

Impact of the Ophthalmology Consultation in Primary Health Care and Extramural with the "Prototype of the Mobile Ophthalmology Clinic" in the San Martin Region-Peru

Luis Felipe Arévalo Arévalo^{1*}, Gioconda Lourdes Armas Herrera¹ and Zully Alexandra Santa Cruz Pérez²

¹Teaching and Research, Clínica Oftalmológica de la Selva, Peru

²Master's degree in Health Services Management, Peru

*Corresponding Author: Luis Felipe Arévalo Arévalo, Teaching and Research, Clínica Oftalmológica de la Selva, Peru.

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Abstract

The objective of the work is to seek accessible medical care in the region; To date, there are only medical, hospital and itinerant services, available to a few. With the prototype of the Mobile Ophthalmology Clinic we plan to reach the most remote and difficult to access places in the Jungle of Peru, providing complete care in the area of ophthalmology; through the Mobile Ophthalmology Clinic prototype in the San Martín Region, taking into account the clinical process and its accessibility, both for patients and health personnel. The universe consisted of the total number of patients seen during this period in rural areas. Information was obtained from the extramural clinical history and surveys were applied through interviews prepared by the research team to people over 5 years of age who attended an ophthalmological consultation. In the results, an average of 2 (two) campaigns per month were carried out, having as a barrier the geography (distance) and the environment (climatological and demographic). An average of 352 patients were treated per campaign, of which the prevalent diseases were refractive disorders, cataract, pterygium. With the prototype of the mobile ophthalmology clinic, decentralized services have been increased, increasing coverage in the Institution, that is, of every 60 patients attended, 27 come by referral from the mobile clinic. Of the total number of surgeries captured, an average of 61.5% were made with a partial subsidy (discounts); 38.4% was total subsidy (zero cost). The project allowed a careful analysis of the elements that hinder the diversification of medical services provided in primary care, since the ophthalmology consultation is one of those that enhance this level of care in the community. With the prototype of the Mobile Ophthalmology Clinic, decentralized services have been increased, which has added coverage by 45.5%.

Keywords: Primary Health Care; Rural Areas; Ophthalmology; Geography

Introduction

The guarantee of medical care accessible to the entire population has become one of the fundamental social paradigms, which corresponds to the humanistic essence and social justice that characterizes the ophthalmological clinic of the jungle. To date, there are only medical, hospital and itinerant services, available to a few. With the prototype of the "Mobile Ophthalmology Clinic". From the beginning, work began on the creation of the Ambulatory Health Care System throughout the San Martin Region, which brought the action of health

workers (licensed doctors, technicians, and administrative staff) to the most remote and difficult-to-reach places. Access [3,4] that allowed distribution throughout the Region. The orientation of services towards the demands of those who request them, it is increasingly present in the proposals of the "Clínica Ophthalmológica de la Selva" and in its professionals, managers and planners in the field. Currently and from currents close to marketing, proposals for quality control of services arise from the opinion of the users who use them, whose analysis incorporates the perspective of citizens in the global framework of the evaluation of health programs. Precisely, one of the strengths of the jungle eye clinic; in primary health care has been, in response to this, the process of community projection of the specialty, with a decentralization of the second level of care to municipalities and public and private entities for the training of human capital, medical assistance, research and management of community programs, with a view to increasing the quality of the services provided and the satisfaction of the population that receives them. Today the "Mobile Ophthalmology Clinic" has the essential material and human resources to carry out an effective consultation in primary care, solve the basic visual problems of the inhabitants of their respective areas and only refer patients who require it to the secondary level. The "Mobile Ophthalmology Clinic" obtained great acceptance of this decentralized service, since it favorably affects the economy of the users, generating a positive effect regarding the positioning of the brand and its recognition as an innovative institution in health services. "The jungle eye clinic", It has a stable ophthalmology consultation, which is attended by a large number of patients; however, since its impact on the clinical and social process at this level of care was not known exactly, it was considered that this question could constitute the scientific basis for an interesting and necessary study, the main results of which are described and analyzed in this Article.

Methods

An investigation was carried out in the ophthalmological clinic of the jungle to evaluate the impact of the introduction and improvement of the extramural ophthalmology consultation; through the prototype of "Mobile Ophthalmology Clinic" in the San Martin Region, taking into account the clinical process and accessibility to it, both for patients and health personnel. The universe was constituted by the total number of patients attended during this period. For the collection of information, the extramural clinical history was obtained and surveys were applied through interviews prepared by the research team to all patients over 5 years of age who attended the ophthalmology consultation; and in the case of patients with a mental disorder, disabled or minors who could not respond to what was contemplated in the survey, this was applied to the family member in their capacity as mother, father or guardian who accompanied him to the consultation and could do so in his place. The remaining data was collected in a statistical voiding model. The information obtained was processed using the statistical software SPSS version 23 and summary measures such as absolute numbers, percentages, index and arithmetic mean were used, with 95% reliability.

Results

Activities	Period	
	I	II
N of extramural activities carried out	48	5
N of people screened	14211	2679
N of patients identified with Cataract in campaigns	3932	616
Cataract operated patients detected in campaigns	720 (18%)	149 (24%)

Table 1: Extramural activities in the "Mobile Ophthalmology Clinic".

An average of 2 (two) campaigns per month were carried out, with geography (distance) and the environment (events such as rain, landslides, etc.) as barriers. An average of 352 patients were treated per campaign, of which 95 (27%) with a diagnosis of cataract; 18 (5.1%) patients were operated on for cataract surgery per campaign. With the prototype of the mobile ophthalmology clinic, decentralized services have been increased, increased coverage in the jungle ophthalmology clinic; that is, of every 60 patients attended, 27 come by referral from the mobile clinic.

Surgeries	Goal 3 years (Reprogrammed Goal)	Period	%Advance
		I and II	
No. of cataract surgeries performed.	3072	1616	52.60%
Rescheduled Goal	2250	1616	71.82%
Initial Goal	822	+ 45 monthly	26.76%
What does the difference imply?			
Surgeries Performed in Base Clinic	NA	814	NA
Surgeries Performed in Campaigns	NA	802	NA
N of Major Surgeries	783	418	53.4%
N of Minor Surgeries	1561	910	58.3%
N of pending surgeries	1456	IPROS I would perform: 112	
Rescheduled Goal	634	monthly surgeries in 13 months	
Previous Goal		(previous goal 54)	

Table 2: Cataract surgeries (major) of extramural activities with the "Mobile Ophthalmology Clinic".

Cataract surgery is taken as a reference, since it is the first cause of reversible blindness worldwide and at the same time it is the one that demands the highest income (sustainability of the clinic), since it is observed that 49% of surgeries are covered by the mobile eye clinic

Surgeries	Goal	Surgeries Performed	%Advance
Rescheduled Goal	600	394	65.66%
Previous Goal	375	394	+100 %
Performed in base clinic	NA	163	NA
Made in campaigns	NA	231	NA
Major Surgeries	150	85	56.7%
Minor Surgeries	250	99	39.6%
Surgeries pending to be performed	-206	IPROS would carry out:100(66)	
Rescheduled Goal	+19	(Course and Congress were held in	
Previous Goal		April)	

Table 3: Cataract surgeries of extramural activities with the "Mobile Ophthalmology Clinic".

Age/Sex	H	M	Total	%
20-29		3	3	0.76
30-39	3	8	11	2.79
40-49	12	13	25	6.34
50-59	25	28	53	13.45
60-69	59	62	121	30.71
70-79	63	66	129	32.74
80-89	24	24	48	12.18
90 to +	1	3	4	1.03
Totals	187 (47.5%)	207 (52.5%)	394	100

Table 4: Cataract surgeries of extramural activities with the "Mobile Ophthalmology Clinic" according to sex and age.

Of the cataract surgeries performed, it was obtained that the highest percentage were women (52.5%) with an average age between 60 and 79 years, equivalent to 64% of the total number of surgeries performed during this period.

	Made	% of total surgeries
N Surgeries with total subsidy	578	35.76
N Surgeries with partial subsidy	1038	64.23

Table 5: Cataract surgeries of extramural activities with the "Mobile Ophthalmology Clinic" according to subsidy.

	Made	% of total surgeries
N Surgeries with total subsidy	194	49.23
N Surgeries with partial subsidy	200	50.76

Table 6: Cataract surgeries of extramural activities with the "Mobile Ophthalmology Clinic" according to subsidy.

Of the total surgeries performed, an average of 61.5% were done with a partial subsidy (discounts); and 38.4% was total subsidy (zero cost).

		Jul-Dec 2014	Jan-Jun 2015	Jul-Dec 2015	Jan-Apr 2016
TO	Cataract patients undergoing counseling.	504	568	698	365
B.	Patients operated after going through counseling	378	357	487	261
	Conversion Rate (B/A) in % (70%-Average)	75.00%	62.85%	69.77%	71.51%
C	New Patients	3879	3779	13812	3884
D	Total Patients	4700	4520	15795	4160
	Potential Demand (C/D) in % (86%-Average)	82.53%	83.61%	87.45%	93.37%
AND	Old Patients	821	741	1983	276
F	Total Patients	4700	4520	15795	4160
	Earned Demand (E/F) in % (14%-Average)	17.47%	16.39%	12.55%	6.63%

Table 7: Cataract surgeries of extramural activities with the "Mobile Ophthalmology Clinic" according to social assistance and demand.

The strategic work of social assistance (counseling) is observed to achieve an average of 70% of patients who have surgery. We also see an average potential claim of 86% and a won claim of 14%.

Discussion

The ophthalmology consultation in the community facilitates the early and timely diagnosis of many eye conditions that previously had to be diagnosed and followed up at the hospital level [11,12]; on the other hand, it also favors the performance of active ophthalmological research, which has been an unprecedented event in recent years [13] and thus defined, the La Selva Ophthalmological Clinic has developed the prototype of the "Mobile Ophthalmological Clinic"; with the purpose of providing outpatient ophthalmological medical services in the San Martin region. Therefore, their presence and that of the specialist in the health area contributes positively, not only in the care aspect, but also in epidemiological research - which has been undervalued over time - and in teaching, both of the new pedagogical model that of the "MOBILE CLINIC" Project and in postgraduate training [14,15]. In the extramural ophthalmology consultation in the mobile ophthalmology clinic; The entire population is served from different ages, although they attend from 5 years of age, being older from the 20 - 29 years stratum. The highest incidence in cataract surgery is found in the 60 - 79 year old stratum, with 52.5% being women. Also, to patients mainly referred by a specialist in the area, as well as some people with emergencies or simple eye injuries [16]. Also to patients mainly referred by a specialist in the area, as well as some people with emergencies or simple eye injuries [16].

Taking into account the essence of this project: impact indicators, according to various researchers [17,18] are objective measures of change, which provide standardized norms to measure, evaluate or show progress. The project made it possible to carefully analyze the elements that hinder the diversification of medical services provided in primary care, since the ophthalmology consultation is one of those that enhance this level of care in the community.

With the prototype of the mobile ophthalmology clinic, decentralized services have increased, which has increased coverage by 45.5%, that is, of every 60 patients seen, 27 come by referral from the mobile clinic, reducing by 47% the loss of use of installed capacity in the pilot plan. This increase in the use of the installed capacity of the clinic's resources leads to an additional care of approximately 15,700 more patients per year, generating higher economic income and reducing the cost of services for patients by 30% of the price before the project. It is important to point out the great social projection offered by the ophthalmological clinic of the jungle.

Although it is true that the ophthalmological care provided is comprehensive, this project takes cataract surgery as a reference, since it is the first cause of reversible blindness worldwide and is also the one that demands the highest income (sustainability of clinical) in 60% of our income; achieving a coverage of 49% of surgeries from the mobile clinic. The degree of satisfaction of the population with the services received, the proper use of existing resources, the scientific and technical knowledge acquired and the conscious application of ethical and moral principles, allow the evaluation of the quality of medical care [17,18] reasons why services at the primary and extramural level must be oriented to meet the health and satisfaction demands of the inhabitants of the areas, so that it is necessary to continue working to improve the treatment of the patient upon arrival to the ophthalmology consultation and offer him the precise orientations by the health personnel, because only in this way can a more effective bilateral communication be achieved. The ophthalmological consultation provided in primary care outside the walls is very general and consultations are often required with different subspecialties (cornea, glaucoma, refractive surgery, retina, neuro-ophthalmology, low vision, pediatrics or others) existing in hospitals or clinics, since be motivated by clinical or surgical aspects. Likewise, the achievement of this project is due to a good interrelation between the administrative staff and community representatives (including management committees, public and private entities) of each locality, as well as a high willingness of those who carry out maintenance work to have the equipment installed in optimal conditions.

The jungle ophthalmology clinic has an updated mural and 1 informative banner on health promotion and prevention of eye conditions; however, this is not enough, because when people attend a consultation, they usually avoid reading these materials, even if they

are didactic, for fear of missing their turn or being late in entering the consultation. Therefore, the decision was made to have the most systematic support from the media, since in recent years they have been little used to provide information on eye health [20]. Taking into account that many patients with ophthalmopathy must be treated and operated on in hospital centers, it is advisable that there is always a good office-clinic-hospital interrelation in order to avoid dissatisfaction between the referent-afferent units and, fundamentally, in the people affected and above all by communication problems. Good training allows better preparation and contributes to the improvement of primary health care and extramural care, because as adequate diagnoses are established, the reliability of the process will increase and patients will attend the consultation early, with which they will not have to travel great distances or wait too long for its realization. In addition to this, identifying the learning needs of professionals and the population itself is of great interest to the health system, since on this basis it can prepare itself to guarantee everyone's satisfaction [8,9].

Conclusion

The "Mobile Ophthalmology Clinic" obtained great acceptance of this decentralized service, since it favorably affects the economy of the users, generating a positive effect regarding the positioning of the brand and its recognition as an innovative institution in health services.

The impact of the ophthalmology consultation in primary health care and extramural was positive in a general sense, both for the patients and for the health personnel and the clinic, without disregarding the elements of dissatisfaction obtained in some indicators of the clinical process and the accessibility, respectively.

The mobile eye clinic prototype increased decentralized services, increasing coverage by 45.5%; reducing by 47% the loss of the use of the installed capacity in the pilot plan.

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