



Benefits of Adopting Primary Eye Care Approach Through A Fortnightly Eye Clinic - An Effort of Tertiary Care Hospital, North India.

KEYWORDS

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ABSTRACT To ascertain the impact of initiating an eye clinic and provision of eye care services to the study population, a retrospective study was conducted from Mar 2009- April 2011 at Eye clinic of field practice area of Govt Medical College and Hospital (GMCH), Chandigarh, India. The study population included patients attending Eye Clinic. A total of 1088 eye patients were examined during the study period. Maximum number of patients were in age group 11-20 yrs, (19.5%; 213). Majority of patients were from urban area, (64.5%; 702). Males (62.5%;680) outnumbered females (37.5%;408). Refractive error (presbyopia/amblyopia)(25.5 %;278) was the most common ocular morbidity followed by cataract 19.3% (210).The place of management of almost all the ocular morbidities was in accordance with WHO guidelines. The major barrier was distance in availing eye care health services by study population. Provision of eye care services at door step increases the access and utilization of services by population.

INTRODUCTION:

About 285 million people are visually impaired worldwide; 39 million are blind and 246 million have low vision. A WHO model on economic and social impact of blindness has predicted the prevalence of blindness and low vision in India to be around 1.37 % in the year 2020 i.e. 18 million people with blindness/low vision ¹.

Around 80% of all visual impairment can be prevented, treated or cured. The Global Initiative for the Elimination of Avoidable Blindness (VISION 2020: The Right to Sight) sets a major challenge requiring a significant increase in the provision and uptake of eye care services². It also seeks to address the main causes of avoidable blindness. To achieve elimination of avoidable blindness in India, multipronged strategy should be advocated. The efforts should be focussed not only on the delivery of eye care services (ECS)but also on factors affecting the utilisation of them .

In India there is wide disparity in availability of health services. Majority of them are in urban area. But the irony of fact is even those which are in urban area are either not within the reach of major population owing to different factors³.

Chandigarh, a union territory of India has a population of about 1 million. Majority of population is urban (89.8%) including peri-urban and slums, where as 10.2% population is rural. The health care facilities in this area includes two tertiary care hospitals, one general hospital, government dispensaries, more than 5 private multispecialty hospitals and many private physicians.⁴In spite of these , health services are not accessible to all. The perceived barriers to

avail health care services encompasses many components like financial constraints, lack of time, distance of health facility etc. In India, however, most of the studies on barriers to eye care as perceived by visually impaired subjects emphasize more on financial constraints and not much has been discussed about distance⁵.

These barriers can be dealt to some extent by implementing the concept of "effective primary health care" with appropriate referral. The basic strategy to achieve the Vision 2020 goals is through the integration of primary eye care(PEC) into primary health care(PHC).

It is found that in countries where PHC development is strong and functional, eye care programmes have achieved success. PEC concept, encompasses the prevention of ocular morbidity through PHC⁶. PEC includes the identification, treatment or referral of individuals with treatable causes of eye diseases ⁷.

Hence, an effort was done by our institution in starting this eye clinic in Urban Health Training Centre(UHTC) to render eye health services at the doorsteps of population. And this study was conducted to ascertain the impact of initiating an eye clinic and provision of ECS to the study population.

Methodology:

This retrospective study was done in UHTC ,Department of Community Medicine ,GMCH. It covers an urban population of about 16,000-20,000, peri urban population of 22,000 and slum population of about 30,000.

Primary eye care equipments as per WHO guidelines were available at the clinic—Snellen’s charts, near vision charts, trial frames, torch, magnifying loupe etc8.

Visual acuity was evaluated using the Snellen’s chart and E chart for literate and illiterates respectively. Anterior segment was examined with torchlight and magnifying loupe where ever necessary. Direct ophthalmoscopy was done for examination of fundus under mydriasis. Cases which required examination under the slit lamp were referred to GMCH for further evaluation and management. Distance of UHTC from different catchment areas and other health facilities was probed from the records.

A fortnightly eye clinic service was started in UHTC in Oct 2008. Since then it has been actively rendering basic ophthalmological / referral services. It is manned by an optometrist, a junior resident and a senior faculty of ophthalmology from GMCH. All the

Fig 1 - Map of Chandigarh Showing Distance of GMCH, PGIMER (Post graduate institute of medical education and Research) and General Hospital Sec 16 from UHTC.



Data was analysed using percentages and proportions.

RESULTS:

A total of 1088 eye patients were examined during the study period. Maximum number of patients were in age group 11-20 yrs, (19.5%; 213). Patients in extremes of ages 5-10 yrs, (9%; 98) and 81-90 yrs.(0.2%; 3) were less. Majority were from urban area, (64.5%; 702). The number of males, (62.5%; 680) were more than females (37.5%; 408). Literate patients were maximum(76.3%; 830) (Table-1).

Table 1 Socio-demographic Profile of Patients (N=1088)

Age(yrs)	No.	%
5-10	98	9
11-20	213	19.5
21-30	95	8.7
31-40	186	17
41-50	162	15
51-60	116	10.7
61-70	169	15.5

71-80	46	4.2
81-90	3	0.2
Area		
Urban	702	64.5
Rural	258	23.7
Slum	128	11.8
Gender		
Male	680	62.5
Female	408	37.5
Literacy		
Illiterate	258	23.7
Primary	92	8.4
Middle	130	11.9
Sec	198	18.2

Table 2- Place Of Treatment Of Ocular Morbidities As Per WHO Guidelines For Primary Care*

Variable	No.	%	Site of treatment	
			Treated at UHTC	Referred to GMCH-no.(%)
Refractive error/presbyopia/amblyopia	278	25.5	197(70.8)a	81(29.1)c
Cataract	210	19.3	-	210(100)b
Conjunctivitis	181	16.6	181(100)a	-
Glaucoma	10	0.9	-	10(100)b
Aphakia/pseudophakia	40	3.6	-	40(100)b
Diabetic/hypertensive retinopathy	32	2.9	-	32(100)b
Pterygium/pinguecula/Meibomitis/Blepharitis	130	11.9	56(43.1)a	74(56.9)c
Corneal insufficiency	24	2.20	-	24(100)b
Squint	20	1.8	-	20(100)b
Lid entropion	4	0.4	-	4(100)b
Sub conjunctival/blepharitis	18	1.6	18(100)a	-
Stye	127	11.7	127(100)a	-
Dry eye	10	0.9	10(100)a	-
Staphylococci	2	0.2	-	2(100)b
Conjunctival xerosis	2	0.2	2(100)a	-
Total			595(54.7)	493(45.3)

Refractive error (presbyopia/ amblyopia) (25.5 %; 278) was the most common ocular morbidity. Majority, 46.04 %(128) were from urban area and It was most prevalent in the age group of 5-20 yrs(37.5 %).

Cataract was the second most common ocular morbidity, 19.3%(210). Majority of patients were aged 51-70 yrs. Prevalence was maximum in slum areas 38.01% (80). Subjects with aphakia/pseudophakia were 3.6 % (40). Allergic conjunctivitis comprised of 14.7% (160) cases.

***WHO Guidelines For Place Of Management**

a=to be managed at primary level/actually managed,

b=to be referred to higher level/ actually referred

c= to be managed at primary level but referred to higher level

Except for refractive errors and Pterygium/pinguecula/Meibomitis/Blepharitis, the rest of patients were treated conforming to WHO guidelines for management at primary level.(Table -2)

Table 3 Relation Between the distance and Type of population availing services of the clinic

Distance travelled to seek eye care (km)	Type Of Population		
	Urban	Semi Urban	Slum
<2	372(52.9)	170(65.9)	63(49.2)
2-<4	240(34.2)	80(31.0)	37(28.9)
>4	90(12.8)	8(3.1)	28(21.8)
Total	702(100)	258(100)	128(100)

Slum dwellers had to travel more distance for reaching UHTC for eye care services.

Table- 4 Shows the comparison distance that population from different areas would have had to travel to seek eye care at different institutions, had there been no eye clinic at UHTC

Table 4 Distance saved by visiting Eye clinic at UHTC in contrast to that of other health facilities

Place of residence of patients(no.)	(Distance from health facility in km*no. of patients from the area)			
	UHTC 44 B	GMCH-32	PGIMER	GH sec 16
Sector 44 (612)	<1 *612=612km	4*612=2448km	8*612=4896km	6*612=3672km
Periurban (Burail)(258)	3*258=774km	3.5*258=903km	11*258=2838km	9*258=2322km
(Slum-Colony No, 5)(145)	1.5*145=217.5km	5.5*145=797.5km	9.5*145=1377.5km	7.5*145=1087.5km
Others(73)	4*73=292km	8*73=584km	12*73=876km	10*73=730km

Discussion:

The present study showed that subjects in extreme of ages as well as less educated availed more ECS. This affirms that if affordable and accessible services are provided to the population then utilization is more. Similar findings were observed by Gnyawali⁷. Gender disparity in usage of eye health services was observed, which was in concordance with the findings of Singh A8 where illiterate and females seek less services.

The present study showed the refractive error, the most common cause of ocular morbidity. Almost 3/4th were treated at UHTC and rest referred to GMCH. Of those treated, more than 71 % started using spectacles so prescribed. It was also observed that refractive error increases with age. Concordant results were found in other studies too⁹. A low prevalence of refractive error in our study was observed compared in contrast to that of study conducted in central India 10. This could be accounted to easy accessibility to first referral system and usage of more services by people living at less distance from health clinic. The above said reason could be responsible for the reporting of less percent of cataract unlike other studies that showed variations in the prevalence of cataract ranging from 30.1% to 72.2% in different parts of India^{11,12}.

Allergic conjunctivitis was present in majority of slum people, may be owing to hygienic and environmental factors. These findings were in concordance with results of other

studies^{13,14}.

Another interesting finding was, though eye clinic was also within the reach of peri-urban and slum population still more urban population availed services. The main reason so cited by majority of respondents on being randomly asked was the distance. Similarly, Distance was a major hurdle in availing eye health services in African American population¹⁵. The other barriers in utilisation of health services as emphasized in many studies are- finance, lack of information, no time, no escort etc¹⁶. The distance is also interlinked with other health care utilisation barriers. The more distant the health facility indirect cost of treatment is raised^{17,18}. More time is needed to visit a distant health facility, also adding to hidden costs. Also, a distant health facility becomes inaccessible for dependent age group i.e elderly/children. It can also raise an issue of health care availability disparity gender wise, as most of women especially of low SES feel unable to go to health clinic alone. At times even husbands show unwillingness to send them alone. Moreover if they tend to escort them to the health clinic then they have to suffer the loss of wages for that day, adding to more of financial loss¹⁹.

The eye clinic by our hospital too was started on concept of PEC. This clinic offered doorstep services. Our study showed that distance travelled by subjects was saved to a great extent by using the services at the clinic in comparison to visiting other hospitals. This led to decrease in the hidden/unstated costs. **These costs include transport, food/ accommodation, costs for accompanying family members, lost work income.** Similar findings were also found by Gyasi et al²⁰.

Hence not only does provision but rather utilization of services has to be optimum for achieving vision 2020. The community eye health concept is being promoted since long that in-cooperates the PEC component²¹. WHO guidelines about PEC were also laid back in 19817. Following this, the first model PEC clinic was established in Thailand. In India too many Apex and tertiary care hospitals like Aravind Eye Hospital Chennai, L V Prasad eye hospital, Hyderabad²² etc are now promoting PEC/ village vision complex via satellite clinics / doorstep clinics. This has led to availability/ accessibility of eye health services at grass root level. Not only this, the load of patients at tertiary care hospitals is also decreased due to screening out of many patients at primary level only, an added benefit for them. And patients too save time and money in visiting these hospitals.

Conclusion:

Our study revealed that starting of the doorstep clinic enhanced the access of eye care services to the population. Holistic approach cooperating PEC is needed to achieve goals of Vision 2020

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