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LVPEI model for LV and Rehabilitation - Game Changer in Developing World

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Visual Impairment – Developing World

- 90% of the world's blind live in the developing world

- Only 5% of them have access to or use low vision services

Bulletin of the WHO 2004;82:844-851

Models of service Delivery - India

- Private consultancy <1%

- Clinic-based - 50 - 60%

- Institution-based - 20-30%

- Community-based - 5-10%

Stand alone models, very few integrated

The LVPEI Model for Integrated Eye Care Service Delivery for Low Vision and Rehabilitation

A Randomized Control Trial of Models of Low Vision Service Delivery

- To test the effectiveness of four different service delivery models of vision rehabilitation
  - Center- based
  - Community- based
  - Mix of center– and community- based
  - Center-based approach with non-interventional home visits

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Intervention models

Model	Training location	Training period	Professionals involved
Center	Centre	3 - days F/ups 6-12 days Duration: 2-5 hours	Rehabilitation professionals
Community	Community	F/ups 6-12 days Duration: 2-5 hours	CBR workers, Family, Community
Center and Community	Center and Community	3 – days F/ups 6-12 days Duration: 2-5 hours	Rehabilitation professional CBR workers, Family, Community
Center with non interventional home visits	Center	3 – days F/ups 6-12 days Duration: 2-5 hours	Rehabilitation professional, CBR workers F/up's for supportive benefits

Outcome measures

- **Primary outcome measure**
  - impact of vision impairment (IVI) – Adult and Children

- **Secondary outcome measures:**
  - subjective complaints to independent living skills – Effectiveness of low vision and rehabilitation training (ELVRT)
  - Quality of life (QOL) – WHOQOL
  - Adaptation to vision loss (AVL)

Overall results – (ES 0.4 - range 0.3 to 0.5) between any two groups

Intervention arms	ELVRT	WHO-QOL	IVI – A	IVI - C	AVL
Centre	0.57	0.25	0.55	0.52	0.83
Community	2.18	0.42	0.88	0.71	1.01
Centre & Community	1.43	0.21	0.43	1.21	0.88
Community non inter.	0.47	0.23	0.68	0.29	0.89

Results - Clinical Low Vision Intervention

- **Optical Devices**
  - Telescope 51(11.6%)
  - Spectacle Magnifier 33 (7.5%)
  - Handheld magnifier 12 (2.7%)
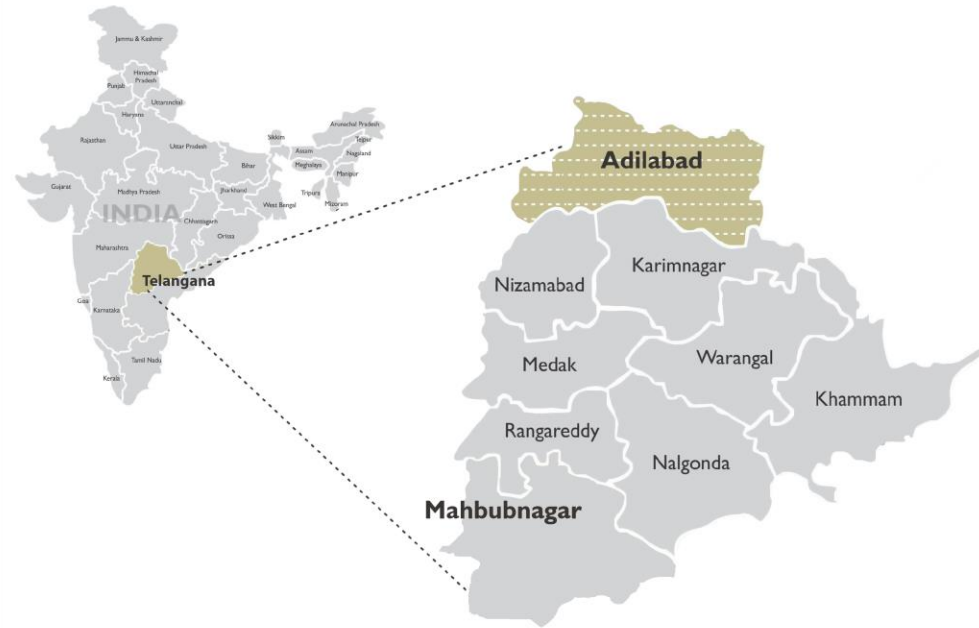 - Stand Magnifier   68 (15.5%)
- **Non-optical**
  - Contrast & lighting 234 (53.6)
  - Glare control devices 22 (5%)
  - Posture comfort devices 25 (5.7%)
  - Typo-scope 101 (23%)
  - Mobility device   247 (56.6%)
  - Educational materials 35 (8%)
- **Computer assistive software** 46 (10.5%)
- 411 (94.2%) of the subjects improved with one or more devices

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Enhance District Model for Low Vision Rehabilitation

- Project period: 3 years (August 2013 to July 2016)

- Coverage Population: 9,00,000

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Enhance District Model for Low Vision Rehabilitation

August 2013 to March 2015

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Low Vision Rehabilitation Services

Rehabilitation – 1365 (806 children)

Low vision – 75 (35 children)

Economic Rehabilitation – 22
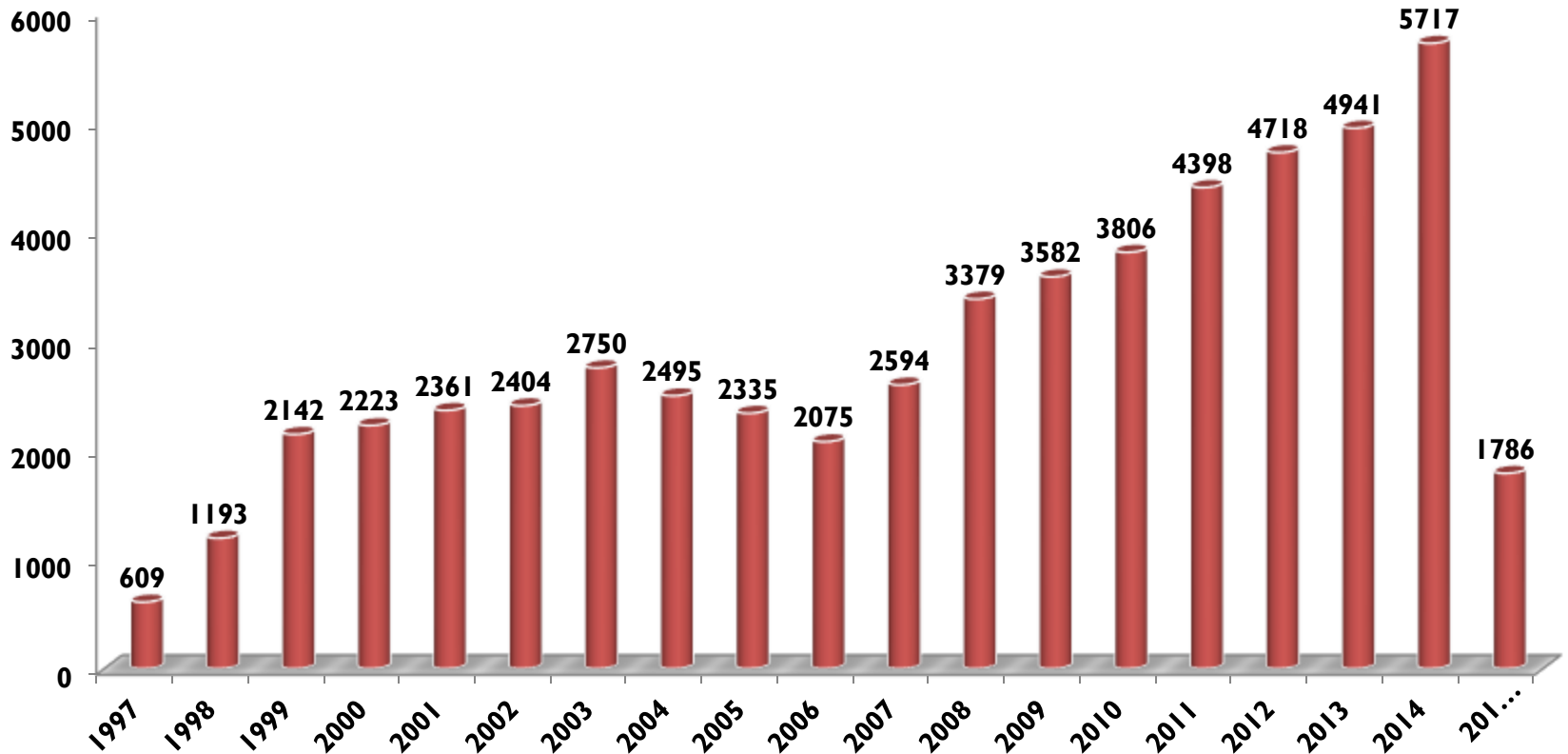
Rehabilitation

Services	Period	Total
Counseling	1992-2015	111304
Early intervention	Nov 2011 – March 2015	7482
Skill training	1992-2015	43229
IT services	Jan 2011-March 2015	979
Digital audio library services	Jan 1992 – March 2015	9948
Job placement	Jan 2011-March 2015	41 (10 in LVPEI)

Training in low vision rehabilitation

- 3 months training
  - Total trained – 91
  - National – 68 (75%)

- Low vision awareness program (LAP)
  - Started in 2001
  - Frequency – twice in a year
  - 33 sessions completed
  - >1200 participants trained so far

Low vision services – low-tech to hi-tech

- Introduction of electronic devices – portable video magnifiers
- OCR based systems
- Assistive software

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Mobility and Sensory Stimulation Park

Other initiatives

- Counselor for job placement

- Livelihood projects

- IT training

- Rehab helpline

- Innovations: Fittle – A novel toy to learn Braille

- Research – Patient reported outcomes

Challenges

- Population ageing – Rise in need for low vision

- High cost of LVDs

- Awareness among service providers

- Very few integrated models

- Equity and accessibility of services to economically deprived

- Sustainability

Way Forward

- Situational Analysis – Availability of low vision and rehabilitation services at different levels of care

- Knowledge, Attitude and Practice of service providers

- National Level Resource Centres for training

- Development of Integrated models

- QUESTION: HOW CAN LESSONS LEARNED IN INDIA BE APPLIED TO LOW VISION NEEDS IN THE US?