

**Submission to the Ministry of Health
on the Draft *Reserved Actions Regulation***

by



The College of Opticians of British Columbia

March 20, 2007

Submission on the Draft *Reserved Actions Regulation*

Executive Summary

The College of Opticians of British Columbia (the “COBC”) is the professional regulatory body for Opticians in British Columbia. The COBC regulates and improves the practice of Opticians to ensure quality professional care for the public of B.C. This submission to the Ministry offers comments by the COBC on the draft *Reserved Actions Regulation* dated November 21, 2006 (“Draft Regulation”), and its implications on regulation of eye care professionals.

The COBC supports the government’s direction towards multidisciplinary practice and increased consumer choice, while ensuring patient safety and public protection. It is our understanding that the new shared scope of practice/reserved actions regulatory model acts in tandem with the legislative reform of existing health professions. Given that the government has been previously designated Opticianry as a regulated health profession, this submission will focus its discussion on the appropriate reserved actions that will safeguard public interest in the dispensing of ophthalmic appliances.

The government has indicated that the *Reserved Actions Regulation* is meant to list health service activities that must not be performed by any person, except members of a regulated profession with the granted legislative authority to perform those activities based on their education and competence. By ensuring that the activities are only offered by persons who are appropriately educated and trained, the reserved activities are an integral component of the scope of practice reform.

However, the circulated Draft Regulation has overlooked critical ophthalmic dispensing activities that should be reserved actions. To properly measure, design and dispense ophthalmic lenses to correct visual impairment, the Optician must consider many health and technical components. The COBC believes that only a trained professional has the competence to properly perform ophthalmic dispensing activities. In particular, the COBC is concerned with the draft reserved actions of s. 2 (s), (t), and (v), and the draft definitions of “dispense”, “prescribe” and “verify”. These draft actions and definitions do not represent either the provincial, national or international understanding of the ophthalmic dispensing process and do not adequately regulate ophthalmic dispensing for the benefit of the public of British Columbia.

The COBC offers the following key considerations for the government in regard to ophthalmic dispensing:

- *Ophthalmic appliances are neutral systems until they interact with the human eye.*
Ophthalmic lenses can only induce a remedial or harmful effect when worn by the patient, not by virtue of their design, measurements or power of the lens to correct refractive error.
- *Professionals must consider the patient’s visual needs and impairment in order to determine the appropriate lens design specifications in ophthalmic dispensing.*

Ophthalmic lenses can only be appropriately designed and dispensed if the professional has properly assessed the patient's visual needs in the initial lens design phase.

- *The Draft Regulation fails to reserve actions in ophthalmic dispensing that require the appropriate education and competence to safeguard patient safety and public protection.*

The Draft Regulation has included inappropriate services as the reserved activities in ophthalmic dispensing. In effect, the Draft Regulation negates the existing education and certification process that had been developed according to current regulations to protect public interest. It will also have the undesirable effect of regulating persons who are currently not certified or regulated.

- *The Draft Regulation will threaten public choice and impede multidisciplinary practice for eye care professionals.*

If the Draft Regulation goes ahead in its present form, the draft reserved activities will unintentionally but effectively grant exclusive scope of practice to optometry and severely narrow public choice in eye care professionals. This would create a scenario that will set back the scope of practice reform and is irreconcilable with the COBC's understanding of the government's commitment to shared scopes of practice and increased public choice.

- *The Draft Regulation has severe implications on eye care health services in B.C.*

The current draft of the *Reserved Actions Regulation* will prevent Opticians from practicing to the full extent of their training. The unintended consequence is that the B.C. public will have no choice but to purchase ophthalmic appliances from optometrists – a profession that has an inherent conflict of interest.

- *The COBC recommends an alternate set of reserved actions that would ultimately ensure that the B.C. public has access to choice and safe dispensing of ophthalmic appliances.*

The COBC suggests that the Draft Regulation should be reconsidered to ensure that it supports multidisciplinary practice, increased choice for the public and the appropriate patient protection measures in relation to ophthalmic dispensing.

I. Introduction

A) The Role of the COBC

The duties and objects of the COBC are contained in section 16 of the *Health Professions Act*: the COBC is given the delegated authority from the government to “serve and protect the public” (s.16 (1)(a)) and to “superintend the practice of the profession” (s. 16 (2)(a)).

The COBC has continuously acted responsibly to regulate Opticianry by closely following its public interest mandate, even though the public interest may not benefit the profession and its members. The COBC ensures that its recommendations and objectives always stem from its core duties to the public interest.

By virtue of being the regulatory body for Opticianry in B.C., the COBC is also a knowledgeable body on the practical aspects of regulation. The regulatory body is in fact the professional expert acting in the public interest under this system – it possesses the breadth of expertise that is not ordinarily available to government.

However, the present consultation process in legislative and scope of practice reform has inadvertently consigned the regulatory college as merely one voice among many stakeholder voices; this in turn sets the regulatory college in an advocacy position, albeit one for the public. The college is forced to offer comments to the government that espouse a certain position (‘this is good for the public interest’) rather than expert advice (‘this health procedure involves X and Y. If the government determines that X needs regulation, these are the factors to consider’).

The COBC believes that its expert advice on Opticianry would assist the government in developing regulation with sound underpinnings and satisfies the government’s direction for the profession.

B) Scope of the Discussion

Opticianry is the health profession where non-pathological visual impairment is corrected by the Optician with ophthalmic lenses. The Optician specifically measures, designs and makes ophthalmic lenses for the patient to achieve the desired remedial effect – this process is called “ophthalmic dispensing”. Ophthalmic lenses are lenses designed to correct or to protect a condition of the eye: they are mounted on a carrier, such as eyeglass frames or contact lenses, to form ophthalmic appliances. Commonly recognised ophthalmic appliances are eyeglasses and contact lenses; however, appliances also include low vision aids and prosthetic ocular devices.

The ophthalmic dispensing of lenses involves the interaction between the anatomical visual system of the patient (cornea, iris, crystalline lens, retina and fovea) and the lens optical system of the lens (lens form, lens function, lens material and lens orientation). The systems are independently complex and the Optician must assess both systems in interaction with each other in order to achieve the desired remedial effect.

It is important to emphasize that the lens optical system is a neutral system until it interacts with the human eye. Ophthalmic appliances cannot be qualified as ‘good’ or ‘bad’ when considered apart from any anatomical visual system. An ophthalmic lens can only produce a remedial or adverse effect on the patient when the lens is interacting with the eye. It is at this point that the lens can be qualified as ‘appropriate’ or ‘inappropriate’ for the patient, dependent on the patient’s visual needs and intended remedial effect of the lens.

Therefore, the neutrality of the ophthalmic appliance is the fundamental reason for the need of professional training in ophthalmic dispensing. A lens can be properly made according to the given design and measurements, but if the design and measurements are inappropriate for the patient in the first place, the lens would induce adverse effects when worn. The effect of an ophthalmic appliance on a patient ultimately depends on professional judgment in lens design during ophthalmic dispensing.

II. Key Components of Ophthalmic Dispensing

The COBC believes that it is important for the government to be clear about the process and phases in ophthalmic dispensing. A complete understanding of ophthalmic dispensing will stress the need to reserve the appropriate actions that are necessary to safeguard public choice and protection.

Ophthalmic dispensing consists of two main phases: the prescribing phase and the dispensing phase. In the prescribing phase, the Optician assesses the patient’s visual needs and then designs appropriate lenses based on his/her professional judgment in lens design for the patient’s needs. In the dispensing phase, the Optician ensures that the resulting ophthalmic appliance produces the appropriate remedial effect as intended by the Optician.

Given the breadth of ophthalmic dispensing, the COBC will highlight the key components of the process that are most affected by the Draft Regulation. The comprehensive discussion on ophthalmic dispensing is found in Appendix 1 of this submission.

A) The Prescribing Phase

In the prescribing phase, the Optician must assess the patient’s remedial needs and design lenses to produce an ophthalmic appliance to correct vision. It is helpful to note that in ophthalmic dispensing, the act of “prescribing” is broader than the government’s current definition in the Draft Regulation.

The Optician first considers the nature of the patient’s visual impairment and visual needs. The Optician then designs ophthalmic lenses with the appropriate remedial effect for the patient’s visual needs. Any ophthalmic lens has four main effects on the eye: the corrective effect, the prismatic effect, the selective light absorption/light transmission effect, and the impact resistance effect. Professional training is necessary to design a lens with the appropriate balance of the four major lens effects for the patient; otherwise, an inappropriately designed lens will have adverse effects on the patient.

There are more than 15 individual design elements that make up an ophthalmic lens (see Appendix 2), and when taken altogether, these design elements ascribe the appropriate lens effects to the lens for the benefit of the patient. All eye care stakeholders understand the complex requirements involved in this design stage of an ophthalmic lens. The American National Standards Institute (ANSI) issues standards for ophthalmic lenses and an extensive list of stakeholder groups participated in the formation of these standards (see Appendix 3). These standards are considered so important in the lens design stage that all eye care professions have incorporated the professional's ability to adhere to these standards into professional competencies, academic curricula, entry-to-practice examinations and professional standards of practice. The COBC's *Professional Standards of Practice* (see Appendix 4) reflects the rigorous standards in lens design.

A telling illustration of the importance of the prescribing phase is found in paediatric ophthalmic dispensing. Infants and children with visual impairment rely on the proper design for speciality ophthalmic lenses. The lens design must be based on the accurate assessment of the infant's visual needs. The Optician is responsible for recommending a lens design that takes into account the accepted standards of lens design, the muscular imbalance in the infant's anatomical visual system and the adaptation of the ophthalmic prescription to the infant's visual needs.

B) The Dispensing Phase

Having determined the appropriate lens design, the Optician then has ophthalmic lenses made according to his/her specifications.

In the dispensing phase, an unfinished piece of glass or plastic is processed into the finished product. The ophthalmic lens undergoes two main types of verifications: the verification between the physical properties of the lens and the recommended lens design, and the verification of the ophthalmic appliance in interaction with the patient's visual system.

In the current practice of Opticianry, the verification of the physical properties of the lens is carried out mainly by optical lab technicians and assistants. The technician compares the finished ophthalmic appliance with the Optician's lens design. Since an ophthalmic appliance is a neutral system by itself, the technician only looks at the physical production aspects of the appliance.

As the professional who prescribed the lens design and measurements, the Optician is ultimately responsible for ensuring that the finished ophthalmic appliance is appropriate for the patient's visual needs. An ophthalmic appliance can only remedy vision if it is in proper interaction with the patient's eyes. In this stage of the dispensing phase, the Optician needs to physically see the patient in order to determine that the lenses, when worn, will properly interact with the visual axis of the eye and help the patient to see clearly.

Going back to the illustration of paediatric ophthalmic dispensing, the Optician designs the suitable lenses for the infant in the prescribing phase and sends the work order to the optical lab. When complete, the lab sends the finished ophthalmic appliance to the Optician. The Optician must then verify the appliance on the infant, to ensure that it is appropriately interacting with the

infant's visual axis. Adjustments to the appliance are part of the verification by the Optician, since even 1 mm of imbalance could cause irreversible damage to the infant's eyes for life.

III. Limitations of the Draft Regulation

Having clarified the phases in ophthalmic dispensing, the COBC seeks to inform the government of the irreconcilable gaps between the current practice of Opticianry and the Draft Regulation's set of reserved actions for ophthalmic appliances.

The heart of health regulation is to ensure that the regulated professional has the expertise to provide certain services in a safe and effective manner to the public. As it is written, the Draft Regulation negates the existing standards, education and certification processes that had been developed according to current regulations. Therefore, the Draft Regulation does not adequately ensure patient safety and public protection in either the prescribing or dispensing phase of ophthalmic dispensing. It will also have the undesirable effect of regulating persons who are currently not certified or regulated.

The COBC's concerns are even more significant as the COBC understands that both the *Opticians Regulation* and the *Optometrists Regulation* are to be amended to harmonize with the *Reserved Actions Regulation*. Keeping in mind the far-reaching implications of the Draft Regulation, it is important for the government to consider its potential effects on eye care health services.

A) The *Reserved Actions Regulation* Needs to Incorporate the Appropriate Definitions that Reflect Accepted Practice for Opticianry

The definitions of "dispense", "prescribe", and "verify" in the Draft Regulation do not reflect the long-standing and accepted definitions of ophthalmic dispensing. Opticianry has a national set of competencies that is recognized by the ten provincial regulatory bodies for Opticianry. The National Association of Canadian Opticianry Regulators (NACOR) has set this definitive measure of the profession in the *National Entry to Practice Competencies* document. The COBC has adopted the national set of competencies for B.C. (see Appendix 5). In addition, experts in the profession comprised of educators, practitioners and industry representatives also have developed manufacturing standards that are based on the needs and tolerances of an individual, such as the ANSI standards.

While the COBC understands that the reserved actions are meant to be a list of narrowly defined activities, the Draft Regulation has improperly defined key competencies in ophthalmic dispensing. The stated purpose of reserved actions is to identify health services that must be performed by a regulated provider with the appropriate education and competency. As it is written, the Draft Regulation thus falls short because its definitions do not properly identify the visual care services that are currently provided by regulated professionals.

In addition to improper definitions for ophthalmic dispensing, the COBC notes that the definitions for ophthalmic appliances are different from those for wearable hearing instruments and dental appliances. There are different definitions for "dispense" and "fit", even though all

three appliances share similar attributes – they are specifically designed and made to address the patient’s physical needs. Notably, only the definition for “dispense” in relation to vision appliance includes the limiting qualification of “verify”. Other health professions do not have this limiting specification. The COBC believes it is significant to highlight that the three appliances are currently not regulated in a similar manner.

B) The *Reserved Actions Regulation* Needs to Reserve Actions that Reflect the Ophthalmic Dispensing Process

The improper definitions in the Draft Regulation exacerbate the COBC’s difficulty with the draft reserved actions in relation with ophthalmic dispensing. The Draft Regulation lists two reserved actions that are intended to reflect ophthalmic dispensing:

- 2 (t) to verify a vision appliance;
- (u) to fit a contact lens

The COBC is most concerned with the government’s intention for characterizing ophthalmic dispensing as the act “to verify a vision appliance” (s. 2 (t)) without reserving the act of dispensing. The Draft Regulation defines “verify” to mean “to verify objectively to the authorization”. However, there is no definition for “verify objectively”, although “authorization” is defined in the context of the act of “prescribe”.

In light of the Draft Regulation’s ambiguity, the COBC assumes that the government considers “verify objectively” to mean the verification of measurements, and “an authorization” to mean “an ophthalmic prescription”. With these definitions, the draft reserved action under s. 2 (t) can be interpreted as “to verify the measurements of the ophthalmic appliance to the ophthalmic prescription”.

The COBC believes that the qualifier of “objectively” denotes an emphasis on the straightforward checking between the ophthalmic prescription and the finished product, without regard for considerations of professional judgment in lens design. As Part II of this submission has already highlighted, professional judgment in lens design and competency are the keys to responsible ophthalmic dispensing. Since an ophthalmic appliance is neutral by itself, ophthalmic dispensing depends on the professional’s assessment of the patient’s needs, the lens design to meet those needs, and the professional’s confidence that the finished ophthalmic appliance is correctly interacting with the patient’s visual system. The draft reserved action of s. 2 (t) has therefore misconstrued the true activities that are essential to ophthalmic dispensing. In particular, the role of an ophthalmic prescription and the verification processes should be reassessed.

The Draft Regulation improperly assumes that an ophthalmic prescription contains the full set of measurements for ophthalmic dispensing. According to current regulations, an ophthalmic prescription only indicates four baseline measurements that make up the power of the lens (corrective effect) to see objects at an infinite distance: spherical power, cylindrical power, axis of astigmatism and reading addition (see Appendix 6). Since an ophthalmic lens is composed of more than 15 lens design elements, the ophthalmic prescription by itself is insufficient for

making an ophthalmic lens. Ophthalmic lenses are made according to the Optician's lens design and specifications based on the patient's needs (see Appendix 2). The Draft Regulation has therefore based a reserved activity on an inaccurate understanding of the role of an ophthalmic prescription in dispensing phase.

Even if "authorization" has a broader meaning than an ophthalmic prescription, the Draft Regulation's reserved action of "verify" is still inappropriate to ophthalmic dispensing. Assuming the act of "verify" means the verification of measurements of an ophthalmic appliance to the intended specifications, an ophthalmic appliance is currently "objectively" verified at the four different stages of the dispensing process:

- At the completion of the process of turning an unfinished piece of glass into a lens;
- At the completion of the process inserting the lenses into the frame;
- Prior to leaving the manufacturing facility for delivery to the eye care professional; and
- Upon the receipt of the finished ophthalmic appliance at the office of the eye care professional.

However, it is lab technicians and assistants who currently verify the physical properties of the lens to the Optician's lens design. In fact, this type of verification is largely an automated process at large-scale manufacturing facilities. The eye care professional only "objectively" verifies the physical properties of the finished appliance when it is received by the office, before s/he uses professional judgment in lens design to verify the appropriateness of appliance on the patient him/herself. It is clear therefore that the draft reserved action of "verify" would only refer to the work of lab technicians and regulate the wrong group of persons. Lab technicians are currently not regulated as a health profession and rightly so, for they already follow the rigorous standards set by the optical industry to produce a neutral product.

The importance of a broader understanding of verification is also evident in other health professions where an appliance is prescribed to correct a physical impairment. The fitting of dentures is a good example. The dentist assesses the patient's needs and sends the design specifications and the study impressions to the dental lab. The finished dentures undergo numerous verifications and adjustments by the dentist to ensure that the appliance fits correctly in the patient's mouth. These bite adjustments by the dentist are crucial to ensure that the dentures are appropriate for the intended patient. Similar to ophthalmic dispensing, it is the proper physical interaction between the appliance and the patient that allows the professional to care for the patient.

The reserved actions for ophthalmic dispensing should be the key activities performed by the Optician, for s/he is the professional who is responsible for correcting the patient's visual impairment with ophthalmic lenses. The Draft Regulation has therefore set an understanding of "verify" that is inappropriately narrow. The mere verification of the physical qualities of the ophthalmic appliance is insufficient for quality professional care and public protection. As it is written, the Draft Regulation incorrectly focuses on the activities of currently unregulated persons, while failing to regulate the appropriate activities that are necessary to safeguard public safety and protection.

C) The *Reserved Actions Regulation* Needs to Recognize that Ophthalmic Dispensing is Based on Professional Judgment in Lens Design, not on Ophthalmic Prescription

The COBC believes that the specific shortcomings in the Draft Regulation stem from the prevailing historical notion that the ophthalmic prescription is integral to ophthalmic dispensing.

The Draft Regulation lists “to prescribe a vision appliance” (s. 2 (s)) as a reserved activity, in which “prescribe” is defined as “to issue an authorization to dispense” and “an authorization” is assumed to mean “an ophthalmic prescription”.

The COBC believes that it is important to clarify the role of the ophthalmic prescription in the current practice of ophthalmic dispensing. At the present, the government’s definition of “prescribe” is the act of a prescriber (physician or optometrist) where s/he writes an ophthalmic prescription that contains the measurements of the refractive error of a human eye. As previously mentioned, an ophthalmic prescription only contains the four baseline measurements that make up the refractive error (see Appendix 6).

It is helpful to note that an ophthalmic prescription does not serve the same function as a pharmaceutical prescription by a physician. A pharmaceutical prescription contains the complete set of information for the recommended remedy: take X tablets at Y intervals for Z days. By contrast, an ophthalmic prescription does not contain a remedy. An ophthalmic prescription only contains the measurements for one aspect of the patient’s anatomical visual system: the refractive error.

However, the present definition of an ophthalmic prescription is not necessarily accepted as the best definition by either Opticianry or optometry.

Both Opticianry and optometry agree that ophthalmic dispensing involves more than 15 design elements in the lens design stage in order to make an ophthalmic lens that can benefit the patient (see Appendix 2). Both professions also acknowledge that only a professional with the appropriate education and competence can properly design an ophthalmic appliance. There is also acceptance that the refractive error of the eye is relatively simple to measure by the eye care professional – it can be determined by computerized equipment such as an auto-refractor or automated refraction equipment.

However, Opticianry and optometry disagree on which professional is responsible for final design of the ophthalmic lens. Opticianry believes that the Optician is the professional who is appropriately educated to determine the lens design and assumes the responsibility to ensure that the final appliance is beneficial for the patient.

The body of knowledge supports Opticianry’s position. At the present, the Optician’s professional training is devoted to the study of ophthalmic lenses and the correction of non-pathological visual impairment. The Optician has the competence to determine the full set of measurements of the patient’s anatomical visual system and s/he is specially educated to convert these measurements into an ophthalmic lens that is designed to allow the patient to see clearly

under specific conditions, such as for distance (driving purposes) or for close quarters (reading or occupational purposes).

From the draft set of reserved actions, it is clear that too much emphasis is placed on the ophthalmic prescription and not enough emphasis on the professional judgment in lens design and intellectual expertise necessary to dispense the appropriate ophthalmic appliance.

The following point is critical for the government's consideration. The Draft Regulation continues to ascribe to the historical notion that the act of prescribing (the writing of an ophthalmic prescription) is the definitive key in designing ophthalmic lenses. This notion, however, contradicts the reality of ophthalmic dispensing and should be reassessed. In practice, the Optician's professional judgment in lens design in the prescribing phase is more important than the ophthalmic prescription itself. It is the Optician's assessment of the patient's needs and the lens design that determines whether the lenses would have a remedial or harmful effect on the patient; therefore, the Optician should be ultimately responsible for the ophthalmic lenses in the correction of visual impairment.

D) The *Reserved Actions Regulation* Should Recognize the Phases in Ophthalmic Dispensing as a Set of Reserved Actions.

The COBC recognizes that the act of prescribing (issuing an ophthalmic prescription) is historically considered as part of an eye health examination. Yet, it is clear from the reality of ophthalmic dispensing that prescribing an ophthalmic appliance (determining the lens design based on patient needs) is separate from diagnostic procedures to determine a disease, disorder or condition.

The government itself indicates that it has recognized that the prescribing phase of ophthalmic dispensing is independent from a medical eye health examination. The Draft Regulation reinforces this point since it acknowledges that the act of prescribing (s. 2 (s)) is independent from the act of making a diagnosis to identify pathology (s. 2 (a)(i)(ii)).

However, the historical notion of prescribing has hindered the proper categorization of ophthalmic dispensing. Ophthalmic dispensing is composed of the act of prescribing and the act of dispensing – these two activities are not independent from each other. As it is written, the Draft Regulation reserves the act of prescribing (s. 2 (s)) but it does not reserve the act of dispensing. This omission continues the erroneous assumption that prescribing is separate from dispensing in ophthalmic dispensing.

The new shared scope of practice/reserved actions regulatory model supports the review of existing health services for the public interest. To truly reflect the reality of ophthalmic dispensing, the COBC recommends the redefinition of key terms and a re-designation of reserved activities. Ophthalmic dispensing should be properly acknowledged in the *Reserved Actions Regulation* by designating “to prescribe and dispense a vision appliance” as the reserved action, along with the appropriate definition of terms as accepted by current ophthalmic experts. This suggested reserved action would be closer to the reality of ophthalmic dispensing and would better safeguard the public interest by reserving this health service to trained professionals.

IV. Implications of the *Reserved Actions Regulation* on the Practice of Opticianry

The *Reserved Actions Regulation* is intended to prevent untrained persons from providing certain health services to the public; however, it has major implications on the regulated profession's scope of practice statements. While the COBC has recommended changes to the Draft Regulation, the COBC is aware that any regulation with regard to the practice of Opticianry needs to be in harmony with the amended *Opticians Regulation* and the government's intended policy decision on Optician-conducted automated refractions.

Until such amendments to the regulations, the COBC is aware that Opticianry continues to rely on the specific authorization to dispense from another health profession, namely physicians and optometrists. However, this current regulatory framework is increasingly difficult to uphold in practice.

A) Current Regulatory Framework for Opticianry is Untenable

The authority of the prescriber is unique in Opticianry, because the authorization to dispense has taken the form of an ophthalmic prescription, which essentially acts as an element of the prescribing phase in ophthalmic dispensing. In other health professions, the authorization to dispense is simply an acknowledgment that the patient has been recommended to get an appliance. The professional who recommended an appliance does not indicate anatomical or product specifications because it is the person who prescribes and dispenses who assumes full responsibility of the finished appliance and of the patient's health and well-being.

However, Opticianry's reliance on a prescriber's authorization to dispense an ophthalmic appliance puts optometry in a conflicted position. The optometrist currently authorizes, prescribes, and dispenses the product they authorize. Under the current regulatory framework, Opticians must obtain an ophthalmic prescription in order to design and dispense new ophthalmic lenses. However, the reality of the Opticianry profession is that authorization from optometry is increasingly difficult to access. Optometric offices are setting barriers to restrict access of ophthalmic prescriptions – neither the patient nor the Optician can easily obtain a copy of the ophthalmic prescription. As a result, consumer choice is limited and the patient is compelled to obtain the ophthalmic appliance from the optometrist.

This restriction of ophthalmic prescriptions is therefore detrimental to the public's right to choose health providers and services, as Opticians cannot continue to offer their professional expertise without access to ophthalmic prescriptions.

B) Draft *Reserved Actions Regulation* Creates Threats to Public Choice

Given the significance of the ophthalmic prescription in the current regulatory framework, the COBC believes that the proposed reserved activities in the Draft Regulation will allow optometry to impose more restrictions on lens design by adding specifications on the ophthalmic

prescription itself. This would severely impact public choice in vision services by limiting Opticianry's ability to prescribe and dispense ophthalmic appliances.

Currently, optometry issues an ophthalmic prescription as the authorization to dispense. An ophthalmic prescription only contains four measurements, but both the Opticians and the optometrists understand that an ophthalmic lens is composed of more than 15 lens design elements. While Opticianry is professionally educated to prescribe all the design elements, optometry believes that the optometrist should be the professional who determines all the design elements on the ophthalmic prescription. A careful review of optometry position papers and literature reveals that optometric stakeholders further believe that the Optician must only dispense according to the optometrist's exact lens design specifications. In other words, optometry is advocating the position that optometrists ought to control the entire prescribing phase of ophthalmic dispensing.

Optometry's position has severe implications for the public of British Columbia: it would effectively grant optometry with a near-monopoly on ophthalmic appliances. The Draft Regulation would allow optometry to prescribe but, without the reserved act to dispense, it would limit Opticianry to "objectively verify". Therefore, if the government continues in the current direction of the Draft Regulation, optometry will undoubtedly redefine the authorization to dispense by modifying ophthalmic prescriptions to include measurements and specifications of all the lens design elements for the ophthalmic appliance.

The resulting ophthalmic prescription would severely restrict the patient's right to choice: the ability to choose the appropriate ophthalmic professional and the ability to choose the appropriate product. Already, organized optometry is advancing its interests in prescribing the final lens design. Organized optometry includes optometric buying groups, consortiums and optometric clinics. It has arrangements with optical manufacturers to advertise ophthalmic products that are only available through optometrists. Furthermore, organized optometry has also developed product lines with brand names such as "D/R (Doctor Recommends™)" (see Appendix 7). While these developments appear to be good marketing strategies by organized optometry, they firmly place the optometrist in an unremitting conflict of interest. There is a high possibility that the patient will be forced to buy a specific ophthalmic product that is only available from the optometrist.

If the current scope of practice in the *Opticians Regulation* remains unchanged, the Optician would be required to dispense only according to the modified ophthalmic prescription: either the Optician cannot dispense the appliance because of product limitations, or the Optician will be restricted to only dispense according to the optometrist's specifications regardless of the Optician's professional judgment in lens design, the patient's needs or the patient's right to choice.

C) Draft Regulation Would Lead to Exclusive Scope of Practice for Optometry

The proposed reserved actions in the Draft Regulation ignore the role of the Optician as a health professional. The COBC believes that the effect of the Draft Regulation is to reduce the Optician to a person verifying instructions issued by an optometrist – in short, giving an exclusive scope

of practice to optometry. This is contrary to the current model of shared scopes of practice/reserved actions regulatory model, where the stated purpose is to enable appropriately trained persons to perform certain reserved activities according to their training. In short, the proposed regulation will ensure that optometry will assume a supervisory role over Opticianry.

Optometrists continue to believe Opticians may only dispense ophthalmic lenses that are designed in totality by optometry, thus reducing the Optician to the role of an order taker. The Draft Regulation reinforces the optometric perspective. If the only reserved action for Opticianry is the existing draft action “to verify objectively to the authorization”, then it is highly likely that the authorization will quickly include all the lens design elements. The unintended consequence will be to effectively limit Opticianry to the physical verification of the finished product to the optometrist’s specifications or to force the patient to purchase the ophthalmic appliance only from optometrists. It would mean the loss of Opticianry as a viable eye care profession.

V. Conclusion

The COBC supports the government’s position to move away from professional exclusivity and towards the new shared scope of practice regulatory model for health professions. Further, the COBC supports the expansion of the scope of practice for both Opticianry and optometry. It is a positive reform that will ensure patient safety and increase public choice.

However, the COBC is deeply concerned that the draft reserved activities that pertain to ophthalmic dispensing do not reflect the reality of the practice of Opticianry, nor do they aim to regulate Opticianry in a manner that is best for the public interest. The reserved actions are meant to be the ‘master list’ of reserved health activities that can only be performed by regulated professionals according to their education and competence. With regard to ophthalmic dispensing, the Draft Regulation falls short of its intended purpose; furthermore, as it is written, it would have significant unintended implications on public choice and safety.

Key recommendations by the COBC:

- The *Reserved Actions Regulation* should define terms related to ophthalmic dispensing based on accepted definitions determined by ophthalmic experts.
- The activity of “to prescribe and dispense a vision appliance” should be a reserved action.
- The *Reserved Actions Regulation* should be developed in tandem with the upcoming amendments of the *Opticians Regulation*, particularly in light of anticipated government announcement on Optician-conducted automated refraction.
- The role of an ophthalmic prescription should be reassessed: If the main function of an ophthalmic prescription is to indicate that the patient requires ophthalmic lenses, rather than to dictate measurements, it is then reasonable that the Optician should be free to determine the appropriate lens design in its entirety and be responsible for the final appliance.

Submission on the draft Reserved Actions Regulation

- The implications of the *Reserved Actions Regulation* need to be carefully considered – increasing public choice and safeguarding the public interest must remain paramount considerations by the government.
- The government is recommended to consult with the regulatory body in the drafting process to ensure that important activities are appropriately defined and included in the regulation, to best safeguard the public interest.

Opticians need to be enabled to prescribe and dispense ophthalmic appliance to patients who need ophthalmic lenses to correct their visual impairment. The COBC understands that the reserved actions are an integral component of the new shared scope of practice/reserved actions regulatory model. The COBC urges the government to include ophthalmic dispensing as a reserved action in order to ensure patient choice and safety in ophthalmic appliances.

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Appendix 3: Standards by the American National Standards Institute

Appendix 4: COBC *Professional Standards of Practice*

Appendix 5: COBC *Entry to Practice Competencies for Opticians in the Province of British Columbia*

Appendix 6: Ophthalmic Prescription by Prescriber

Appendix 7: Advertisement for “D/R (Doctor Recommends™)” in Optometric Publication

Appendix 1

Phases in Ophthalmic Dispensing: the Prescribing Phase and the Dispensing Phase

Ophthalmic dispensing consists of two main phases: the prescribing phase and the dispensing phase.

A. The Prescribing Phase

In the prescribing phase, the Optician must assess the remedial needs of the patient's anatomical visual system and then design lenses to produce an ophthalmic appliance that will correct the patient's visual impairment. It is helpful to note that in ophthalmic dispensing, the act of "prescribing" is broader than the government's current definition in the Draft Regulation.

The Optician first considers the nature of the patient's visual impairment and visual needs. Non-pathological visual impairments include:

- Ametropia – a condition in which there is a refractive error and visual acuity (clearness of vision) is affected.
- Amblyopia ('lazy eye') – a condition in which an eye suffers from poor vision without physical or pathological cause.
- Presbyopia – a refractive condition associated with aging in which eyes cannot focus at short range and vision is nonexistent for objects at close quarters.
- Phoria – a condition where an eye wanders away from the natural resting position when it is not reacting to visual stimuli.
- Diplopia – a condition in which there is the occurrence of double vision.

The Optician considers the patient's visual impairment in relation with his/her visual needs. Visual needs include occupational needs, lifestyle needs and health considerations to age. In the young, eye muscles are extremely susceptible to external stimuli and they can be irreversibly damaged by inappropriate lenses. In the old, weakening eye muscles and aging tissue are more susceptible to ultraviolet and other radiant energy, and so lenses must be treated to protect eyes from overexposure.

Having assessed the patient, the Optician then designs ophthalmic lenses with the appropriate remedial effect for the patient's visual needs. An ophthalmic lens can affect vision because its design changes the way the eye perceives light. Any ophthalmic lens has four main effects on the eye and professional training is necessary to design a lens with the appropriate balance of the four major lens effects for the patient:

- Corrective Effect (Lens Power)

The corrective effect of the lens is how the lens focuses light on the retina to correct the refractive error. The appropriate power of the ophthalmic lens is dependent on the patient's

visual needs (the tasks that the patient needs to perform), the working distance (how far away is the object that is being viewed), the curves of the lenses and the vertex distance (the distance between the lens and the retina). Opticians would use the corrective effect of ophthalmic lenses for patients with ametropia and presbyopia.

The power of the lens is the most widely understood lens effect because the baseline measurements for the power of the lens are the numbers on an ophthalmic prescription, as contained in the current *Opticians Regulations* (see Appendix 2). However, an ophthalmic prescription only contains the baseline measurements, which is the lens power for viewing an object at an infinite distance. As the eye focuses on nearer objects, the power of the ophthalmic lens and the human lens system must change in order to keep the visual system in focus. For ophthalmic appliances designed for tasks at close range, the baseline measurements are inappropriate for the patient's visual needs and the power of the lens needs to be adapted. Under current legislation, the Optician is permitted to change the surface power of the lens (curves on the lens surface) to take into account these aspects.

- Prismatic Effect (Deviation)

The lens can act a prism and change the direction of light rays passing through the lens to the eye. The Optician induces this effect in an ophthalmic lens by either grinding the prism into the surface of the lens or varying the position the optical centre of the lens in relation to the visual axis of the eye. The prismatic effect is important because the Optician can use it to increase or decrease the vergence (diverge or converge) of an eye or to neutralise the effect of the prism to prevent unwanted vergence. This powerful effect is particularly important for patients with phoria and amblyopia. However, the human eye can only tolerate a limited variation of the prismatic effect, and this tolerance grows weaker with age. The eye can tolerate more horizontal variation of the effect but has little tolerance for the vertical variation. In the very young, an inappropriate prismatic effect can even permanently damage eye muscles.

The amount of prismatic effect is directly proportional to the power of the lens and the distance of the visual axis from the optical centre of the lens. Professional standards such as those published by the COBC identify the maximum limits of induced or uncorrected prismatic effect.

- Selective Light Absorption and Selective Light Transmission Effect

The lens can selectively absorb or transmit light. This effect is most widely understood with lenses that absorb light of a particular wavelength, such as sunglasses that inhibit ultraviolet light. Ophthalmic lenses have rigid industry standards – known as tolerances – that specify the correct amount of light that can be transmitted in order to adequately offer protection from radiant energy. The Optician must consider the patient's visual needs to design the appropriate ophthalmic lenses with this lens effect. Visual needs include health needs, such as age, and can range from lifestyle needs, such as ultraviolet protection, to challenging industrial requirements. The wrong choice of light absorption/transmission effect can permanently damage the patient's sight.

- Impact Resistance Effect

Ophthalmic lenses must be designed to resist impact or to protect the wearer against the effects of projectile injury. The form and function of the lens are determined by the lens material, hardening treatments and the thickness of the lens material. There are different impact resistance standards for different types of ophthalmic appliances: dress ophthalmic appliances (street wear) are under different standards than special purpose occupational, educational, or recreational protective lenses. The Optician needs to consider the patient's needs to determine the appropriate impact resistance effect on the lens, and these determinations can only be made by a professionally trained individual.

There are more than 15 individual design elements that make up an ophthalmic lens, and when taken altogether, these design elements ascribe the appropriate lens effects to the lens for the benefit of the patient. All eye care stakeholders understand the complex requirements involved in this design stage of an ophthalmic lens (see Appendix 3). These standards are considered so important in the lens design stage that all eye care professions have incorporated the professional's ability to adhere to these standards into professional competencies, academic curricula, entry-to-practice examinations and professional standards of practice.

B. The Dispensing Phase

Having assessed the patient's visual needs, the Optician then has ophthalmic lenses made according to his/her lens design.

In the dispensing phase, an unfinished piece of glass or plastic becomes the ophthalmic appliance. The piece of glass or plastic is first cut and ground according to the Optician's specifications to take on the necessary properties as an ophthalmic lens. The lens is then mounted on a carrier, such as an eyeglass frame or contact lens, so that the lens can be worn by the patient. Since the lens is the only component that actively affects vision, the carrier itself is only important in that it positions the lenses correctly in the client's line of vision.

Throughout the dispensing phase, the ophthalmic lens undergoes two main types of verifications: the verification between the physical properties of the lens and the recommended lens design, and the verification of the ophthalmic appliance in interaction with the patient's visual system.

In the current practice of Opticianry, the verification of the physical properties of the lens is carried out mainly by optical lab technicians and assistants. The technicians verify the lenses and compare the result to published standards, such as the ANSI standards (see Appendix 2) and COBC Professional Standards of Practice (see Appendix 3). The verification ensures that the lenses are made to design but cannot ensure in any way that the appliance is suitable for the named individual.

The final stage of the dispensing process is the verification of the ophthalmic appliance in interaction with the patient's visual system. The Optician needs to verify that the prescribed ophthalmic appliance is indeed inducing the desired remedial effect on the patient. Recall that

ophthalmic appliances are neutral lens optical systems until they interact with the human eye. The Optician can only ensure that the lenses are appropriate for the patient when the patient is physically present and wearing the ophthalmic appliance – the Optician can then verify that the lenses are mounted along the correct visual axis of the eye.

Throughout the ophthalmic dispensing process, it is therefore the Optician's professional judgement in lens design and training that ensure the correct prescribing and dispensing of the ophthalmic lens, so to achieve the correct remedial effect and address the patient's visual impairment.

Appendix 2

Lens Design by Optician

		Carl Zeiss Vision 45 Valleybrook Drive Toronto, Ontario M3B 2S6		WORK ORDER		Check here if this order has already been placed <input type="checkbox"/>		
Please use this check box to avoid duplicating telephone, fax and internet orders <input type="checkbox"/>								
Patient Last Name		First Name		Lens Material			Uncut	
Ref./Rx No.		Plastic 1.5 1.53 1.6 1.6AS 1.67AS Poly		Glass 1.5 1.6 1.7 1.8 1.9			<input type="checkbox"/>	
Other _____		Other _____		Other _____			<input type="checkbox"/>	
R	Sphere	Cylinder	Axis	Distance PD	Near PD	Prism In/Out	Prism Up/Dn	
L								
SV	Lens Style		R	Add	Seg Height	OC Height	Seg or OC Measured at	
Business	Gradal HS	ST28						
Gradal Top	Gradal 3	ST35	L				Box PD	
Gradal Brevis	Gradal Rd	STT7X28						
	Other _____							
Base Curve		Colour/Tint		Coating		Chem Hard		
Clear		Solid		Carat XT Hard Coat		<input type="checkbox"/>		
Trans - Grey		Gradient		Carat Advantage XT		<input type="checkbox"/>		
Trans - Brown		Colour _____		Other _____		LRP		
Other _____		Absorption _____ %						
Frame Name	Frame Colour	Frame Size	Frame Supply Enclosed	Lens Only To Follow	Edge Type	Bevel	Groove	Flat
A	B	ED	DBL		Frame Type	Metal	Plastic	Rimless
Special Instructions			Trace					
			Please indicate nasal position "N"					
Account Name				Telephone				
GRANVILLE EYELAND				604-488-0909				
K.S. PROJECT INC				Account No.				
15-1666 JOHNSTON STREET				21606				
VANCOUVER, BC V6H 3S2				Order Taken & Reviewed		Date		
Zeiss Surface		Zeiss Final Optic		Zeiss Final Visual		Date Wanted		
Insp.		Insp.		Insp.				

QSP7.1A-1 REV. 3

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Appendix 3

Standards by the American National Standards Institute

On-Line Access: webstore.ansi.org

Part I:

OLA® American National Standard for Ophthalmics

- Prescription Ophthalmic Lenses
- Recommendations

Standards Number: ANSI Z80.1-2005

Part II:

OLA® American National Standard for Ophthalmics

- Contact Lenses
- Standard Terminology, Tolerances, Measurements and Physicochemical Properties

Standards Number: ANSI Z80.20-2004

SCHEDULE “B”

PROFESSIONAL STANDARDS OF PRACTICE COLLEGE OF OPTICIANS OF BRITISH COLUMBIA

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April, 2002

INTRODUCTION

The College of Opticians has the responsibility to regulate the practice of opticianry in accordance with the *Health Professions Act* and the Regulation and Bylaws of the College, ensuring that registrants uphold a basic standard of ophthalmic care to protect the public.

This document is presented by the Board of the College of Opticians of British Columbia providing guidance to registrants on operational standards that must be fulfilled to maintain good standing. It is also anticipated that these standards and principles will nurture professionalism in opticianry.

PURPOSE AND SCOPE OF COLLEGE STANDARDS

The Standards of Practice serve the following purposes:

1. Provide the public with clear guidelines of the quality of care received from an Optician or Contact Lens Fitter.
2. Provide Opticians and Contact Lens Fitters with clear expectations for upholding the requirements of professional practice as set by the College.
3. Provide the College with benchmarks by which it may investigate complaints, and, if necessary, the criteria by which it will judge whether disciplinary action is required.

The College of Opticians of British Columbia is responsible for setting the standards of practice with respect to client management, records management, staff supervision, and business and dispensing practices, in relation to the protection of the public.

ONGOING REVIEW

The **Standards of Practice** constitute present policy for the conduct of professional practice. The Quality Assurance Committee and the Board maintain an ongoing review of these Standards of Practice and your comments are appreciated.

1. CLIENT MANAGEMENT

- a) Communication
- i) Communicate product information so that the client is able to make a product choice based on all pertinent facts, including final costs.
 - ii) Communicate the intended use of the ophthalmic products, information for correct ongoing care of the products, health and safety factors, warranties, and clearly establish guidelines for liability when the client provides their own frame for insertion of new lenses only.
 - iii) When fitting **contact lenses**, use a consistent protocol to instruct the client about;
 - warning signs of possible harm, and the necessity to report any problems.
 - the necessity for follow up to ensure health and safety.
 - all proper cleaning and caring procedures
 - the necessity to comply with a specified wearing schedule.
- b) Complaints
- i) Respond to client complaints in a timely manner.
 - ii) For **eyeglasses**, ensure that the product meets tolerances approved by the College.
 - iii) For **contact lenses**, establish whether there is a possible risk to eye health. If there is seen to be a risk, advise the client to seek a medical opinion.
- c) Responsibility
- i) It is the duty of every registrant to manage relations with clients in a professional manner, in compliance with the Regulation of the Health Professions Act, and the Bylaws of the College.

2. RECORDS MANAGEMENT

- a) Client files
- i) Establish and maintain a consistent system for recording and filing relevant client information.
 - ii) Use a consistent method of accepting, analyzing, verifying, and recording prescription information.
 - iii) Collect and record relevant client data.
 - iv) Keep an ongoing record of transactions in the client file.
- b) Records
- i) Retain original and updated client files for a minimum of five years from the last date of entry for **eyeglasses** and **contact lens fittings**.
 - ii) Ensure the security of client records within the business premises by taking appropriate precautions against loss, theft, or destruction.
- c) Disposal of files upon termination or sale of a business
- i) Upon termination of a business for any reason, the registrant of the business must advise the college of the new location where the client files are stored.
 - ii) Only contact lens fitters may receive contact lens files.
 - iii) Any registrant who receives client files must advise those clients through an economical broadcast means, that their files have been received.
 - iv) A registrant who receives client files must advise the college that the files have been received.

(No.2 RECORDS MANAGEMENT Cont.)

- d) Responsibility
 - i) In managing client records, registrants are obliged to comply with the Regulations of the Health Professions Act, with the Freedom of Information and Privacy Act, and with the Bylaws of the College.

3. BUSINESS PRACTICES

- a) Ensure the safety of clients by observing relevant government regulations for the business premises.
- b) Establish and maintain non-discriminatory business practices.
- c) Conduct all business transactions within professional and ethical standards, and in compliance with the *Health Professions Act*, and the Regulation and Bylaws of the College.

4. PROFESSIONAL ETHICS

- a) In all professional and business practices, registrants must ensure freedom from harassment and freedom from discrimination, in compliance with the Human Rights Act of British Columbia.
- b) Uphold the professional ethics, in compliance with the Health Professions Act and the Regulations and Bylaws of the College of Opticians of British Columbia.

5. REGISTERED OPTICIAN'S OR CONTACT LENS FITTER'S ABSENCE FROM PREMISES

"Supervision" means, if supervision is not governed in accordance with the *Optometrists Act* or the *Medical Practitioners Act*,

- a) **Dispensing Opticians**
in relation to the services described in section 5 (1) of the Regulations, that a prescriber or optician supervises at reasonable intervals and provides regular inspection of the services performed by a non-registrant, and
- b) **Contact Lens Fitters**
in relation to the services described in section 5 (3) of the Regulations, that
 - (i) a prescriber or contact lens fitter is normally on the premises, although he or she may be absent from time to time, not including holidays,
 - (ii) a prescriber supervises the fitting or dispensing of contact lenses by a person other than a prescriber or contact lens fitter, and
 - (iii) a contact lens fitter supervises the refilling of a prescription if contact lenses are dispensed by a person other than a contact lens fitter.
- c) **Identification**
All registrants must clearly identify themselves to the public as registrants of the college. An identification card displaying current registration must be worn at all times when serving the public. The identification is provided by the college and must be updated after renewal each year.

6. ACCEPTED PRACTICES FOR THE DISPENSING OF EYEGLASSES

- a) Supplying non-prescribed products need not be a supervised activity.
- b) Supplying a prescribed lens product is a supervised activity where an optician must verify the measurements necessary for the manufacture of the eyeglasses or lenses, and the power described in the prescription at or before the time of final dispensing.
- c) An optician must supervise at reasonable intervals and provide regular inspection of the services performed by a non-registrant at each optical outlet where dispensing is taking place.
- d) **Supervision of Non-Registrants**
 - i) An optician, designated to supervise the activities of non-registrants is held responsible and accountable for the supervised activities that take place at that optical outlet.
 - ii) The supervising optician must be clearly identified on the client file as having verified the work of the non-registrant.
 - iii) Every optical dispensary must record with the Registrar the name of the optician responsible for the supervised activities for that dispensary.
 - iv) An optician who is recorded as supervising non-registrants at one location cannot be designated as such at any other location simultaneously.
 - v) The optician who is recorded as being responsible for the supervised activities of all non-registrants is so responsible, whether or not that optician is present in the store.
- e) **Responsibility:**
 - i) All opticians are required to ensure that their staff or assistants have appropriate training for the tasks entrusted to them, and that recurrent training enables staff to handle new eyewear products.
 - ii) At the point of verification of the finished product, the supervising optician, regardless of whether he/she checks the finished eyeglasses him/herself, carries full responsibility for the verification.
- f) **Details To Include In Client Files When Dispensing Eyeglasses:**
 - i) The following information **must** be included in the file of a client who is being dispensed eyeglasses:
 - client's name
 - a copy of the prescription or note that the prescription is a duplication
 - pertinent anatomical measurements; e.g. PD's, segment heights, etc.
 - frame specifications
 - lens design and materials
 - the date of dispensing
 - a record that a client has been advised when a lens is dispensed that does not or cannot meet impact resistance standards
 - the identity of the optician(s) or supervising optician, involved in the dispensing of the eyeglasses
 - warranty information
 - financial details of the transaction

(No.6(f) Details To Include In Client Files When Dispensing Eyeglasses Cont.)

- ii) It is **desirable** that the following information also be included:
- client's address and phone number
 - client history pertinent to the service required
 - if the prescription is a duplication of an existing pair of glasses without a written prescription or is older than 2 years, it should be noted in the client's file, that the client was advised to return for a full eye examination

g) **Equipment for the Dispensing Eyeglasses:**

It is acknowledged that there are different methods of achieving the same result with respect to frame adjustments; thus the tools and equipment used will vary accordingly. However, an optician must achieve results to a professional standard whether by performing manually or by using equipment.

An optician must have the appropriate tools for dispensing eyeglasses and maintain them in good working and calibrated condition. These include, but are not limited to:

- adjustment and bench tools
- lensometer
- lensgauge
- frame heater
- millimeter ruler
- pupilometer and/or penlight
- frame and lens cleaning products
- thickness calipers
- vertex measuring device

The dispensary must have proper lighting facilities and mirrors to provide an appropriate environment for clients to choose eyeglasses.

h) **Tolerances for Dispensing of Eyeglasses**

VERTICAL SEGMENT LOCATION

- Per Lens - within .5 mm

LENS POWER TOLERANCE

- PL - 6.00 D +/- .12 D
- 6.12 D and above +/- 2%

CYLINDER AXIS TOLERANCE PER LENS

- 0.125D to 0.50D..... +/- 5 degrees
- 0.625D to 1.50D..... +/- 3 degrees
- 1.625D and above..... +/- 1 degree

(No.6 (h) Tolerances for Dispensing Eyeglasses Cont.)

VERTICAL IMBALANCE TOLERANCE ¹

- 1/4 prism dioptre per lens 1/2 prism dioptre total

UNWANTED HORIZONTAL PRISM TOLERANCE PER PAIR ¹

- 1/4 prism dioptre per lens 1/2 prism dioptre total

Note:

¹ Prescribed prism must be within tolerance at specified O.C. (per lens).

NEAR PD TOLERANCE

- +/- 2mm of specified

ADD POWER TOLERANCE PER LENS

- +/- .12 D

THICKNESS GUIDELINES

- the nominal thickness of any lens may be specified by the Optician or be the subject of agreement between the optician and the supplier
- when a thickness is specified, it shall be within +/- .2 mm of that specification

BASE CURVE

- should be within +/- 0.50 D from requested

IMPACT RESISTANCE

- before they are mounted in frames, all plastic and impact-resistance treated glass lenses shall be capable of withstanding an impact test using a 15.9mm (5/8 inch) steel ball, dropped 127cm(50 inches).
- the public must be informed when a lens is dispensed that does not or cannot meet that standard
- impact-resistant occupational lenses shall meet requirements of the CSA and that of that industry

WARPAGE

- the curves in the principal meridians of the mounted lens must be within a tolerance of +0.50D of the design specifications of the lens.

QUALITY

- no scratches, pitting, chips, water marks or blistering shall be acceptable
- no internal bubbles or stress lines shall be acceptable
- all lenses in any type of frame mounting or configuration shall fit securely with smooth edges

7. ACCEPTED PRACTICES FOR THE FITTING OF CONTACT LENSES

- a) No one other than a Contact Lens Fitter, or a Registered Student Contact Lens Fitter under direct supervision of a Contact Lens Fitter, with the contact lens fitter immediately present at all times, is allowed to fill a prescription and to fit and dispense contact lenses.
- b) A non-registrant may under supervision of a Contact Lens Fitter
- i) refill a prescription by dispensing contact lenses
 - ii) instruct insertion and removal techniques, care systems and hygiene,
- provided the non-registrant does not fit contact lenses.**
- c) A Contact Lens Fitter must inform the parent/guardian of an individual 16 years or younger that it is recommended that the present prescription be written within the year and the recommendation charted on the individual's client file.
- d) A complete pre-fit evaluation must be conducted on all new clients. Contact lens specifications from previous wear is to be recorded as patient history.
- e) The Contact Lens Fitter is required to:
- i) take or review the client history
 - ii) assess the prescription for professional ability and client suitability
 - iii) conduct a pre-fit evaluation prior to undertaking a trial fitting
 - iv) do trial fittings of contact lenses and assess them, to determine the correct lens type, lens style, and lens parameters
 - v) order contact lenses, assess them on the client and determine that they are correct
 - vi) ensure the client has received instructions on follow-up requirements
 - vii) ensure the client has received adequate information and training on insertion and removal techniques, care systems, and hygiene
- f) Contact Lens Fitter must have and maintain in good working order, adequate tools and properly calibrated instruments for fitting and dispensing contact lenses.
- g) A Contact Lens Fitter must ensure hygienic and safe facilities and equipment.
- h) Details To Include In Client Files When Fitting and Dispensing Contact Lenses**
The following information **must** be included in the client file:
- i) client's name, address and telephone number
 - ii) copy of prescription
 - iii) the pre-fit evaluation must include, and is not limited to:
 - reason for contact lenses, previous wear and history, lifestyle and interests
 - medical history and medications
 - keratometry readings
 - slit lamp examination
 - location and size of anomalies and pathology
 - tear quality
 - horizontal visible iris diameter
 - pupil size (dim and bright light)
 - palpebral aperture size
 - lid assessment

(No.7(h) Details to Include in Client Files When Fitting Contact Lenses Cont.)

- iv) specifications of final lenses fitted
- v) the fitting date and the date dispensed
- vi) care system provided
- vii) recommended wearing schedule
- viii) a record of the follow-up care, including VA, corneal integrity, fit and condition of the contact lenses
- ix) a record of follow-up schedules and warranty of lenses
- x) fit and/or replacement policy
- xi) the identity of the Contact Lens Fitter involved in the fitting and dispensing of the contact lenses

i) **The Contact Lens Room**

Fitting areas must be able to be well lit and darkened for examination, and if necessary, furnished with chairs that adjust in height to accommodate the measuring equipment and the fitting procedures.

A sink equipped with hot and cold running water together with disinfectant soap must be readily accessible to the Contact Lens Fitter. Contact Lens Fitters must wash hands prior to contact with each client and before inserting contact lenses.

Equipment must be kept calibrated at all times.Necessary equipment:

- slit lamp / biomicroscope, with test bar
- keratometer, with extended range and calibration equipment
- lensometer
- visual acuity chart for distance and near
- trial lens set (ophthalmoscopic lenses) for prescription verification
- measuring magnifier with scale
- diameter gauge

Recommended equipment: radiuscope
modification unit
shadow graph
thickness gauge
Burton Lamp

Necessary supplies:

- diagnostic contact lens trial sets
- tweezers
- fluorescein strips for soft and hard lenses
- crimper and caps
- rinsing and disinfectant solutions
- suction cups

(No. 7. ACCEPTED PRACTICES FOR THE FITTING OF CONTACT LENSES Cont.)

j) **Follow Up Care for Contact Lens Clients**

For clients wearing daily wear soft lenses including disposable lenses:

A new client should be seen after one week, one month, three months, six months and then at yearly intervals.

For clients wearing hard or rigid gas-permeable lenses:

A new client should be seen **within** one week, one month, three months, six months and then at yearly intervals.

For clients wearing extended wear lenses:

After the initial insertion the client should be seen within the first 24 hours. If there are no problems, the client should be seen after wearing lenses three days, one week, two weeks, one month, three months, and then maintain three to six month intervals thereafter.

Contact Lens Fitters should recommend that clients leave their lenses out overnight twice a week, but if this is not possible, at least once a week. *
Recommendations for overnight wear must be determined by the Contact Lens Fitter and based solely on the health of the client's eyes.

NOTE: The equipment and supplies identified within section i) above are mandatory for practicing Contact Lens Fitters only.

8. ACCEPTED PRACTICES FOR THE USE OF AUTOREFRACTORS/AUTOMATED SYSTEMS
--

- a) Registered Opticians/Contact Lens Fitters only, may collect sight testing data through the use of an autorefractor/automated system.
- b) A prescriber, a qualified medical practitioner who prepares a prescription, must produce a signed prescription using the collected sight testing data supplied.
- c) **Restrictions:**
 - i) Sight testing data can only be collected on adults between the ages of 19 and 65 years of age unless referred by a prescriber.
 - ii) Sight testing data cannot be collected from an individual, unless referred by a prescriber, who has
 - 1. an ongoing ocular disease
 - 2. present glasses containing prisms for diplopia
 - 3. refractive error over +8.00 D and -10.00 D spheres with cylinder written in minus form
 - 4. surgery to treat detached retina, cataracts, corneal transplants
 - 5. corrective treatment through orthokeratology
 - 6. keratoconus, glaucoma

(No. 8. (c) Restrictions Cont.)

- iii) The individual must have had a medical eye examination within the last five years.

d) Responsibility:

- i) All Registered Opticians/Contact Lens Fitters are required to ensure that they have appropriate training for the tasks entrusted to them.
- ii) All legislation must be adhered to and the Registered Optician/Contact Lens Fitter clearly identified in the client file.
- iii) To explain to the client the restrictions of a sight test.

e) Details To Include In Client File and the “Sight Test Patient Consent Form” When Collecting Data for Autorefractors/Automated Systems:

The following information **must** be included in the file of a client who is being sight tested:

- client’s name, address, and birth date
- identification of the prescriber
- visual acuity achieved using old correction
- visual acuity achieved using new correction
- the date of the sight testing
- the identity of the Registered Optician/Contact Lens Fitter performing the sight testing
- a signed disclaimer by the client authorizing the release of the gathered information to the identified prescriber

f) Equipment for Collecting Data for Autorefractors/Automated Systems:

Necessary equipment:

- computer driven sight testing system
- auto-refractor
- auto-phoropter
- printer
- monitor
- lensometer

Desirable equipment:

- electronic interfacing lensometer

The sight testing room must have proper lighting facilities and be of appropriate size to accommodate the proper use of the equipment.

Appendix 5

COBC Entry to Practice Competencies for Opticians in the Province of British Columbia

Entry to Practice Competencies for Opticians in the Province of British Columbia

A. Practise according to the codes of conduct and professional standards

A1) Explain the function of the Regulatory body (College of Opticians), professional associations and provincial regulatory legislation.

- A1.1 Identify and summarize legislation relevant to the Opticianry Profession in the Province of British Columbia.
Identify the role and legal responsibilities of Opticians under the Health Professions Act (HPA) and the Opticians Regulations
Summarize the regulations, by-laws and standards of Practice for Opticians in British Columbia.
- A1.2 Identify the role and benefits to opticians of professional associations and the College of Opticians.
Compare and contrast the role of professional organizations related to the field of Opticianry.

A2) Adhere to the Standards of Practice, legislation and code of ethics related to the Dispensing of Eyeglasses, Contact Lenses and Sub-Normal Vision services.

- A2.1 Adhere to the Code of Ethics of the Optician Association / College of Opticians of British Columbia.
Discuss code of ethics for opticians as described by the profession and explore ethical issues and choices.
- A2.2 Adhere to the scope of practice, role and responsibilities as outlined in the Health Professions Act, Optician's Regulations, By-laws and Guidelines.
Describe the professional Standards of Practice as determined by the college of Opticians of British Columbia related to the operation of an optical dispensary.
Identify the Guidelines for Standards of Practice for Opticians as determined by the College of Opticians of British Columbia including the responsibilities assumed by the student and supervising optician.
- A2.3 Securely maintain in accordance with the Freedom of Information and Privacy Act personal information in accordance with relevant provincial legislation and Standards of Practice.
Maintain confidentiality about private and intimate patient matters.
Hold in confidence all patient information, unless the Optician is permitted by the patient or required by the Act or any other enactment or by order of a court, to disclose the information.
- A2.4 Demonstrate ability as a role model of the professional behavior of the Optician.
Acquire knowledge from every day experiences and understand the importance of continuous learning, sources and methods for keeping up to date as a professional.
Analyze current professional issues as they relate to the practice of Opticianry.
Provide care in a nondiscriminatory manner.
Refer any incompetent, illegal or unethical conduct by colleagues or other health personnel to the appropriate authority.

B. Promote and ensure appropriate vision care for the patient.

B1) Gather and analyze meaningful data.

- B1.1 Question about previous experience with ophthalmic appliances.
Inquire about patient concerns.

- B1.2 Take a complete client history and record data as required and in compliance with the standards of practice for opticians.
 Establish patient's vocational and avocational visual needs.
 Establish working distance, field of view requirements.
 Assess patient needs.
 Determine environmental influences on vision including lighting and physical set up of workstation.
 Apply knowledge of factors affecting vision in a working environment.
- B1.3 Collect and organize health data from appropriate sources using an established assessment format to contribute to the identification of a patient's health care needs.

B2) Record information accurately.

- B2.1 Document and communicate patient data to provide continuity of care.
 Keep an ongoing record of the patient's eyeglass experience.
 Record details of patient's medical history affecting successful contact lens wear including indications and contraindications for specific lens modalities and solution protocols.
 Record details of patient's history of ocular health such as injuries, surgery, allergies, medication, hereditary diseases.
- B2.2 Create and maintain patient files, keeping full and accurate records related to:
 Client information
 Prescription information
 Subjective information
 Current medication
 Clinical history
 History of contact lens wear
 Hobbies and environment
 Motivation
 Objective information – ocular observations
 Ocular health
 Physical health.
 Document using behavioral description, the patient's communication pattern, therapies used and outcomes.
 Record all measurements as listed in Standards of Practice.
 Record communication with the Doctor or the lab.
 Record changes in fit of the lens, modifications, changes in care routine.
 Record any follow up, appointments, problems, advice.
 Record any changes made in response to problems.

B3) Prepare recommendations based on defined needs.

- B3.1 Make recommendations to the patient for appropriate ophthalmic appliances for the patient's identified visual, vocational and avocational needs.
- B3.2 Address patient concerns about vision and/or ophthalmic appliances.

B4) Teach patients about good vision care.

- B4.1 Implement an individualized teaching plan in order to promote, maintain and restore ocular health.
 Apply knowledge of teaching and learning principles and techniques.
 Recognize the importance of common, important factors influencing learning and adjust teaching according to:
 Cognitive ability
 Environment
 Motivation
 Psychomotor ability

- Readiness
 Take into account the characteristics of the patient, including:
 Age
 Culture
 Economics
 Emotions
 Environment
 Gender
 Language
 Lifestyle
 Physiologic events.
 Apply common guidelines in providing patient and family teaching including:
 Assess current knowledge level of patient
 Consider special needs of patients
 Establish a positive learning environment
 Pace learning to achieve optimum effect
 Provide for active participation of patient
 Select appropriate time for teaching
 Use appropriate teaching methods to meet patient's learning needs
 Use audio visual aids
 Use repetition
 Start with simple concepts before moving to complex
 Actively involve the patient/family
 Ask for feedback during the teaching cycle.
- B4.2 Adjust teaching plan and delivery to meet needs of patients with special needs including, but not limited to:
 Children of various age groups
 Patients with impaired vision
 Patients unable to read
 Patients with short attention spans
 Patients unable to speak
 Cognitively impaired
 Elderly patients
 Mentally impaired
 Hearing impaired.
- B4.3 Evaluate the effectiveness of teaching and learning through appropriate responses, demonstration of skill or change in behaviour.
- B4.4 Document the teaching plan, its delivery, and outcomes of the teaching and learning process.
- B4.5 Deliver instruction.
 Explain the uses and limitations of the ophthalmic appliance, using a variety of demonstration techniques.
 Prevent misuse and unnecessary abuse of eyewear.
 Explain the general care and cleaning protocols including any unique instructions for specialty lenses or coatings.
 Teach the patient to insert and remove contact lenses.
 Acquaint the patient with disinfection, cleaning, rinsing and storing protocols.
 Establish appropriate lens orientation for lens insertion including tips to recognize when a soft lens is everted and how to identify axis markings on toric lenses.

B5) Evaluate the patient's application of eyeglasses, contact lenses, and sub-normal vision devices.

- B5.1 Evaluate the patient's application of the ophthalmic appliance.
 Perform troubleshooting procedures to correct any deficiencies related to the appliance.
 Ensure that patient's visual, vocational, and avocational needs and requirements have been met.
 Evaluate the effect of interventions.
 Reconcile patient's expectations with realistic optical, physiological and visual results.

B6) Plan and deliver follow-up care.

- B6.1 Maintain integrity of the ophthalmic appliance.
- B6.2 Conduct a thorough follow up examination consistent with professional standards of practice.
Observe and record physiological anomalies that arise following the fit that were not present when pre-fit.
Affirm patient's ability to see at required distance.
- B6.3 Design, record, and communicate a plan of follow up care for the patient.
Schedule and perform follow up activities.
- B6.4 Identify and make adjustments and/or repairs to patients' ophthalmic appliances.
Verify patient's assent to your proposed adjustment and / or repair.
Verify patient's satisfaction with adjustment and / or repair.

C. Conduct business in a professional manner.**C1) Manage time and organize patient care effectively and efficiently.**

- C1.1 Rank the priority of patient needs according to:
Emergent – immediate threat to safety.
Urgent – actual problems requiring immediate help.
Potential – actual or potential problems unrecognized by the patient or family.
Anticipated – anticipated problems for the future.
Prioritize the assessment and interventions required to meet the identified priority needs.
Complete assessments and interventions on patients with highest priority needs first.
Report findings and outcomes of priority needs on an ongoing basis.
- C1.2 Seek guidance and assistance as required.
Seek guidance and assistance as required in order to provide care required in order of priority or in a reasonable time.
Inform the supervisor / manager if assigned care activities are outside the scope of the Optician.
- C1.3 Demonstrate flexibility, creativity and adaptability in meeting the unexpected demands of the health setting.
- C1.4 Ensure documentation on all priority areas is completed in a timely manner.
- C1.5 Manage projects: identify the tasks from initiation to completion of a project; develop a schedule; assess resources and priorities; monitor progress; and revise the plan to include new information.

C2) Manage human resources.

- C2.1 Apply knowledge of labor laws.
- C2.2 Recruit, interview and hire potential staff.
Evaluate individual skills and limitations.
- C2.3 Develop and implement protocols for performance review.
Detail individual performance goals in conjunction with staff members including student optician/intern.
Terminate employees as required.
- C2.4 Schedule staff efficiently.
Arrange vacation time, and sick leave as required.
- C2.5 Assign tasks.
Assess and detail tasks.
- C2.6 Orient and train staff.
- C2.7 Apply the principles and concepts of human resources management and organizational behaviour in order to establish and maintain effective working relationships.
Resolve conflicts.

C3) Perform marketing tasks.

- C3.1 Keep accurate and current records of sales and expenses.
Use accepted record keeping protocols.
Review and record payment at the point of transaction as per company policy.
Record payment, third party payments.
Use accepted accounting procedures.
Prepare standard business reports.
- C3.2 Establish and communicate pricing (including any applicable taxes) and policies.
Review and explain at the point of transaction.
Review the cost to charge ratio of repair and service work performed by staff.
Establish and communicate refund and warranty policies.
- C3.3 Comprehend the retail optical business environment.
Assess a specific company's selling points.
Assess the demographics, wants and needs of target market.
Assess competition and competitors' marketing strategies.
- C3.4 Apply company policies and procedures including but not limited to pertinent warranties, methods of payment and recourse for complaints.
- C3.5 Establish a selling environment.

C4) Control inventory.

- C4.1 Organize and maintain control over inventory.
Maintain stock in appropriate condition for retail sale.
- C4.2 Determine and maintain an appropriate inventory.
Develop an understanding of overhead costs.
Regularly review manufacturer's listings
Review current availability of lenses and frames.
Refresh inventory.

C5) Use current business practices and technology.

- C5.1 Use a computer and relevant software.
Demonstrate the use of a computer-based system, which includes managing the files and directory structure of a disk.
Send and receive electronic mail.
Prepare standard business communications.

C6) Comply with applicable business laws and regulations

- C6.1 Understand applicable tax regulations and government programs.

C7) Apply problem-solving skills

- C7.1 Solve a business problem by using an organized approach to define the problem, identify alternative actions and possible outcomes and recommend, with rationale, the preferred course of action.

C8) Perform administrative tasks

- C8.1 Assist the patient in completing any forms required by public or private vision care plans.

D. Assess patient vision and visual needs within the scope of practice.**D1) Demonstrate an understanding of the structures and functions of the eye**

- Define the location, dimensions, functions, gross structure, layers, structure of the layers, transverse section, and nerve supply and sources of nutrition and methods of waste product removal of structures in the adnexa.
- Describe the conjunctiva including location of the caruncle and plica semilunaris, as well as the structure of the plica and caruncle, and lymphatics.
- Describe the sclera including factors affecting its appearance.
- Describe the cornea including radii of curvature and refractive index.
- Describe the limbal region including the limbus as a transitional zone, the scleral spur, trabecular meshwork and canal of Schlemm.
- Describe pupil position using the schematic eye.
- Describe and diagram the pupil and chief ray.
- Describe entrance and exit pupils.
- Discuss the pupil as a limiting aperture including principal (or chief) ray; entrance and exit pupils and a comparison with telescope, microscope and camera.
- Describe the iris including anterior aspects and colour as well as pupil reflexes.
- Describe the eyelids including anterior aspect.
- Describe the ciliary body including involvement in accommodation, longitudinal and coronal sections.
- Describe the choroid.
- Describe the retina including the structure of the cells of each layer and their distribution as well as the functions and connections of neural cells.
- Discuss retinal images with a near object.
- Describe blurred and clear retinal image sizes using an unaccommodated and accommodated schematic eye.
- Describe the crystalline lens including radii of curvature and refractive index as well as changes during accommodation, the role of the capsule, Zonular fibres and changes that occur with age.
- Describe the orbit and orbital fasciae.
- Discuss the simple camera including concept of blur circle; depth of field; depth of focus; comparison with the eye.

D2) Demonstrate an understanding of the external anatomical structures

- Describe the lacrimal system including lacrimal, accessory lacrimal and tarsal glands and goblet cells as well as mucous, serous, sebaceous and lysozyme secretions, movement of tears, the lacrimal rivers and lake, tears drainage and passages, the lacrimal pump and tear film.
- Describe the skull.
- Discuss the location and structure of cranial and facial bones.
- Discuss the location of major foramina, fossae and fissures.

D3) Demonstrate an understanding of the visual pathway

- Define the visual pathway.
- Describe the location of the visual pathway, list the seven components, describe visual and visual reflex fibres, diagramming a representation of the visual field at each section, describing the supply of blood to the visual pathway and the effect of lesions in the visual pathway.
- Discuss the visual pathway and the effect of lesions in the visual pathway.
- Describe the optic nerve including the structure of the meninges as well as nerve fibres and neuroglia.
- Discuss the location of the brain in relation to the spinal cord and meninges.
- Discuss the structure of the brain, spinal cord and meninges.
- Describe neuro-humoral transmission.
- Discuss the four main groups of tissues (epithelium, connective tissue, muscle tissue, nervous

tissue) including the structure of each group, the functions of each group and identifying the location of each group.

D4) Demonstrate an understanding of the photochemistry of vision

Discuss colour vision.
 Describe trichromatic, opponent colours and zone theories.
 Describe monochromacy, dichromacy and trichromacy.
 Describe congenital colour deficiencies, acquired colour deficiencies as well as tests for congenital colour deficiencies including colour naming tests, sorting and matching tests, and confusion tests.
 Describe the electromagnetic spectrum; wavelength and colour.
 Describe transverse and longitudinal waves; the electromagnetic spectrum.
 Discuss the function of rods and cones.
 Discuss contrast sensitivity.
 Describe monocular and binocular contrast sensitivity and the related terms including factors affecting contrast sensitivity such as cataract and visual pathway lesions; clinical contrast sensitivity tests.
 Describe the effect of a contrast filter.
 Describe the use of the duochrome test in determining 'add'.
 Discuss the Duochrome test.
 Discuss fan and block and associated subjective routine.
 Describe potential sources of radiation and the effect upon the various components of the eye.
 Discuss light sensitivity.

D5) Demonstrate an understanding of visual fields

Discuss visual fields.
 Explain the concepts of "stops" and "field of view".
 Describe factors affecting field of view of spectacle lenses.

D6) Demonstrate an understanding of binocular function

Describe simultaneous perception, fusion and stereopsis.
 Discuss anomalies of accommodation and convergence.
 Describe the role of refractive error; spasm of accommodation; pseudomyopia; convergence insufficiency; accommodative-convergence/convergence ratio.
 Describe relative accommodation and convergence including fusional reserves and Saccades and pursuit movements.
 Discuss theories of accommodation including changes in the lens during accommodation using a diagram of the accommodated schematic eye.
 Discuss the stimulus to accommodation.
 Discuss amplitude of accommodation.
 Describe near point of distinct vision or accommodation.
 Discuss convergence and accommodation.
 Describe accommodation in the uncorrected astigmatic eye.
 Describe spectacle and ocular accommodation using a schematic eye corrected by a thin or thick lens.
 Discuss presbyopia related to accommodation.
 Discuss the role of refractive error; spasm of accommodation; pseudomyopia; convergence insufficiency; accommodative-convergence/convergence ratio.
 Describe reduction of amplitude with age including causes for this phenomenon.
 Describe versions and vergences; diagnostic positions of gaze; the metre angle and its relationship to the prism dioptre; near point of convergence and disjunctive vertical movements.

Describe physiological position of rest; active and passive positions; position of functional rest; dissociation and association of eyes; accommodative, proximal and fusional convergence.

Describe the unaccommodated eye including the far point.

Describe fixation disparity.

Describe median; face and frontal planes; erect head position; centre of rotation; fixation point; optic, fixation, nodal and visual axes; angles alpha, kappa and gamma; Listing's plane;

Primary, secondary and tertiary positions of gaze.

Define field of vision and field of fixation.

D7) Demonstrate an understanding of refractive conditions of the eye

- D7.1 Demonstrate an understanding of the optics of the eye, ametropia and its correction.
 Discuss emmetropia and ametropia in real eyes.
 Define and compare anisometropia and including retinal images in and measurement of.
 Discuss hypermetropia related to accommodation.
 Describe magnification in anisometropia and including dioptric and cortical image sizes.
 Describe axial, curvature and index ametropia in schematic, and real eyes.
 Discuss correction of spherical ametropia with a thin lens using a schematic eye.
 Discuss asthenopia and its symptoms.
 Describe the power of the eye including ocular refraction, spectacle refraction and vertex distance and equations relating them.
- D7.2 Discuss aphakia related to accommodation.
 Discuss the etiology of aphakia.
 Discuss the signs, symptoms and treatments for aphakia.
 Describe the effect of the inability to accommodate, spectacle refraction in aphakia, retinal image size in aphakia using a schematic diagram of the eye made aphakic, correction of aphakia with a contact lens or an intraocular lens as well as clinical aspects of aphakia.
 Describe pseudo-aphakia.
- D7.3 Describe stereopsis in astigmatic corrections.
 Discuss astigmatism.
 Describe the astigmatic pencil of light and blur ellipse.
 Describe astigmatism in the human eye using a schematic eye.
 Describe the retinal image of a point object in astigmatism.
 Describe the classification of astigmatism including simple, compound and mixed astigmatism.
 Describe distance vision in the unaided astigmatic eye.
 Describe correction of astigmatism using a schematic eye.
 Define oblique astigmatism, tangential and sagittal planes of refraction, the astigmatic pencil of light, and the effect on astigmatism of stop position and form of lens.
 Explain spherical aberration, coma and oblique astigmatism.
 Explain the surface astigmatism of a conicoid and how this can be used to combat aberrational astigmatism.
- D7.4 Describe spherical ametropia including myopia and hypermetropia.
 Describe growth of the human eye in emmetropia and spherical ametropia including correlation and component errors, progressive myopia and pseudomyopia.
 Discuss the resting state as well as the anomalous myopias including empty field myopia, night myopia and instrument myopia.
 Describe the use and appropriate selection of aspheric lenses for correction of high degrees of myopia and (hyper) metropia.
 Describe facultative, absolute, manifest and latent hypermetropia including accommodation in juvenile stress myopia.
- D7.5 Describe presbyopia.

D8) Demonstrate an understanding of ocular motility

Describe strabismus and pseudostrabismus including suppression and suppression tests.
 Describe ductions including actions of individual muscles; combined actions of extraocular muscles; theories of ocular rotation.
 Classify types of heterophoria and heterotropia.
 Discuss heterophoria.
 Define bifixation; orthophoria; heterophoria and heterotropia.
 Describe associated and dissociated heterophoria.
 Describe the use of prisms in cases of heterophoria including Fresnel lenses and prism adaptation.
 Discuss points, axes and planes associated with eye movements.

D9) Understand the correction of visual error and apply principles of refraction.

- D9.1 Use standard distance and reading charts.
 Explain the construction of standard eye charts.
 Describe detection or visibility acuity, resolution acuity; Landholt rings and illiterate E's bar gratings; Snellen's definition of acuity; Snellen fraction recognition or letter acuity; design of letter charts; choice of letter and letter style; methods of measuring children's acuity; the Sheridan Gardiner test; vernier acuity.
- D9.2 Describe visual acuity.
 Discuss visual activities.
 Describe the numerical valuation for visual acuity.
 Describe the effects of aging on acuity.
 Describe visual acuity and its relationship to contrast sensitivity.
 Discuss relative spectacle magnification.
 Describe spectacle magnification with thin and thick lenses using a schematic eye.
 Use the equation for basic retinal image size including thick and thin spectacle lenses.
- D9.3 Use the schematic eye.
 Discuss Gullstrand's simplified schematic eye and its equivalent surface.
 Describe and diagram focal points and focal lengths of the schematic eye.
- D9.4 Demonstrate an understanding of retinoscopy.
 Discuss retinoscopy.
- D9.5 Demonstrate a knowledge of the role of laser surgery in correcting retinal problems, in visual therapy, addressing ocular emergencies, and photorefractive surgery.

D10) Analyze data to design ophthalmic appliances.

- D10.1 Perform calculations related to light.
 Diagram and perform calculations of the path of light rays.
 Diagram light rays that pass through reflecting surfaces including paraxial ray tracing through lens mirrors, thin lenses in differing media, spectacle lenses and the eye and Purkinje images and ghost images in spectacle lenses.
 Compare finite and paraxial rays by diagramming the path of each through spherical surfaces.
- D10.2 Assess the object-image relationship.
 Describe nodal points and the clear retinal image size.
 Use the equation for basic retinal image size including thick and thin spectacle lenses.
 Calculate clear image size for a distant object.
 Demonstrate an understanding of polarization.
 Define plane-polarized light including a description of why light is considered to be a transverse wave motion; the production of plane-polarized light including reflection, ordinary and extraordinary rays and dichroic crystals.
 Describe the polaroid sheet including polarization and blue sky, polarimeters, correct glazing for polarizing spectacles and suitable uses for polarizing spectacles.
 Describe the properties of wave of light and groups of waves.

- D10.3 Determine required magnification.
 Make calculations for magnification with thin lens correction using a schematic eye including effect of axial length and corneal power induced ametropias on the retinal image size.
 Discuss relative spectacle magnification.
 Describe spectacle magnification using a schematic eye corrected by a contact lens including a comparison with spectacle correction.
 Discuss a simple magnifier including a definition of linear and angular magnification; proof of nominal magnification for a lens system or a thick lens; calculation of magnifying power in general situations (to include refractive error of the eye).
- D10.4 Solve presenting problems.
 Solve problems of high power and / or specialty forms.
 Solve problems of geometric optics related to the fitting of ophthalmic appliances.
 Calculate the effect of vertex distance change in the results of refraction.

D11) Integrate concepts of anatomy, physiology and pathology in order to provide optimum care.

- D11.1 Recognize abnormal ocular conditions.
 Recognize symptoms of ocular anomalies.
 Use appropriate terminology describing abnormal ocular conditions.
 Name and define terms relating to pathological, congenital, acquired, primary, secondary, spastic and cicatricial conditions.
 Discuss abnormal conditions of the eyes and adnexa.
 Understand the effect of systemic disorders on the eye and adnexa.
 Discuss the effects of radiation on the eye and adnexa.
 Demonstrate knowledge of the eye and ocular adnexa.
 Describe etiology, signs and symptoms of compensated and uncompensated heterophoria
 Discuss diabetes, papilloedema and Sjogren's syndrome.
- D11.2 Demonstrate an understanding of the signs, symptoms and treatment of various conditions/disorders
 Describe signs, symptoms and treatment of eyelid conditions including but not limited to epicanthus, ptosis, entropion, ectropion, trichiasis, and coloboma.
 Describe signs, symptoms and treatment of lid inflammation including but not limited to hordeolum, chalazion and blepharitis.
 Discuss inflammation.
 Name and describe the signs and symptoms of inflammation in general as well as acute and chronic inflammations and their consequences.
 Describe signs, symptoms and treatment of conjunctivitis including but not limited to bacterial, viral and allergic conjunctivitis.
 Describe signs, symptoms and treatment of nystagmus.
 Describe signs, symptoms and treatment of conjunctival conditions including but not limited to pinguecula, pterygium, and hemorrhages.
 Describe signs, symptoms and treatment of disorders of the lacrimal system including but not limited to dacryocystitis and epiphora.
 Describe signs, symptoms and treatment of keratoconus.
 Describe signs, symptoms and treatment of iris conditions including but not limited to aniridia, iritis, keratic precipitates, aqueous flare, hypopyon, posterior and anterior synechiae and hyphaema.
 Describe signs, symptoms and treatment of lens conditions including subluxation of the lens, and cataract including senile, congenital, traumatic, nuclear and secondary forms.
 Describe signs, symptoms and treatment of glaucomas including primary narrow angle, chronic simple open angle, secondary and juvenile glaucoma.
 Describe signs, symptoms and treatment of retinal detachment.
 Describe signs, symptoms, and treatment of retinal vascular accidents.
 Identify ocular tissues.
 Describe signs, symptoms, and treatment of tumors of ocular tissues.
 Discuss amblyopia; describe signs, symptoms and treatment of amblyopia.

- Define amblyopia including monocular and binocular amblyopia; strabismus, anisometropic, stimulus deprivation, types; meridional amblyopia and uncorrected astigmatism; failure of lateral inhibition in geniculate and cortical sites.
- D11.3 Describe occluders and the treatment of amblyopia with central fixation.
Refer patients with abnormal ocular conditions for medical advice.
Refer patient to a medical practitioner as required.
- D11.4 Demonstrate an understanding of the use of ophthalmic drugs.
Discuss ophthalmic drugs.
Describe neuro-humoral transmission.
Describe types of ophthalmic drugs and topical preparations.
Describe the functions and effects of ophthalmic drugs related to visual outcomes.
Describe regulations affecting use and storage of ophthalmic drugs in ophthalmic practices.

E. Fit, prepare and dispense appropriate devices using current practices and technology.

E1) Demonstrate an understanding of physical optics

- Describe Newton's corpuscular theory; Huygen's wave theory, associated difficulties of propagation of light through a vacuum and velocity of light passing through different optical media.
- Define a ray of light.
- Demonstrate knowledge of historical development of light and of lens theory.
- Define the difference between paraxial and finite rays by diagramming the light rays.
- Describe and explain the diffraction grating and measurement of wavelength of light.

E2) Interpret the prescription.

- Express a lens power in crossed cylinder form or sphero-cylinder form the latter being in either plus or minus cylinder form.

E3) Understand and apply knowledge of lens theory for the correction of ametropia.

- E3.1 Demonstrate an understanding of optical instruments.
Discuss telescopic and microscope lens systems including calculation of magnifying power for both afocal and non-afocal settings including a comparison to the lensometer and keratometer and for application of low vision aids.
Describe the theory of determination of corneal radius, image doubling principle and fixed as well as one-position and two-position instruments and the measurement of astigmatic corneas.
Explain interference and diffraction.
Demonstrate an understanding of ophthalmic instruments and aids related to a complete oculo-visual assessment.
Describe the principle of the instrument including illumination and the use of lenses in the ophthalmoscope including angular magnification, linear field of view.
Discuss the relationship of the resolving power of an instrument to the eye and minimum magnifying power.
Discuss the effect of vertex distance change on the results of refraction.
Use knowledge of visual optics and anatomy and physiology and the special issues of the aging eye.
- E3.2 Solve problems related to the optics of the eye.
Solve problems of spherical lens forms.
Solve problems of effectivity, vertex powers and transposition.
Solve problems of bifocal lens forms.
Solve problems using sphero-cylindrical lens forms.
Solve problems of multifocal lens forms.
Solve problems of decentration.
Recognize and determine vertical imbalance and how to correct it.

- E3.3 Solve problems related to applied optics and lens forms.
 Perform calculations to apply the principles of visual and applied optics.
 Use the thin lens formula to calculate and describe lens forms and use thick lens formula.
 Use the formula for calculating surface power to determine the surface power required in a lens medium other than that for which the tools are calibrated.
 Calculate prismatic effects at various points away from the optical centre of spherical and spherocylindrical lenses, with their axes in any meridian.
 Calculate the decentration required to produce specified amounts of prism in a given prescription.
 Calculate the prismatic effect required to produce a given decentration.
 Calculate spectacle magnification, shape factor, power factor, form and / or thickness of afocal iseikonic lenses.
 Calculate the edge and centre thickness of spherical or spherocylindrical lenses.
 Calculate the sum of obliquely combined cylinders by using formula –cylindrical.
 Calculate spherical equivalent.
 Describe and calculate the extent of apparent field of view and real field of view.
 Describe and calculate the 'image jump' effect of different styles and sizes of bifocals.
 Calculate prismatic effects at the near vision point (NVP) and neutralize prismatic effect at the NVP.
 Identify which lens should be selected for bi-centric grinding in a given lens medium and to calculate the amount of slab-off prism required.
 Calculate the effective power of a lens.
 Calculate prescription modification to account for different vertex distances.
 Calculate the effective power of a lens in near vision.
 Calculate the ranges of vision through the various portions of a given trifocal or progressive lens.
 Calculate the intermediate addition for a prescription that designates only distance and near powers.
 Perform calculations for a thin lens to determine front and back vertex powers and focal lengths; define principal and nodal points, unit magnification in the principal planes.
 Calculate images for near and distant objects using vergences.
 Calculate the positions of the focal lines and circle of least confusion for thin lenses of different powers.
 Measure vertex powers and the vergence impressed by spectacle lenses in near vision.
 Use measurements derived from lens thickness, sag formulae, lens measure (clock) and sagometers.

E4) Apply knowledge of binocular vision.

- E4.1 Discuss monocular and binocular vision.
 Compare binocular versus monocular vision including contrast sensitivity and acuity; stereopsis versus monocular depth perception.
 Discuss binocular movements.
 Discuss binocular status.
 Describe binocular visual acuity.
 Discuss monocular depth perception.
 Demonstrate an understanding of anomalies of binocular vision.

E5) Troubleshoot

- Explain typical short term physiological difficulties related to ophthalmic appliances.
 Explain visual or physiological symptoms that would require immediate attention.
 Teach the patient how to solve typical mechanical problems related to ophthalmic appliances.
 Develop a patient specific adaptation program and check regimen.

F. Fit, prepare and dispense appropriate eyeglasses using current practices and technology.**F1) Apply knowledge of lens theory and perform ocular measurements.**

- Define and visually identify segment types and sizes including diameter, width, height, depth, top position, drop, geometrical and optical inset.
- Define and locate distance and near visual points of bifocal lenses.
- Describe the ranges of trifocals and progressive lens formats available including the advantages and disadvantages of each.
- Describe and diagram the regions of indistinct vision, astigmatism and skew distortion inherent in the progressive lens format.
- Describe and locate the identifying markings found on a typical progressive power lens.
- Describe thickness reduction prism (TRP) and determine the amount of TRP or prescribed prism required.
- Describe Fresnel diffraction and diffractive lenses.
- Describe the use of back vertex power to classify spectacle lenses.
- Identify wavelength transmittance of the ocular media.
- Discuss transmission curves for a range of lens materials and for a range of tint formats.
- Define spectral and luminous transmittance.
- Define a spherical lens in terms of its base curve, surface powers and nominal power.
- Indicate on a diagram, with radii of curvature marked, converging and diverging forms of a spherical lens.
- Discuss dioptric systems.
- Describe shape factor.
- Determine monocular pupillary distances including for distant and near point gaze.
- Determine suitable vertical height for standard bifocal styles.
- Measure the vertex distance of each lens of the patient's existing eyeglasses.
- Measure the vertex distance of each lens of the patient's final frame selection.
- Determine the need to apply the compensated power formula.
- Measure curves including base curves and secondary curves.
- Calculate the power of a lens.
- Measure segment heights and widths.
- Measure lens thickness including at nasal and temporal edges and at optical center.
- Calculate and record the change in power due to fitting vertex distance.
- Calculate convergence through centered and decentered spectacle lenses.
- Measure and calculate the prismatic effect of lenses.
- Locate and measure the optical center height including distance above segment and vertical distance from bottom of frame.
- Locate and measure distance between optical centers on a given pair of lenses.

F2) Demonstrate an understanding of aberrations

- Discuss aberrations in the eye's optical system.
- Describe spherical aberration, chromatic aberration, coma, oblique astigmatism, curvature of field and distortion.
- Describe magnitudes of spherical and chromatic aberrations.
- Describe significance of the aberrations.
- Describe the effects of the pupil in dealing with aberrations.
- Define spherical aberration and its influence on the paraxial theory of ophthalmic lenses.
- Define chromatic aberration.
- Define longitudinal and transverse aberration (LA and TA).
- Demonstrate knowledge of the history and evolution of bifocals.
- Describe the development and use of split bifocals, cement bifocals, upcurve bifocals, panoptik bifocals and bonded bifocals.
- Locate optical centers of lenses and geometric centers of lens apertures in frame.

Demonstrate a knowledge of appropriate lens media including the indices of refraction, abbe factors, thickness variants, reflective characteristics, recommended coatings and tints, power ranges, manufacturing limitations and availability of same.

Define a cylindrical surface in terms of power meridians, axis notation.

Describe and explain the diffraction grating and the measurement of wavelength of light.

Describe visual anomalies related to eyeglass wear including but not limited to the 'jack in the box effect', 'ring scotoma', 'pin-cushion effect' and 'barrel distortion'.

Describe curvature of field (Petzval surface).

Define the far point.

Describe and explain principles of lenses for use under water, recumbent prisms, Fresnel lenses and prisms, and frosted lenses.

Describe and explain principles of design of aids for low visual acuity, spectacle magnifiers, loupes, telescopic spectacles and field expanders.

Describe aspherical lens surfaces.

F3) Use ophthalmic instruments and aids for eyeglass fitting.

- F3.1 Use instruments.
- Use a spectrometer (UV meter).
 - Use a caliper to measure lens thickness as per original order.
 - Use a ruler or task specific device to determine suitable vertical location for distant optical center including both single vision and multifocal prescriptions.
 - Use the penlight reflex and pupillometer methods to take a papillary distance.
 - Use a vertex distometer or other task specific device to measure vertex distance.
 - Use a lensometer to measure the refractive power of lenses.
 - Use edging and finishing equipment to fabricate eyeglasses.
 - Use a lens clock to measure base curve.

F4) Advise and assist with frame and lens choice.

- F4.1 Access information on product availability and manufacturer's specifications.
- F4.2 Make lens and frame recommendations.
- Describe the advantages and disadvantages of photochromic filters as well as to describe their transmission curves (unactivated as well as exposed), kinetic energy curves and their availability in various lens formats.
 - Observe a variety of frame sizes and shapes on the patient.
 - Determine the suitability of eye size given specific prescription and anatomical features.
 - Determine the suitability of bridge for specific frontal, transverse and crest angles of patient's nose.
 - Assess appropriateness of style and length of temple for specific anatomical features.
 - Discuss importance of combining function and fashion elements of the frame selections.
 - Convey to the patient the advantages and disadvantages of each frame under consideration including resulting lens appearance, weight, durability, maintenance requirements.
 - Describe the difference between as well as the advantages and disadvantages of vacuum tints and through and through (fixed) tints.
 - Describe the vacuum coating process for the application of single and multi-layered anti-reflection coating as well as for the application of filtration tints.
 - Describe the source of and methods of reducing troublesome reflections (ghost images) as well as the conditions causing various intensities of ghost images.
 - Describe and illustrate through diagrams the benefits of multi-layer anti-reflection applications as opposed to single layer anti-reflection applications in combating poor resolution due to light intensity.
 - Describe the properties of impact resistant lenses for both dress and industrial uses including the required specifications for a variety of lens media.
 - Recommend the best frame given specific prescription requirements, frame size requirements and patient's choices.

- Use knowledge of trigonometric functions and optical calculations applied to lens manufacturing and lens and frame selection.
- Advise, assist and recommend to patients an appropriate selection of products including when task specific products are required.
- Advise patient of visual consequences and physiological adaptation requirements created by changes in prescription.
- Make appropriate tint and coating recommendations.
- F4.3 Select to achieve optimal comfort and vision.

F5) Design, prepare and order eyeglasses.

- F5.1 Demonstrate knowledge of lens designs, materials and manufacturing methods.
Display an understanding of methods of manufacturing lens blanks.
Understand the protocols of the lab being used.
Describe the relationship between the finished lens box dimensions, decentration required, indices of refraction of material selected and resulting edge thickness.
- F5.2 Order any components as required.
Convey the lens specifications required using either hard copy or electronic format.
Note prescription changes, frame adjustments and repairs and ancillary purchases.
Note specifications of lenses, coatings, tints, special applications and frames being ordered.
Properly and efficiently develop and verify an appropriate lens order.
- F6.3 Ensure completion of the eyeglasses in a timely fashion.
Establish and monitor a reasonable delivery time.
Coordinate with the lab and frame supplier.

F6) Fabricate eyeglasses and perform needed repairs.

- Examine frames and lenses.
- Note adjustment, lens, tint, coating and frame quality.
- Layout and assess proper surface and polish lenses as required by prescription using both glass and plastic lens media.
- Use manufacturers' specification charts.
- Inspect completed adjustment and / or repair.
- Dye and coat lenses, excluding specialty vacuum coat applications according to specifications.
- Manufacture a properly sized lens free of edging defects.
- Mount finished lenses into frames.
- Complete manufacturing process without distorting or otherwise marking the frame.
- Place eyeglass unit in standard alignment.
- Prepare order for delivery.
- Calculate the cost of repair.
- Establish a reasonable timeline for completion of repair.
- Establish a reasonable timeline for delivery of completed eyeglass unit to patient.
- Solder frame components as required.
- Modify tints or coatings as required.
- Re-cut lenses as required.
- Re-string nylon frame mounts as required.

F7) Evaluate completed eyeglass product.

- F7.1 Verify the physical and optical integrity of the eyeglass unit.
Measure the reading addition of a bifocal lens.
Verify lens specifications as per original order including prescription, optical centre location, required prism, segment size and height.
Note model, color, size and general appearance of frame as delivered.
Verify frame supplied as per original order.
Inspect lens, verifying transparency of lens, colour and quality of tinting or coating as ordered,

and integrity of lens surface.
 Verify lens medium and format as per original order.
 Correlate all components of the written or electronically transferred frame and lens information with the assembled components that accompany the order.
 Verify light transmission of coatings or tints as per original order.
 Determine power anomalies.
 Ensure quality as per policy.

F8) Deliver eyeglasses.

- F8.1 Understand applicable tolerance standards.
Verify that the lens complies with technical standards.
- F8.2 Calculate potential sources of visual discomfort.
- F8.3 Re-fit and readjust eyeglasses as required.
Verify patient satisfaction with adjustment and / or repair.
Make adjustments including to the bridge, temples, pantoscopic angle, face form and vertex distance.
Explain expected changes in special perception, focusing distances.

G. Fit, prepare and dispense appropriate contact lenses using current practices and technology.

G1) Interpret the prescription.

Transpose to minus cylinder form.
 Establish base line visual acuity.
 Discuss correction of ametropia with a contact lens.

G2) Develop patient's visual profile.

Inquire about and record the patient's expectations of contact lens wear.
 Determine accommodation and convergence requirements in contact lenses compared with spectacles.
 Establish/determine wearing schedule requirements.
 Determine patient's focusing requirements.
 Determine patient's lens format and modality requirements.
 Anticipate indications and contraindications to lens wear and specific solution usage resulting from unusual ocular symptoms.
 Discover and evaluate reasons for wanting contact lenses.

G3) Use ophthalmic instruments and devices to perform ocular measurements and assessments for contact lens fitting

Use a Snellen chart or equivalent measuring tool.
 Use a contactek to verify the calibration of the keratometer.
 Perform keratometry.
 Co-relate K readings and the prescription to determine if any difference in power of the two eyes is axial or refractive and thus to make the appropriate recommendation to the patient.
 Establish base line corneal curvature.
 Measure palpebral fissures, diameter of cornea, diameter of pupil and eyelid position.
 Perform biomicroscopy.
 Manipulate lids.
 Ascertain lid tension.
 Evert upper lid to inspect for signs of giant papillary conjunctivitis.
 Note condition of cornea and adnexa.
 Use Florescein Disclosing solution.

Establish tear quality by applying the measurement of the tear break up/measure and record dehydration time.
Establish tear quantity by performing a Schmirer test.
Use a radiuscope to measure the B.C.O.R. of an RGP lens.

G4) Evaluate existing contact lens.

Assess lens movement.
Assess hydration and cleanliness of lenses.
Perform and chart the results of a biomicroscopy examination.

G5) Review range of lens choices.

Explain limiting factors of prescription and physiology.
Consider appropriate lens modalities.
Select lens of alternate specifications targeting a solution to symptoms presented and observed.
Review available lens formats and specifications.
Determine any limiting characteristics of the lenses.
Advise patients regarding the pros and cons of each lens modality.
Use knowledge of available manufacturing specifications.
Establish required water content requirements of lenses.

G6) Use diagnostic lenses and calculate contact lens specifications.

Select appropriate diagnostic lenses.
Assess static and dynamic performance of lens.
Perform over refraction in conjunction with trial contact lenses.
Perform critical contact lens and optical lens measurements.
Assess static and dynamic position of lenses.
Measure base curve as appropriate.
Measure diameter as appropriate.
Measure power as appropriate.
Measure thickness as appropriate.

G7) Design, prepare, order and modify optically correct contact lenses.

Use measurements taken and results of trial lens fitting.
Design a gas permeable lens.
Select an appropriate soft lens.
Order specific edge treatments, lens diameters, peripheral curves and blends (gas permeable).
Calculate the compensated power that should be ordered.
Assess power that needs to be ordered to achieve maximum visual acuity.
Establish relationship between the corneal surface and the back of an RGP lens using fluorescein.
Calculate compensating power for ordering lens.
Order appropriate lens modality for specific patients.

G8) Evaluate and correct performance of contact lenses.

- G8.1 Ensure appropriate RGP lens modifications are completed as required.
 Inspect edge quality as appropriate.
 Inspect peripheral curve quality as appropriate.
 Assess surface quality.
 Discuss rationale and procedures for RGP lens modifications including:
 Polish surfaces
 Adjust powers

Re-cut peripheral curves
 Reduce diameter
 Re-blend lens
 Re-roll edges.
 Make RGP lens modifications as required.
 Verify completion of modifications as specified.

G9) Provide followup care and evaluate anomalies affecting contact lens wear.

- G9.1 Determine anomalies and their possible source.
 Note unusual ocular symptoms such as conjunctivitis and dry eye.
 Recognize and identify any corneal pathology or injury.
 Relate contact lens related physiological anomalies to their source.
- G9.2 Implement appropriate followup care to address:
 Inadequate lens movement.
 Problems with lens hydration and cleanliness.
 Contact lens-related physiological anomaly.

G10) Demonstrate proper aseptic techniques for contact lenses.

- G10.1 Adhere to procedures for disinfecting and sorting soft contact lenses including:
 Cleaning of lens surface
 Disinfecting the lens
 Oxidization (Hydrogen Peroxide)
 Cold chemical regime
 Thermal disinfection (heat)
 Neutralization, rinsing or storing
- G10.2 Follow procedures for using protein removers.

H. Fit, prepare and dispense appropriate sub normal vision devices using current practices and technology.

H1) Recognize symptoms specific to the low vision patient.

Identify age-related anomalies.
 Maintain an up to date knowledge base on ocular anomalies and low vision.

H2) Interpret the prescription and evaluate the patient needs.

- H2.1 Evaluate the patient's needs
 Assess patient's physical dexterity in using the appliance on an independent basis.
 Assess the patient's psychological preparedness to accept a low vision device.
 Provide focusing targets for a range of visual distances.
 Determine the patient's visual goals.
- H2.2 Recommend an appropriate appliance.
 Select potentially appropriate devices for the patient's primary visual goal.
 Identify appropriate optical parameters for low vision device.
 Determine the impact of illumination on visual goals.

H3) Advise patient on purchase, use and maintenance of sub normal vision appliances

- H3.1 Assist the patient in purchasing the device.
 Discuss available product.
- H3.2 Train the patient on the use and care of the vision aid.
 Explain and demonstrate the use and limitations of the device.

I. Implement and maintain infection control and safe practices.**I1) Demonstrate proper aseptic techniques.**

Disinfect lenses, tools and instruments.
 Use storage techniques for trial lenses commensurate with solutions chemistry, pharmacology and microbiology issues.
 Maintain sample frames on display in a hygienic fashion.

I2) Teach patients proper hygiene protocols.

Demonstrate proper hygiene protocols.
 Communicate consequences of non-compliance.

I3) Recognize and control infection hazards.

Recognize the current landscape of infectious diseases and required preventative measures for public safety.

I4) Use safe procedures related to tools, equipment and products

- I4.1 Apply safety procedures recommended/defined by:
 The Optical Laboratory Association.
 Health Protection Branch of Canada and the Food and Drug Administration of the USA.
 Canadian Safety Association and American National Standards.
 The Canadian Ophthalmological Society, Canadian Association of Optometrists, Opticians
 Council of Canada and American Academy of Ophthalmology.
 International Organization for Standardization standards.
 Outline and comply with WHMIS legislation in terms of scope, material data safety sheets and labeling requirements for controlled substances.
- I4.2 Demonstrate proper personal hygiene.
 Maintain proper personal hygiene.
- I4.3 Apply first aid and CPR.
 Apply knowledge of basic first aid and CPR.
 Discuss first aid for common presenting medical conditions.
 Make decisions and deal with common medical emergencies that may occur in the workplace or at home, including wounds, bleeding and unconsciousness.
 Survey the safety of the emergency scene and contact EMS appropriately.

J. Communicate effectively.**J1) Use a wide range of verbal and nonverbal communication strategies**

- J1.1 Use empathy and active listening skills.
 Itemize and rephrase patient's choices to clarify needs.
 Demonstrate an appreciation of the needs of others, ways of encouraging positive relationships, an awareness of sources of conflict and strategies for conflict resolution when working independently and / or as a member of a group.
 Understand the importance of verbal and nonverbal communications.
 Identify communication barriers.
 Apply interpersonal communication concepts in the understanding of personal and professional relationships.
 Observe, evaluate and improve communications in relationships.
 Use demonstration techniques and questioning skills.
- J1.2 Present ideas clearly and effectively.

- J1.3 Use an interview process to determine needs
- J1.4 Use effective techniques with various ages and behaviours.
Identify and apply appropriate communication techniques with children.
Identify and use appropriate communication techniques and interventions to manage the abusive and / or aggressive patient.
Identify and use established protocols, policy and procedure to assess, manage and report abusive and aggressive patient behaviour.
Build effective relationships with all age groups.
Identify and use alternative techniques to create a relationship and to communicate to the speech / language impaired patient (i.e. communication boards, electronic devices).

J2) Communicate effectively with health care professionals and patients.

- J2.1 Use appropriate terminology.
Understand and apply common prefixes, suffixes, root words, symbols and abbreviations as related to production of ophthalmic appliances.
Demonstrate knowledge of common optical appliances and material terms in assessment, communication and documentation.
Speak about observations with a mature and informed vocabulary.

J3) Prepare documents and patient records.

- J3.1 Use writing that is consistent with the rules of English grammar.
Use consistent ophthalmic terminology on printed professional communications.
Write objectively and accurately about patient observations.

J4) Use effective interpersonal skills to resolve conflicts and complaints.

- J4.1 Apply conflict resolution skills to resolve concerns and / or complaints.
Use appropriate business etiquette when resolving conflicts.

K. Perform as a member of a health care team.

K1) Collaborate as both a team member and team leader in the workplace.

- K1.1 Function in independent, interdependent and collaborative roles with other members on the health care team to provide total vision care.
Understand the role / responsibilities of each member of the health care team.
- K1.2 Teach, guide, instruct, mentor, and supervise the student / intern in all areas of the profession.

K2) Liaise, refer and interact with all eyecare professionals.

- K2.1 Seek guidance when applicable.
- K2.2 Confer with appropriate health professionals and refer patients as required.
Serve as a patient advocate with other members of the team.
Liaise with patient's medical practitioners as required.
- K2.3 Recommend routine eye health screening.

Appendix 6

Ophthalmic Prescriptions by Prescriber

The following is an ophthalmic prescription by an ophthalmologist, Dr. L. Napier, M.D.:

DR. L. NAPIER Inc M.D., FRCSC 207 - 9808 KING GEORGE HIGHWAY
SURREY B.C. V3T 2V6 PHONE 588 - 3811

NAME: [REDACTED] DATE: Jan 20 '06

RIGHT EYE		LEFT EYE	
SPHERE	—	SPHERE	Plano
CYL.	+0.75	CYL.	—
AXIS	050	AXIS	
ADD.	+2.00	ADD.	+2.00

GENERAL USE _____ READERS _____ BIFOCAL _____ PROGRESSIVE _____

REMARKS _____

SIGNATURE [Signature]

Appendix 6

Ophthalmic Prescriptions by Prescriber – continued

The following is an ophthalmic prescription by an optometrist, Dr. D. Dosanjh, O.D.:

Oakridge Optometry Clinic
650 W. 41st Ave.
Vancouver, British Columbia, V5Z 2M9
604263-4211

Spectacle Lenses Prescription

Printed on: 7/05/2006

Date of RX: 10/20/2004



Vancouver

Rx

	Sphere	Cylinder	Axis	Add
OD:	-1.50	-0.25	165	
OS:	-1.50	-0.50	173	
Prism	In	Out	Up	Down


Dr. D. Dosanjh, OD

- 1) Occasionally small changes are required to provide maximum optical performance. Do not fill this prescription unless you are prepared to make these modifications without charge.
- 2) Not to be used as a contact lens prescription.
- 3) Not valid if over one year old.
- 4) This prescription is your property and should be kept in your possession.

Doctor Recommends™
**Affordable,
 quality
 products**

Eye-glass lenses, and the coatings that go on them, are the foundation for great vision. That's why our office has introduced the exclusive **DR** (Doctor Recommends™) line of lens and coating products. **DR** products deliver vision excellence and price value.

Look Ma, no lines!

DR Progressive lenses offer you improved vision that goes beyond bifocals, trifocals and average "no-line" progressive lenses. Our lenses provide natural vision that will satisfy your varying needs – from near to distance and everything in between.

Most progressives on the market don't compensate for the fact you look through the *reading* area of the lens at a different angle than the *distance* area. Our **DR** progressive calculation provides a larger reading area. Enjoy less eye strain and clearer vision.

Our **DR** Progressive lenses are made to precise specifications in Germany by one of the world's leading lens manufacturers.

Easy-clean **DR progressive lens coating**

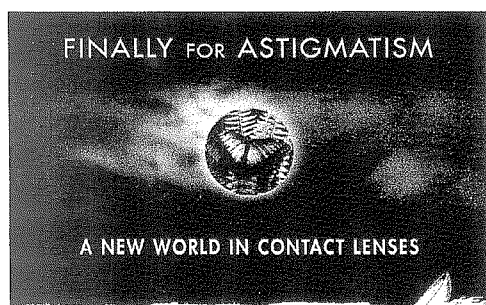
Eliminate up to 99% of unwanted reflections on both surfaces of your lens. The **DR** 3-in-1 multi-layered coating has a specially formulated finish that makes it super easy to clean. Talk about maintenance friendly!

Add optimum clarity and increased scratch resistance to the benefits. Better yet, say farewell to ghost images, distracting reflections and glare. The **DR** progressive coating is just what the Doctor Recommends.

New D/R 'Free Form' lenses

These highly sophisticated lens designs are essentially customized to your eyes, and your eyes only. Through advanced digital technology, we can now specify infinitely more elements of your lens curvatures – on both the front and back surfaces of the lens, and with variations in outer edges – so that you experience the best possible vision. **DR** Free Form lenses are one of the great innovations that are possible with new technology – ask us about whether a pair would be suitable for your vision.

Doctor Recommends **DR** lens products - available exclusively through our membership in Doctors Eyecare Network.



ALL-DAY CLARITY. ALL-DAY COMFORT.
 A WORLD OF DIFFERENCE
 ASK US FOR A FREE TRIAL PAIR*

THE CONTACTS

ACUVUE
 CONTACT LENSES

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