The Burden of Eye Disease & Eye Care Utilization Pattern In Patients At An Asian Free Healthcare Clinic

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INTRODUCTION

- Visual impairment decreases quality of life, impacts health outcomes, and places substantial economic burden in the United States.[1,2]
- Racial/ethnic disparities exist in the rates of eye disease and eye care utilization, with Chinese Americans having lower rates of utilization than African Americans and whites.[3-5]
- To meet the eye care needs of Sacramento's large Asian community, U.C. Davis Eye Center and Paul Hom Asian Clinic (PHAC) partnered together to offer no-cost ophthalmologic services for underserved Asian Americans and immigrants.
- There is limited data examining patterns of eye disease prevalence and eye care utilization for high-risk populations in an Asian free healthcare clinic setting. Our study aims to understand these patterns at Paul Hom Eye Clinic and identify potential barriers related to follow-up management. [6]

METHODS

- Subjects were obtained from a medical record database. Participants met inclusion criteria if they had at least one visit to the ophthalmology clinic between 2015-2019.
- This two-part study includes a retrospective chart review looking at the prevalence of eye diseases diagnosed at Paul Hom Eye Clinic, followed by a cross-sectional telephone survey assessing participants' utilization of eye care services prior to and following their clinic visit.
- Primary outcome measures were further stratified by potential predisposing and enabling factors. The second phase of the study also assessed participants' perceived barriers to follow-up care.

RESULTS

Phase I

Retrospective chart review

Data collected from charts:
- Demographic information
- Dx of eye conditions
- Insurance Status

- Outcome measure: eye disease prevalence
- Compared prevalence between insured vs uninsured (analyzed with two tail proportion testing in STATA)

Disease Category	Diagnosis	Prevalence
Refractive Diagnosis	Uncorrected refractive	40%
	Uncorrected Presbyopia	14%
Lens Diagnosis	Non-visually significant cataract	47%
	Visually significant cataract	14%
Corneal Conjunctival Problems	Dry Eyes	26%
	Pterygium	7%
Glaucoma	Glaucoma Suspect	8%
	Narrow Angles	5%
	Ocular Hypertension	3%
	Open Angle Glaucoma	12%
Retinal Problems	DM without retinopathy	12%
	Non-proliferative DMR	4%
	Moderate non-proliferative DMR	1%
	Proliferative DMR	2%

DEMOGRAPHICS
- 102 Subjects
- 41 F & 61 M
- Age 17-82 (mean age 60)
- Mean vision: 20/30 OD 20/38 OS
- Mean IOP: 14 mmHg OU

- More patients were insured (60%) than uninsured (40%).
- Insured patients were diagnosed more frequently as being a glaucoma suspect (12%, p=.02)
- Uninsured had a higher percentage of people diagnosed with ocular hypertension primary open angle glaucoma (7%, p=0.04)

Phase II

Cross-sectional survey

- Questionnaire (QR code)
- Recruiting interpreters
- Informed consent
- Telephone survey
- Multivariable logistic regression analysis

Outcome measure: utilization of eye care services
- Eye exam by a medical professional
- VSP vouchers for vision care & prescription lenses
- Obtaining eye medications
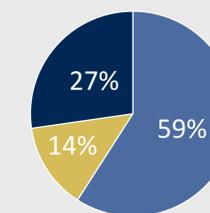- Referrals for ophthalmic care

Related Factors
- Predisposing factors: sex, age group, ethnicity, country of birth,
- Enabling factors: socioeconomic status, insurance coverage, English-language proficiency

Patients' perceived barriers to care

Reasons for Referral

22% total patients received referrals. Of these, 27% had insurance at the time of visit.

- 59% Cataract surgery
- 14% Retina evaluation
- 27% Glaucoma evaluation

DISCUSSION

- Most diagnoses did not yield statistically significant differences between insured and uninsured patients.
- Lack of insurance may not be the primary reason why patients seek eye care at PHAC.
- Findings from Phase I provide useful insight to the development of appropriate screening and educational programs for this population
- Findings from Phase II can elucidate factors that drive disparities in eye care utilization. Understanding related barriers can guide specific practices and interventions for improving access, utilization, and quality in care.[7]
- Study limitations (smaller sample size, diagnoses reported in charts, questionnaire design, participant responses)

REFERENCES

1. Sahel JA, Bandello F, Augustin A, et al. Health-related quality of life and utility in patients with age-related macular degeneration. Arch Ophthalmology 2007;125:945-51.
2. Wittenborn, J. & Rein, D. Cost of vision problems: The economic burden of vision loss and eye disorders in the united states. Ophthalmology, 2013;120: 1728-1735.
3. Sommer A, Tielsch JM, Katz J, et al. Racial differences in the cause-specific prevalence of blindness in east Baltimore. N Engl J Med 1991;325:1412-7.
4. Jiang X, Varma R, Torres M, Hsu C, McKean-Cowdin R, Chinese American Eye Study G. Self-reported Use of Eye Care Among Adult Chinese Americans: The Chinese American Eye Study. Am J Ophthalmology 2017;176:183-93.
5. Owsley C, McGwin G, Scilley K, Girkin CA, Phillips JM, Searcey K. Perceived barriers to care and attitudes about vision and eye care: focus groups with older African Americans and eye care providers. Investigative Ophthalmology & Visual Sciences. 2006;47:2797-802.
6. Akuffo, K.O., Sewpaul, R., Dukhi, N. et al. Eye care utilization pattern in South Africa: results from SANHANES-1. BMC Health Serv Res 2020;20:756.
7. Chheda K, Wu R, Zaback T, Brinks MV. Barriers to eye care among participants of a mobile eye clinic. Cogent Med. 2019;6(1):1650693.

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