Large scale vision screening for school children in South India

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Elite School of Optometry (ESO) is an academic institution offering undergraduate and graduate programmes in Optometry in South India. It is run by Sankara Nethralaya in collaboration with Birla Institute of Technology and Science, Pilani.

ESO's mission is to be always a foremost and distinguished leader with social responsibility, responsiveness and accountability in optometric education, vision care service and vision science research in India.

Highlights of large scale screening
1. Four phased structured protocol
2. Standardized documentation of the data
3. Involvement of the students of optometry in initial screening making them socially accountable
4. Availability of Optometrists during the vision screening
5. Refraction and referral for other problems on the same day
6. Choice of frames to the children
7. Cost effective compared to conventional screening
8. Ability to cover schools with small strength and at unreachable places
9. Coverage of school children in maximum numbers in a single day
10. School hours are disturbed for a day only
11. Distribution of spectacles within a week by personal visit
12. Follow up for spectacle compliance and referral compliance of children as the fourth phase

Limitations
1. Screening should not be planned on holidays, rainy days or exam days
2. Those children absent on the day of screening do not receive screening
3. Instruments required for the teams should be available

Conclusions/Learnings
Maximizing the utilization of available resources with adequate planning have demonstrated the possibility of ensuring vision testing for school children on a single day in large scale. This model could be effectively adopted and implemented by schools of Optometry attached to eye care hospitals. A consolidated effort of the schools of optometry in India will be a great contribution towards eradicating needless blindness in this country.

School children vision screening initiatives aim to reduce the burden of avoidable blindness because of refractive error. According to the 2011 census, 936,810,812 children in India belong to the age group of 0-14 years. Large scale vision screening is a means to screen school children in large numbers and identify those with vision impairment.

Taking into account, shortage of manpower, infrastructure and time, such single day large-scale screening aims at optimal utilization of resources. Keeping up with its mission of social responsibility, responsiveness and accountability ESO initiated a new single day mass vision screening approach and applied the same among school children successfully between 2010 and 2012.

Stages of large scale vision screening
The stages of single day vision testing were divided into pre vision testing, vision testing and post vision testing.

In the pre vision testing stage, the preparatory work before the vision testing was done. It included identification of the target population, permission from authorities, collecting information about students’ strength from each school, providing information about the school vision testing to the school in-charge, formation of teams for different schools, training of the members of the teams, identifying one in-charge for instrument maintenance, and assigning teams to schools for vision testing.

The second stage was vision testing and it was conducted using a three phased protocol (Figure 1).

In the post vision testing stage, all the team members documented the name of the school and the area it belonged to along with their names in their notebooks. Data was crosschecked with individual members and the team leaders the subsequent day. Collected information was entered in a Microsoft Excel data sheet, which was again rechecked by another person.

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