

# Access barriers to visual health

## Barreras de acceso a la salud visual

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### ABSTRACT

A number of factors and conditions hinder and restrict access to the health care system and its different services; these barriers to access put at risk the health of people by affecting adequate processes. *Objective:* To carry out a literature review on barriers to access to the health care system and visual health services in Colombia and around the world. *Methodology:* A literature review was carried out based on a search of the Medline, ScienceDirect, and Pubmed databases, as well as indexed public health journals and the websites of the Local Health Authority, the World Health Organization, the Pan American Health Organization, the UNESCO, and the Brien Holden Vision Institute. *Results:* The main barriers related to demand, both in general services and in visual health, are the lack of perception on the need for service and lack of economic resources; at the offer level, the existing policies constitute a real obstacle. *Conclusions:* Awareness-raising in the population, together with the implementation of health policies that grant equal access to health care services, are fundamental to prevent people from being affected, to a large extent, by barriers related to demand or offer, regardless of their location or level of income.

**Keywords:** health services; health care, quality access and evaluation; health services accessibility; optometry.

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## RESUMEN

Varios factores y condiciones obstaculizan y restringen el acceso al sistema de salud y sus diferentes servicios; estas barreras de acceso ponen en riesgo la salud de las personas al afectar los procesos adecuados. *Objetivo:* presentar una revisión bibliográfica sobre las barreras de acceso al sistema de salud y los servicios de salud visual en Colombia y en el mundo. *Metodología:* se realizó una revisión bibliográfica basada en una búsqueda en las bases de datos Medline, ScienceDirect y Pubmed, así como en revistas indexadas de salud pública y en los sitios web de la Autoridad Sanitaria Local, la Organización Mundial de la Salud, la Organización Panamericana de la Salud, la UNESCO y el Brien Holden Vision Institute. *Resultados:* las principales barreras relacionadas con la demanda, tanto en los servicios generales como en la salud visual, son la falta de percepción sobre la necesidad del servicio y la falta de recursos económicos; a nivel de oferta, las políticas existentes constituyen un verdadero obstáculo. *Conclusiones:* la sensibilización de la población y la implementación de políticas de salud que garanticen igualdad de acceso a los servicios médicos son fundamentales para evitar que las personas se vean afectadas, en gran medida, por barreras relacionadas con la demanda u oferta, independientemente de su ubicación o nivel de ingresos.

**Palabras clave:** servicios de salud; cuidado, acceso y evaluación de la salud; accesibilidad a los servicios de salud; optometría.

## INTRODUCTION

Health coverage is defined as the number of inhabitants having access to health services, that is, those who have the possibility to use them. Access is defined as the percentage of people who used these services at the time of requiring them (1-3), and it comprises the need to use them until the end of the medical assistance provided, its result and satisfaction (4,5). Health and access to health may be affected by two main factors: socioeconomic factors like education and income, and variables related with the health service or medical assistance (4).

Other factors determine access to services: *barriers*, which are defined as obstacles that hinder proper access by people to the process and which may be related to offer and demand (4). For example, at world level, the implementation of copayments and possible exclusion depending on the person's income have not had very good results in low income countries, as it is difficult to determine who or what sector of the population is in worse conditions of poverty. This may lead to very strict criteria, reducing or eliminating coverage and increasing access barriers (2). Likewise, the universal coverage objective defined by the World Health Organization (WHO), which aims for

all the people to have access to health services without facing financial problems at the time of paying for them, would not be attained (2,6). This objective aims to favor access directly, since universal access intends to eliminate geographical, economic, socio-cultural and organization access barriers and grant timely access (6,7).

The provision of health services is divided into levels of assistance: primary, secondary, and tertiary levels in order to organize resources in a stratified way in response to the needs of the population. Satisfaction is understood as the resolution of health problems (8). The primary level of assistance is addressed to the main health issues in the community, providing the services of promotion, prevention, treatment, and rehabilitation to tackle these problems at low complexity centers such as doctors' offices, polyclinics or health centers, and solving approximately 85 % of the prevailing problems (8,9); it is here that the first contact is made with the people, their families and the community, and the national health system (8,10). The second level of assistance is made up of hospitals and centers where internal medicine, pediatrics, gynecology-obstetrics, general surgery and psychiatry services are provided. These services, together with first-level assistance, solve 95 % of the problems encountered. Lastly, the tertiary level focuses on

health issues, which are of low prevalence and feature complex pathologies that require high technology for specialized procedures (8,9).

The visual health service must satisfy the primary (essential) needs of the patient and may be provided by different professionals; that is why visual assistance should not be offered in an isolated way and why it should be integrated, since visual health services involve primary, secondary and tertiary levels of assistance (11,12).

At world level, several methods have been used to identify the main access barriers to health services. Regarding visual health, we can mention RARE (Rapid Assessment Refractive Error), a simple, cost-effective research method that, in addition to identifying refraction disorders in patients older than 15, also determines the main barriers to access refractive services in case these are required (13). The survey is the main tool to determine the barriers that populations encounter when accessing health services at their different levels.

The existing bibliography provides information related with the different barriers, but it does not unify several studies on the same topic to generate a global and national overview. This article aims to find the relationships existing between the obstacles that hinder access to general health services and the obstacles found when looking for visual health services in Colombia and around the globe. The collection of information carried out may facilitate the identification of the main difficulties and the possible solutions to them, taking into consideration the parties involved and the role of policies and the population, especially in the area of visual health, which has been little studied, since, when carrying out this study we witnessed a lack of information on the barriers to access visual health in Colombia.

The aim of this article was to carry out a literature review on the barriers to accessing the health system and the visual health system in Colombia and around the world.

## METHODOLOGY

In order to prepare this paper, a bibliographical search was made of the Medline, ScienceDirect and Pubmed databases in indexed public health journals, websites from the local health authority and the Colombian Ministry of Health, Banco de la Republica in Colombia, the WHO, the Pan American Health Organization (PAHO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Brien Holden Vision Institute. The websites were available in 2017. This search was made by using key words like *access barriers*, *access to health services*, *use of eyecare services*, *barriers to eye services*, and *determinants of the use of eye care services*. The review was carried out within a time limit, including articles, reports, and documents published between 2002 and 2017.

This paper describes access to health services and identifies the main barriers hindering the adequate course to find a solution to a disease. In this context, the concept of *visual health* and its levels of assistance are defined, followed by a description of the characteristics of visual health and the health system in Colombia, and its coverage with respect to refractive disorders. Finally, the barriers found in several RARE carried out in different countries are presented.

## ACCESS AND BARRIERS TO THE HEALTH SYSTEM

Restrepo et al. (14) define *access to health* as the capacity to start a search for services and to solve individual or collective needs. This capacity depends on the individual's characteristics, on the provision of services system and on the context where it takes place. This access has an influence on the effect of health services and on the quality of the lives of people (15). If it does not take place, the right to health is violated, since for the WHO, this right involves "timely, acceptable and available access to health services" (16).

Access to health is a process involving several stages. It starts with the motivation in people to access medical assistance, followed by the opportunity to contact the health service, and it ends with the satisfaction of having had access to it (5). This access is measured by counting the number of people who need medical assistance and then finding out how many of them enter the system and how many of them fail to do it; that is, by measuring the level of use with respect to the need (3). Considering there are barriers or resistance, access might also be defined as the degree of adjustment between the characteristics of the health assistance resources and those of the population, together with their interrelationships (17).

In order to understand the access mechanism, it is important to consider three fundamental elements: the need, the demand and the offer by health service providers, since for a person to access a health service, they must need medical assistance first, followed by a demand for service, and ending with access to service through its offer (4).

In 2015, Fajardo, Gutierrez and Garcia (18) revisited Gulliford et al.'s proposal (3) in order to complement the concept of access to health through four main aspects or dimensions comprised in this definition: a) availability of services, measured through descriptors like doctors per person; b) the capacity of services to provide equal attention; c) the existence of personal (recognition of the need for assistance), economic (extra payments, copayment, private services), organizational (over demand or inefficient use of resources), social and cultural barriers; and d) results in terms of health, since access also involves the results and satisfaction of the patient after receiving assistance (3,18).

In addition, the Tanahashi model also contemplates four stages in access: 1) availability of services; 2) physical, administrative and financial accessibility; 3) acceptability of the services by the user; and 4) contact and continuity in the service in order to achieve effective coverage and access (19).

Taking this into account, the barriers that hinder access to the health system and its adequate process may be related with the offer by the medical service provider or the system, such as the lack of medical centers or bad quality of service; or they may be related with the demand and depend on the individual, as in the case of lack of money or the perception of "little" need for medical attention by users (1,4).

In turn, there are other categories to classify access barriers: 1) economic barriers that prevent access to services due to lack of money (20), as explained before (3,18); 2) administrative barriers that arise from the way in which services (programming of appointments, authorizations or procedures) are organized and provided (17,20); 3) cultural barriers arising from the cultural differences existing between the target population and the people offering the service (20).

For the WHO, equality in timely access to health services is not possible without a health financing system that works correctly, and governments are the ones called to guarantee equality in terms of coverage. That is why the 2005 World Health Assembly, through Resolution 58.33, states that every person has the right to access health services and that no one should suffer financial difficulties to do it (2).

However, the world's reality is far from attaining the objective of universal coverage, mainly in low-income countries, where the economic factor is one of the main barriers to access, when people have to pay high sums of money for the services received, pushing 5% of the population into absolute poverty, a fact that is related with the implementation of copayment; besides these payments, the people who are limited by the cost have to cover the distance to the health centers, a cost which is directly proportional to the distance that must be covered. In addition to these barriers, there are also cultural obstacles, especially in multicultural societies in which women, foreigners and ethnic groups appear to be and feel discriminated

against (2). One of the cultural barriers was made evident in a study carried out by Bolutife et al., who found that men used this service more than women, pointing at the fact that the low levels of education among women, the lack of social support and the lack of female empowerment to make decisions are some of the probable reasons to explain the results found (21).

In Colombia, through Law 100 of 1993, a reform to the health system was implemented, namely the model of regulated competence, whereby a regulated market was introduced, having all insurance companies competing to get the affiliation of the population in order to improve access to assistance (22).

However, larger coverage does not necessarily mean an increase in the access of people to medical systems, as the period between 1997 and 2012 revealed, when insurance coverage rose from 56.9 to 90.8%, but access was reduced from 79.1 to 75.5%, according to results provided by the National Survey on the Quality of Life (ENCV, from its Spanish initials) (1).

Based on the results of the health component in the citizen perception surveys for the “¿Cómo Vamos?” programs for the period comprised between 2008 and 2012 in five cities in Colombia, Reina (4) found that in the year 2012, the percentage of people who did not use the health service—in spite of requiring it—reached 4.9%. The barriers reported by those taking part in the survey, which prevented them from going to a health service had more to do with demand, where the perception that “the case was not serious” was the main answer to explain their failure to use the medical services; at the level of offer, answers were provided at a lower proportion. The most frequent reasons provided for those years were “bad service” and “lots of steps to get an appointment” (4).

In 2009, Vargas found four main barriers, independently from the type of modality and area of location, added to the barrier presented by insu-

rance companies and service providers who aim for economic profits. These barriers were insurance policies: problems in the extension and continuity of the affiliation; control instruments for the use and purchase of services by insurance companies; shortcomings related with infrastructure and the organization of the network of providers, and the socioeconomic characteristics of the target population (23).

On the other hand, according to Vargas (23), these barriers do not present themselves in a similar way in different regimes and areas; in urban areas, we find obstacles related with the existence of the assurance market, which implies frequent changes in service providers, conflicts among entities, and fragmentation in the provision of assistance; in rural areas, access is limited by structural difficulties like geographical access and the available offer. In terms of modalities, in the contributory regime, barriers are found in the offer of services that are geographically difficult to access and, in the subsidized regime, financial limitations are observed, leading to less coverage of benefits and additional payments. However, both in the contributory and the subsidized regime, access is limited due to the effect caused by the collection of sliding scale fees and co-payment (24), a barrier not found in the special regime, which does not include these additional payments (25). It is worth clarifying that, for the year 2009, the health system was regulated by the Compulsory Health Plan (POS, as per its Spanish initials), and not all medication and procedures were included, leading to a sharp difference in coverage for these treatments between the contributory and the subsidized schemes (26).

In line with Vargas' statement (23), Rodríguez reports that the percentage of people who did not attend medical services due to lack of money is lower among the affiliated population than in the population not affiliated to social security, at 14.4 and 50.4% respectively (5). Likewise, by the year 2010, differences between these schemes had not been eliminated (26).

On several occasions, economic barriers are directly linked with geographical barriers, especially in a country like Colombia, where health services are fragmented and disperse (27,28), and the reality of every individual and his/her family and how this reality facilitates access to services are not considered. For example, in some cases, patients have to cross a large city like Bogota to get their medication; others have to go from one city to another in order to have some tests and specialized procedures done; sometimes patients have to cover transportation costs (27), which are a geographical and economic barrier for many.

A study carried out by the Equity LA research project compared barriers to the use of health services in the General Social Health Security System in Colombia (SGSSS, as per its initials in Spanish) and the Unique Health System (SUS) in Brazil. This research divided the access mechanism into four stages: 1) searching for the service; 2) accessing the service; 3) staying in the service; and 4) solution to the problem.

Barriers in each stage were identified. Both in Colombia and Brazil, most people in the survey who looked for health assistance made up a larger group than those who did not. For the latter, the main reason was “the delay in getting an appointment and in receiving assistance” (29); these results differed from those from Reina (4). The main reason for not getting medical assistance was the lack of physicians; regarding barriers while using the services, economic reasons related with the payment for medical attention and its derivate services were involved; with respect to the solution of the problem, 30.5 % of the Colombians surveyed reported that their reason for consultation was not solved at the emergency services (29).

#### ACCESS BARRIERS TO VISUAL HEALTH

Visual health is the absence of visual conditions that prevent people from “having a physical, cultural, structural and functional condition of social well-being.” The population’s capacity to access

health services and hence, their visual health depend on economic, political and social factors, on the assistance network, on the health providing professionals, the institutions training on visual health, and on the legal framework (30).

The visual health service involves three levels of assistance: the primary level, at which prevention and treatment for the most common problems is provided by means of ophthalmological checkups, a functional assessment of vision and forwarding to ophthalmological assistance services, surgery and advanced treatments, including optometry; the secondary assistance level comprises primary assistance services together with surgery for the most common conditions (cataract or glaucoma); and the tertiary assistance level, which offers all visual health subspecialties such as advanced diagnosis, medical and surgical treatment for children and adults. In general, these services are provided by university hospitals and similar institutions (11,12). Those in charge of offering and providing assistance in visual health are health professionals: optometrists, ophthalmologists and related ophthalmological professionals (31).

The main purpose of visual health services is to reduce preventable visual disability and grant access to rehabilitation by the visually impaired. Through the *VISION 2020* program, the global initiative for the elimination of avoidable blindness and visual disability, the World Health Organization and the International Agency for the Prevention of Blindness (IAPB) set up measures for the prevention of these problems through assistance and treatment of cataracts, refractive problems, diabetic retinopathy, glaucoma, age-related macular degeneration, pediatric visual health, low vision, and rehabilitation (12,32).

Since visual alterations are rarely deadly, many countries do not count on a visual assistance service. This lack of access is increased by the exclusion of the least favored sectors (the poor, informal workers, children, rural communities, the elderly, ethnic minorities) and reflects itself on the high

prevalence of preventable and curable blindness (33) and on the lack of treatment for visual defects. In South America, the least favored population, especially in rural areas and with poor economic resources, face different access barriers, such as the price they have to pay for the service, the distance they have to cover to get to health centers or the limited number of staff and infrastructure in the public assistance network; that is, the lack of service in rural areas, where only 10 % of the population have access to ophthalmology and optometry services as compared with the 85 % of the population who do have access to them (30).

In Colombia, most health service providing institutions are private, a fact that represents an access barrier for those who cannot pay for private consultations (33). In South America, the cost of a private ophthalmological consultation is a little higher than 10 % of the minimal wage (30).

As reported by the 2008 UNESCO Chair of Visual Health in South America, the Colombian public network of assistance has 112 hospitals that provide ophthalmological services: Bogota holds 9 % of these centers, while 39 % of them are located in Valle del Cauca (30); a total of 1446 ophthalmologists are in the main cities (Bogota, Medellin, Cali, and Barranquilla), which represents a barrier for those who do not live in those areas (distant areas and rural population). On the other hand, although the distribution of optometrists is better—4,692 optometrists for a number of approximately 56 to 100 professionals per million of inhabitants in the country— there are 829 optical shops, 1 out of 3 of them in Bogota, an insufficient number of optical shops (2 per 100.000 inhabitants), hospitals, clinics, and private offices (the sum of these three is lower than the total number of optical shops). This access barrier, like the shortage of optical shops and visual health centers, is somehow due to the lack of professionals in this area of health (30).

The main cause for visual disability in the world is uncorrected refractive error in 43 % of the ca-

ses (34). This figure may be reduced if countries undertake adequate plans and policies for the detection and correction of these disorders.

In Colombia, the Health Benefits Plan to be charged to the UPC (payment unit by collection, as per its initials in Spanish) defines the benefits to which beneficiaries of the General Social Security in Health System in Colombia are entitled (35). This plan was modified through Resolution Number 6408 of 2016, which states that the first optometry consultation must be provided to all age groups, and the assessment should include tonometry, an initial orthoptic assessment, the prescription of visual optical aids, referral to visual, and ophthalmological therapy assessment, the adaptation and tuning of prosthesis or visual optical aids; the plan also includes assessment for low vision and visual triage from 0 to 18 years of age (33,36).

Likewise, the Health Benefits Plan covers corrective lenses prescribed by doctors or by optometrists and for defects reducing visual acuity, depending on the scheme (36). For the Contributory Plan: children under 13 are covered once per year and patients older than 12, once every five years. This plan includes the adaptation of the prescribed lens to the frame, while patients cover the cost of the frames. Subsidized Plan: for patients younger than 21 and older than 60. They are covered once per year. This plan includes the frame for up to 10 % of the current minimal monthly wage. Patients between the ages of 21 and 60 are covered once every five years; this plan includes the adaptation of the lens to the frame and the cost of the frames is the responsibility of the patient.

Figures 1 and 2 show the steps that a patient must follow in order to access treatment for the correction of refractive errors, after adapting the example designed by Sanchez (37) to illustrate the itineraries of skin cancer. The flowchart was drawn considering the process that users in the Colombian health system must follow in several healthcare institutions, and every stage represents

an access barrier. As mentioned by Abadia and Oviedo (38), the itineraries created by the Colombian health system become access barriers.

When the assistance requested is not granted, there are legal actions available to access them, but the lack of knowledge on these legal tools, like the writ for protection, also become an access barrier (38). This mechanism is an alternative resource provided by the Political Constitution of 1991, Chapter 4, Article 86, which is designed to grant the protection of fundamental rights and provide access to an integrated health service (39); in other words, this is a tool to overcome access barriers.

In the Colombian SGSSS system, access to services is provided by the emergency consultation or by not specialized medical and dental consultation (40). However, in some cases, only the Phase 2 Itinerary is required (See Figure 2 above) to attain the correction of refractive errors, a scenario that represents one obstacle less in accessing this visual health service.

According to the World Health Organization, there are around 39 million blind people and 246 million people with low vision in the world, for an approximate total of 285 million visually impaired people, with 9 out of 10 blind people living in developing countries (34,41). As Oviedo

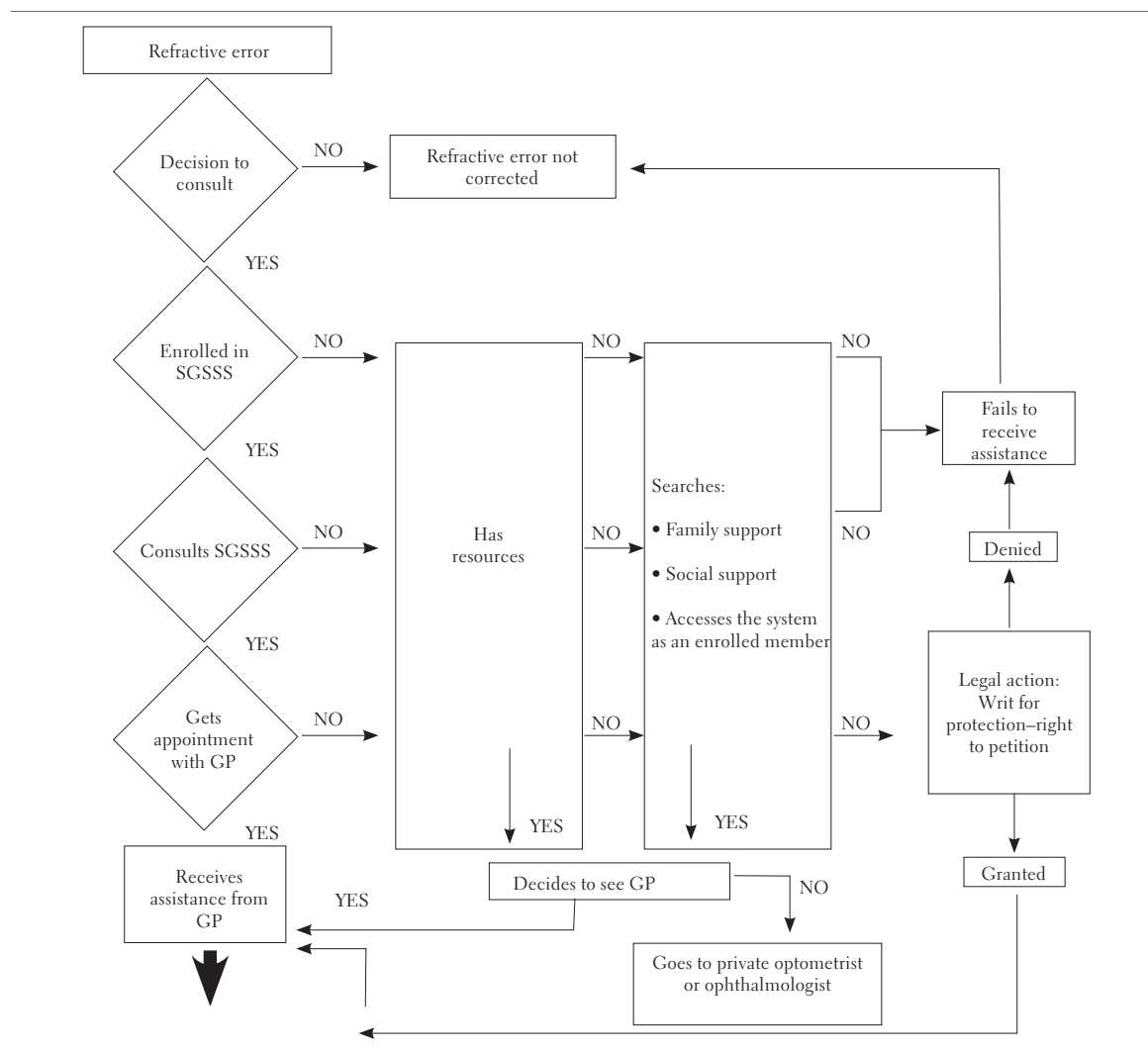


FIGURE 1. Itinerary Phase I: General practitioner

Source: Adapted from Sánchez (37).



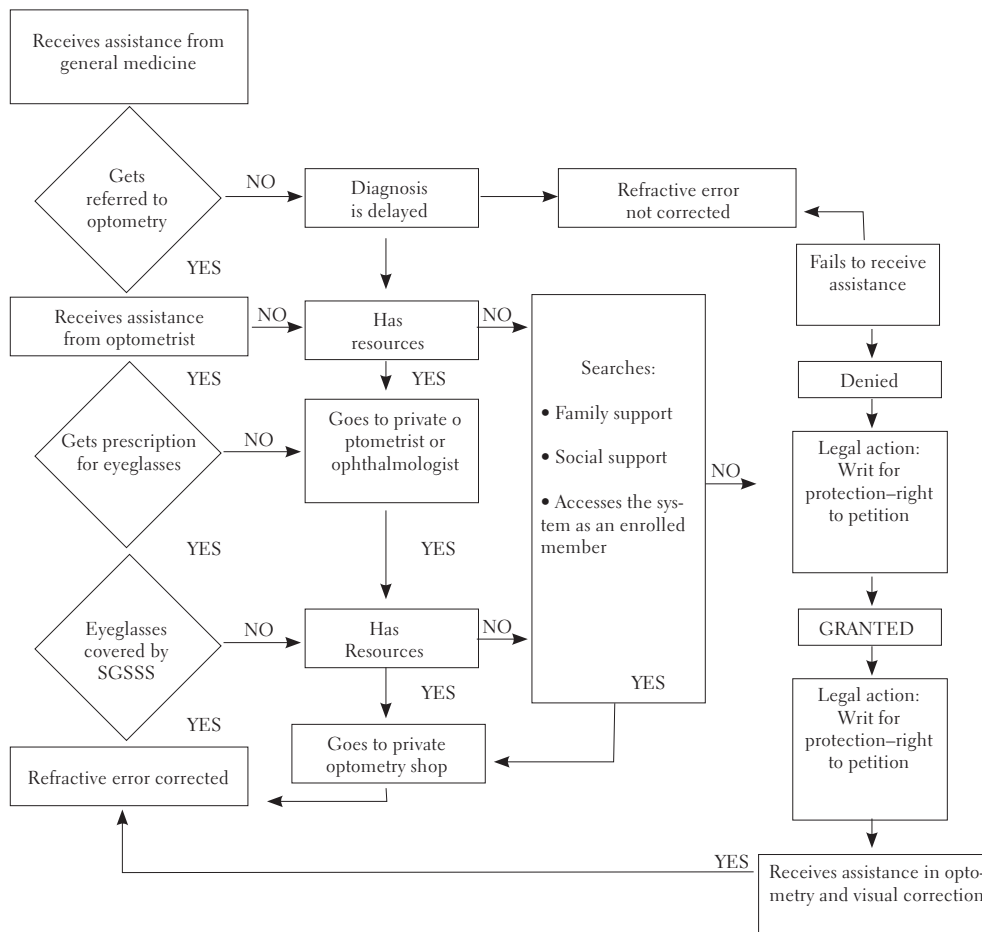


FIGURE 2. Itinerary Phase 2: Optometrist and visual correction

Source: Adapted from Sanchez (37).

et al. (42) explain, the potential access of the visually impaired to low vision services is given by every government's policies on public health; in Colombia, low vision is not considered in the execution of policies, since this condition is not perceived as a social problem.

This lack of policies and the access barriers they raise before the health system can also be observed in countries like Nigeria, where the national health insurance plan has not been developed, leading to a situation where the majority of the population does not have medical insurance coverage. In Nigeria, Bolutife et al assessed the use of visual health services and its determinants. They found that the possibility of using these services is directly related with good education, living near visual health centers, experiencing visual or

eye symptoms or discomfort, old age, and visual impairment (21).

A similar study was carried out in South Korea, which yielded both similar and different results, as compared with the previous study. On the one hand, for people older than 12, it was found that age, sex, area of residence and the level of education were related with the use of visual assistance services. On the other hand, unlike the previous study, women resorted to these services more than men, and no correlation was found with the monthly income and visual health services, possibly due to the wide coverage of the *NHI* health system. Based on the results, geographical barriers were identified, with people in rural areas having less access to services, and sociocultural barriers that may be related with the level of education.

Likewise, the perception of a low need to use these services represents a barrier to access, since those who showed reduced visual acuity preventing them from performing their daily activities were the ones who resorted to these services in larger numbers (43).

In addition, in developed countries it is often the case that inequality in health results more from cultural deprivation than from economic shortcomings, as in Spain, where cultural and educational barriers are more influential than economic barriers (44).

Unlike these countries, people with little resources have limited access to visual health services due to geographical and economic barriers, as well as to barriers related with little knowledge on visual health, in addition to unsatisfactory clinical services (45).

Other studies determining and identifying barriers to access visual health services, specifically refractive services, are Rapid Assessment of Refractive Error studies. A RARE carried out in the district of Kahama, Tanzania, in 2015, showed that in this population the main barriers, in descending order are: 1) being aware of the problem but not feeling the need for consultation; 2) other priorities related with other health problems; 3) unawareness regarding the problem; 4) not having the budget to buy glasses; 5) long distance to access services; 6) lack of time for a visual test; 7) fear of getting worse due to glasses; and 8) lack of budget to pay for a visual exam (13).

In addition to these barriers, there is also the fact that several people, in spite of having had access to the optical correction services, stop using it due to reasons like discomfort with their glasses, loss or damage of glasses, clear vision, even without glasses, among others (46).

In Eritrea, a RARE was also carried out, and the results for low coverage in optical coverage revealed little access to refractive correction services,

especially for the people who live in rural areas, a service provided by a few centers for visual health, most of them located in urban areas, and offered by a small number of professionals in this area of health, creating barriers associated with the demand (geographical barriers) and barriers associated with the offer (scarce availability of services).

Regarding the barriers most frequently reported by those taking part in the survey for not using optical correction despite requiring it, these were, in descending order: 1) being aware of the problem but not feeling the need for consultation; 2) not having the resources to get eyeglasses; 3) lack of budget to afford visual tests and not being aware of the problem; and 4) long distance to services (47).

Similar results were found in the urban population of Delhi, where the main reason for not correcting refractive errors were "being aware of the problem but not feeling the need for consultation," followed by financial barriers; this research also reported personal limitations such as discomfort when wearing correction, fear of being laughed at if they wear them or lack of time (48).

In Bogota, Colombia, a rapid assessment of refractive errors was also carried out and the partial results showed that the barriers preventing the use of optical correction, in case of requiring it, were, in descending order: 1) not being able to pay for eyeglasses; 2) not being aware of the problem; 3) not feeling the need for consultation; 4) not being able to afford a visual test; 5) not having time for visual tests; 6) other health priorities; 7) other; 8) delay in getting an appointment; 9) distance from health services available; 10) fear that people will laugh at them if they wear glasses; 11) they did not wear them on the day of the survey; and 12) delay in getting glasses (49).

In the United States, a study involving the Latino population was made to determine the prevalence of refractive errors and the proportion of uncorrected refractive errors. In addition to the associated factors, it was found that not having

health insurance and having an income below 20,000 dollars increased the chances of having uncorrected refractive errors; besides, the cultural and educational level is also directly associated with these defects, presenting socioeconomic barriers for the refractive service (50); these results are similar to the previously mentioned studies, where barriers were related with demand and were mostly economic in nature (45,47-49).

## DISCUSSION

Several authors (4,5,14,15) agree on the definition of *access to health services*, establishing that this term does not only refer to entering or being enrolled in a specific health system, but it is a complex process in which the final result is also involved, in terms of the satisfaction after service and the opportunity through which it was obtained. It is therefore important to carry out studies that complement this information at the level of satisfaction experienced after using these health services.

One of the main barriers to access the health services found in the review, both in Colombia and around the world, was the economic barrier related with the existence of copayment (2,23,24,29) and the distance that must be covered to reach the medical services (27), something that most frequently affects people with a low income (5,23).

On the other hand, in different research studies, the main barriers found were not economic, but there were obstacles against using the service related with the perception that “the case was not serious” (4) or “delays to get an appointment and receive assistance” (29).

Similar barriers to the ones found in the general health service were also found at the level of visual health: economic barriers, when people have to pay for private consultation (33), or geographical barriers, depending on the place of residence (21,30,43). An obstacle that may be most fre-

quently found among people who have mobility issues due to their physical or health conditions is the difficulty to get to the health service providers, which might be overcome by mobile equipment that may be taken to distant locations or to people with mobility challenges.

The economic barriers mentioned were made evident when analyzing the flowchart, where the itinerary to access to an appointment with the optometrist and acquiring visual correction through the SGSSS in Colombia is presented: It is possible to observe that patients with financial limitations find more obstacles than those who have more financial resources, since the latter may seek a private consultation if they fail to get assistance, and they can even resort to this consultation from the beginning, in sharp contrast with the difficulties faced by a person with little buying power who has to wait for a medical consultation with a general practitioner, which is assigned three working days after being requested, at most (51,52), seeing the GP, and then being referred to the optometrist, a process that takes time and depends on the availability of visual health professionals and the medical condition of the patient (51,52), as no regulation defines a time limit for the optometry appointment to be assigned (51); the longest waiting time to get an appointment before it turns into an access barrier depends on the waiting capacity of every patient and when this capacity is exceeded, the individual finds yet another reason not to attend consultation when required: “delays in getting an appointment.” However, being able to get an optometry appointment does not necessarily mean that the patient attends this appointment, since it is possible that he/she finds geographical obstacles, since it is not always easy to get to the health centers where these services are provided, and this journey requires time, money and transportation, which are not readily available to everybody.

In addition, based on these itineraries (figures 1 and 2), an administrative barrier may be identified, which results from all the steps required to get assistance, an obstacle that could be reduced

if authorizations and the general medicine consultation were abolished. With the elimination of the Compulsory Health Plan (POS, as per its Spanish initials) and with the arrival of the Mipres application, the Ministry of Health and Social Protection eliminated the authorizations required to access certain treatments, medication, corrections or services that were not included in the benefits plan; however, this application works for the contributive plan only, since for the subsidized plan it is up to mayors and governors to determine the use of Mipres (53), a fact that shows that there still exist differences between the two plans.

It is also observed that even in the best economic and social security conditions, the procedure to be followed and the time from the moment a person decides to consult due to a refractive error are too long, and for these reasons some users do not follow through the process and the objective, visual correction, is not achieved. It is thus necessary to raise awareness in users and simplify the steps involved in the process to access services. The outlook is even more disturbing in the extreme case when users do not have the economic resources to access health services because the barriers to assistance are almost unsurmountable, which leads to the deterioration of their visual health. Government policies must be generated to overcome these barriers and allow this sector of the population to receive assistance.

Regarding the difficulty to correct refractive errors, the economic factor plays an important role again, since some studies have determined that not correcting these errors was related with little availability of personal financial resources (49,50); likewise, since the Health Benefits Plan does not cover the total value of optical correction (lenses and frames) (36), patients may be affected by the economic barrier, related with demand, especially during the period when lenses are not covered every year, since this barrier will hinder and limit the correction of visual effects as they will not be able to acquire their lenses and sometimes a frame to hold them.

The barriers reported with regards to not feeling the need for consultation (13,47,48) and the lack of public health policies at visual level (21,42) show the little importance given to visual health, both personally and at the level of public health policies. The population must be made aware of the importance of eyesight in the personal, work and social quality of life, and its effect on the development of a country.

A barrier that was not contemplated, perhaps because it is not very common, is the lack of time people with economic resources report as a cause for not attending any health service, public or private, since they do not have time in their working schedules. This situation could be overcome with special programs for the adaptation of equipment and the transfer of professionals to business centers.

## CONCLUSIONS

Different types of barriers arise at the different stages of the process to access health services: motivation, contact with the health service and satisfaction. The first two types of barriers have been most widely studied and in consequence, they report a larger number of cases for the existence of this reluctance; however, information on satisfaction levels may be obtained through the failure to use the services while needing them, under the justification of a "bad service."

The implementation of health policies, as well as of measures that grant equal access to health services, like total coverage and a better distribution of health centers and professionals, is fundamental so that people in countries and regions are not affected by barriers related with the offer of services, regardless of their place of residence or their income level.

The main barriers related with demand, both for the health service in general and for visual health, are the lack of perception on the need for assistance and the lack of money; this reveals little

awareness among the population on the importance of checkups and periodical visits to health professionals.

One of the most complex barriers is the different steps some people must follow before receiving assistance through the health system. Most of them never start the process or quit halfway due to all the red tape they must go through. These processes are seen as endless and yielding no positive results, added to the fact that the population usually does not know their rights or the way to exert them.

An additional barrier in the area of visual health is the small number of professionals, which makes their equitable distribution in the territories difficult and mainly affects the rural populations. This situation is found at world level and Colombia is not foreign to these obstacles to access.

## RECOMMENDATIONS

Due to the small amount of research carried out in Colombia, it is necessary to study the access to visual health services and the barriers it faces.

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