RUTGERS HEALTH
Robert Wood Johnson Medical School

View on Eye Care in South India

Radha Tummalapenta, MS[1], Vineeta Maddali, MD[1]

[1]Goutami Eye Institute - 1 RV Nagar, Korukonda Road, Rajahmundry, India 533105

About the hospital:

- Non-profit organization registered under the A.P. Societies Registration Act, 2001 chaired and founded by Dr V.K Raju
- Provides eye care in a sliding scale model to the local underserved community
- Outreach programs with a clinic on wheels to screen for various diseases in villages with no access to healthcare
- One of the only hospitals in the area to use RetCam, a portable device to assess for retinopathy of prematurity (ROP)
- Screened over 6,500 children in schools and provided glasses





ROP screening in the main hospital (left); Laser treatment for ROP in the NICU (right)





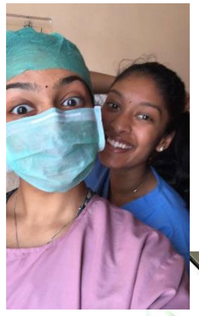
Screening bus visiting nearby villages to screen the community for eye diseases/glasses (left); School screening program (right)

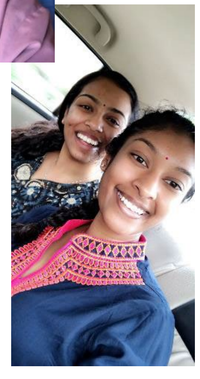
Our Experience:

- Understood diagnostic and screening processes for ophthalmologic diseases like cataracts, glaucoma, and retinopathy of prematurity
- Shadowed various ophthalmologic surgeries
- Gain cultural understanding of healthcare, medical records, and communication in South India
- Learn about specific diseases and their severity in this community

Reflection:

- Recognized my privilege to be living in the USA with relatively increased access and standardized care
- Honored to provide care and have complicated conversations in my mother tongue, Telugu
- Motivated to use my medical training to serve vulnerable communities locally and globally



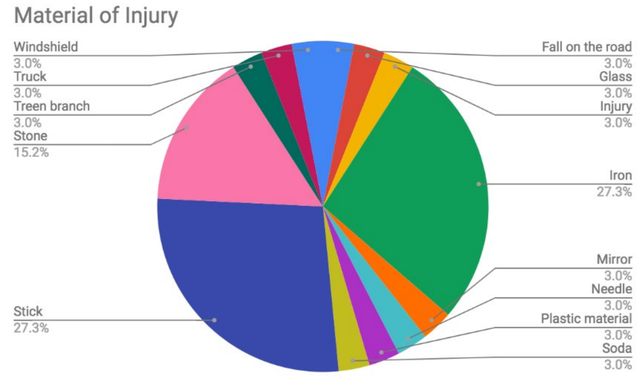


Eye related issues in India:

- National Diabetic Retinopathy Rapid Assessment of Avoidable Blindness Survey 2015-2019 found that 16.9% of those with diabetes have diabetic retinopathy[1]
- Cataracts are the cause of 50-80% of bilateral blindness in India[2]
- 500 children are thought to go blind each year due to ROP[3]

Eye Injury Registry:

- Inspired by the mission of the hospital: to combat preventable eye injury
- Objective: to assess causes of injury to the eye
- Method: chart review from paper charts from 2011-2015
- Results: 40 corneal tears identified due to various causes in the table below
- Conclusions: the most common causes of injury are stick, iron, stone
- Future directions: collect more data to improve public health guidelines



References

1. Kumar, Atul; Agarwal, Divya; Kumar, Aman. Diabetic retinopathy screening and management in India: Challenges and possible solutions. Indian Journal of Ophthalmology 69(3):p 479-481, March 2021. | DOI: 10.4103/ijo.IJO_2357_20
2. Murthy G, Gupta SK, John N, Vashist P. Current status of cataract blindness and Vision 2020: the right to sight initiative in India. Indian J Ophthalmol. 2008 Nov-Dec;56(6):489-94. doi: 10.4103/0301-4738.42774. PMID: 18974520; PMCID: PMC2612994.
3. Gilbert C. Retinopathy of prematurity: a global perspective of the epidemics, population of babies at risk and implications for control. Early Hum Dev. 2008 Feb;84(2):77-82. doi: 10.1016/j.earlhumdev.2007.11.009. Epub 2008 Jan 29. PMID: 18234457.