"Eyecare on call" – Extending the frontiers of care through home-based eye care – Concept and the protocol

Dear Editor,

Vision loss is a major challenge among the elderly population.^[1,2] Fortunately, a large proportion of this vision loss is avoidable.^[1] With the coronavirus disease-2019 (COVID-19) pandemic, the world is witnessing unprecedented situation all spheres of life with eye health being no exception.^[3] While everyone is affected by this pandemic, the elderly people are worse affected due to a higher risk, poor access due to limited transport, economic issues, and a sense of fear to go out and seek eye care.^[4] At this juncture, "reaching out" to these people to provide care and alleviate their vision loss becomes paramount.

The concept

In response to this, we at L V Prasad Eye Institute (LVPEI) initiated a novel "Eyecare on-call – LVPEI Silver Sight" initiative to transverse economic and access barriers and reach out to the elderly in the communities and the residential care. Led by the primary eye care provider (optometrist/Mid-Level Ophthalmic Personnel/Other personnel trained for primary eye care) and a coordinator, this initiative provides home-based eye care for the elderly population and also for those with disabilities. This home-based care is an extension of primary eye care provided by the vision centers and secondary eye care centers which provide logistic support, referral services, and optical dispensing services. The home consultations are provided at no cost to the patients.

The process

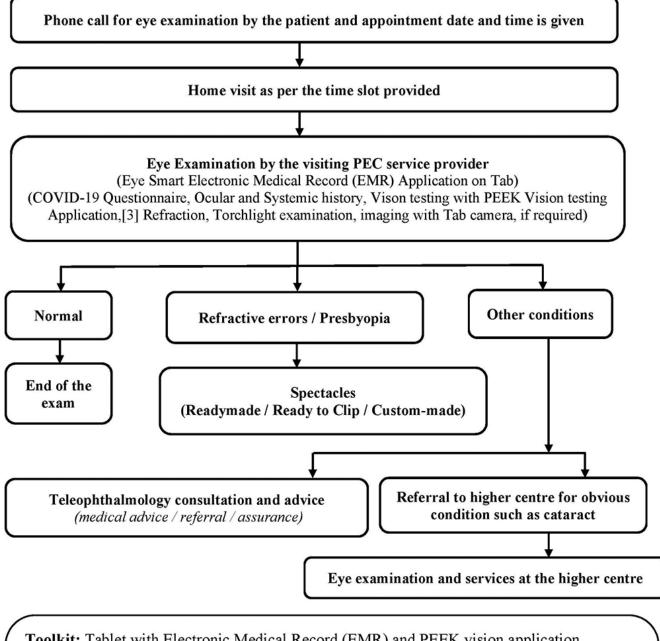
The information on the availability of these services were disseminated using social media network, telephones, and other local mass media with the contact details to book for an appointment. Upon receiving a call, the coordinator schedules the appointment to visit the household for an eye examination.

The protocol

The eye examination workflow is shown in Fig. 1. The home-based eye care includes basic undilated eye examination, refractive error and presbyopia correction, teleophthalmology for nonrefractive error causes, and referral services for cataract and other conditions. A standard consent form for electronic data privacy is signed by the patient or the parents/guardians at the time of registration. The eye examinations are carried out taking complete precautions to mitigate the risk of COVID-19 infection for the subject and the examiner.^[5,6] As part of this initiative, ready-made spectacles, ready to clip spectacles, and simple spherical prescriptions are encouraged over the custom-made spectacles while ensuring that the vision is not compromised to enable faster dispensing at a lower cost. Readymade and ready to clip glasses are preferred if the unaided distance visual acuity is worse than 6/12 but improving with correction, cylinder power not more than one dioptre, anisometropia less than one dioptre and spherical errors less than +/-3.0 dioptres in both eyes. Similarly, single vision glasses for near are dispensed if unaided distance vision is 6/12 and better in both eyes.

Our experience

On pilot basis, we started this service on June 13, 2020 in two vision center catchment locations. In 4 weeks, a total of 104



Toolkit: Tablet with Electronic Medical Record (EMR) and PEEK vision application, Torchlight, Near vision chart, Retinoscope with barrier, Modified Trial box (Mini), IPD (interpupillary distance) ruler, measuring tape, Spectacles display kit with readymade spectacles for distance and near, Ready to Clip spectacles, Spectacle frame repair kit, Mirror for spectacle frame selection, Appointments register and bill books, Hydrogen peroxide (0.5%) spray bottle and lens cleaning cloth for cleaning frames and lenses, Sterillium handrub, a ziplock cover to place the used carrying discard PPE (personal protective equipment)

Figure 1: Protocol for eye examination at home

people were examined at their households. Mean age of these participants were 53.4 years (median: 58.5; range 13-90 years). Of this, 56.7% (n = 59) of them were women and 47.1% (n = 49)

were aged 60 years and older. In terms of services, 41.3% (*n* = 43) were prescribed with spectacles including 8 readymade spectacles, 19.2% (*n* = 20) were referred to the higher centres,

15.4% (n = 16) were within normal limits and the remaining 24% (n = 25) were asked to continue the same spectacles. This experience suggested that 80.8% of services could be delivered at the doorstep and only 19.2% needed referral to higher centers. At the same time, it improved access to care, especially for women as 56.7% patients examined were women.

Future directions

Though home-based eye care received impetus during the COVID-19 pandemic, the need for such care is felt necessary due to the large burden of vision impairment in the elderly.^[1,2] With the increasing proportion of elderly in India, the home care for eye health will become a mainstay both in urban and rural areas in the future years. Leveraging the technology to provide teleconsultations and follow up care where required and dispensing spectacles at the doorsteps, this proposed home care can enable us to reach out many more elderly so that they continue to enjoy good vision in their "silver" years of life.

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Conflicts of interest

There are no conflicts of interest.

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References

 Ehrlich JR, Stagg BC, Andrews C, Kumagai A, Musch DC. Vision impairment and receipt of eye care among older adults in low- and middle-income countries. JAMA Ophthalmol 2019;137:146-58.

- Marmamula S, Challa R, Khanna RC, Kunkunu E, Rao GN. Population-based assessment of vision impairment in elderly population in Telangana state in India – Policy implications for eye health programmes. Ophthalmic Epidemiol 2020;1-8. doi: 10.1080/09286586.2020.1797122
- 3. Ali I, Alharbi OML. COVID-19: Disease, management, treatment, and social impact. Sci Total Environ 2020;728:138861.
- D'Adamo H, Yoshikawa T, Ouslander JG. Coronavirus disease 2019 in geriatrics and long-term care: The ABCDs of COVID-19. J Am Geriatr Soc 2020;68:912-7.
- Vashist P, Senjam SS, Gupta V, Manna S, Agrawal S, Gupta N, et al. Community eye-health and vision center guidelines during COVID-19 pandemic in India. Indian J Ophthalmol 2020;68:1306-11.
- Marmamula S, Niranjan Kumar Y, Rajashekar V, Mettla AL, Vemuri JPS, Rathi VM, *et al.* Commentary: Preferred practice pattern for primary eye care in the context of COVID-19 in L V Prasad Eye Institute network in India. Indian J Ophthalmol 2020;68:1311-5.

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