



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



ARAVIND EYE CARE SYSTEM

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



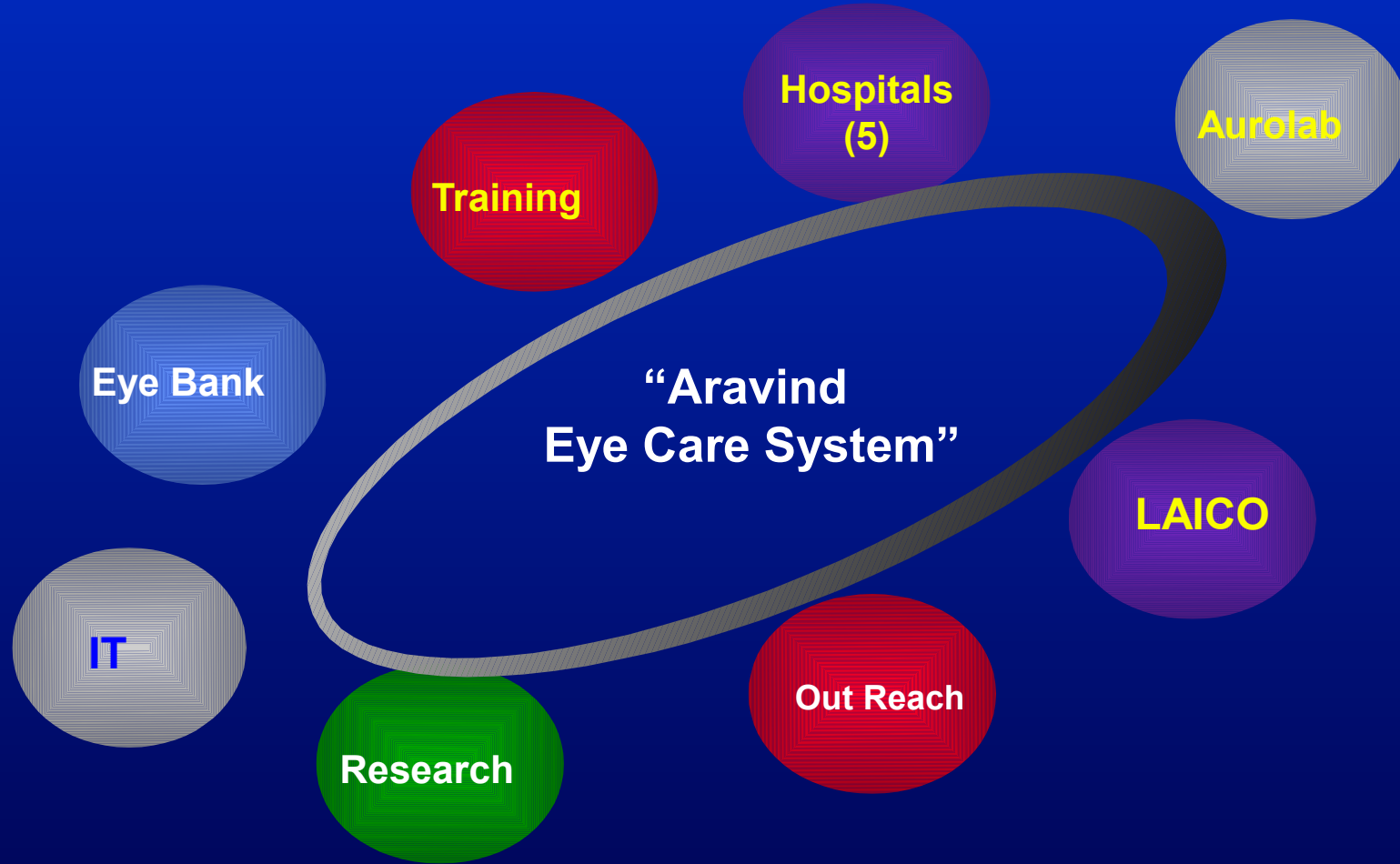


A Non-Profit Trust

Humble Beginning of Aravind Eye Care System – 1976 11 beds



Aravind Eye Care System



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



Lucknow
- 2008



Amethi (UP)
- 2005



Kolkata (WB)
- 2001



Amreli (Gujarat)
- 2007



Coimbatore (1997)



Tirunelveli (1988)

Total – 47centres

Tertiary
Eye Care
Units
5

Community
Eye
Centres
14

Vision
Centres
36

Managed
Eye Hospitals
2

City
Center
1



Pondicherry (2003)



Madurai (1978)



Theni (1984)



- **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**

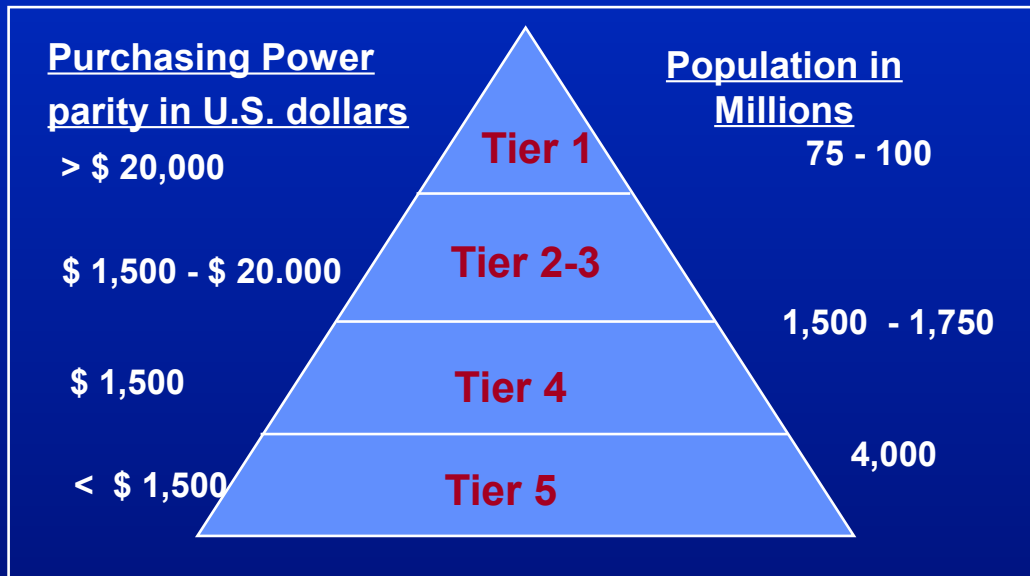


Innovations

- **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



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

- 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



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



Prof. and Mrs. Prahalad with Dr. Aravind Dr. Haripriya . . .



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

No. of Screening Camps	1,381
Patients examined	312,129
Surgeries	76,175





LIONS – ARAVIND DIABETIC RETINOPATHY PROJECT

Screening Protocol

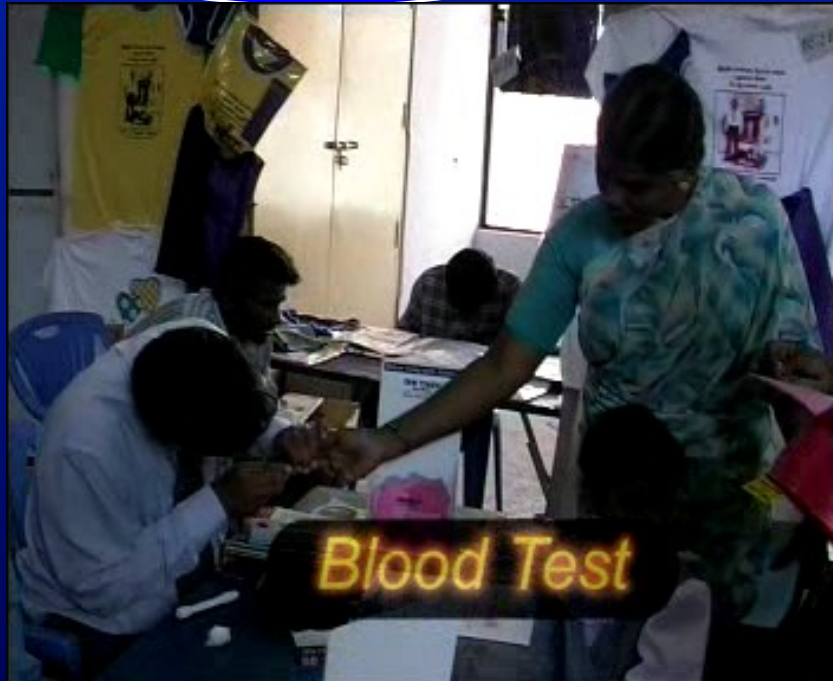
Awareness
Creation

Community
SCREENING CAMPS

Tertiary care

Training

- Patients who need urgent referral
 - Patients who need routine referral
 - Patients who need regular screening and follow up annual
- OP
Diabetics
- Rehabilitation
- Delivery Model
- No. of screening camps - 1703
- 3,88,399
- 97,534



Mobile Van



INTERNET

OR

V-SAT

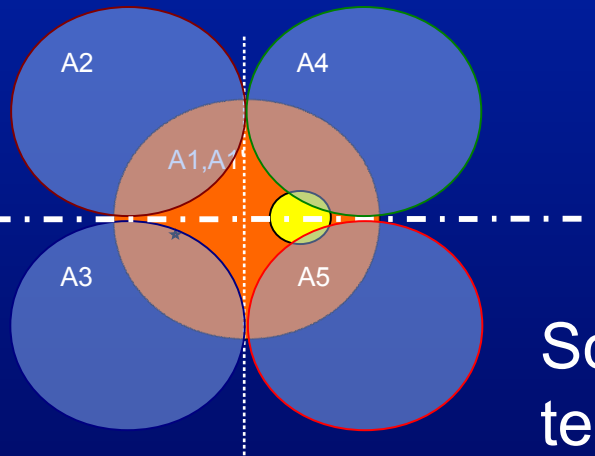
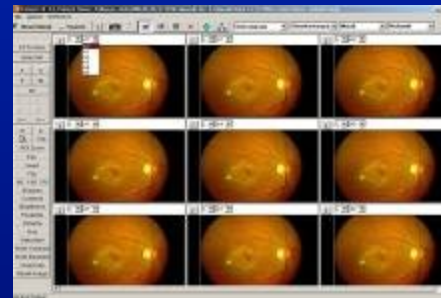


Image acquisition
protocol

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



Additional Investment:

- Cost of adapter rings:
US\$ 25 (about Rs.
1,000)

- Now this is used in
village level Vision
Centres



Fundus Screening

Diabetic

Monitoring/Evaluation and Management :

DIABETES ♦ Reduces D.R.

- Non mydriatic fundus camera form first contact
- Technician trained in photography
- Blood sugar
- Medical shops
- Images stored in next contact
- HbA1c
- Report generated in office
- Blood urea
- Every diabetic needs fundus examination
- 80%
- Ocular Fundus
- Baseline Fundus status like other exam
- To prevent vision loss
- Micro albumin
- To monitor diabetes
- No ophthalmologist
- Body mass index
- Serum lipids
- management
- A total follow up of all diabetic patients
 - Comprehensive like blood sugar, HbA1c etc



Teaching & Training

Technicians



Ophthalmologists



Administrators



Residency Programme 1982 - 2011

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

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

PGs: MS, DO, DNB, Fellowship





Aravind Eye Care System

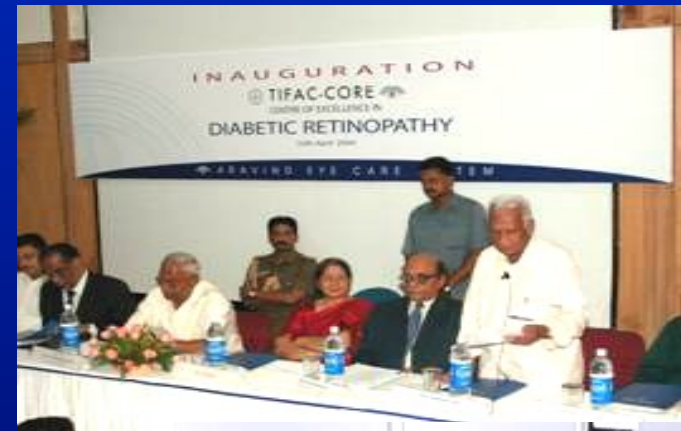
**“Centre of Excellence”
in Glaucoma**

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

Ophthalmologists	Tables	Scrub Nurses	Running Nurses	Instrument sets	Sur./hour
1	1	1	1	1	1-2
1	1	1	1	3	2
1	2	2	1	6	4-6
1-1 Resident	3	3	2	8	8



Productivity

Efficiency

- 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



	Total	Paying	Free
Outpatients	2,646,129	1,378,150	405,177
Surgeries	315,483	155,089	160,394

“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



Aravind - Service Model

High Quality

High Volume

Affordability

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

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.



Aravind Model - Pricing

“Out of the Box”

Paying Capacity of the Population

- 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.

Category	%
Can pay any amount	5
Can pay reasonable charges	40
Can pay subsidized rate	35
Can't pay any amount	20



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**



- **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.

Intraocular Lens Division



Pharmaceutical Division



Suture Division



Blades Division



Instruments Division



Making Eye Care Affordable

10 million people see the world
through Aurolab's lenses

Used in 120
countries



7% of global market

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



Lions Aravind Institute of Community Ophthalmology



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

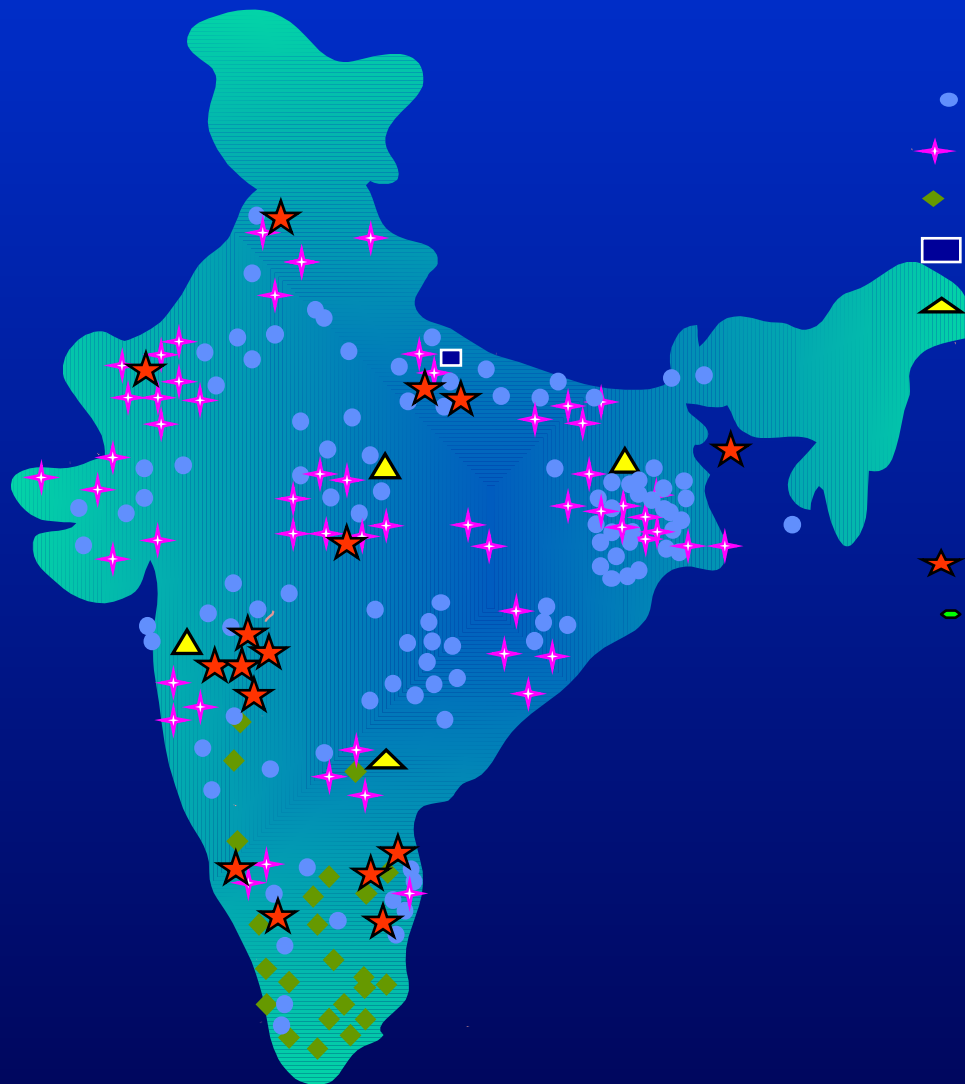
Spirit of Sharing



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
<u>Total Hospitals : 279</u>	
<u>Participants : 1395</u>	



Dr. G. Venkataswamy Eye Research Institute

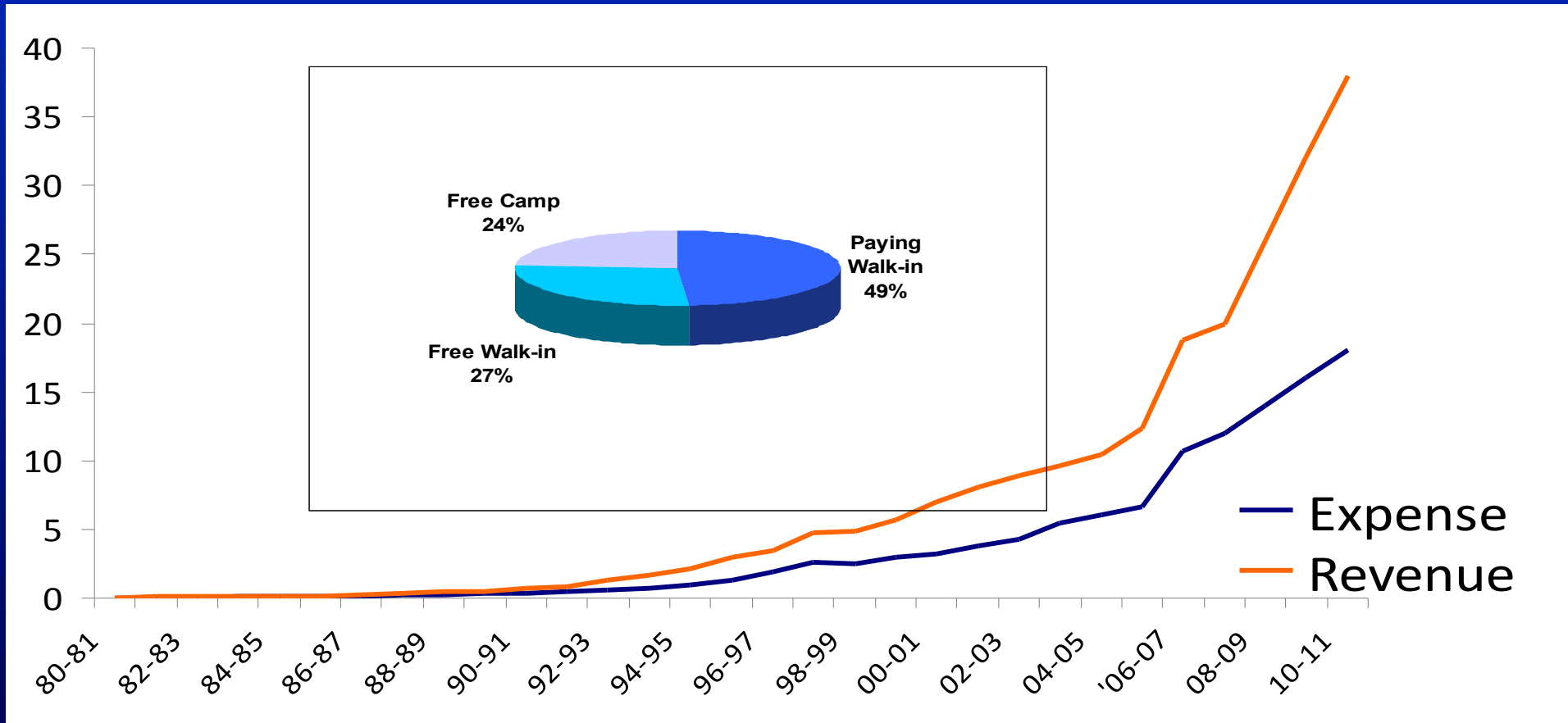
Aravind Medical Research Foundation

Unit I	Aravind Medical Research Foundation	<ul style="list-style-type: none">• Basic Research• Molecular Genetics• Microbiology• Immunology• Stem cell biology• Proteomics• Ocular Pharmacology
Unit II	Aravind Eye Hospital & Eye Bank	Clinical Research & Clinical Trials
Unit III	LAICO	Operations Research
Unit IV	Aurolab	Instrumentation R & D



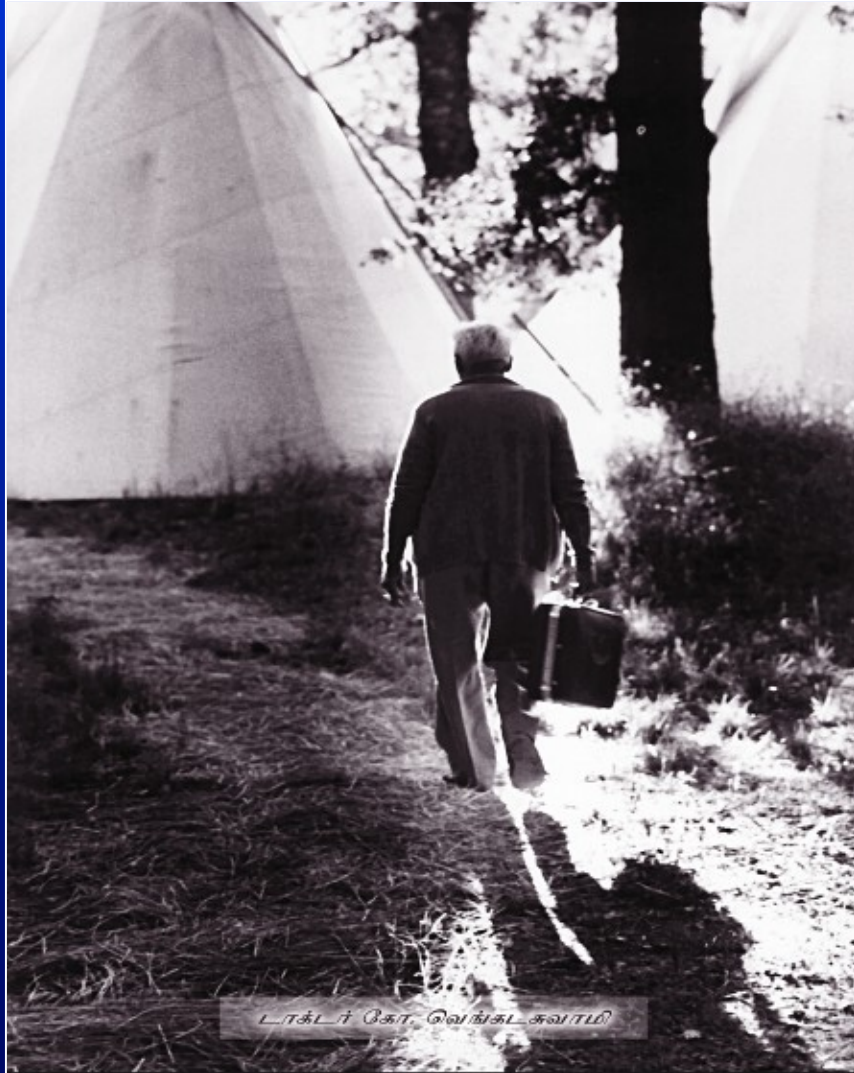


DOING WELL by DOING GOOD



Set Goal ...

Aim High



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

Thank You

Set an Example

