the globe. Even an old man like me from a small village in India knows of Michael Jackson and Magic Johnson. Why can't we bring eyesight to the masses of poor people in India, Asia, Africa, and all over the world? I would like to do that in my lifetime.*

Dr. V. died on July 7, 2006. Today, his hospitals perform 1-in-5 of all Indian eye surgeries.