9th General Assembly 2012 (IAPB)

Private Institutes: AECS
Broad Base – Broader Appeal

Eye Care for Every One in India

Dr. P. Namperumalsamy, MS, FAMS
Chairman Emeritus

ARAVIND EYE CARE SYSTEM
Aravind Eye Hospital
& Postgraduate Institute of Ophthalmology
Madurai, India
In a developing country with competing demands on limited resources, government alone cannot meet health needs of all 200 million who need eye care in India.

There is an urgent need to establish an alternate health care model that could strengthen and supplement the efforts of the Govt and also be self-supporting.

Dr.V, feeling the urgent need, started an eye clinic with 11 beds, to create an alternate, sustainable eye care system to supplement the government’s efforts
A Non-Profit Trust

Humble Beginning of
Aravind Eye Care System – 1976
11 beds
Aravind Eye Care System

- Eye Bank
- Hospitals (5)
- Aurolab
- LAICO
- Training
- Research
- Out Reach

“Aravind Eye Care System”
Organization Mission

Aravind Eye Care System’s Mission is to eradicate needless blindness by providing compassionate & high quality eye care to all, rich and poor.

We aim to do this by:

- Providing high – quality, high – volume eye care at a low cost.
- Offering first rate ophthalmology training within India.
- Providing capacity building training and consultation throughout the developing world.
- Conducting research into causes, treatments and service delivery models.
- Providing high quality affordable products in eye care through Aurolab.
Aravind Eye Care Network

Managed Eye Hospitals

- Amreli (Gujarat) - 2007
- Lucknow - 2008
- Amethi (UP) - 2005
- Coimbatore (1997)
- Tirunelveli (1988)

Tertiary Eye Care Units
5

Community Eye Centres
14

Vision Centres
36

Managed Eye Hospitals
2

City Center
1

Total – 47 centres

- Theni (1984)
- Madurai (1978)
- Pondicherry (2003)
It was not planned. It just happened. And yet once happened - a chain of events was set in motion that would profoundly affect the delivery of medical care.

This is the opening sentence in “Kaiser Permanente Medical Group Story”

Fits well with – AECS STORY TOO
Aravind Model........

- Aravind work viewed from 4 dimensions
  - **Service model**: Large volume, high quality affordable eye care, self supporting
  - **Business model**: systems and procedures that make Aravind work
  - **Spiritual angle**: the drive to reach greater heights, to do more, to do better
  - **Innovations**
Innovations

• Application of high standard clinical and management principles
• Demand generation
  – Social marketing by the community and for the community
  – Outreach services
  – Speciality eye care and camps – innovative methods of approach
  – IT enabled vision centers
  – Mobile vans with satellite connectivity
• Development of human resources
  – PG training
  – Medical team – Recruitment and retention
  – Mid level ophthalmic personnel
The Fortune at the Bottom of the Pyramid

- Consider the global market as a pyramid of consumers based on economic strength.
- The new and emergenic opportunity in countries such as China, India and Brazil is in the lower - income segment: Tiers 2, 3 and 4.
- Serving these markets will dramatically influence the management process in transition.

Reference: C.K Prahalad and Stuart Hart 2002
Create a “Consumer market out of poor” capture the “Poor Market” there is a big money in the poor
– by C.K. Prahalad
Prof. C.K. Prahalad

- Better approach to help the poor
- Involve partnering with them to innovate
- Achieve sustainable win-win scenarios
- Poor actively engaged and companies providing profitable products and services
- Collaboration between poor, community service organisations, Govt. local firms

Discussion with Aravind Team
Core Principles in Delivering Eye Care

Aravind Model

Community Based Eye Care
With Modern Technology and Quality
Affordable to All and Financially Viability
Under Efficient Management Systems
Developing the Market

- Market driving
- Removing barriers
- Community participation

Outreach in 2010 – 2011

<table>
<thead>
<tr>
<th>No. of Screening Camps</th>
<th>1,381</th>
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<tbody>
<tr>
<td>Patients examined</td>
<td>312,129</td>
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<tr>
<td>Surgeries</td>
<td>76,175</td>
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</table>
LIONS – ARAVIND DIABETIC RETINOPATHY PROJECT

Screening Protocol

- Awareness Creation
- Community Outreach work
- OP Development
- Patients who need urgent referral
- Diabetics
- Diabetics
- Patients who need routine referral
- No. of Screening camps - 1703
- OP - 3,88,399
- Diabetic retinopathy patients - 15,083
- Rehabilitation - 97,534
- Training

- Patients who need regular screening and follow-up annual

Blood Test
Screening by ophthalmic technicians
Expert opinion and consultation
Tele-Ophthalmology in Vision Centres 600+
Patient consultations a day (37 VCs)

Innovation - Reducing the cost
Images taken using digital

Additional Investment:
- Cost of adapter rings: US$ 25 (about Rs. 1,000)
- Now this is used in village level Vision Centres
Fundus Screening
Diabetic Retinopathy

- Medical doctors form first contact
- Medical shops: Next contact for diabetics
- Every diabetic needs fundus examination
  - To prevent vision loss
  - To monitor diabetes management

- Non-mydratic fundus camera
- Technician trained in photography
- Images sent to reading centre
- Report generated in office
- Referral to ophthalmologist or follow up

80% Baseline Fundus status like other parameters

Fundus Screening Monitoring, Evaluation and Management:
DIABETES Reduces D.R.

- Blood sugar
- HbA1c
- Blood pressure
- Ocular Fundus exam
- Serum lipids
- Electrocardiogram
- Blood urea
- Serum creatinine
- Micro albumin
- Body mass index

A total follow up of all diabetic patients
- Comprehensive like blood sugar, HbA1c etc
Residency Programme 1982 - 2011

- **MS** - 94
- **DO** - 204
- **DNB** - 190

**Total** - **488**

**Affiliations:** MCI, NBE, RCO-UK, JACHPO-USA, MGR Medical & MKU Universities

**PGs:** MS, DO, DNB, Fellowship
Aravind Eye Care System

“Centre of Excellence” in Glaucoma
Tirunelveli

“Centre of Excellence” in Diabetic Retinopathy
Madurai
Paramedics Training

- Spirituality
- Core area in Aravind
- High school qualified girls
- Rural background to match our clients
- Culture and values
- Value added training
- Doctor : Paramedics = 1:4
- Produce and viable
Cataract Surgery with IOL Implant

<table>
<thead>
<tr>
<th>Ophthalmologists</th>
<th>Tables</th>
<th>Scrub Nurses</th>
<th>Running Nurses</th>
<th>Instrument sets</th>
<th>Sur./hour</th>
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<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1-2</td>
</tr>
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<td>4-6</td>
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<tr>
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<td>3</td>
<td>3</td>
<td>2</td>
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- 40% of all cataract surgeries in Tamil Nadu are performed in Aravind Eye Hospitals
- A surgeon in Aravind performs more than 2000 cataract surgeries a year which is 5 times the number performed by an average Indian ophthalmologist.
- Key factor: Monitoring
Volume Handled Per Day

- 6000 Outpatients in hospitals
- 850 surgeries
- 4-5 outreach screening eye camps
  - Examining 1500 people
  - Transporting 300 patients to the hospital for surgery
- Classes for 100 Residents/Fellows & 300 technicians and administrators

Making Aravind the largest provider of eye care services and trainer of ophthalmic personnel in the world
Clinical Services Year 2010-11

<table>
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<tr>
<th></th>
<th>Total</th>
<th>Paying</th>
<th>Free</th>
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<tr>
<td><strong>Outpatients</strong></td>
<td>2,646,129</td>
<td>1,378,150</td>
<td>405,177</td>
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<tr>
<td><strong>Surgeries</strong></td>
<td>315,483</td>
<td>155,089</td>
<td>160,394</td>
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</table>

“Aravind Hospitals perform 150,000 cataract operations in a year - more than the whole NHS -UK” - Mark Tully (BBC) 2002
Innovations

- Utilization of available resources to the maximum
  - “McDonald way”
  - Assembly line effectiveness

- Patient Satisfaction
  - Quality assurance
  - Affordable differential pricing of the ‘Product’ - Vision
  - Standard protocol – systems development
  - ‘State of the art’ technology
  - Deployment of IT in eye care
Assembly Line … Efficiency

Surgical Productivity
The patient chooses where to get his/her care. The care provided is of the same quality but the facilities provided are different based on the pricing.

- Fee for service: 35% of patient care
- Free/Subsidized service: 65% of patient care
- Separate facilities for the paying and free patients
Aravind Model - Pricing

- Different pricing for poor, middle and upper class of the community
- Transparency in patient charges
- Services that match patient expectations
- Pricing the services to match the paying capacity of the community.

“Out of the Box”

Paying Capacity of the Population

<table>
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<tr>
<th>Category</th>
<th>%</th>
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<tr>
<td>Can pay any amount</td>
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<tr>
<td>Can pay reasonable charges</td>
<td>40</td>
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<tr>
<td>Can pay subsidized rate</td>
<td>35</td>
</tr>
<tr>
<td>Can’t pay any amount</td>
<td>20</td>
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</table>
Quality Assurance

- Standard Clinical Protocols
- Monitoring of Complications & Outcomes
- Morbidity meetings
- Patient Satisfaction surveys
- Relevant technologies adopted as they are introduced
- Skills & Perspectives upgraded through international visits and exchanges
- Research
Innovations

• Product development
  – Cost effective consumables
  – IOLs, pharma, instruments to ensure quality

• Financial viability and self sustainability
  – Service cum business model
- Aurolab was established in 1992 to produce intraocular lenses (IOLs) to make quality cataract surgery affordable in developing countries.
Making Eye Care Affordable

10 million people see the world through Aurolab’s lenses

Used in 120 countries

Price of IOL came down from $100 to $2 – making cataract surgery affordable

7% of global market
Lions Aravind Institute of Community Ophthalmology

To contribute to the prevention and control of global blindness through Teaching, Training, Consultancy, Research, Publications & Advocacy

Spirit of Sharing

Capacity Building Workshop, LAICO
LAICO - Capacity Building

Other Countries:
Bangladesh-15
Bulgaria-1
Bolivia-1
Botswana-1
Cambodia-1
Cameroon-3
China-3
Congo-1
Egypt-1
El Salvador-1
Eritrea-1
Ethiopia-2
Guatemala-1
Indonesia-1
Kenya-2
Malawi-3
Maldives-1
Nepal-9
Nigeria-5
Paraguay-1
Rwanda-1
South Africa-2
Sri Lanka-3
Tanzania-1
Tibet-1
Zambia-1
Zimbabwe-1

- Lions (SF) - 127
- Sight Savers - 53
- CBM - 21
- Seva - 7
- Orbis - 9
- RTS - 10
- WHO, IEF
- Leafrog, Fred Hollows, ICO Lavelle
- Fund - 12
- Private - 31
- IABP CBGF - 9

Total Hospitals: 279
Participants: 1395
## Dr. G. Venkataswamy Eye Research Institute
### Aravind Medical Research Foundation

<table>
<thead>
<tr>
<th>Unit</th>
<th>Department/Institute</th>
<th>Research Areas</th>
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<tbody>
<tr>
<td>Unit I</td>
<td>Aravind Medical Research Foundation</td>
<td>• Basic Research&lt;br&gt;• Molecular Genetics&lt;br&gt;• Microbiology&lt;br&gt;• Immunology&lt;br&gt;• Stem cell biology&lt;br&gt;• Proteomics&lt;br&gt;• Ocular Pharmacology</td>
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<tr>
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<td>Aravind Eye Hospital &amp; Eye Bank</td>
<td>Clinical Research &amp; Clinical Trials</td>
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<td>Unit III</td>
<td>LAICO</td>
<td>Operations Research</td>
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<tr>
<td>Unit IV</td>
<td>Aurolab</td>
<td>Instrumentation R &amp; D</td>
</tr>
</tbody>
</table>
DOING WELL
by
DOING GOOD

Free Camp 24%
Free Walk-in 27%
Paying Walk-in 49%

Expense
Revenue
He has shown the way to do it,
We believe it and we “can do” it ...

Thank You