



## BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY

### FINAL MEMORY

---

# OPTOMETRIC REFERRALS – HOW, WHEN AND TO WHOM REFER A PATIENT?

**IVETTE BRUGUERA MORILLAS**

DIRECTORA I TUTORA: MIREIA PACHECO CUTILLAS  
DEPARTMENT OF OPTICS AND OPTOMETRY

JUNE 14<sup>th</sup>



## BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY

La Sra. **Mireia Pacheco Cutillas** com a tutora i directora del treball,

CERTIFICA/CERTIFIQUEN

Que la Sra. **Ivette Bruguera Morillas** ha realitzat sota la seva supervisió el treball “**Optometric referrals - who, when and to whom refer a patient?**” que es recull en aquesta memòria per optar al títol de grau en Òptica i Optometria.

I per a què consti, signo/em aquest certificat.

Sra. Mireia Pacheco Cutillas

Directora i tutora del TFG

Terrassa, 14 de Juny de 2017



## BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY

# OPTOMETRIC REFERRALS – HOW, WHEN AND TO WHOM REFER A PATIENT?

### ABSTRACT

Optometrists have the necessary equipment and knowledge to provide an eye examination and to identify the need to refer a patient. An optometric referral is the key to achieve a complex exam, avoid risks for the patient and to have a final diagnosis by a professional with a higher knowledge. Early diagnosis, appropriate screening and prompt treatment are the key to prevent and reduce emergencies and to minimizing harm and sight loss from urgent eye conditions.

A false positive means a patient has initially been diagnosed with a disease, that turns out to be absent after proper and extensive assessment. Optometrists less experienced have to be more cautious because they make more false positives referrals.

According to the accuracy and adequacy of optometric referrals, an important fact to consider is that the lack of clinical information reduces the quality of many optometric referrals. When an optometrist has to refer a patient must write a referral letter. A referral letter should include all the clinical information that is relevant to understanding the case reported. Depending to whom the patient is referred; it should have a specific structure.

At the time to inform the patient, an effective communication is the key point for a correct development of the process. Finally, as professionals, optometrists have their Code of Ethics and Conduct providing the best for the patient's needs.



## BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY

# OPTOMETRIC REFERRALS – HOW, WHEN AND TO WHOM REFER A PATIENT?

### RESUM

Els optometristes posseeixen l'equipament i els coneixements necessaris per a proporcionar un examen visual complet i, així detectar la necessitat de derivar a un pacient, si escau.

Una derivació optomètrica és la clau per aconseguir un examen ocular complementari, evitar riscos per al pacient i obtenir un diagnòstic complet, per part d'un professional amb coneixements en altres àrees. Un diagnòstic precoç, la tria de proves necessàries i un ràpid tractament són essencials per a prevenir, reduir emergències, minimitzar danys i pèrdues visuals d'una derivació ocular urgent.

Un fals positiu és aquell pacient que ha estat inicialment diagnosticat amb una patologia però resulta absent després d'una avaluació complementària i extensa. Els optometristes amb poca experiència han de ser curosos perquè són els que tendeixen a generar un major nombre de falsos positius.

D'acord amb la precisió i l'adequació de les derivacions optomètriques, cal considerar que, la falta d'informació redueix la efectivitat de moltes derivacions. Quan un optometrista ha de derivar un pacient és necessari escriure un informe de derivació. Aquest, ha d'incloure tota la informació clínica rellevant que permeti entendre el cas derivat. Depenent de a qui vagi dirigida la derivació del pacient, l'informe de derivació haurà de seguir una estructura o una d'altre.



Quan arriba el moment d'informar al pacient, una comunicació efectiva és la clau per l'èxit d'un bon desenvolupament del procés.

Per concloure, com a professionals, els optometristes tenen un Codi d'Ètics i de Conducta, el qual indica i argumenta pautes, proporcionant solucions per a les necessitats dels pacients i el seu benestar.



## BACHELOR'S DEGREE IN OPTICS AND OPTOMETRY

# OPTOMETRIC REFERRALS – HOW, WHEN AND TO WHOM REFER A PATIENT?

### RESUMEN

Los optometristas poseen el equipo y los conocimientos necesarios para proporcionar a los pacientes un examen visual completo y detectar así la necesidad de derivar a un paciente si fuera necesario.

Una derivación optométrica es esencial para conseguir un examen complementario, evitar riesgos para el paciente y obtener un diagnóstico completo por parte de un profesional con conocimientos en otras áreas. Un diagnóstico precoz, la elección de las pruebas necesarias y un rápido tratamiento son esenciales para prevenir, reducir emergencias y minimizar tanto daños como pérdidas visuales de derivaciones oculares urgentes.

Un falso positivo es aquel paciente que inicialmente ha sido diagnosticado con una patología, pero ésta resulta errónea al realizar una valoración complementaria y extensa. Los optometristas con poca experiencia deben ser cuidadosos ya que tienden a ser los que generan un mayor número de falsos positivos.

De acuerdo con la precisión y adecuación de las derivaciones optométricas, un hecho importante a considerar es que la falta de información reduce la calidad de muchas derivaciones. Cuando un optometrista debe derivar un paciente es adecuado escribir un informe de derivación detallado.



Éste, debe contener la información clínica necesaria que permita entender, al profesional correspondiente, el caso derivado. Dependiendo a quién sea derivado el paciente, el informe de derivación tendrá que seguir una estructura u otra.

Cuando llega el momento de informar al paciente, una comunicación efectiva es clave para el éxito de un buen desarrollo del proceso.

Para finalizar, como profesionales, los optometristas tienen un Código Ético y de Conducta, el cual indica y argumenta pautas, proporcionando soluciones para las necesidades de los pacientes y su bienestar.



## ACKNOWLEDGEMENTS

During my literature review, there have been many people who have been by my side.

First of all, I would like to name my tutor Mireia Pacheco and express my gratitude for giving her help, provide me some information, give me different advices with the research and correct my English expressions.

I would also like to name my family. They gave me the motivation, support and calm to move on with my literature research.

Finally, my literature review it is over. I have been very lucky to have you by my side during this period of time.





# TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	8
1 BACKGROUND INFORMATION .....	12
2 AIMS AND PROJECT REQUIREMENTS .....	14
3 GUIDANCE FOR REFERRAL.....	15
4 URGENT REFERRALS.....	17
5 FACTORS INFLUENCING UNNECESSARY REFERRALS (FALSE POSITIVE)	21
6 ACCURACY AND ADEQUACY OF REFERRALS .....	23
6.1 Accuracy of referrals for Glaucoma.....	26
6.2 Accuracy of referrals for cataracts.....	27
7 WRITING REFERRAL DOCUMENTS.....	28
8 INFORM THE PATIENT.....	30
9 PROFESSIONAL CODE OF ETHICS AND BEHAVIORAL PATTERNS.....	33
10 DISCUSSION .....	35
11 CONCLUSIONS .....	36
12 FUTURE STUDIES .....	37
13 REFERENCES .....	38
14 APPENDICES .....	40



# 1 BACKGROUND INFORMATION

The referral of patients by Optometrists to others practitioners has been extensible studied in the United Kingdom compared to Spain where there is a shorter history for this activity due to younger profession. UK system is more experienced than optometric profession in Spain. That is why I am going to carry out a literature research and analyze some recent articles and information about the importance of the accuracy in optometric referrals.

Optometrists are primary healthcare professionals trained to examine the eyes to detect defects in vision, signs of injury, abnormalities and so on. They have the necessary knowledge to prevent ocular diseases and detect the need to refer a patient with the corresponding referral letter to another professional practitioner. They are becoming the principal primary eye care providers to the ophthalmic healthcare.

In the healthcare professionals field, there is a need of continued development training due to science is continuously improving and innovating. An effective communication between practitioners is the key to provide a suitable service for the patients.

As a professional, optometrists have their Code of Ethics and Conduct providing the best for the patient's needs. It helps to have a multiprofessional education, in order to refer suitably patients.

A referral is to address information to another professional for help or examination. In the optometrist case to refer or to obtain further information for exams, is to send a patient to others practitioners in order to improve their examination and diagnosis. The main goal of the referrals is to provide maximum quality services to the patient, minimum quantity and with the appropriate tools and knowledge to solve the patient's needs. An accurate referral is necessary to avoid patient's risk and to minimizing sight loss from eye conditions. Because of this, the importance of the optometrist in identifying and referring sight-threatening conditions is essential.



Following the “Model d’atenció en oftalmologia i criteris de planificació” of the Health Department of the Government of Catalonia:

Ideally, an ordinary referral should be within a month and less than 7 days for a preferential referral. Referrals regarded as urgent should be met in 24-72 hours.

## 2 AIMS AND PROJECT REQUIREMENTS

The aims of the project are to perform a literature review on optometric referrals and to provide an insight about the importance of appropriate referrals.

This project will include the following goals:

- To evaluate the importance of an accurate referral
- To get instructions for writing referral letters
- To recognize and detect false positives patients and urgent referrals
- To know about the professional Code of Ethics and Conduct

During this project I hope to learn about professional Code of Ethics and to improve knowledge on primary eye care duties and different rules to follow as a professional.

In addition, I will expect to learn how to write an essay in English and the technical vocabulary within my professional field.

### 3 GUIDANCE FOR REFERRAL

Assessment and prioritization of patient's problems is essential for efficiency and effectiveness of an eye care service. It is crucial to ensure when is necessary a quick referral for those needing urgent treatment and preventing unnecessary use of hospital resources for those who cannot benefit from treatment.

Referrals from Primary Eye Care, cataract and lens disorders have been repeatedly identified as being the most common reason for referral by optometrists. Glaucoma is usually the second most commonly referred pathology and was found to be more common than cataract by one study conducted by Harrison et al (1988) but the third most common, after retinal problems and cataract, by another study carried out by Pierscionek et al (2009). Instead, the most commonly referred condition by GPs was disorders of the lids and adnexal (Davey, 2011).

Many clinical management guidelines for many eye conditions have been produced. The most important indications for referral are listed below according to the College of Optometrists (UK). (See appendices section also).

- If the optometrist observes a sign or symptom of injury that cannot manage within their competence, he/she should refer the patient to the appropriate practitioner.
- Only refer patients for cataract surgery if the patient is having visual problems such as visual acuity.
- If the optometrist considers that the patient doesn't need to be referred, he /she must record: a sufficient description of the condition, the reason for deciding not to refer and details of advice or treatment given to the patient.
- Follow the protocols to consider if the patient needs an emergency or urgent referral.
- In case that the patient doesn't want to be referred, the optometrists should ensure the patient understands why the referral is necessary,

record a full explanation in the patient records and obtain the patient's signature on a declaration that explains the patient doesn't wish to consult the doctor.

- Optometrist must refer the patient to another practitioner with the appropriate knowledge and skills for furthermore examination and diagnosis.

For best patient care there needs to be good communication and integration of services between primary and secondary care.

In Spain, there are also clinical management guidelines to follow. This literature review will focus in the autonomous region of Catalonia. The Health Department of the Government of Catalonia has a model of care in Ophthalmology and planning criteria. This is based on the collaboration between primary care and specialized care and has the aim to achieve better services for the future. Planning services are proposed to be developed territorially and must specify the function of each professional and the interactions needed between different processes. The health plan 2011-2015 has prioritized ophthalmology as one of the most important fields in healthcare with a high-ranking potential in improvement resolution, efficiency and quality, in order to solve problems with the use of clinical practice services and waiting time due to ophthalmology is the healthcare field with a slower course process.

According to this model plan and with the aim to improve diagnosis efficiency, treatment and monitoring of certain pathologies, it is necessary to facilitate access of the primary care professionals (optometrists) into the ophthalmologist services. Also, to facilitate access to differential diagnosis assessment protocol and finally, preferential access to the specialist depending on the referral criteria.



## 4 URGENT REFERRALS

It has been shown that most of the urgent referrals are, actually, non-urgent problems. Hence, there is a challenge to reduce inappropriate referrals and deterring primary healthcare professional, from referring non-truly urgent cases.

The College of Optometrists and The Royal College of Ophthalmologists (UK) define urgent eye care condition as any condition that is painful and distressing for the patient and presents an imminent threat to vision or to the general health. On the other hand, an emergency is a condition of damage that requires treatments or admission at short notice to avoid damage to the eye or eyesight.

Following the “Model d’atenció d’urgències” of the Government of Catalonia, immediate demands cover a wide range of different complex situations, from life-threatening emergency to trivial problems or cases that not need urgent attention. Patient reception is managed according to the assigned priority level and not according to waiting time or time of arrival. In Catalonia there is a system known as “model andorrà de triatge” (MAT) which distributes patients in five levels according to the initial assessment (see appendices section).

Mechanical injury to the globe, chemical injuries, central retinal occlusion, acute angle closure glaucoma and retinal detachment are some of the conditions that require an urgent referral to an ophthalmologist. Despite of those conditions, there are others that are referred as urgent and they are not. The optometrist should follow relevant local protocols for referral to avoid over referring.

There is limited scope for preventing urgent eye conditions. Eye trauma is potentially preventable. Eye protection could prevent injuries from sport or public health companies can raise awareness of the risk of eye injuries from fireworks, for example.

Another way to prevent urgent referrals is to be careful with contact lenses such as limiting the number of hours of use, frequent replacement, good hygiene, to not use

them with makeup and also to not use them for swimming to reduce the risk of infectious keratitis.

Early diagnosis, appropriate screening and prompt treatment are the key to prevent and reduce emergencies and to minimizing harm and sight loss from urgent eye conditions. Patients with urgent conditions require a slit lamp and the skills to be able to use it for diagnosing.

In order to form a diagnostic hypothesis is necessary to take a careful history, measuring visual acuity, performing a basic external examination of the eye and examining the fundus with a direct ophthalmoscope. For a patient without sight loss it could be enough a diagnostic hypothesis and does not need more detailed examination.

Based on the experience in the UK system, patients with urgent eye conditions are mostly non-acute and relatively straightforward to treat but a significant minority are emergencies that cause acute distress and are sights threatening. Also, it is known that hospital eye departments treat large numbers of patients whose conditions could easily be treated elsewhere without the need to refer them as urgent conditions.

Community-based optometrists have shown the main set of standards for appropriateness of referral by optometrists to secondary care. They performed a method which did not consider whether the diagnosis is ultimately correct but simply whether it would be expected that the condition be referred urgently based on the condition diagnosed by optometrist consultation. The outcome of this study shows a very good level of performance, with 87% of the conditions diagnosed by optometrists being appropriate for urgent referrals (Davey, 2011).

According to the “Model d’atenció en oftalmologia i criteris de planificació” of the Government of Catalonia it is necessary to implement a service which allows dealing with cases that have been referred as urgent.

	DISPOSITIU	FUNCIONS	TIPUS D'ATENCIÓ	LOCALITZACIÓ	HORARI
ACCÉS LLIURE DE LA POBLACIÓ	EAP	Resoldre consultes telefòniques. Atendre i resoldre nivells d'urgències de baixa complexitat. <sup>2</sup> Atendre i derivar a atenció complexa nivells d'urgències d'alta complexitat. <sup>3</sup>	Telefònica Presencial Domiciliària	CAP (+ consultoris)	Horari definit al territori
	DISPOSITIU D'URGÈNCIES TERRITORIAL	Resoldre consultes telefòniques. Atendre i resoldre nivells d'urgències de baixa complexitat. Derivar l'atenció a l'EAP corresponent (en horari de funcionament del CAP). Atendre i derivar a atenció complexa nivells d'urgències d'alta complexitat.	Telefònica Presencial Domiciliària	CAP Hospital	24 hores
	CENTRAL DE TRUCADES (061-112)	Resoldre consultes telefòniques. Derivar l'atenció als dispositius més adequats. Comunicar al territori demandes d'atenció a domicili Gestionar recursos d'emergències directament.	Telefònica	Centre de trucades	24 hores
ACCÉS DERIVAT	D'ATENCIÓ COMPLEXA	Atendre i resoldre (o derivar a un altre hospital) nivells d'urgències d'alta complexitat. Atendre demandes immediates derivades per 061, EAP-dispositiu d'urgències territorial. Inclou l'atenció a les emergències derivades pel SEM i codis específics (IAM, ictus, politrauma).	Presencial	Hospital Unitat mòbil <sup>4</sup>	24 hores

**Table 1. Diagram of functional organization of the immediate attention system in Catalonia**

It is advisable that hospital emergency services and the primary care emergency centers have the capacity for a direct appointment in their schedule.

First of all, in order to reduce urgent referrals, it is interesting that the urgency is initially assessed by the primary eye care and if required refers as urgent. This can avoid major delays. A flexible and fluid communication between the general practitioner (GP) and the specialist, in this case, the ophthalmologist is needed.

It is essential that the ophthalmologist has a complete referral letter with all the information for the reason of the urgency, the time of the evolution and the possible causes of urgency.

Following this model, two of only those conditions needing an urgent referral are displayed:

The first one is red eye or ocular discomfort / eye pain. It will be an urgent referral when:

- This condition is unilateral and patient is an uncomfortable with nauseas.
- Severe eye pain or poor acuity associated with red eye.
- Corneal opacity or infiltrate which dyes with fluorescein.

The second one is sudden loss of vision or loss of the visual field which needs to be an urgent referral for an exhaustive examination if the loss is in less than 72 hours.

## 5 FACTORS INFLUENCING UNNECESSARY REFERRALS (FALSE POSITIVE)

In healthcare, a false positive means a patient has initially been diagnosed with a disease, that turns out to be absent after proper and extensive assessment. It normally happens at primary healthcare level and it is typically known as a false alarm.

Certainly, it is difficult to define a false positive referral because there are some limitations to it. It depends on what clinical techniques are available for the optometrist.

A true positive patient is a patient whose diagnosis is confirmed as a correct. An increase of false positives are identified when the optometrist use, for the initial diagnosis, diagnostic techniques that are poor at identifying. If the practitioner does not have the necessary clinical techniques to make a diagnosis, they may refer simply for a second opinion without having arrived at the diagnostic decision. For patients that have non-specific symptoms where it is not possible to come up with a better diagnosis, could be a reason for lower referral accuracy and make a false positive referral.

On the other hand, a correct referral is when an optometrist refers a patient for further examination and then, the patient is diagnosed with a condition that needed referral in the first place.

A sample of 431 referrals about likelihood of false positive referrals by optometrist (2007-2008) was analyzed. The study concluded that false positives referrals decrease with experience at a rate of 6.2% per year. The greatest effect on referral accuracy is clinician experience, but also gender has an important effect on it; with women tending to refer more false positives. Male optometrists were more likely to provide a correct diagnosis. No significant effects were found for patient age, patient ethnicity, and legibility of referral or type of referring clinician (Davey, 2011).



In order to reduce false positives referrals it is suggested that inexperienced or less confident optometrists have more mentors in the beginning of clinical careers and also, a continuing education could be an asset for these groups of professionals. It makes sense that they have the highest false positive referrals due to inexperience and they want to be more cautious. As they become more experienced, they become more confident as well.

## 6 ACCURACY AND ADEQUACY OF REFERRALS

The accuracy of referrals can improve as professionals become more experienced and it is curious that a large number of false positive are generated by female professionals (Davey, 2011).

Optometrists have a wide range of ocular diseases to refer a patient to an ophthalmologist. An important fact to consider is that the lack of clinical information reduces the quality of many optometric referrals.

Previous research in areas of healthcare has shown also that psychological distress can be caused by false positive referrals. Hence, it is important to use appropriate diagnostic techniques for the initial differential diagnosis and to refer true positive cases for an accurate referral (Davey, 2011).

Optometrist accuracy in referrals is variable. Because of the clinical uncertainty, optometrist has to refer a patient for a final diagnosis. The accuracy and appropriateness are influenced by the legal requirements upon the optometrist practice (Davey, 2011).

Focusing on the UK experience, the process of testing for the second time established quality criteria and provides satisfaction of knowing that there is substance and reality to the intent of pursuing excellence in giving good optometric care. A well-implemented quality management system will provide efficiencies in the practice growth built on enhanced patient satisfaction.

A handwritten letter was formerly used in the United Kingdom to refer patients but was less likely to contain as much information due to the lack of space for optometrist to write. Therefore, in July 2010 an electronic version of the referrals form was made available, which can be completed on a computer and then printed. This is an adequate compromise that will improve the quality, legibility and legality of referrals.

According to the “Model d’atenció en oftalmologia i criteris de planificació” of the Government of Catalonia, there are some actions established in order to improve the efficiency to the specialist’s services:

- To improve accessibility, following the time agreed, to the specialist service as much for routine visits, urgent visit or emergency.
- To integrate optometrist in the ophthalmology service with tasks on ocular refractive errors, through measuring instruments, using reeducation visual techniques, adaptation, verification and control of optical aids. Also, performing diagnostic test and the follow up of different ophthalmologic pathologies.
- To share clinical information between different professionals for the most complex cases.
- To establish services protocols amongst different ophthalmic professionals who take care of ophthalmological pathology.

Below different pathologies are shown which require an optometrist or an ophthalmologist, in order to improve accuracy and efficacy.

Model d'atenció en oftalmologia								
Motius de consulta	MFC	Optometrista (1)	Oftalmòleg/òloga	Proves complementàries protocol·litzades	Consultoria presencial	Consultoria virtual	Reciclatge	Sessions clíniques
Disminució de la visió	Criteris de derivació i prioritació	D/T/S de les causes refractives. Criteris de derivació	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Fotòpsies, miodesòpsies	Criteris de derivació i prioritació	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Dolor ocular (amb ull blanc)	D/T/S Criteris de derivació i prioritació.	D/T/S de les causes refractives	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Traumatisme	D/T/S Criteris de derivació i prioritació	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Ull vermell	D/T/S Criteris de derivació i prioritació	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Pèrdua visual transitòria	Criteris de derivació i prioritació	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Estrabisme	Criteris de derivació i prioritació	Tècniques de reeducació visual i criteris de derivació i prioritació	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Hipertensió ocular	Criteris de derivació i prioritació	Realització de proves diagnòstiques i criteris de derivació i prioritació	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Pruïja ocular	D/T/S Criteris de derivació i prioritació	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Llagrimeig	D/T/S Criteris de derivació i prioritació	no	D/T/S i tractament Q	no	no	sí	no	Una a l'any per revisar i consensuar protocols

Table 2. Optometrist in ophthalmologic service.



Model d'atenció en oftalmologia								
Malaltia crònica	MFC	Optimetrista (2)	Oftalmòleg/òloga	Proves complementàries protocol·litzades	Consultoria presencial	Consultoria virtual	Reciclatge	Sessions clíniques
Cataractes	no	Seguiment refractiu de les no Q i postoperatori refractiu	D/T/S IQ, complicacions postoperatories	no	no	sí	no	no
Glaucoma	Compliment del T	Realització de proves per al diagnòstic i seguiment i criteris de derivació i prioritització	D/T/S IQ	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Retinopatia diabètica	Tractament DM, seguiment retinopatia lleu (1)	Realització de proves per al diagnòstic i seguiment i criteris de derivació i prioritització	D/T/S	Retinografia (1)	no	sí	no	Una a l'any per revisar i consensuar protocols
Maculopaties	Criteris de derivació i prioritització	Realització de proves per al diagnòstic i seguiment i criteris de derivació i prioritització	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Conjuntivitis, blefaritis, patologia annexal	D/T/S Criteris de derivació i prioritització	no	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols
Estrabismes	no	Seguiment i tècniques de reeducació visual	D/T/S IQ	no	no	sí	no	no
Ametropies	no	Seguiment i tractament refractiu. Criteris de derivació.	D/T	no	no	sí	no	no
Ambliopies	Criteris de derivació i prioritització	Seguiment i tractament refractiu	D/T/S	no	no	sí	no	Una a l'any per revisar i consensuar protocols

**Table 3. Optometrist in ophthalmologic service.**

Model d'atenció en oftalmologia								
Cribratge*	MFC	Optimetrista	Oftalmòleg/òloga	Proves complementàries protocol·litzades	Consultoria presencial	Consultoria virtual	Reciclatge	Sessions clíniques
Retinopatia diabètica en DM	Detecció del grup de risc Lectura de la retinografia Control RD lleu (1)	Realització de la retinografia (dependent dels centres)	Control i tractament en cas de RD	Retinografia mitjançant la càmera no midràtica	no	sí	no	Una a l'any per revisar i consensuar protocols

**Table 4. Optometrist in ophthalmologic service.**

Studies on accuracy, appropriateness and adequacy of referrals have been performed in order to show the referrals effectiveness.

Two studies examined in the UK the accuracy of the optometrist diagnosis of ocular conditions. In 58% of cases, the ophthalmologist confirmed the optometrist diagnoses. There was only a 1.4% of disagreement of cases. Ocular dysfunctions, allergic conjunctivitis and dry eyes were the most commonly misdiagnosed conditions by optometrists. On the other hand, infective conjunctivitis was the most over-diagnosed condition.

Optometrists were not legally required to do any more task than the decision to refer the patient for further examinations (Pooley and Frost, 1999).

They consider that optometrists do not have the necessity to refer patients to the HES unless in an emergency. This fact may reduce both the accuracy and quality of referrals, despite the College of Optometrists guidelines which say that as much information should be included in the referral as possible (1991).

The quality of 172 referrals by Optometrist was assessed in 1997. Those referrals contained visual acuity measurements and 51% of them contained a diagnosis. Some of those referrals have legally mandatory required information missing; 3% of the referrals had no professional name or address, 17% had no patient age or the date of birth, some of them had no date of the examination (which was missed on 28% referrals) (Pooley and Frost, 1999).

Overall, authors identified that the majority of the referrals were due to cataract with a 37% of the referrals and glaucoma with 18% and that is why the following points of this literature will explain in detail the accuracy of Glaucoma and Cataract referrals.

## 6.1 Accuracy of referrals for Glaucoma

Following with the study mentioned before, it is said that for any patient suspected of glaucoma it is crucial the presence of the following details from the referral: practitioner name, address, date of birth, spectacle prescription, visual acuities, intraocular pressures, cup: disc ratios, visual fields and patient consent.

The quality of glaucoma referrals was investigated and it was found that a wide proportion of the referrals did not have legally mandatory non-clinical information, e.g. Date, patient date of birth or referrer name (Scully et al, 2009).

Suspected glaucoma has been studied by various authors over the past twenty-five years. The majority of those studies have identified inaccuracy with the referrals as a cause of concern, and in order to solve this problem many authors have made suggestions to improve the accuracy of those referrals.

Another study realized with 1103 referrals being included show that 71.4% of referrals were correct being diagnosed as glaucoma or required follow up (Tuck, 1991).

Other authors, nine-months after continued with this study, commended that abnormalities of the optic disc and/or visual field were reported by the optometrist in only a minority of referrals.

In order to improve referral accuracy a new guidelines for referrals were suggested for when abnormalities are suspected. Another suggestion was to measure IOP, visual field and disc assessment.

To sum up, all the authors concluded saying that the accuracy of glaucoma referrals is an area for potential improvement.

## **6.2 Accuracy of referrals for cataracts**

According with a study realized with 172 referrals of Optometrists has shown that only 7% of the cataract referrals included information about the effect of this condition on patient lifestyle. Legally mandatory information was also absent in some of the referrals which the most important was the signed patient consent, only obtained in 5% of referrals. Following up to the study, they could demonstrate that it is clear that direct referral is associated with higher quality referrals (Pooley and Frost, 1999).

## 7 WRITING REFERRAL DOCUMENTS

Until now, this literature has shown the importance to refer a patient and the accuracy and efficiency of that. Also, it is important to know how to do a referral letter, in order to facilitate the communication between the healthcare professionals.

When optometrists have to refer a patient must write a referral letter. This is a detailed report of the signs, symptoms, diagnosis and treatment in order to follow up an individual patient. The referral letters guidelines are made to manage that it accomplishes its purpose. This will be argued bellow.

In the field of optometry, a referral letter can be about refractive errors and their correction including contact lenses, mobility and binocular disorders and low vision, but can be also related to diseases of the eye, adnexa or visual pathway. The referrals letters must accomplish some different goals:

- To communicate the reason for referral
- To identify anomalous results
- To recognize the abilities and knowledge of the healthcare professional who receive the patient
- To point out the relative urgency of referral
- To show the information easily
- To keep a copy of the referral letter

A referral letter should include all the clinical information that is relevant to understanding the case reported. Optometrists should not report clinical information that is not relevant to the case story. Despite of this, optometrists have the necessary skills to carry out a tentative diagnosis. An important point to consider is patient's identification. This fact, must be protected unless they give consent.

Regarding to the main of times to refer, it is possible to refer more than one case. It is also feasible to refer several times different patients with the same eye condition with the purpose to demonstrate common features or differences between them.

In order to start writing a referral letter, it is essential to know to whom it is addressed. Depending to whom the patient is referred; it should have a specific structure. Mostly, the structure changes in function of the professional specialist in eye diseases or not.

Following this fact, referrals letters through family doctors must follow general rule to achieve an accurate and adequate referral. This referral letter has to include only relevant information (signs, symptoms) to avoid misunderstandings, direct opinion of which is what the optometrist considered abnormal and say what the family doctor should do because may be they do not know to whom refer the patient (ophthalmologist, neurologist and so on) in accordance to the sight test results.

On the other hand, direct referral letters to ophthalmologist should not include a specific diagnosis but a description of the case and the optometric test are needed at the beginning. Despite that, at the end of the referral letter there will be a section which can include the optometrist suspicious, abnormal results and a tentative diagnosis with the relevant clinical information.

To conclude, writing referral documents is a skill that requires training to be effective. It will be useless if it is hand writing without being able to understand, too extensive and with abbreviators. Optometrist must follow up the referral letter and make sure that the information arrives. In appendices section there are examples of referral letters to ophthalmologist and family doctors.

## 8 INFORM THE PATIENT

In order to achieve satisfactory referral accuracy, efficiency, avoid false positives, detect urgent referrals or emergency referrals, it is essential to have a good communication with the patient. Frequently, the cause of a false positive referral is the poor communication between the patient and the healthcare professional.

Before testing, questions will help the practitioner to know about the patient's vision, loss of vision, previous ocular pathology or general care. These questions will provide important and necessary clinical information for the patient's ocular refraction and it is crucial to show special attention on it because it can be an impact for untrusty patients. In fact, this initial contact with the patient will provide essential key points and the professional can achieve trust with them for a successful outcomes.

It is known that professional practitioners must have to consider the psychological impact through the use of questionnaires in the professional practice. In order to reduce psychological harm to participants, it is essential and effective communication and the option to decline answers any question (Jorm, 1994).

An effective communication with the patient it is the key point to achieve a correct development of the process. Another key point to consider is patient's obedience. To achieve a successful development of the process it is necessary that the patient follow the healthcare professional instructions. To get this, a good communication, the quality information and what is given and how is given and the interaction of the information between the healthcare professional and the patient, it is crucial to avoid the process failure. In conclusion, patient's satisfaction is possible when the healthcare professional sample concern and interest about patient's care, always respecting patient's point of view.

There are different types of communication and situations which requires a specific communication. Physical contact is an important sign of non-verbal communication between the healthcare professional and the patient. Silence and non-verbal

communication are frequently the most expressive communication and shares more information than verbal communication.

Focusing on verbal communication, it shows insufficient information about the sight test results, diagnosis, the reasons to refer or tests needed in order to complete the exam accurately.

Patients have the right to be informed about their care and the treatment options available and know about the risks or benefits associated. Healthcare professionals have to explain and inform the patient with an appropriate vocabulary and consider the age, sex and education and so on. Depending of that, the healthcare professional should use different expressions or explanations.

In order to simplify the clinical information the practitioner must use shorts sentences, ordered information and avoid technical terms.

Focusing on the different clinical situations:

- If the patient is a child, the optometrist should involve parents making decisions as appropriate.
- In case that the patient is from another country or culture, the optometrist has to make an effort to understand the patient and develop a good communication with them.

Finally, it is important to know that communication of medical information between clinicians is lawful without the patient consent, if it is the interests of the patient; therefore the patient signature space is not necessary. Despite of this, confidentiality is the most important fact to consider because patient routinely share personal information with their healthcare professional. If this information is not protected, trust will reduce.

According to the College of Optometrists (UK), optometrist must explain the patient eye condition in a way that they can understand clearly. It is important that the professional eye care identify their self to the patient, e.g. the entire name. It is also said that it is priority the patients care but also their concern.

It is crucial to give patients the following information before referring:

- Information about the condition.
- If the optometrist use technical words has to explain the meanings.
- Accurate information about the optometric services that the optometrist offers and gives.
- The patient has to be aware of what is to be expected from the treatment. This will give the patient real expectative.
- Give to patients appropriate written information about services that can help them and if needs to be referred write a referral letter with the reasons for referral.
- Tell the patient what you expect about the referral and what to do if get worse before they are seen.
- Give a copy of any correspondence.



## 9 PROFESSIONAL CODE OF ETHICS AND BEHAVIORAL PATTERNS

Individuals engaged in a profession have an ethical obligation to whomever they offer their services. A profession is required to have a Code of Ethics.

It is essential that each professional has their own Code of Ethics because this serve to help practitioners in their decision and in practicing in accordance with the guiding principles, which are include in the Code of Ethics, that are expected of a healthcare professional. A profession requires responsibility and providing the necessary attention and accurately services.

Optometrists have various national Codes of Ethics as healthcare professionals in Spain. Each community follows their rules. Despite of this, there are the same basis of ethics and behavior conduct as healthcare professionals. The main aims are:

- To express the principles that characterizes optometrist as a professionals and their implication with professionals ethics.
- To manifest the quality of their vocation as professionals serving the community and which has to place some principles above the economic and personal benefits.
- To help the optometrist to achieve the required conduct with the patients and others healthcare professionals.

According the Spanish Code of Ethics:

- Patients have to have complete and exact information about the diagnosis test with a clear and satisfactory vocabulary.
- In order to have real expectations, the optometrist has to write and explain clearly how far the patient can get visually.
- Patient consent (or parent consent if the patient has less than 18 years old) and opinion is required and must be taken in account.



- If the patient is a child, parents have to be present during the visual examination.
- It is compulsory to verify if the patient has understood the treatment to follow.
- Optometrist has to facilitate the communication with patients from other countries.
- The reason for referral must be clear.

## 10 DISCUSSION

The main goals of this essay were a literature review on optometric referrals. How, when and to whom refer patients were the main points to consider in the research. Despite of this, urgent referrals, false positives, accuracy and adequacy, how to write a referral letter and inform the patient and what the code of ethics and behavior patterns says has been discussed in order to conclude the factors to take into account when a referral is needed.

Outcomes of the literature are a valuable source of information for healthcare professionals about optometric referrals process, leading to a better communication between professionals while working with a patient and achieve the best service for them.

During the literature review I obtained new skills and I have improved also existing ones. For example:

- Knowledge about the importance of accuracy and adequacy referrals.
- The importance to avoid false positives referrals.
- Skills to inform the patient with the appropriate vocabulary.
- Distinguish when a referral is urgent or not.
- How write a correct referral letter depending on the professional to whom is referred.

## 11 CONCLUSIONS

The literature review achieved the target goal of producing an essay on optometric referrals which provides an insight on the importance of an appropriate referral. It has also been possible to give advice of the importance of an accurate referral and suggest instructions for preparing referral documents. Other points to achieve were recognition and detection of false positives patients and urgent referrals as well as to learn about the professional Code of Ethics and Conduct.

I have accomplished to learn and improve knowledge on primary eye care duties and different rules to follow as a professional.

After much research and according to several studies published and mentioned on this literature it is known that prompt and accurate diagnosis is vital to minimizing sight loss from eye conditions. Also, there is a need for multiprofessional education due to advice and referral suitably the patients. Additionally, a good communication between healthcare professionals is crucial throughout the process, as it is possible that involves several different healthcare professionals from various fields.

Finally, I achieved to write an essay in English with technical vocabulary within my professional field.

## 12 FUTURE STUDIES

There are some recommendations for a future literature regarding optometric referrals and new material for healthcare professionals. To make the research more complete it would be ideal to have information about the main reasons for optometric consultations and make a point which explains clinical pathologies that needs to be referred. This would provide clearer information about the general optometric field and will help to know more about patient's necessities.

Also, some research about general protocols in healthcare referrals in Catalonia would also bring an understanding of the healthcare system. It would be good to have a comparative between different countries about how, when and to whom refer a patient in the optometric field. As it is normal, every country has their Code of Ethics and behavioral patterns and protocols established.

An inaccurate optometric referral can be a frightening experience that affects the patient both physically and emotionally. Throughout the process, the patient will need emotional support from the doctors or optometrist treating them, as well as a good communication and information about their healthcare.

It would also be good to gather and add some data about what methods are used to help patients emotionally during the referral process.

## 13 REFERENCES

Charlesworth, P. (2006). Referring common conditions accurately. *Replay Learning*.

College of Optometrists. (2001). *Guidance on the urgency referrals*. <<http://guidance.college-optometrists.org/guidance-contents/communication-partnership-and-teamwork-domain/working-with-colleagues/urgency-of-referrals/>> [Accessed: March 2017].

College of Optometrists. (2001). *Referrals*. < <http://guidance.college-optometrists.org/guidance-contents/communication-partnership-and-teamwork-domain/working-with-colleagues/referrals/> > [Accessed: March 2017].

College of Optometrists and the Royal College of Ophthalmologists. (2009). *Guidance on the referral of Glaucoma suspects by community optometrists*. < <https://www.college-optometrists.org/guidance/supplementary-guidance/guidance-on-the-referral-of-glaucoma-suspects.html> > [Accessed: March 2017].

Davey, C.J. (2011). *Referrals from Primary Care: An investigation into their quality, levels of false positives and psychological effect on patients*. United Kingdom: Bradford.

Harrison R.J. (1988). Referral patterns to an ophthalmic outpatient clinic by general practitioners and ophthalmic opticians and the role of these professionals in screening for ocular disease. *British Medical Journal*, 297, 1162-1167.

Junta General de Colegiados del Colegio Nacional de Ópticos-Optometristas de España. (2006). *Código deontológico y Manual de buenas prácticas clínicas del óptico-optometrista*. <[http://opticosoptometristasdegalicia.org/wp-content/uploads/2015/07/codigo\\_deontologico.pdf](http://opticosoptometristasdegalicia.org/wp-content/uploads/2015/07/codigo_deontologico.pdf)> [Accessed: March 2017].

Jorm, A. F. (1994). Do mental Health surveys disturb- further evidence. *Psychological Medicine*, 24, 233-237.

Mason, J & A (2002). Optometrist prescribing of Therapeutics agents: Economic Implications for the UK. Chapter 2, 10-26.

Pacheco, M. *Calidad y efectividad de los informes de derivación*. Universitat Politècnica de Catalunya, Terrassa.

Pierscionek, T. (2009). Referrals to ophthalmology: optometric and general practice comparison. *Ophthalmic and Physiological Optics*, 29, 32-40.

Pooley, J.E. & Frost, E.C. (1999). Optometrists' referrals to the Hospital Eye Service. *Ophthalmic and Physiological Optics*, 19, S16-S24.

Roberson, G.(2006). Quality and effectiveness of referral letters. *Optometry in Practice*, Vol 7, P.83-88.

Scully, N.D, Chu, L., Siriwardena, D., Wormald, R. & Kotecha, A. (2009). The quality of optometrists' referral letters for glaucoma. *Ophthalmic and Physiological Optics*, 29, 26-31.

Tuck, M.W. (1991). Referrals for suspected glaucoma- An International Glaucoma Association survey. *Ophthalmic and Physiological Optics*, 11, 22-26.

## 14 APPENDICES

### A. College of Optometrist, Guidance for referral 2001



THE COLLEGE  
OF OPTOMETRISTS

## Referrals

### C142

You may refer a patient or you may receive a referral from a colleague. If you receive a referral, you should address the reasons for referral and advise the patient to consult their regular practitioner for routine eye care.

### When to refer

### C143

If you observe a sign or symptom of injury or disease which you cannot manage within your competence or scope of practice, you should refer patients to an appropriate practitioner who is registered with a statutory regulator.

### C144

You should only refer patients for cataract surgery if the patient is having visual symptoms that are bad enough to warrant surgery. This will depend on factors such as the patient's visual acuity.

### C145

If, in your professional judgement, you do not need to refer the patient, or it is impractical to do so, you may decide to manage the condition yourself.<sup>171</sup>

### C146

If you decide not to refer the patient to a doctor you must record:

- a a sufficient description of the condition
- b the reason for deciding not to refer on this occasion, and
- c details of advice or treatment given to the patient.

### C147



If you decide not to refer the patient you should inform the patient's GP of any relevant findings if the patient consents.

#### C148

The welfare of the patient must not be compromised.

#### C149

You must refer patients with appropriate urgency. If there are local protocols in place for referrals, including emergency or urgent referrals, you should follow these. If in doubt, you should seek advice from the on-call ophthalmologist to determine the most appropriate pathway for the patient. Where there are no local protocols, guidance on which conditions are considered an emergency and which are considered urgent can be found in para [C171a](#) and [C171b](#).

#### C150

Patients have a right to be fully involved in decisions about their care.

#### C151

If the patient does not wish to be referred you should:

- a ensure the patient understands why the referral is necessary
- b record a full account in the patient records, and
- c obtain the patient's signature on a declaration that they do not wish to consult a doctor.

### Whom to refer to

#### C152

You must refer patients to a practitioner with the appropriate knowledge and skills who is registered with a statutory regulator.

#### C153

When you refer a patient, you also transfer responsibility for the relevant part of the patient's care.

#### C154

If the patient is not registered with a GP or wishes to see a doctor privately, you should give the patient the referral letter and tell them to register with a GP or to arrange a private appointment with an appropriate doctor, for example an ophthalmologist. Alternatively, you can send your advice by recorded delivery to the patient and enclose the referral letter.

### Telling the practitioner

#### C155

You should write a clearly worded letter of referral and include:

- a relevant details from the eye examination
- b the reason for referral
- c details of discussions with the patient and any with the practitioner to whom you are referring, and
- d the level of urgency.

#### C156

If the patient is already receiving care for the observed sign of injury or disease you should notify the practitioner who is caring for the patient if you believe your findings might provide additional, useful information.

#### C157

If you send the referral letter directly to the doctor to whom you are referring you should ensure that the patient's GP is kept informed. This may be relevant in an emergency or where you use a referral centre.

### Telling the patient

#### C158

If you are referring the patient, you must give them a written statement of the reasons for referral, immediately following the sight test.<sup>172 173</sup> If you cannot write the referral letter immediately following the sight test you can write the reason for referral elsewhere for the patient, for example on their prescription.

#### C159

You should ensure the patient understands the urgency of the referral.

#### C160

You should tell the patient when they should expect to hear about their referral and what to do if they do not hear within that timescale.

#### C161

You should tell the patient what to do if their symptoms get worse before they are seen.

#### C162

You should give patients copies of any correspondence relating to them so that they are clear about their condition and the care they are receiving. This can also be useful in case the original correspondence goes astray when the patient sees the clinician to whom they have been referred.

#### C163

If the patient is not legally responsible for their own care, you should copy the letter to the person who is legally responsible.

### C164

You should provide copies of correspondence in large print for patients with visual impairment.

### C165

You should ask young people who have the capacity to consent to treatment if they would like to receive copies of letters about them. You should also check if they prefer to collect a copy of any letter containing personal information or have it sent to their home.

### C166

You should not copy a letter to a patient if:

- a they decline a copy
- b the letter contains information about another person who has not given their consent for you to disclose this information (other than if the patient originally provided this information or if you remove this information from the copy letter), or
- c you feel it may cause harm to the patient, although giving bad news is an insufficient reason for withholding a copy of the letter.

## B. Model Andorrà de triatge (MAT)

---

Model d'atenció a les urgències.

## Annex. Model andorrà de triatge (MAT)

El model andorrà de triatge (MAT) assigna els pacients, un cop valorats, en 5 nivells d'urgències. Aquests nivells són:

Nivell 1: situacions que requereixen ressuscitació amb risc vital immediat (atenció immediata).

Nivell 2: situacions molt urgents, de risc vital previsible.

Nivell 3: situacions d'urgència, de potencial risc vital.

Nivell 4: situacions de menor urgència, potencialment complexes, però sense risc vital.

Nivell 5: situacions no urgents, que permeten una demora en l'atenció, poden ser programades sense risc per al pacient.

### C. Carta de derivació a l'oftalmòleg

Nom Pacient:

Nº HC:

Data:

Sexe:

Edat:

#### INFORME OPTOMÈTRIC:

- Motiu principal de consulta:

- Antecedents rellevants:

- AV en condicions habituals en VL:

UD: (estenopèic: )

UE: (estenopèic: )

- AV i refracció actual en VL:

UD: AV: |

UE: AV: Adició:

- Altres:

- Motiu de derivació:

Nom alumne:

Nom professor/a optometria:

#### INFORME OFTALMOLÒGIC:

D. Suggestiment dels apartats que ha de contenir una carta de derivació al metge de capçalera

# ENCAPÇALAT

**Professional**  
**Direcció**  
**Població, codi postal**

Asunto: Sra. Xxxxx Xxx

Fecha: 13/09/13

1. Presentación del caso:
  - Paciente/ Sr.a.....de .....años que acude a nuestra consulta con síntomas.....
  - La Sr.a.Xxxx nota, desde hace unos meses, algo de distorsión en la visión de su OI
2. Resultados destacables:
  - Al examen se detecta/observa....
  - Los resultados del examen revelan....
3. Diagnóstico tentativo o conclusión que incluye la justificación de la derivación (sospecha o diagnóstico tentativo o resultados anómalos)
  - En vista de los resultados clínicos de ....
  - En vista de los cambios en el fondo de ojo/cristalino/conjuntiva...
  - Tal como indican los signos y/o síntomas.....

...creo que la paciente está desarrollando/ sufre de....
4. Solicitar que pensamos debe hacerse
  - Por este motivo le agradecería que la Sr.a..... fuera derivada para.....
5. Urgencia:
  - De forma urgente en el plazo de ....1 semana/1 mes.....
  - De forma rutinaria para control oftalmológico.....
6. Despedida y firma (incluye filiación y num. colegiado)