eCUSUM

Register Today

NED Newsletter

NATIONAL EYE DATABASE

Volume 3, Issue 1

April 2015

MOHS/CRC/30.13(NS)

The Power and Paradox of Aravind

Aravind Eye Care System is a network of eye hospitals, institute, research centers and outreach facilities located in several districts in the state of Tamil Nadu, INDIA.

It was founded by Dr. Govindappa Venkataswamy in 1976 and started as an 11 bedded eye hospital in Madurai. Since then it has grown into a network of eye hospitals throughout Tamil Nadu with branches in Theni, Tirunelveli, Coimbatore, Pondicherry, Dindigul and Tirupur.

The hospitals throughout the network provide high quality and affordable services to the rich and poor. Madurai branch provide general and subspeciality services while others have well equipped general and speciality clinics with comprehensive support facilities. All the hospitals in the system serve as base hospital within their outreach network, the activity which is given a great emphasis as social and financial marketing strategies for Aravind.

Aravind is self sustainable. It generates revenues by maintaining the balance and constant ratio between the paying: subsidized: free patients. While the free section provides the colossal volume of patients, the paying section provides an income which is able not only to cover the operational requirement for the whole network but able to generate income surplus. This surplus is used to finance the research and development activity in Aravind.

The model of Aravind Eye Care hospitals has been applauded all over the world and has become a subject for numerous case studies in administrative, business and medical discussions.

Population (2011)	
• **Total**	72,147,030
• **Rank**	6th in India
• **Density**	550/ km² (1,400/ sq mi)

High Volume High Quality Cataract Surgery

Aravind's success at performing a large number of high quality cataract operations per year and per surgeon (known as high-volume cataract surgery) is in part due to the innovative operating practices (eg 'assembly line' system where surgeons sit in alternate between two operating tables; when they finish with one surgery, they will swing the operating microscope to the other patient who is already prepared and draped by the Mid Level Ophthalmic Personnel). This allows them to save time between surgeries and makes them productive.

In Aravind, one single surgeon has a capacity to operate between 30-40 cataract surgeries per day and produce 2000 per year.

Similar to NED, Aravind has a database and performance monitoring system to monitor intra-operative complication and outcome of cataract surgeries performed throughout the network. Rigorous cataract audit is also conducted regularly by weekly basis as quality assurance measures.

Most importantly, in view of the rising backlog of cataract blindness and the high level of incidence in India, all cataract service providers at each level of service in Aravind including the subspeciality services are fully committed to the urgent need of higher productivity. They have indeed moved beyond the debate of whether high quality can be achieved by high volume surgery.

Optical shop attached to Aravind Theni

Separate entrance to the free section— Aravind Theni

Patient can choose to receive either paying, subsidized or free service without formal assessment to determine their financial status. Paying patients will receive premium preoperative service including premium IOLs. Subsidised patient are required to pay 750 Indian Rupee (RM45). The sections are segregated by the comfort of service. But the quality of surgery they receive is equal as Aravind either randomizes the OT list or rotates the surgeons.

Total number of cataract surgery by year

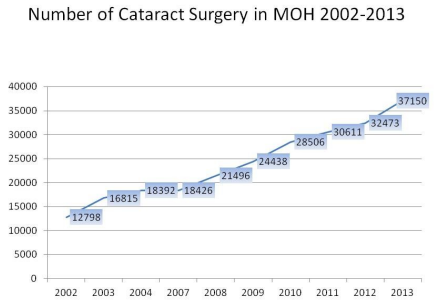


Figure 1: Total number of cataract surgeries performed in the Ministry of Health (MOH) facilities

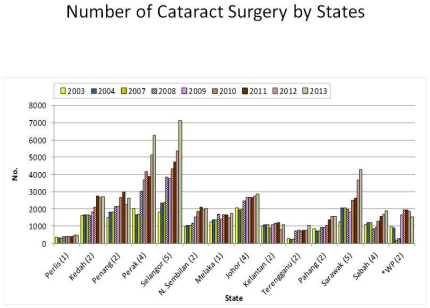


Figure 2: Total number of cataract surgeries performed in the MOH facilities by states.
Bracket ( ) shows the number of facilities in the state.

Ascertainment

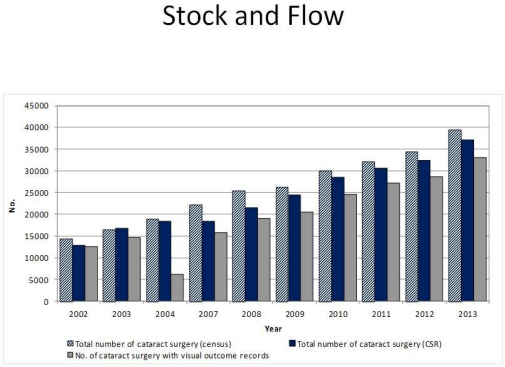


Figure 3: Ascertainment for Cataract Surgery Registry (CSR)

Although the total number of cataract surgery is increasing each year, it is an adverse trend that the number reported to CSR is lower than the number in census.

It is imperative that the Head of Department must ensure that data for all surgeries performed in their department are entered into CSR.

Mean duration from 1st and fellow eye surgery

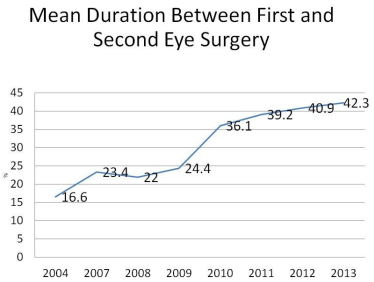
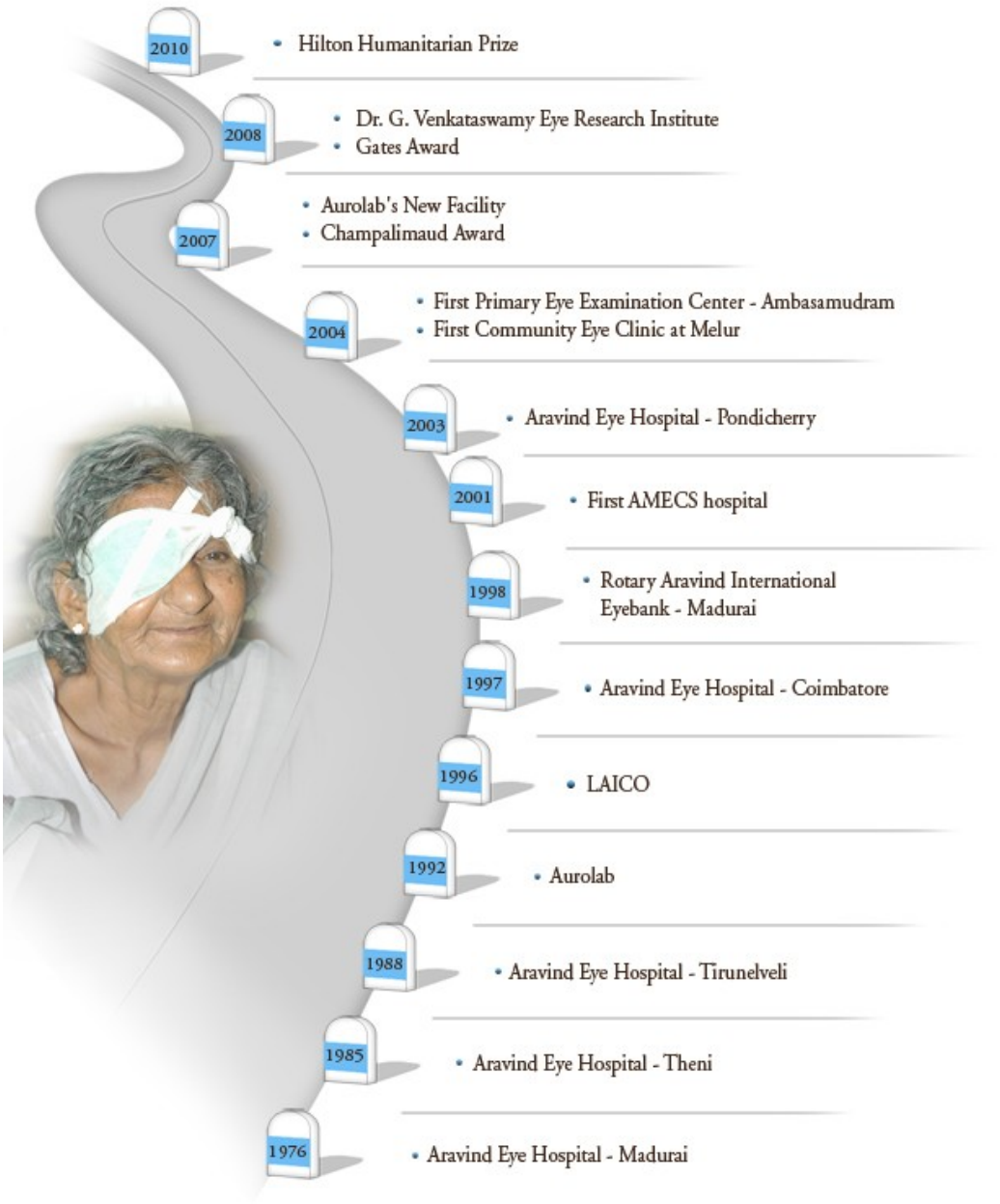
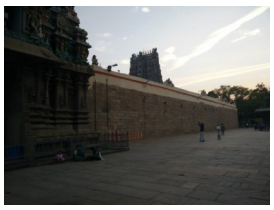


Figure 4: Mean duration between 1st eye surgery and the second eye surgery.
The number is increasing each year indicating a longer time taken for a patient to have the second eye surgery done. Although we acknowledge that this finding is consistent with the increasing number of cataract surgeries done throughout the years, specific action has to be taken to maintain this percentage within an acceptable range. This is because, first eye surgery may overcome cataract blindness but second eye surgery adds quality to the vision.

Aravind — milestone





Meenakshi Temple, MADURAI

INTELLIGENCE AND CAPABILITY ARE NOT ENOUGH. THERE MUST ALSO BE THE JOY OF DOING SOMETHING BEAUTIFUL. BEING OF SERVICE TO GOD AND HUMANITY MEANS GOING WELL BEYOND THE SOPHISTICATION OF THE BEST TECHNOLOGY, TO THE HUMBLE DEMONSTRATION OF COURTESY AND COMPASSION TO EACH PATIENT - DR.G.VENKATASWAMY

Aravind — success stories to be emulated

In the context of eye-care service provision, milestone represent a significant event or stage in the progress or development of an eye-care establishment. Aravind eye hospital was humbly founded in 1976 as an 11-bed hospital in Madurai. It now has branches at Theni, Tirunelveli, Coimbatore, Pondicherry, Dindigul and Tirupur and it has become one of the leading eye-care institutions in the world in cataract and subspeciality fields both in term of service and research.

It has been almost 40 years since it started its first journey in Madurai. Aravind as we can see today is the product of good leadership and committed workers who are united in reaching a single goal—to overcome the problem of cataract blindness in India.

We have the correct ingredients to create similar success stories. The milestone have been erected in a form of projects like NED, KK1M, NES, MAIWP-HOSPITAL SELAYANG and many others. We only need to persevere and be committed to embark on a similar journey like what Aravind did.

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The National Eye Database (NED) is a service supported by the Ministry of Health (MOH) as an approach to collect health information. It collects data on incidences and distributions, and evaluates risk factors as well as treatment outcome of visually threatening eye diseases such as cataract, diabetic retinopathy, glaucoma and contact lens related corneal ulcer. In the initial phase, NED will collect data on cataract surgery, status of diabetic retinopathy in new diabetic patients, contact lens related corneal ulcer and glaucoma patients. Besides disease registry, NED also collects monthly service census of MOH Ophthalmology departments. The census serves as an effort to monitor key performance indicators of each ophthalmology department in the MOH.

Information collected in the NED is very useful in assisting the MOH, Non-Governmental Organizations, private healthcare providers and industry in program planning and evaluation, leading to eye disease prevention and control.

We're on the web

http://www.acrm.org.my/ned

Community Outreach as Service Marketing Strategy

Community owned screening camp at Theni, Tamil Nadu, INDIA

Aravind gives great emphasis in the welfare of the poor. It incorporates in their daily objectives and workprocesses, the novel concept of serving and reaching out the non-customers. These non- customers are the groups of people who reside in rural places in Tamil Nadu who cant afford cost of cataract surgery.

Aravind believes that these outreach activities will generate significant and sustainable amount of awareness among the population. This in turn generates volume of patients seen today in Aravind network.

Delivery of service for outreach is designed in such a way that participation from the community is fully optimised. This partly lead to initiation and organisation of screening camps regularly in selected districts in Tamil Nadu.

These screening camps are owned by the community, usually the leaders and they take pride in conducting the camps for their own people.

During screening camps, comprehensive eye examinations are done by the doctors and eye conditions are treated or referred accordingly.

These screening camps also provide optical dispensing facilities. Patients with refractive errors are able to receive their spectacle on the same day therefore minimizing the need for distant travel.

Those requiring cataract surgery will be prepared on-site for cataract surgery at the base hospitals. The leader who owns the screening camp is responsible for the financial needs of the camp to organize all patients from operating day up to 1 month follow up post operatively.