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A study of pent-up demand in ophthalmology: Divinolândia Hospital/Unicamp

Estudo da demanda reprimida em Oftalmologia: Hospital de Divinolândia/Unicamp

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ABSTRACT

Objective: To assess the waiting time for eye care identifying the number of patients with each complaint; to investigate how the waiting time may worsen the patient's condition; to check the screening of urgent cases for effectiveness; and to devise means of increasing the medical-surgical care capacity. **Methods:** A retrospective descriptive survey was conducted using data obtained on 12 occasions during collaborative team visits to provide eyecare services. These initiatives were designed to decrease the waiting time and to treat urgent cases that occurred on each occasion; eyecare services were provided every Saturday, in the period from June to August 2006, in 16 cities of the region covered by Conderg (Consortium for the Development of the São João da Boa Vista Administrative Region). **Results:** Referrals used 1,743 (87.1%) of the 2,000 places available. The most frequent diagnoses were refractive errors, with 683 cases, corresponding to 39.1% of the total, followed by cataracts, with 296 cases, corresponding to 20.9%. Of the 238 surgeries indicated, 54.6% were phakectomies. Thirty-five (2.0%) cases were considered urgent. **Conclusion:** The most common diagnoses made during the team visits to manage the excess demand for eyecare were refractive errors and cataracts, which, together, accounted for the majority of the cases. The Divinolândia Hospital has the necessary human and material resources to meet the demand left unattended by the local SUS network. Immediate referral of urgent cases by the primary units' screeners proved effective.

Keywords: Health services needs and demand; Waiting lists; Medical care; Eyehealth; Primary health care

RESUMO

Objetivo: Avaliar a fila de espera pelo atendimento oftalmológico detectando os problemas oculares; estudar o agravo que esta espera pode acarretar ao paciente; verificar a eficácia na triagem dos casos de urgência e averiguar a possibilidade de aumento da capacidade de atendimento clínico e cirúrgico. **Metódos:** Foi realizada pesquisa retrospectiva e descritiva dos dados obtidos durante 12 mutirões de atendimento oftalmológico. Os mutirões foram realizados com a intenção de diminuir a fila de espera e atender as urgências que surgiram nos dias de atendimento; ocorreram aos sábados durante os meses de junho a agosto no ano de 2006, em 16 municípios da região do Conderg (Consórcio de Desenvolvimento da Região de Governo de São João da Boa Vista). **Resultados:** Das 2.000 vagas disponibilizadas, foram utilizadas 1.743 (87,1%) dos encaminhados. Nos diagnósticos realizados se destacam os vícios de refração com 683 casos, correspondendo a 39,1 % seguido de catarata com 296, correspondendo a 20,9. Das 238 cirurgias indicadas, 54,6% foram de facectomia. Foram detectados 35 casos (2,0%) considerados como urgência. **Conclusão:** Nos diagnósticos realizados durante os mutirões de atendimento à demanda reprimida, destacaram-se os vícios de refração e catarata; que somados representaram a maioria dos problemas detectados. O Hospital de Divinolândia tem recursos humanos e materiais para atender a demanda gerada, e não absorvida pelo SUS local. O encaminhamento imediato das urgências pelos triadores dos postos de saúde mostrou-se eficaz.

Descritores: Necessidades e demandas de serviços de saúde; Listas de espera; Atendimento médico; Saúde ocular; Atenção primária à saúde

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INTRODUCTION

The Brazilian public healthcare system is characterized by long waiting lists for appointments, tests and surgeries, a shortage of hospital beds, and insufficient human resources⁽¹⁾. At most units, the demand exceeds the capacity to provide services, resulting in pent-up demand.

The long wait for eyecare may cause patients to suffer vision loss, which decreases their quality of life. It is worth mentioning that urgent ophthalmological conditions are at risk of worsening and, therefore, should be diagnosed and treated as soon as possible. Factors influencing the visual prognosis include the access to medical care, the waiting time and the procedure performed⁽²⁾.

In 1985, an attempt was made to improve public healthcare services in a region of the state of São Paulo through the implementation of the CONDERG Consortium (Consortium for the Development of the São João da Boa Vista Administrative Region). In the field of healthcare, an intercity consortium is an association of city governments to implement joint activities related to their populations' health promotion, protection and recovery. This is a very valuable tool to maximize the efforts developed, avoiding dispersion of financial, human, and material resources and optimizing the use of locally available means⁽³⁾.

In order to cover the demand for eyecare services in the region of CONDERG, in addition to other purposes, the Eyecare Clinic of the Divinolândia Regional Hospital was created in 1987, supported by a partnership with the Ophthalmology Department of the University of Campinas-Unicamp⁽⁴⁾. Currently, the clinic provides secondary and tertiary care to the population of the sixteen cities participating in the Consortium. It also contributes positively to the education of resident physicians from Unicamp, proving that it is feasible to extend the reach of the teaching hospital services⁽⁵⁾.

To achieve these goals, the clinic has invested, over the past few years, in human and material resources, using funds from various sources, namely⁽⁶⁾:

- financial resources reallocated by CONDERG cities' government from the public healthcare system (SUS) budget;
- resources managed by the São Paulo State Healthcare Agency;
- resources from partnership agreements with the mayors of some cities in Minas Gerais.

However, demand remains greater than service capacity, and the main reason for this difference is the limitation on funding imposed by the government⁽¹⁾. A major public health challenge is to assess the damage caused by this situation and plan for providing comprehensive care to the population.

The objectives of this survey were to assess the waiting time for eye care, identifying the individual complaints; to check the screening of urgent cases for effectiveness; and to investigate the potential for increasing the medical-surgical care capacity.

METHODS

A retrospective descriptive survey was conducted using data obtained on 12 occasions during collaborative team visits to provide eye care services. These initiatives were designed to decrease the waiting time and to treat urgent cases; eyecare services were provided every Saturday, in the period from June to August 2006, in 16 cities of the region covered by CONDERG. There were, in total, 12 efforts over the 3-month period, totaling 2,000 possible consultations.

The project did not interfere with routine care, which is made from Mondays to Fridays.

The routine eye care in the 16 cities involved usually starts at the primary care units. After screening by properly trained nurses (12-hour theoretical course plus 16-hour practical training)⁽⁶⁾, urgent cases are immediately referred to the Eye Clinic of Divinolândia. Non-urgent cases are scheduled for evaluation according to the daily capacity of each unit. The sample for this survey includes patients in the waiting queue (unmet demand) and the urgent cases emerging on the task force days.

Diagnoses were recorded by doctors on the patients' medical files, together with the surgical indication and/or corrective lenses prescription.

The study was approved by the Ethics Committee of the Divinolândia Regional Hospital under the number 002/2010.

The information obtained was entered into a database using a Windows (Vista) application. The results were presented in tables and graphs (Excel-Windows).

RESULTS

Of the 2,000 appointments available for ophthalmic care, 1,743 (87.1%) patient consultations were effectively performed.

The most common diagnoses were refractive errors, with 683 (39.1%) cases, and cataracts, with 309 (17.7%) cases; together, these accounted for 56.8% of the problems detected (Table 1).

Table 1
Number of patients with each condition during the 2006 task force period at the Divinolândia Regional Hospital (n=1,743)

Diagnosis	n	%
Refractive errors	683	39.1
Cataracts	309	17.6
Glaucoma	113	6.4
Pterygium	112	6.3
Blepharitis / meibomitis	98	5.6
Diabetic retinopathy	86	4.9
Dermatochalasis	52	2.9
Strabismus	39	2.2
Hypertensive retinopathy	15	0.8
Ectropion	14	0.7
Obstruction of lacrimal passages	11	0.6
Trichiasis	11	0.6
Other *	97	6.2
No changes	46	2.6
Total	1,743	100.0

* Fewer than 10 cases: allergic conjunctivitis, macular degeneration, conjunctivitis, chronic sequelae of trauma, uveitis, xanthelasma, corneal foreign body, pingueculitis, non-perforating injury, amblyopia, ptosis, blepharospasm, keratitis, keratoconus, macular scarring, entropion, subconjunctival hemorrhage, optic neuritis, occlusion of central retinal vein, central waxy retinopathy, congenital cataracts, orbital cellulitis, retinal detachment, macular edema, vitreous hemorrhage, leucoma, molluscum contagiosum, ocular perforation, ocular proptosis, retinoschisis, corneal ulcer.

Table 2
Types of surgeries performed during the 2006 task force period at the Divinolândia Regional Hospital (n = 238)

Indicated and performed surgeries	n	%
Cataract surgery	130	54.6
Excision of pterygium	70	29.4
Eye plastic surgery	38	16.0
Total	238	100.0

Of the 238 surgical procedures indicated, 54.6% were cataract surgery, followed by excision of pterygium (29.4%) and plastic surgery of the eyes (16.0%). The surgeries were performed within three months. In total, 810 (46.5%) corrective glasses were prescribed, from which 683 (39.1%) patients had an initial diagnosis of refractive error and 127 (7.9%) underwent prior clinical treatment.

Table 3
Diagnoses of the 35 urgent cases seen during the 2006 task force period at the Divinolândia Regional Hospital

Diagnosis	n	%
Dacryocystitis	11	31.5
Corneal foreign body	6	17.0
Trauma, non perforating	5	14.5
Keratitis	2	5.5
Optic neuritis	2	5.5
Central retinal vein occlusion	2	5.5
Corneal ulcer	2	6.0
Retinal detachment	1	3.0
Vitreous hemorrhage	1	3.0
Ocular perforation	1	3.0
Retinoschisis	1	3.0
Orbital cellulitis	1	3.0
Total	35	100.0

Urgent cases requiring immediate care included: Corneal foreign body, non perforating trauma, keratitis, optic neuritis, central retinal vein occlusion, orbital cellulitis, retinal detachment, vitreous hemorrhage, ocular perforation, retinoschisis, corneal ulcer and dacryocystitis, n = 35 (2.0%).

DISCUSSION

The most frequent diagnoses made during the task force efforts to meet the pent-up demand in the region of CONDERG were refractive errors (39.1%) and cataracts (17.7%) (Table 1). It should be mentioned that, worldwide, uncorrected refractive errors are among the main causes of low vision and blindness, despite the fact that they require very simple medical interventions, almost always completely effective^(7,8).

However, for their effective resolution the patient must be aware of his/her low visual acuity. Individuals will not seek medical help until they clearly perceive their vision is unsatisfactory. The next step is to facilitate access to an ophthalmologist and also to purchase glasses. One of the most important barriers is the lack of access to healthcare and to corrective interventions⁽⁹⁾. Fighting these barriers depends on

healthcare policies that provide patients in need with access to ophthalmologic exams and corrective lenses, either free or at affordable prices⁽¹⁰⁾. Such barriers are found even in developed countries and are a reason for concern both of the World Health Organization (WHO) and the Vision 2020 program⁽¹¹⁾. In the U.S. it is estimated that 11 million individuals who need to correct refractive errors use no optical correction⁽¹²⁾. In Brazil this number is expected to be much higher because about 80.0% of the population depends solely on the SUS, which, despite much progress, still suffers from a chronic lack of resources⁽¹³⁾.

Reports show that about 30.0% of the patients seen at Unicamp do not follow their prescription for economic reasons⁽¹⁴⁾. In the region of CONDERG the barrier to the acquisition of glasses has been overcome since 1987, when patients started to have access to free or affordable eyeglasses. As of 2007, 46,000 pairs of glasses had been delivered⁽¹⁵⁾.

The number of eyeglasses prescribed, i.e. 810 (46.5%), was higher than the number of cases diagnosed as refractive errors (39.1%), due to the need for glasses in patients treated for other eye disorders. Repeated visual acuity tests should be performed in patients treated for any other condition.

These findings are similar to those from other studies conducted in our country in three different periods: Kara-José et al. in 1990⁽¹⁶⁾; Arieta et al. in 2003⁽¹⁷⁾ and Arieta et al. in 2009⁽¹⁸⁾ - and show that uncorrected refractive errors and non operated cataracts are still the most common eye problems.

The fact that these problems persist, in the region of CONDERG, despite the assistance provided by the ophthalmologic clinic of Divinolândia leads to the hypothesis that part of this demand could come from areas outside the Consortium, where people have been attracted by the special conditions offered by the clinic.

However, increased demand for eye care may also be related to the high degree of satisfaction of users, managers and staff with the level of healthcare provided in partnership with UNICAMP⁽⁵⁾.

A survey conducted in 2010 on users' perception of the care provided at the Eye Clinic of Divinolândia showed that user satisfaction is directly related to how well the needs of the population are met, universal access capabilities, and high rates of problem resolution and free distribution of eyeglasses⁽⁵⁾. It should be noted that the Divinolândia Hospital has received several awards from the Ministry of Health for the services rendered. The first was in 2001, when CONDERG ranked #7 among 1421 hospitals in the Hospital Quality category. In 2010, CONDERG again ranked #7 among 630 hospitals assessed by the state Healthcare Agency for the same category⁽¹⁹⁾.

In Divinolândia, the need for the collaborative task forces was driven primarily by the limited number of daily consultations offered by the SUS. The 12 task force initiatives were able to eliminate the pent-up demand and to treat, over the 3-month period, all the medical and surgical cases, without interfering with the usual routine. While the service capacity is not increased, these initiatives will remain mandatory to avoid any worsening of eye condition due to excessive waiting time.

In this study, 309 (17.6%) patients were diagnosed with cataracts - 179 had no surgical indication and 130 underwent phakectomy (Table 2). Over the past several years, Brazil has maintained a very low, flat rate of cataract surgery, which leads to the assumption that many patients remain unassisted. The country has the necessary resources and capacity in place to immediately increase the number of surgeries⁽²⁰⁾. The achievement of this goal requires funding and the contribution of partners, such as professional associations and universities, not only

to increase the number of surgical procedures, but also to control their quality and the post-operative care⁽²¹⁾.

Among the 1,743 cases treated by the task forces, 35 cases (2.0%) were considered as requiring urgent management (Table 3). This result matches the screening performed by nurses in primary care units of CONDERG, where there were 2.8% urgent cases per day over a 2-month period, suggesting that the screening system was efficient.

Understanding the major complaints and eye problems in a given area helps to plan for the appropriate use of public resources and to design strategies directed to decrease and control of visual loss and blindness⁽²²⁾.

The provision of eye care should be planned and organized as part of a system, where problems are identified allowing the creation of plans to solve them as well as the definition of the necessary resources to carry out its activities and the scheduling of tasks of different levels of complexity to be performed⁽²³⁾.

The data provided by this survey were useful in restructuring the Divinolândia Hospital, where the new facilities are almost ready and will allow an increase of approximately 20.0% in the service capacity.

CONCLUSION

Within the conditions of this survey, we conclude that: the most common diagnoses made during the task force efforts to manage the excess demand for eyecare were refractive errors and cataracts, which accounted, together, for the majority of the cases. And, immediate referral of urgent cases by the primary units' screeners proved effective.

Suggestions: 1) organize a network of primary care units to manage cases of refractive errors and perform cataract surgery, and 2) increase funding to the Divinolândia Hospital to cover the regional demand.

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