CAOS • ACÉO

Canadian Association of Optometry Students

Association Canadienne des Étudiants en Optométrie

2020 - 21

Student Experience and Expectation survey (SEES)

Enquête sur l'expérience et les attentes des étudiants

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Table of Contents / *Table des matières*

Abstract / *Résumé de l'enquête*

The Canadian Association of Optometry Students (CAOS) conducted a survey that was sent out to all Canadian OD students from the University of Waterloo, Université de Montréal, and US optometry schools to better understand student perspectives about the state of the optometric profession.

Our results revealed that medium middle-sized urban cities, closely followed by metropolitan areas were the most preferred demographics where students would like to practice upon graduation. After 15 years of practice, the preferred practice type remained fairly constant, with just a small percentage of students wanting to shift towards a large metropolitan practice. Lifestyle, proximity to family/ friends and location were the top three factors considered by students when deciding if they were interested in practicing rural optometry.

The vast majority of students have never had experience using any form of teleoptometry and only a small percentage of students said that they are comfortable with using teleoptometry. Most students do not feel that their education provides adequate knowledge to use teleoptometry platforms. The top three drawbacks of teleoptometry according to the students are reduced ability to accurately diagnose disease, lack of practitioner-patient interaction and reduced quality of care. Conversely, the top three benefits according to students are increased access to care for rural populations, scheduling flexibility and ability to practice from home. The majority of students believe that the benefits of teleoptometry outweigh the possible threats that teleoptometry poses.

L'Association canadienne des étudiants en optométrie (ACÉO) a organisé une enquête qui a été envoyée à tous les étudiants canadiens en optométrie de l'Université de Waterloo, de l'Université de Montréal et des écoles d'optométrie aux États-Unis. Le but de ce sondage était de mieux cerner la perspective des étudiants à propos de la profession optométrique.

Nos résultats ont révélé que les villes urbaines de taille moyenne, suivies de très près par les métropoles, sont les lieux de prédilection où les étudiants aimeraient pratiquer à la suite de leur graduation. Après 15 ans de pratique, le lieu privilégié reste similaire, avec un petit pourcentage d'étudiants qui opteraient pour une pratique en ville urbaine avec une large population. Le style de vie, la proximité avec la famille et les amis ainsi que la l'emplacement sont les trois principaux facteurs considérés par les étudiants lorsqu'ils évaluent leur intérêt pour la pratique de l'optométrie en milieu rural.

La grande majorité des étudiants n'ont jamais eu d'expérience avec la téléoptométrie et un faible pourcentage se sent confortable de l'utiliser. La plupart des étudiants ne ressentent pas que leur éducation actuelle leur octroie les connaissances adéquates pour utiliser les plateformes de téléoptométrie. Selon les étudiants, les inconvénients principaux de la téléoptométrie sont le manque de relation patient-praticien, une réduction de la qualité des soins et une diminution de la capacité à bien diagnostiquer les pathologies. Toutefois, les avantages reliés à la téléoptométrie sont l'augmentation de l'accès aux soins pour les populations en milieux éloignés, la flexibilité des horaires et la possibilité de pratiquer depuis son domicile. La majorité des étudiants perçoivent que les bénéfices reliés à la téléoptométrie l'emportent sur les désavantages envisagés.

Introduction and Purpose/*Introduction et objectif*

The Canadian Association of Optometry Students/Association Canadienne des Étudiants en Optométrie (CAOS-ACÉO) is a North American wide organization that represents Canadian optometry students studying in North America. Our mission is to enhance the professional and clinical development of the next generation of optometrists and prepare students by creating awareness of challenges affecting the optometric profession. If you are interested in learning more about our organization, please visit our website at http://www.caos.ca/

The CAOS executive committee conducts an annual Student Experience and Expectation (SEE) survey. The focus of the 2021 survey was to investigate the student perspectives on teleoptometry and its future potential in practice. The intent is to gather information to share with optometry stakeholder groups and guide discussion on how future technologies and advancements shape optometry, and how students can navigate through these changes.

L'Association canadienne des étudiants en optométrie/Canadian Association of Optometry Students (ACÉO-CAOS) est une organisation nord-américaine qui représente les étudiants canadiens en optométrie qui poursuivent leurs études en Amérique du Nord. Notre mission est d'améliorer le développement professionnel et clinique de la future génération d'optométristes et de sensibiliser les étudiants aux enjeux reliés à la profession optométrique. Si vous êtes intéressés à en savoir plus sur notre organisation, veuillez visiter notre site web : http://www.caos.ca/

Le comité exécutif de l'ACÉO mène annuellement une enquête (Student Experience and Expectation survey). L'objectif de l'enquête de 2021 était d'évaluer la perspective des étudiants envers la téléoptométrie et son potentiel au niveau de la pratique. Le but est de rassembler et de partager cette information auprès des parties intéressées. Ces résultats visent aussi à entamer des discussions sur l'impact des avancements et des technologies face au développement de l'optométrie et sur comment les étudiants devront naviguer à travers ces changements.

Methods / *Méthodes*

Google Forms was used as the main method to reach students. The survey consisted of 18 questions, constructed with guidance and correspondence from the Canadian Association of Optometry (CAO). Questions to obtain actionable information on student demographic, practice interests and teleoptometry were devised for students to answer.

To encourage participation, students were automatically eligible for a random draw of twenty (20) 25$ gift cards upon completion of the survey. The survey was emailed to all University of Waterloo Optometry students and was also distributed to the presidents of each of our CAOS chapters, and distributed through online social media platforms.

The survey was available for seven (7) days, from December 17th - December 23rd. The results were analyzed by the UW CAOS executive team and compiled into this report. The survey received a total of 328 responses from the aforementioned Canadian optometry students. Translation of the survey was provided by Université de Montréal CAOS.

Google Forms a été la plateforme principalement utilisée pour rejoindre les étudiants. L'enquête était composée de 18 questions, élaborées selon les conseils et en correspondance avec l'Association canadienne des optométristes (ACO). Les questions étaient regroupées afin d'obtenir de l'information sur la démographie des étudiants, leurs intérêts liés à leur pratique future et sur la téléoptométrie.

Afin d'encourager la participation, les étudiants étaient automatiquement éligibles à participer à un tirage aléatoire pour remporter 20 cartes-cadeaux (25$) à la suite de la complétion du questionnaire. L'enquête a été envoyée par courriel à tous les étudiants de l'Université de Waterloo et a été distribuée par les présidents de chaque chapitre de l'ACÉO à l'aide des différentes plateformes de réseaux sociaux.

L'enquête était disponible pendant sept jours, entre le 17 décembre et le 23 décembre 2020. Les résultats ont été analysés par l'équipe exécutive du chapitre ACÉO de l'Université de Waterloo et compilés dans ce rapport. L'enquête a reçu 328 réponses provenant d'étudiants canadiens en optométrie. La traduction des résultats a été fournie par le chapitre ACÉO de Montréal.

Demographics / *Informations démographiques*

Data was collected from 328 respondents spread amongst eight different optometry schools across North America with the majority attending the University of Waterloo School of Optometry and Vision Science. 27.1% of respondents attend optometry schools in the United States, an 11.9% increase from the year previously. Most respondents at American schools attend Illinois College of Optometry, closely followed by New England College of Optometry. None of the respondents originate from any one of the three territories of Canada. Females made up the majority of the respondents at 78.4% and there was a relatively even distribution of respondents from each cohort year.

Les données récoltées des 328 répondants proviennent de huit écoles d'optométrie à travers l'Amérique du Nord, la majorité venant de l'École d'optométrie et des sciences de la vision de l'Université de Waterloo. Les participants qui viennent des écoles d'optométrie aux États-Unis représentent 27,1% des réponses, soit une augmentation de 11,9% comparativement à l'année précédente. La majorité des répondants des écoles américaines proviennent de l'Illinois College of Optometry, suivi de près par le New England College of Optometry. Aucun des répondants n'est originaire des trois territoires du Canada. La majorité des répondants s'identifient au sexe féminin à 78,4% et la distribution des étudiants par promotion est relativement similaire.

School	Number of respondents
University of Waterloo School of Optometry and Vision Science	181 (55.2%)
Université de Montréal - École d'Optométrie	58 (17.7%)
Illinois College of Optometry	37 (11.3%)
New England College of Optometry	34 (10.4%)
State University of New York College of Optometry	9 (2.7%)
Arizona College of Optometry	5 (1.5%)
Pacific University College of Optometry	3 (0.9%)
Chicago College of Optometry	1 (0.3%)

Figure 1. Distribution of respondents by school

Figure 1. Distribution des répondants par école

Province/territory	Number of respondents
Ontario	183 (55.8%)
Quebec	57 (17.4%)
Alberta	31 (9.45%)
British Columbia	22 (6.7%)
Saskatchewan	12 (3.7%)
Manitoba	11 (3.35%)
New Brunswick	6 (1.8%)
Nova Scotia	3 (0.9%)
Prince Edward Island	1 (0.3%)
Nunavut, Northwest Territories, Yukon	0 (0%)
Other	2 (0.6%)

Figure 2. Distribution of respondents by province/territory

Figure 2. Distribution des répondants par province/territoire

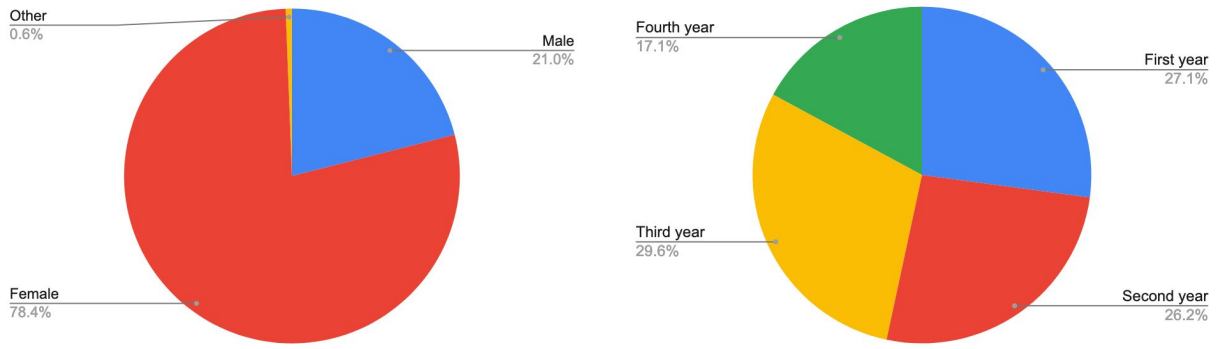

Figure 3. Distribution of respondents by gender and year of study

Figure 3. Distribution des répondants selon le sexe et leur année d'étude en optométrie

Location Ambition/ *Lieu de pratique envisagé*

Of the 328 students that responded to the survey, 239 students (72.9%) identified as studying in Canada and 89 students (27.1%) identified as studying in the United States. The majority of the students (70.5%) irrespective of their place of study responded that they preferred to practice in Canada. The remaining students were split with 28.1% responding that they have no preference between practicing in Canada or the United States and 1.2% responding that they prefer to practice in the United States.

When comparing students studying in the United States to students studying in Canada, a larger percentage of students in American optometry schools (59.6%) are found to have no preference in their desired location of practice compared to students in Canadian optometry schools (16.3%).

Students were asked where they plan on working their first-year of practice versus their fifteenth-year of practice. Options included all the provinces and territories across Canada or "other" should they wish to practice in a different country. Most of the respondents (49.7%) expect to practice in Ontario immediately post-graduation. In their fifteenth-year of practice, slightly more respondents (50.3%) have an interest in practicing in Ontario. By comparing figure 8 to figure 2, consistency across numbers show the vast majority of students plan on returning to their hometown to practice optometry. Based on figure 6 and 8, it appears there is some interest in practicing outside the country early on in their careers (5.3%) but all respondents foresee themselves eventually returning to Canada to practise optometry by their fifteenth-year of practice (0% for "other" in their fifteenth-year of practice). 80.8% of respondents plan on remaining in the same provincial location whereas the remaining 19.2% of respondents plan on changing locations from where they initially practiced post-graduation.

Des 328 étudiants qui ont répondu au sondage, 239 (72,9%) ont identifié qu'ils étudient au Canada et 89 (27,1%) aux États-Unis. La majorité des étudiants (70,5%), indépendamment de leur lieu d'étude, préféreraient pratiquer au Canada alors que 28,1% ont répondu qu'ils n'avaient pas de préférence entre pratiquer au Canada ou aux États-Unis. Finalement, 1,2% des étudiants ont répondu qu'ils préféreraient pratiquer aux États-Unis.

En comparant les réponses entre les étudiants qui étudient aux États-Unis à ceux du Canada, un plus grand pourcentage d'étudiants des écoles d'optométrie américaines (59,6%) n'avaient pas de préférence par rapport à leur lieu de pratique souhaité en comparaison des étudiants des écoles d'optométrie canadiennes (16,3%).

Il a été demandé aux étudiants où ils envisagent de travailler après un an de pratique puis après quinze ans de pratique. Les options présentaient toutes les provinces et territoires du Canada et une réponse « autre », s'ils souhaitaient pratiquer dans un autre pays. La plupart des répondants (49,7%) ont une préférence pour travailler en Ontario après leur graduation. Après quinze ans de pratique, il y a une légère augmentation de la préférence de pratiquer en Ontario (50,3%). En comparant la figure 8 à la figure 2, il y a une cohérence dans les résultats qui montre que la majorité des étudiants planifient retourner dans leur province d'origine pour pratiquer l'optométrie à long terme. Selon les figures 6 et 8, il semble y avoir un intérêt pour pratiquer en dehors du Canada au début de leur carrière (5,3%), mais tous les répondants souhaitent éventuellement retourner au Canada pour pratiquer au-delà de quinze années de pratique (0% pour l'option « autre » à leur quinzième année de pratique). Il apparaît que 80,8% des répondants planifient rester dans la même province alors que 19,2% planifient changer de lieu de pratique par rapport à leur début de carrière.

Q: Which country are you currently studying in?

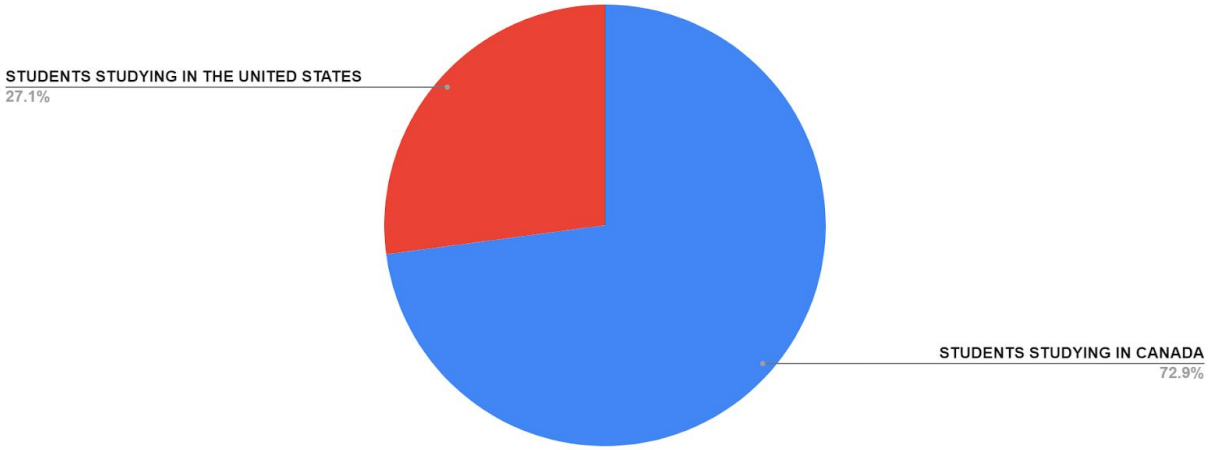

Figure 4. Distribution of respondents according to country of study
Figure 4. Distribution des répondants selon le pays où ils étudient.

Q: Which country would you prefer to practice in?

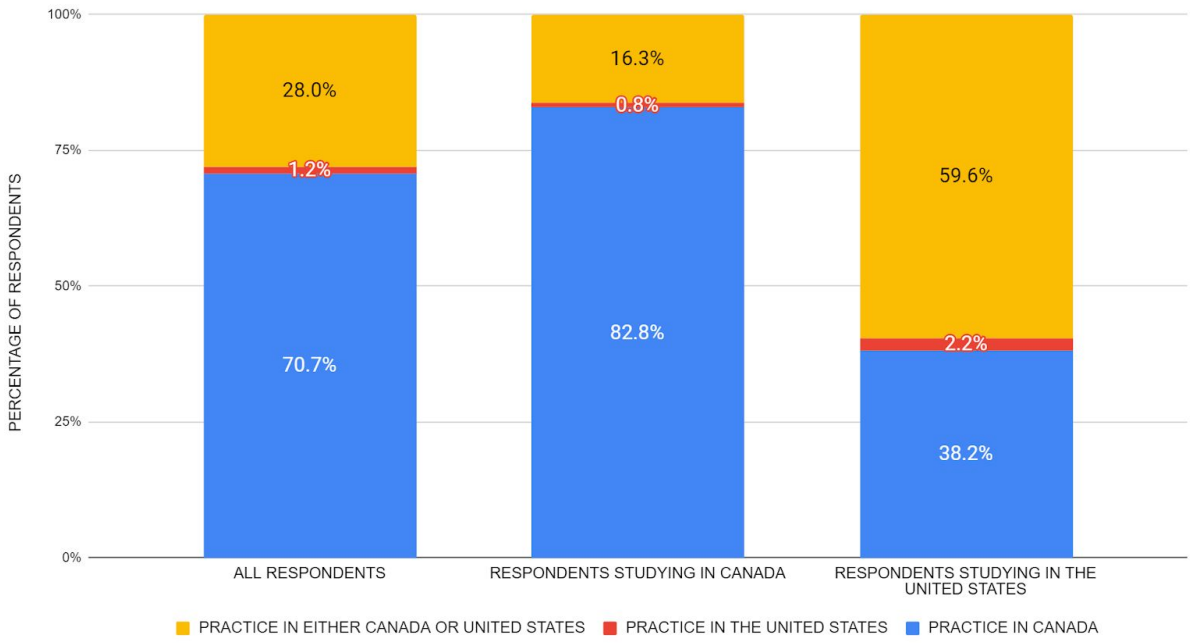

Figure 5. Proportion of respondents according to their country of study and their preferred country of practice
Figure 5. Proportion des répondants selon le pays où ils étudient et leur pays de préférence pour leur pratique.

Q: Where would you like to first practice when you graduate?

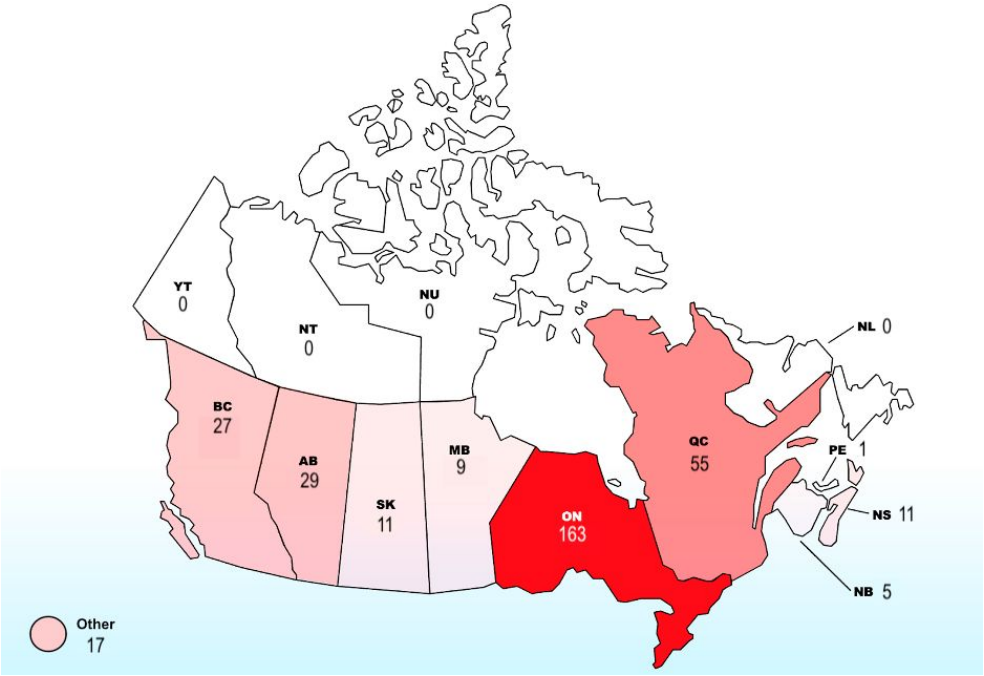

Figure 6. Geographic representation of where students plan to practice immediately post-graduation
Figure 6. Représentation géographique du lieu de pratique souhaité des étudiants suivant leur graduation

Q: Where would you like to practice in 15 years?

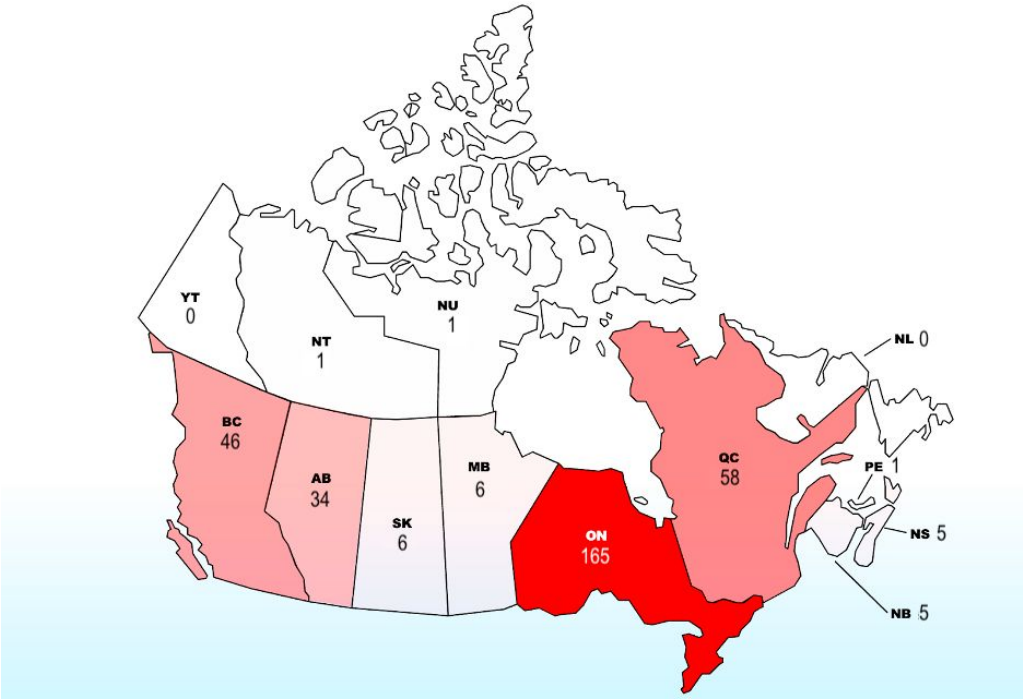

Figure 7. Geographic representation of where students plan to practice 15 years post-graduation
Figure 7. Représentation géographique du lieu de pratique souhaité des étudiants 15 ans suivant leur graduation

Province/territory	Immediately post-graduation	15 years post-graduation
Ontario	163 (49.7%)	165 (50.3%)
Quebec	55 (16.8%)	58 (17.7%)
Alberta	29 (8.8%)	34 (10.4%)
British Columbia	27 (8.2%)	46 (14%)
Saskatchewan	11 (3.4%)	6 (1.8%)
Manitoba	9 (2.7%)	6 (1.8%)
New Brunswick	5 (1.5%)	5 (1.5%)
Nova Scotia	11 (3.4%)	5 (1.5%)
Prince Edward Island	1 (0.3%)	1 (0.3%)
Nunavut, Northwest Territories, Yukon	0 (0%)	2 (0.6%)
Other	17 (5.2%)	0 (0%)

Figure 8. Distribution of respondents of where students plan to practice immediately post-graduation versus 15 years post-graduation

Figure 8. Distribution des répondants selon leur lieu de pratique souhaité immédiatement après leur graduation en comparaison à 15 ans suivant la graduation.

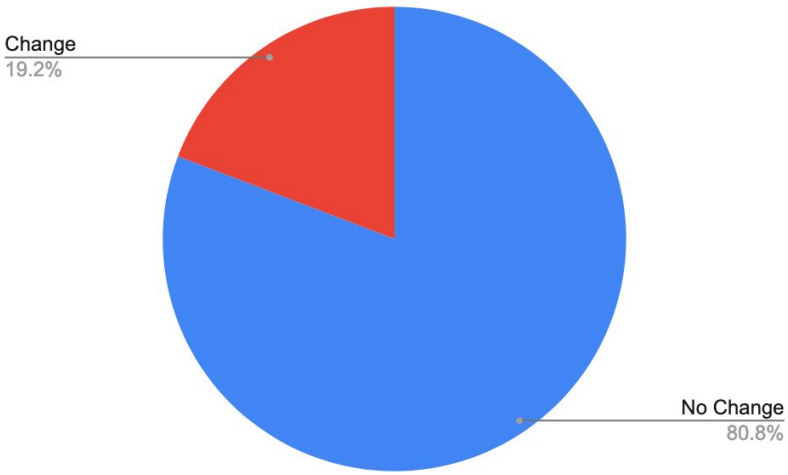

Figure 9. Distribution of respondents that plan on staying in the same provincial location after graduation and respondents that plan on changing their provincial location 15 years post-graduation

Figure 9. Distribution des étudiants qui prévoient rester dans la même province après leur graduation et des étudiants qui prévoient changer 15 ans après leur graduation.

Students were asked where they preferred to first practice upon graduation and where they preferred to practice 15 years into the future. The students were given four options for a response that were each defined based on their population size. The four options included rural, medium-sized urban city (greater than 100,000), metropolitan (greater than 500,000) and large metropolitan (greater than 1.5 million).

Following the completion of the survey, it was determined that a large proportion of students (36.8%) preferred to first practice in a medium-sized urban city upon graduation. The remaining responded with 31.6% of the students preferring to first practice in a metropolitan, 18.5% in a rural setting and 13.1% in a large metropolitan. This trend that a larger number of students preferred a medium sized urban city followed by a metropolitan, rural setting and large metropolitan was found to be the same when the prompt asked where the student preferred to practice 15 years in the future.

To understand the reasoning behind why the profession of optometry currently faces a large demand for optometric services in rural settings, students were surveyed to identify their top three factors that influenced their preference for or against practicing rural optometry. The results from the survey determined that the top three factors for students were lifestyle (65.3%), proximity to family or friends (62.9%) and location (61.7%). The other factors that were included in the survey included salary (52.3%), significant other (32.8%), scope of practice (24.9%) and employment saturation (15.8%). The ranking of the factors by the students this year closely mirrors the rankings from last year's report.

Il a été demandé aux étudiants où ils préféreraient travailler immédiatement après leur graduation, puis quinze ans plus tard. Quatre options ont été proposées aux étudiants qui étaient définies selon la taille de la population. Les quatre options incluent les populations rurales, urbaines de taille moyenne (plus de 100 000 habitants), métropolitaines (plus de 500 000 habitants) et métropolitaines de grande taille (plus de 1,5 million d'habitants). Suite à l'évaluation du questionnaire, il a été déterminé qu'une grande proportion d'étudiants (36,8%) préféreraient une pratique dans une ville urbaine de taille moyenne en début de carrière. Le reste des répondants préféreraient une pratique auprès d'une population métropolitaine (31,6%), rurale (18,5%) et métropolitaine de grande taille (13,1%). La tendance restait la même lorsqu'il était demandé aux étudiants quelle serait leur préférence quinze ans suivant la graduation.

Pour comprendre pourquoi le domaine de l'optométrie fait face à une demande accrue de services optométriques en régions rurales, il a été demandé aux étudiants d'identifier les trois facteurs principaux qui influenceraient leur choix de travailler ou non en milieu rural. Les résultats présentent le style de vie (65,3%), la proximité de la famille et des amis (62,9%) et l'emplacement (61,7%) comme les trois facteurs principaux. Les autres facteurs présentés étaient le salaire (52,3%), un être cher (32,8%), le champ de pratique (24,9%) et la saturation d'emploi (15,8%). Le rang des facteurs choisis par les étudiants cette année est très similaire aux résultats du rapport de l'année dernière.

Q: What type of demographic would you like to first practice at when you first graduate? / What type of demographic would you like to practice in 15 years?

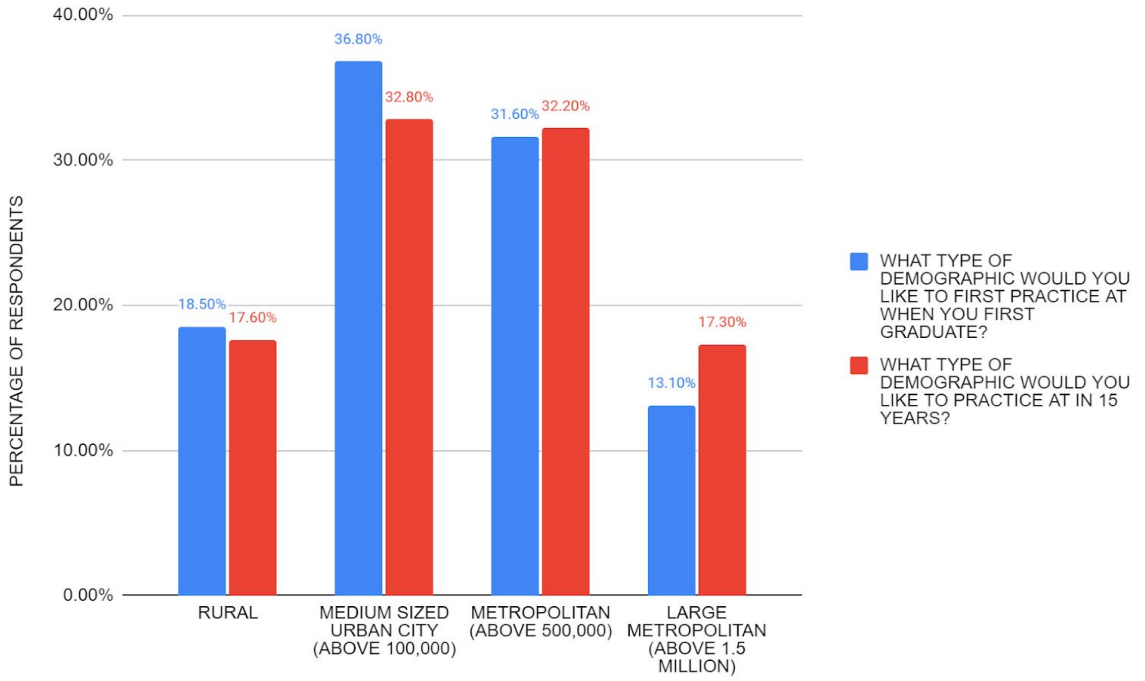

Figure 10. Comparison between where students preferred to first practice upon graduation versus in 15 years
Figure 10. Comparaison entre la préférence de lieu de pratique des étudiants à la graduation et 15 ans suivant la graduation.

Q: Which of the following are the top 3 factors which influence for/against your decision to practice rural optometry?

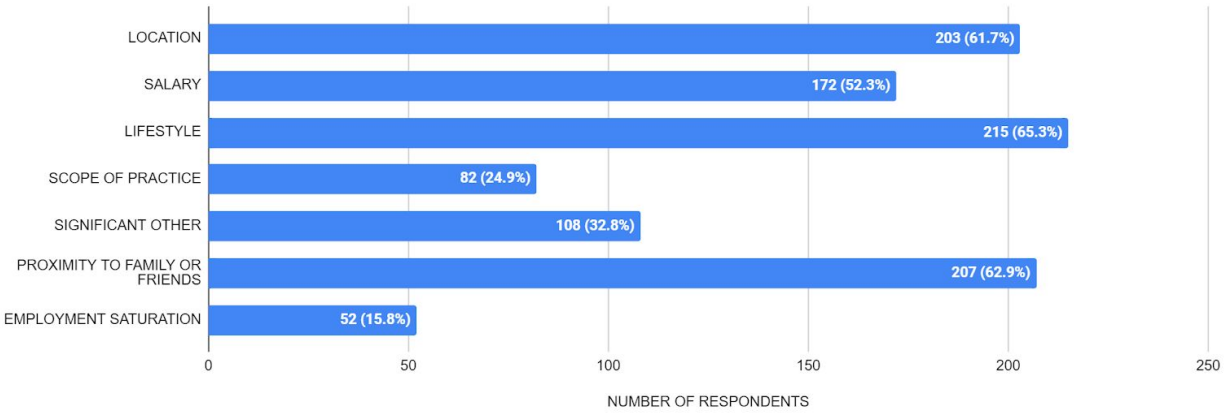

Figure 11. Distribution of factors influencing decision for or against practicing rural optometry
Figure 11. Distribution des facteurs qui influencent la décision de pratiquer ou non l'optométrie en milieu rural.

Prospects of Teleoptometry/

Perspectives en téléoptométrie

Students were asked about their experience using teleoptometry platforms, and of the 328 respondents, 300 (91.2%) of the students had no experience using any form of teleoptometry. 23 (7%) of the respondents have used teleoptometry previously and six (1.8%) were unsure if they had used teleoptometry previously.

Students were also asked about their comfort level using teleoptometry platforms and were asked to rank their comfort level on a scale of one to five, with one representing that they are "very uncomfortable" and five representing that they are "very comfortable" using teleoptometry platforms.

Most of the respondents fell in the middle with 116 students (35.4%) ranking their comfort level as a three out of five. The data skewed towards students being relatively uncomfortable with teleoptometry, with 81 (24.7%) responding one (very uncomfortable) and 80 (24.4%) selecting two. 41 students (12.5%) responded with four and only 10 students (3%) responded that they were very comfortable (five out of five) with using teleoptometry.

In addition to asking about students' experience and comfort level using teleoptometry, students were surveyed on if they feel their education provides them with sufficient preparation to have the knowledge and skills to use teleoptometry in practice. The majority of the respondents, 244 students (74.4%) felt that they were not sufficiently educated to have the knowledge and skills needed to use teleoptometry. 84 students (25.6%) responded that they did have sufficient education to use teleoptometry.

Les étudiants ont été questionnés par rapport à leur expérience avec les plateformes de téléoptométrie. Sur les 328 participants, 300 (91,2%) n'ont eu aucune forme d'expérience avec la téléoptométrie. Ce sont 23 (7%) des répondants qui ont préalablement eu une expérience avec la téléoptométrie et 1,8% des participants qui étaient incertains.

Les étudiants ont aussi été questionnés sur le niveau de confort qu'ils ont avec les plateformes de téléoptométrie selon une échelle d'un à cinq, un représentant indiquant être « très inconfortable » et cinq, « très confortable » de les utiliser.

La plupart des répondants, soit 116 étudiants (35,4%), se sont situés dans le milieu de l'échelle en évaluant leur confort à « neutre » (3/5). Les résultats penchent plus vers un inconfort envers la téléoptométrie, 81 (24,7%) étudiants répondant être très inconfortables (1/5) et 80 (24,4%) répondant être inconfortables (2/5). Ce sont 41 étudiants (12,5%) qui ont répondu être confortables (4/5) et 10 (35) étudiants ont répondu très confortables (5/5) à utiliser la téléoptométrie.

En plus d'évaluer l'expérience et le confort des étudiants envers la téléoptométrie, il leur a été demandé si l'éducation reçue fournit suffisamment de préparation pour avoir les connaissances et les habiletés permettant d'inclure la téléoptométrie dans leur pratique. La majorité des répondants, soit 244 étudiants (74,4%) ressentent que leur éducation est insuffisante pour avoir les ressources leur permettant d'utiliser la téléoptométrie. Ce sont 84 (25,6%) étudiants qui ont répondu avoir suffisamment d'éducation pour intégrer la téléoptométrie à leur pratique.

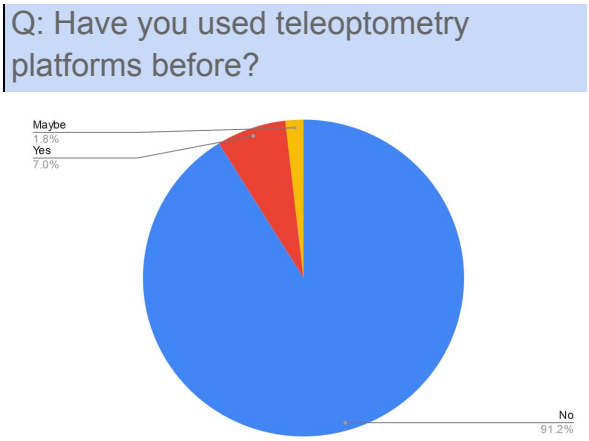

Figure 12. Graphical representation of students' prior experience with the use of teleoptometry.
Figure 12. Représentation graphique de l'expérience des étudiants avec la téléoptométrie

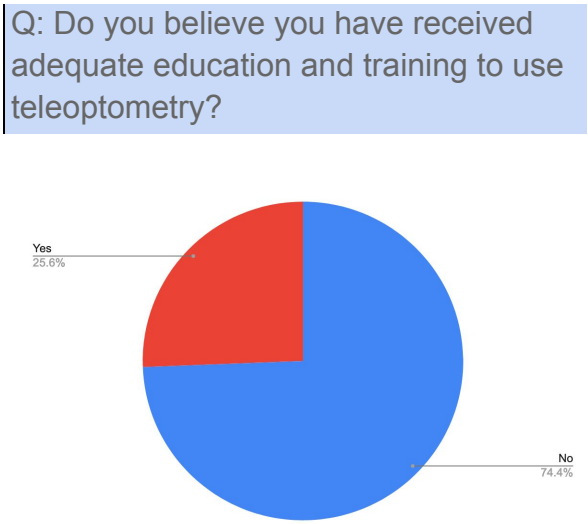

Figure 14. Distribution of student responses that indicates if they believe they have received the skills and education required to use teleoptometry.
Figure 14. Distribution des réponses des étudiants qui indiquent avoir reçu les ressources et l'éducation appropriées pour faire usage de la téléoptométrie

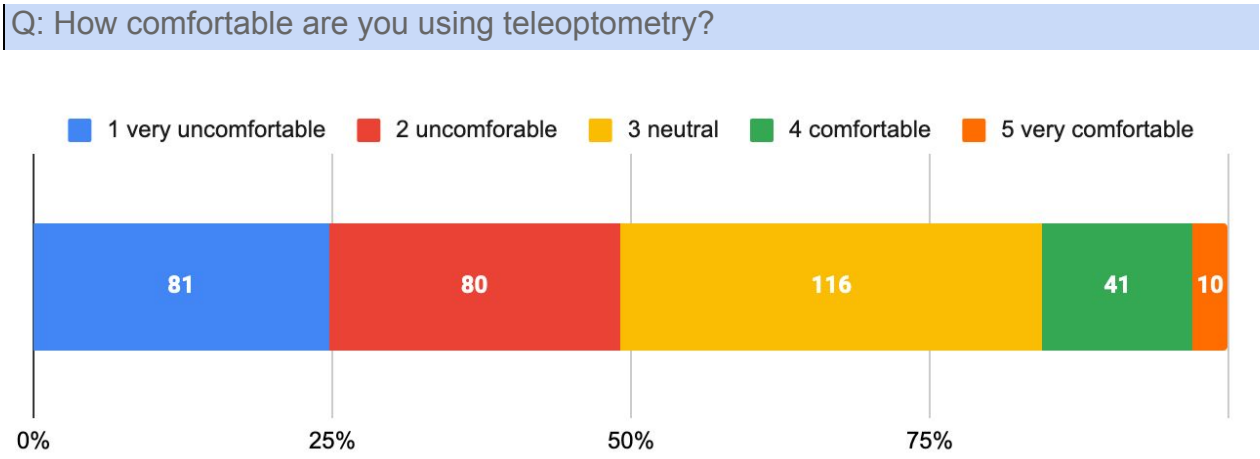

Figure 13. Distribution of student responses to their comfort level using teleoptometry.
Figure 13. Distribution des réponses des étudiants selon leur niveau de confort avec l'usage de la téléoptométrie

Benefits and Drawbacks of Teleoptometry from the Student Perspective

Bénéfices et inconvénients de la téléoptométrie selon la perspective étudiante

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Students were asked to gauge what they believe the major threats or drawbacks that teleoptometry had to the profession (Figure 15).

The top five threats of teleoptometry from the patient perspective included the following:

1) Reduced ability to accurately diagnose disease (74.2%)
2) Lack of practitioner-patient interaction (71.4%)
3) Reduced quality of care (66%)
4) Lack of access to care (45.3%)
5) Heavy reliance and instability of technologies (39.5%)

The bottom three responses that were deemed as major threats include:

1) Ethical issues surrounding teleoptometry (16.4%)
2) Reduced ability to provide patient-centred care (22.5%)
3) The risk for breaches in confidentiality (24%)

When asked of the major benefits that teleoptometry provides, students responded of the following (Figure 16).

The top five benefits of teleopometry included:

1) Increased access to care for rural populations (86.3%),
2) Scheduling flexibility (78.1%),
3) Ability to practice from home (71.1%),
4) Reduced healthcare costs (42.2%),
5) Allow for co-management of disease with other health care professionals (41.9%).

The bottom three responses that were deemed as major benefits include:

1) Improved patient interaction and involvement (6.7%)
2) Improves quality of care delivery (8.5%)
3) Increases patient engagement (38%)

Students' perspective on the prospects of teleoptometry were summarized in the remaining questions. When asked if they will integrate teleopometry into their future practice, 42.2% of respondents answered 'yes', 47.7% of respondents answered "do not know", and 10% of respondents answered 'No' (Figure 17). Additionally, 62% of respondents believed that the overall benefits of teleoptometry outweigh the threats. (Figure 18)

Il a été demandé aux étudiants d'évaluer les enjeux possibles de la téléoptométrie qui selon eux pourraient avoir un impact sur la profession (Figure 15).

Les cinq menaces de la téléoptométrie du point de vue du patient :

1) *Diminution de la capacité de diagnostiquer adéquatement une pathologie (74,2%)*
2) *Diminution de l'interaction patient-praticien (71,4%)*
3) *Diminution de la qualité des soins (66%)*
4) *Diminution de l'accès aux soins (45,3%)*
5) *Dépendance élevée et instabilité des technologies (39,5%)*

Les trois réponses les moins identifiées comme une menace :

1) *Soulèvements éthiques reliés à la téléoptométrie (16,4%)*
2) *Diminution de la capacité à fournir des soins centrés sur le patient (22,5%)*
3) *Les risques de bris de confidentialité (24%)*

Lorsque questionnés sur les bénéfices majeurs que la téléoptométrie apporte, les étudiants ont répondu ainsi (Figure 16).

Les cinq bénéfices principaux de la téléoptométrie :

1) *Augmentation de l'accès aux soins pour les populations rurales (86,3%)*
2) *Flexibilité des horaires (78,1%)*
3) *Possibilité de travailler de la maison (71,1%)*
4) *Diminution des coûts de santé (42,2%)*
5) *Permet une collaboration entre les professionnels de la santé dans la cogestion de pathologies (41,9%).*

Les trois réponses les moins identifiées comme bénéfice :

1) *Augmentation de l'interaction du patient et son implication (6,7%)*
2) *Augmentation de la qualité des soins délivrés (8,5%)*
3) *Augmente l'engagement du patient (38%)*

Le point de vue des étudiants par rapport aux perspectives de la téléoptométrie a été résumé avec les questions suivantes. Lorsque questionnés s'ils considéraient intégrer la téléoptométrie dans leur pratique future, 42,2% des répondants ont répondu « Oui », 47,7% ont répondu « Ne sait pas » et 10% ont répondu « Non » (Figure 17). De plus, 62% des répondants croient que les bénéfices globaux de la téléoptométrie surpassent les désavantages (Figure 18).

Q: What do you believe are the top 5 threats/drawbacks that teleoptometry presents?

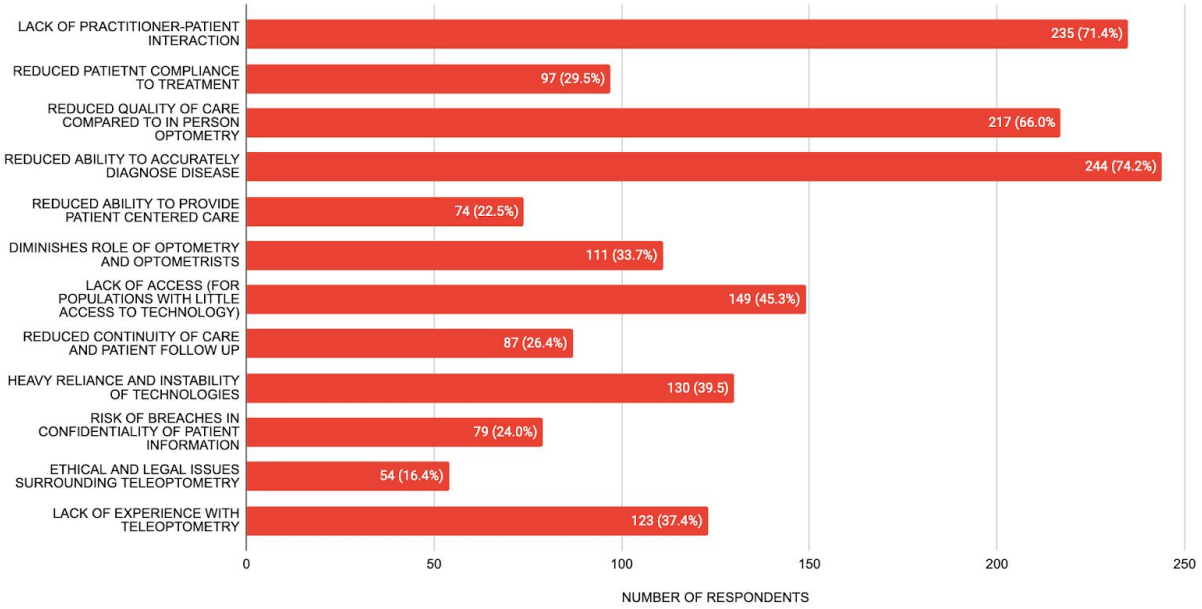

Figure 15. Major threats/drawbacks that teleoptometry poses on the profession of optometry
Figure 15. Menaces/désavantages majeurs de la téléoptométrie dans le domaine de l'optométrie

Q: What do you believe are the top 5 benefits that teleoptometry presents?

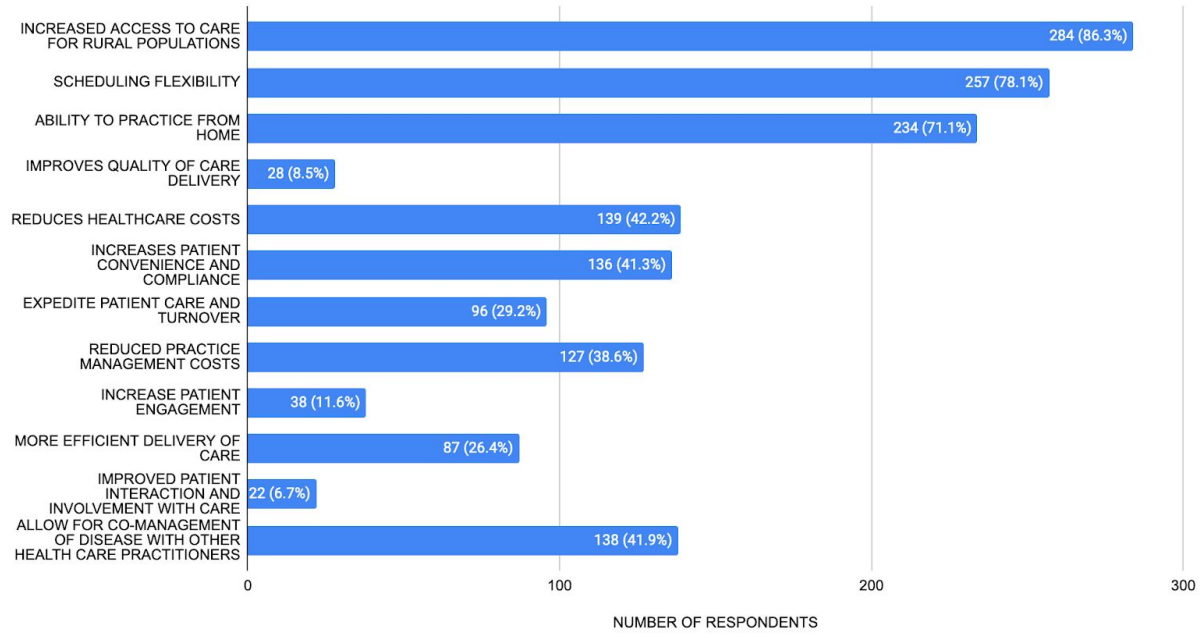

Figure 16. Benefits that teleoptometry poses on the profession of optometry
Figure 16. Bénéfices de la téléoptométrie dans le domaine de l'optométrie

Q: Do you think you will use teleoptometry platforms for certain diagnostics, treatment and communication with other healthcare professionals upon graduation

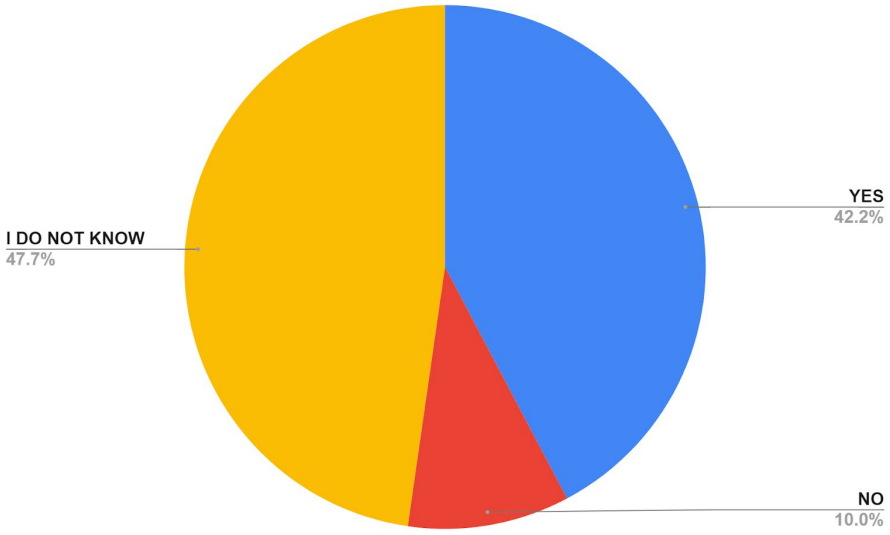

Figure 17. Distribution of respondents by their willingness to incorporate teleoptometry into their practice for diagnostic, treatment and communication reasons

Figure 17. Distribution des répondants selon leur volonté d'incorporer la téléoptométrie dans leur pratique pour le diagnostic, le traitement et les communications.

Q: Do you think the benefits outweigh the threats for integrating teleoptometry?

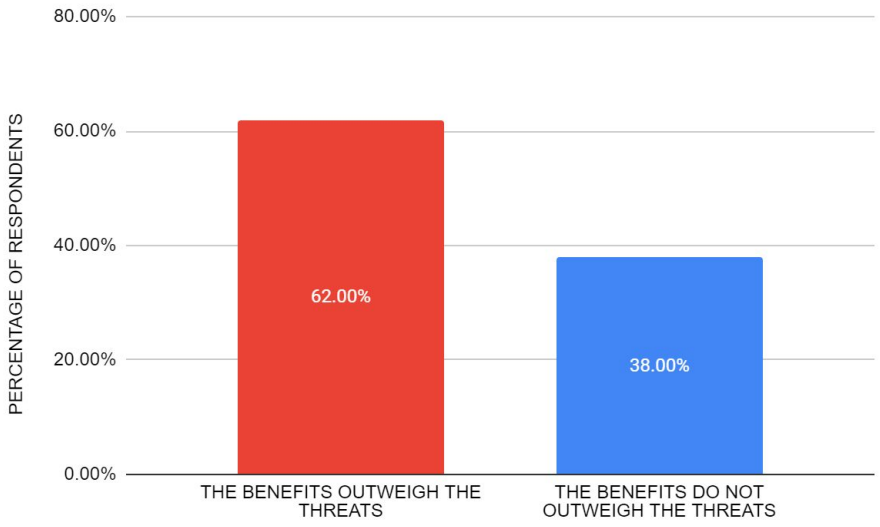

Figure 18. Distribution of respondents that deem that the benefits associated with teleoptometry outweigh its threats/drawbacks

Figure 18. Distribution des répondants jugeant les bénéfices associés à la téléoptométrie supérieurs aux menaces/désavantages.

Student Subjective View of Teleoptometry

Opinion subjective des étudiants sur la téléoptométrie

Students' were asked to provide insight into their views of teleoptometry, speaking to the benefits it provides and additional comments to the growing field. Some responses are highlighted below. A complete recount of all responses can be found in Appendix I.

Il a été demandé aux étudiants d'émettre leur point de vue à propos de la téléoptométrie en discutant des bénéfices d'une telle technologie et en ayant la possibilité d'émettre des commentaires supplémentaires sur les perspectives de la téléoptométrie. Quelques réponses ont été soulignées ci-dessous. L'intégralité des réponses se retrouve en Annexe 1.

Q: What is the top opportunity that you think teleoptometry provides to new graduates?

" Allows treatment options for individuals unable to access clinic locations, thereby increasing the accessibility of optometry."

« Permet des options de traitements pour les individus qui n'ont pas accès à certaines cliniques, et donc d'augmenter l'accessibilité aux soins optométriques. »

"Teleoptometry could allow for screening of individuals in emergency situations in extremely rural settings to ensure that eye care is available to everyone."

« La téléoptométrie permettrait le dépistage d'individus en situation d'urgence dans des milieux très éloignés, permettant d'assurer des soins oculaires pour tous. »

"I believe that teleoptometry provides new graduates the ability to work on their communication skills being that they would practice their ability to efficiently collect relevant information with brevity."

« Je crois que la téléoptométrie apporterait aux nouveaux gradués la possibilité de travailler sur leurs habiletés de communication, puisque cela pratiquerait leur capacité de collecter l'information pertinente de façon efficace et avec concision. »

"The opportunity to diversify the daily practice, but more importantly it could help answering the lack of rural access to optometric care in many Canadian regions!"

« Une opportunité de diversifier sa pratique, mais encore plus important d'aider à répondre au manque de soins optométriques en régions éloignées dans plusieurs régions du Canada ! »

“There is easier co-management and new graduates would potentially be able to see more patients with this method of diagnosing/treating patients since it is more efficient.”

« Il y aurait plus facilement de la cogestion et les récents gradués pourraient potentiellement voir plus de patients avec cette méthode de diagnostic et de traitement qui est plus efficace. »

“The ability to supplement our salary with additional teleoptometry opportunities, and to reach remote communities that otherwise would not have access to eye care! “

« La possibilité d’augmenter notre salaire avec plus d’opportunités de téléoptométrie et de rejoindre plus de communautés éloignées qui n’auraient pas eu accès aux soins optométriques d’une autre façon. »

Q: Please use this space to comment on other prospects of teleoptometry, either benefit or drawback

“ I think it will allow you to see more patients because of the increased availability and convenience, but the remote location might lead to questions about reduced quality of care and whether that should translate into lower fees (it undermines the profession). But it’s something that can’t be avoided and there’s a good chance that it’s here to stay even after the current situation passes, so we’ll have to learn to work with it either way.”

« Je pense que cela va permettre de voir plus de patients, puisque cela augmente les disponibilités et les commodités, mais le fait d’être à distance peut conduire à nous questionner sur la diminution de la qualité des soins et sur la réduction des frais liés à un examen (et donc sur la valeur de notre profession). Mais il s’agit de quelque chose qui ne peut pas être évité et il y a de fortes chances que cela reste après que la situation actuelle se sera améliorée, nous aurons besoin d’apprendre à travailler avec la téléoptométrie dans tous les cas. »

“I do not think that teleoptometry is in the best interest of the patient at this time. Many standard test would be unable to be performed remotely and patient care would suffer. “

« Je ne pense pas que la téléoptométrie soit dans le meilleur intérêt des patients actuellement. Plusieurs standards de tests ne seraient pas faisables à distance et les soins aux patients en seraient affectés. »

“Teleoptometry is the future of optometry, much in the same way that autorefractors are part of its present. Tele-health in general can easily become a part of current practices and lend to increasing quality of patient care. “

« La téléoptométrie est le futur de l'optométrie, de la même manière que les autoréfractomètres font partie de notre présent. La télé-santé en général peut facilement faire partie de notre pratique et permettra d'augmenter la qualité de soins pour les patients. »

"Although I mentioned the potential benefit for rural populations, we would have to first ensure that these individuals in remote locations had access to technology and connection to utilize the teleoptometry platforms. Without this, its benefit in the rural healthcare setting is diminished."

« Même si j'ai mentionné les bénéfices potentiels de la téléoptométrie pour les régions éloignées, il faudra être certain que ces patients ont accès aux technologies et connexions adéquates pour utiliser les plateformes d'optométrie. Sans cela, les bénéfices pour les soins de santé en milieux ruraux sont diminués. »

"I think that we need to make it clear to patients that we are limited to what teleoptometry can offer and that it doesn't replace the need for in person patient care. With that in mind - teleoptometry can help filter out some of the appointments that don't necessarily need in person appointments "

« Je pense qu'il faut mettre au clair avec les patients que nous sommes limités dans ce que la téléoptométrie peut offrir et que cela ne remplace pas les soins en présentiel. Avec cette pensée, la téléoptométrie pourra filtrer certains rendez-vous qui ne nécessitent pas d'être en présentiel. »

"My concern is that tele-optometry will be more refractive-centric, at the expense of ocular health. This could interfere with the early detection of certain pathologies, since patients still see us as professionals for refraction and not for the overall ocular health"

« Mon inquiétude avec la téléoptométrie est qu'elle sera plus centrée sur la réfraction, aux dépens de la santé oculaire. Cela pourrait causer de l'interférence avec le dépistage de certaines pathologies, puisque les patients nous voient encore comme les professionnels de la réfraction et non de la santé de l'œil globalement. »

"I think the quality of care and the whole purpose of healthcare will be diminished as the general public will value online opinions (such as 1800 contacts) over real in patient/doctor care. I believe teleoptometry will be abused over time and people will get away with things that could be a threat to patients care. "

« Je pense que la qualité des soins et le but même des soins de santé seront diminués à l'œil du public général qui consultera plus l'opinion des ressources en ligne (ex : 1800 contacts) au détriment d'un soin patient-praticien. Je crois que la téléoptométrie sera sur-utilisée avec le temps et les gens s'en tireront avec des choses qui pourraient être une menace pour les soins aux patients. »

“In theory it sounds good but I’m not sure I know enough about it to trust it. Seems highly unlikely we would be able to do the same testing as we would if the patient was sitting in front of us. I feel like it may take away from optometrists/optometry rather than help us. Patients would need to know they are being assessed by trained professionals. “

« En théorie, cela semble bien, mais je ne suis pas certain que j’en connais assez pour avoir confiance. Il semble très incertain que nous serons capables de faire les mêmes tests que si le patient était sur la chaise devant nous. Je sens que cela enlève à l’optométrie et aux optométristes plutôt que de nous apporter de l’aide. Les patients voudront savoir qu’ils sont évalués par des professionnels certifiés. »

Discussion / *Discussion*

The prospects of optometry is largely unknown as students continue to navigate a landscape that provides several setbacks; this is compounded with a lack of experience and practical knowledge of the profession they will enter. The SEES annual publication aims to highlight student opinions and thoughts of the optometric profession in order to guide future direction and focuses. This year, the number of respondents has surpassed any year prior, collecting responses for 328 Canadian students throughout North America.

Of importance, more than half of respondents attend school in Canada (72.9%), either the University of Waterloo or Université de Montréal. The provincial breakdown of respondents reveals the majority from Ontario (55.8%), as seen in *Figure 1* and *Figure 2.* This information is not uncommon and has followed a similar trend to prior years of conducting this survey.

Interestingly, of the respondents studying in Canada, a majority intend to continue practicing in Canada (72.9% of 239 students). Conversely, of the 89 students identified as studying in the United States only 38.2% had the intention of returning to practice in Canada. Continuing, the trend to return to Canada after a number of years in practice remains strong from in years’ past, as a number of respondents intend to return to their home provinces after 15 years of practice, regardless of their initial provincial selection

The information suggests a possible predilection that the location of the study suggests a preference of location to practice; even so, the majority of respondents intend to return to Canada to establish permanent work, regardless of study location. The limited scope of this survey restricts further extrapolations, but merely provides insight into the subjective views between the two groups of students.

Location of practice remains unchanged from in years past, revealing that medium urban cities (above 100,000) and metropolitan areas (above 500,000) are the main preference for students to practice in; the main driving forces that determine against practicing in a rural setting include lifestyle (65.3% of respondents), location (61.7% of respondents), land proximity to family or friends (62.9% of respondents). Scope of practice and employment saturation was not as strong indicators against practicing rural optometry.

In discussing the mode that teleoptometry faces with students, the general consensus is that it is an inevitable technology, especially with the current climate. Being said, students do not feel equipped to face those challenges and have very limited experience and knowledge with these advancing technologies. Additionally, there remains a lot of ambiguity and unknowns when evaluating this new mode of health service.

In an environment meant to learn fundamental skills and foster clinical proficiency, our academic institutions are essential to provide opportunities to gain experience in a clinical setting; unfortunately, with the global pandemic and changing field of optometry, students are feeling the impacts. 91.2% of students had no experience using any form of teleoptometry, and 74.4% did not feel that their education provided sufficient knowledge and skills to use teleoptometry in practice.

The prospects around teleoptometry center around the ability to provide remote access to care and flexibility of the practitioner and the main drawbacks revolve around the reduced quality of patient care and reduced ability to perform. While the verdict is swift to suggest that the prospects of teleoptometry outweigh the threats (62% of respondents versus 38% of respondents), only 42.2% of students could confidently indicate that they would use teleoptometry in the future; 47.4% were unsure. The full list of acquired student responses is shown in Appendix I, and gleans into the concerns and possibilities that teleoptometry can provide.

This apparent disconnect between what teleoptometry can provide versus how we can navigate it is all too common. It would appear that the pandemic has thrust the profession into a new direction that necessitates online services, but students may not be equipped to partake in that journey. It would necessitate that key stakeholders within the field of optometry provide adequate training and information to students and new graduates that may have to enter a newer era in the profession than intended.

While there are hesitant reservations about teleoptometry, students remain hopeful to learn more about this new direction of new technologies, and how it may benefit our patients in the future.

Les perspectives reliées à l'optométrie sont largement inconnues alors que les étudiants vivent présentement dans une période qui procure d'innombrables revers; ce à quoi vient s'ajouter un manque d'expérience et de connaissances pratiques de la profession qu'ils exerceront. L'enquête annuelle « SEE » vise à mettre en évidence l'opinion des étudiants sur le domaine de l'optométrie afin d'orienter des objectifs futurs. Cette année, le nombre de répondants a surpassé toutes les années antérieures, permettant d'obtenir des réponses de 328 étudiants canadiens à travers l'Amérique du Nord.

Plus de la moitié des répondants étudient dans une école canadienne (72,9%), soit à l'Université de Waterloo ou à l'Université de Montréal. Le décompte par province révèle que la majorité des répondants viennent de l'Ontario (55,8%), tel que montré à la Figure 1 et la Figure 2. Cette information n'est pas inhabituelle alors qu'elle suit les tendances des enquêtes des années antérieures.

Il est intéressant de constater que la majorité des répondants qui étudient au Canada souhaitent également pratiquer au Canada (72,9% des 239 étudiants). Inversement, sur les 89 répondants qui étudient aux États-Unis, 38,2% ont l'intention de pratiquer au Canada à la suite de leurs études. La tendance de revenir au Canada pour pratiquer quelques années après la graduation est encore bien présente et ne se démarque pas des précédentes enquêtes. Un grand nombre de répondants ont l'intention de retourner dans leur province d'origine après 15 ans de pratique, indépendamment de leur choix initial de province pour le début de leur carrière.

Les résultats semblent suggérer que le lieu d'étude des répondants pourrait influencer leur préférence de choix de lieu de pratique. Toutefois, la majorité des répondants ont l'intention de revenir au Canada pour leur pratique permanente, peu importe le lieu où ils ont fait leurs études. L'étendue limitée de cette étude ne permet pas plus d'exploration, mais donne une perspective sur le point de vue des deux types d'étudiants (étudiant au Canada ou aux États-Unis).

Le lieu de pratique souhaité ne change pas par rapport aux dernières années, révélant qu'un milieu urbain avec une population de taille moyenne (au-delà de 100 000 habitants) et les régions métropolitaines (au-delà de 500 000 habitants) restent les lieux de pratique de prédilection selon les étudiants. Ce qui retient principalement les étudiants de pratiquer en milieu rural sont le style de vie (65,3% des répondants), l'emplacement (61,7% des répondants) et la proximité avec la famille et les amis (62,9% des répondants). Le champ de pratique et la saturation d'emplois n'étaient pas des indicateurs assez forts pour influencer le choix de pratiquer en milieu rural.

En discutant de l'avènement de la téléoptométrie avec les étudiants, le consensus général est qu'il s'agit d'une technologie inévitable, spécialement dans le climat actuel.

Ceci étant dit, les étudiants ne se sentent pas suffisamment équipés face à ces nouveaux défis et ont très peu d'expérience et de connaissances avec ces technologies avancées. De plus, il reste encore beaucoup d'ambiguïtés et d'inconnus lorsqu'il leur est demandé d'évaluer ce nouvel outil.

Dans un environnement où les connaissances fondamentales sont apprises et où les compétences cliniques sont préconisées, les institutions académiques sont essentielles afin de fournir des opportunités de gain d'expérience en milieu clinique. Malheureusement, en raison de la pandémie et des changements dans le domaine de l'optométrie, les étudiants en ressentent certains impacts. Ce sont 91,2% des étudiants qui ont répondu n'avoir aucune expérience avec aucun type de téléoptométrie, dont 74,4% qui ne sentent pas que l'éducation qui leur est fournie est suffisante pour les former face à ce type de pratique.

Les perspectives d'avenir autour de la téléoptométrie tournent majoritairement autour de la possibilité qu'elle offre d'augmenter l'accès aux soins en régions éloignées et de la flexibilité qu'elle permet aux praticiens. Les désavantages ressortis sont principalement la diminution de la qualité des soins aux patients et de la capacité de performance. Bien que les résultats suggèrent que les étudiants perçoivent que la téléoptométrie procure plus de bénéfices que de désavantages (62% des répondants contre 38%), seulement 42,2% des étudiants ont pu répondre de manière convaincue qu'ils utiliseraient la téléoptométrie dans le futur, alors que 47,2% en étaient incertains. La liste complète des réponses des étudiants se retrouve en Annexe 1 et discute des inquiétudes et possibilités que peuvent offrir la téléoptométrie.

Cette déconnexion apparente entre ce que la téléoptométrie peut fournir et notre manque d'expérience avec cette technologie est un peu trop courante. Il apparaît que la pandémie a initié de nouvelles directions dans le domaine de l'optométrie qui mènent à la nécessité des services en ligne, mais les étudiants ne sont pas outillés pour faire face à ces nouveaux défis. Il sera nécessaire pour les intervenants principaux du domaine de l'optométrie de fournir des formations adéquates pour les étudiants et nouveaux gradués qui auront à commencer dans une nouvelle ère de la profession.

Bien que certains étudiants gardent certaines réserves quant à la téléoptométrie, la plupart demeurent confiants qu'ils en apprendront davantage sur ces nouvelles technologies et sur comment elles permettront d'apporter des bénéfices pour les patients dans le futur.

Conclusion / *Conclusion*

The student perspective continues to be instrumental in providing insight into the position our young professionals are in, and the direction they may take optometry. Student location ambition mirrors closely to years past, finding that a majority intend to remain practicing within Canada, regardless of the location of study, little interprovincial mobility post-graduation, and a predilection for urban optometry practices. With the current pandemic, we evaluated student comfort levels and perspectives in using teleoptometry, and while this idea appears to be cemented into the requirements of our future practices, students are still unsure if their educational background and skills will be adequate to navigate it, and the risks it may befall on the profession as a whole.

La perspective des étudiants continue d'être cruciale afin de comprendre le point de vue des jeunes professionnels et dans quelle direction ils guideront l'optométrie. L'intérêt de l'emplacement de pratique des étudiants est similaire aux dernières années, montrant l'intention de ceux-ci de pratiquer au Canada, peu importe leur lieu d'étude, avec une légère mobilité interprovinciale suivant la graduation et une préférence pour la pratique en milieu urbain. Avec la pandémie actuelle, le niveau de confort des étudiants et les perspectives d'usage de la téléoptométrie ont été questionnés. Bien que cette technologie semble s'ancrer dans les exigences des pratiques futures, les étudiants sont encore incertains si leur niveau d'éducation et leurs habiletés reliés à la téléoptométrie seront adéquats pour l'utiliser efficacement et s'il y aura un risque encouru sur la qualité des soins prodigués.

Appendix / *Annexe*

Q: What is the top opportunity that you think teleoptometry provides to new graduates?

"It would allow for employment flexibility. E.g. you could work part time ina big city while supplementing your income with Teleoptometry for a rural location."
"Able to provide care to a larger number of patients"
"Makes them a more interesting applicant"
"The fact that proximity would no longer be a barrier - larger patient base"
"Medication renewal"
"while one might be limited to a set demographic when working in-person, teleoptometry might allow for new graduates to interact with a wider variety in patient demographic, allowing for accelerated exposure and experience building"
"Protect the patient and doctor against germs in situations like a pandemic"
"We can practice remotely, serving a wider range of demographics."
"It allows you to interact to more patients"
"More efficient patient care"
"New scope of practice"
"I think the use of teleoptometry would allow new graduates to gain more experience and data on ocular disease while practicing virtually"
"Convenience and accessibility"
"Convenience"
"The opportunity to continue practicing and taking care of patient's needs who might experience more difficulty with accessibility to the clinic/practice."
"More efficient patient care."
"Able to help more people around the world"
"Allows the doctors to examine patients who live in remote locations who are unable to receive the care that they need."
"Able to help more people around the world"
"Ability to treat patients in rural settings who would not otherwise have access"
"Able to help more people around the world"
"There is easier co-management and new graduates would potentially be able to see more patients with this method of diagnosing/treating patients since it is more efficient."
"Maximizing patient encounters"
"Expansion of scope, flexible hours, efficient form of care"

“increased patient encounters”
“Better case history”
“New graduates who want to practice in practice in the city but also see patients in rural areas. Also with COVID-19 teleoptometry can be done to assess complaints or reason to determine whether patient needs to come in person for further assessment and testing.”
“Convenience”
“To build stronger patient relations”
“Larger pool of patients.”
“To build stronger patient relations”
“Larger pool of patients.”
“I think this will become more prominent in the future, so experience now would be helpful.”
“The ability to treat more patients, especially with COVID where patients are afraid to go into clinic”
“Ability to reach distant individuals”
“Being able to help more remote communities”
“Access to more patients during the pandemic”
“It's another great avenue to help those in need especially as was shown by the pandemic”
“Increased out reach”
“Access to a wider px demographic”
“In the quarantine world we live in today this could definitely make a huge difference for patients.”
“It's relatively more accessible (particularly right now with COVID) for patients and ODs. You can see a wider demographic of patients more efficiently, and for patients who may not have the means to commute to an office, this is a great opportunity for them to still access a professional opinion.”
“Distance plays no role in access to carefully”
“Ability to reach more people”
“People's experience using or working with telehealth”
“Better access to rural areas”
“Ability to practice from home”
“Being able to reach more patients”
“Able to develop critical communication skills with patients.”
“Flexibility”
“multiple revenue streams”
“A new approach to communicating with patients w/o the need for in clinic apts a few days a month.”
“Comfort”
“To prepare for the future of where optometry is going”

“Flexibility in conducting eye exams, being more efficient with in-office procedures and visits.”
“The ability to provide service to a wider range of patients from different geographical areas.”
“Increases the communication between patient and doctor”
“The ability to work remotely would allow for more compromise with where I'd be living at myself, as I would have a greater outreach in terms of potential patient care. So, I'd be potentially able to help those who would be originally inaccessible due to distance/time.”
“The ability to gain more work hours and experience without having to be directly in the clinic.”
“Ability to see more patients and work from home sometimes which was never a possibility before!”
“higher volume patient care for partial exams.”
“Able to provide to a wider demographic”
“More access to jobs no matter where you want to live after graduation.”
“We are able to communicate and deliver care to those who are unable to come in to the clinic personally for any reason, allowing us to continue to grow our practice and build a patient base even remotely.”
“The ability to be flexible with their practice.”
“Flexibility to deliver care”
“The top opportunity that teleoptometry provides to new graduates is greater access to a job coming fresh out of school.”
“Providing care to people who may otherwise not be reached with office based visits only.”
“The ability to supplement our salary with additional teleoptometry opportunities, and to reach remote communities that otherwise would not have access to eye care!”
“Access to patients from different geographic areas”
“To provide better practice in establishing patient rapport and diagnostic reasoning.”
“To connect with the people whom you would never had a chance to meet”
“Opportunity to expand patient base and provide care to underserved communities”
“Better access to more rural communities”
“Reaching more patients”
“Increasing patient care and interaction for better follow up protocol.”
“See more patients in less amount of time so that you can get your name out there to more people but with quicker more problem oriented tele exams likely ultimately leading to the patient coming to see you for a comprehensive eye exam”
“See more patients in less amount of time so that you can get your name out there to more people but with quicker more problem oriented tele exams likely ultimately leading to the patient coming to see you for a comprehensive eye exam”
“Reduce costs.”
“Reach people far”

“See more patients”
“I don’t really know since i never heard of this before”
“Easy accessibility”
“It allows us to live where we want, and not necessarily closed to our work.”
“Quick consulting with patients when in need of urgent care.”
“Being able to help more people”
“Help people in remote locations to have access to eyecare professionals and treatments.”
“The ability to practice optometry during periods of confinement and to increase the scope of their practice.”
“Developing your communication skills and lowering the cost of practice.”
“Being able to chose wether the graduate want to treat his patients in the same room or via teleoptometry is great. During this pandemic, we can see just how much it’s an advantage to practice teleoptometry so the new graduates are better equipped to face any situations.”
“It allows new graduates to practice out of their comfort zone.”
“Being able to help more people who might not have access to eyecare (ex the Indigenous)”
“Be able to analyse the eye health of more patients in a day.”
“We can helps people that comes from places where there is no optometrist”
“if ever some sort of situation like the covid pandemic arises, we could work from home”
“Opportunity to work with people who cannot go by themselves at the clinical or in context that nobody can move from home like in our conditions of covid19.”
“Variation”
“It gives them a challenge to use their judgment and reasoning without seeing a patient.”
“Fast access to patient”
“More impact on people far away”
“Better access for people that live in rural areas, less wait time”
“It gives more flexibility to both the patient and the optometrist. If the patient cannot come to the clinic but he needs someone to check his eyes, it will be more efficient for him.”
“Some follow-ups could be made by teleoptometry instead of in the practice”
“Diminuer les listes d'attente de 5-6 mois dans les régions éloignées”
“new patients”
“Consultations during pandemic”
“Improvement of the patient interaction and follow up”
“It does avoid making patients come in for something that can be resolved with a simple telepoptometry assessment and allows therefore more serious cases to come in and visit the optometrist in person. Also, in a time like 2020, it does reduce contact time with different people.”

“flexibility”
“The opportunity to adapt to situations like a pandemic + offer care to residents of very rural areas”
“Diagnosis of rare pathologies.”
“To be able to use learn about new types of treatment.”
“The opportunity to give care to more patients especially during covid”
“More accebility for patients from far to see an optometrist.”
“It will help them reach further to patients, not only by place, but also permit more online consultation.”
“Reaching more patients from regions with fewer optometrists.”
“More patients in a small amount of time, for appointements that doesnt required a visual examination”
“Opportunity to see more diverse cases non-depending on how your boss wants to book your schedule for the clinics income (urgencies don't bring as much money to the office compared to selling glasses, so sometimes the receptionnists are told not to book emergencies, which is a shame)”
“Not having to be infected by patients”
“Being able to perform eye exams in a region that they would not necessarily willingly move to (but would still like to provide services if possible)”
“Knowing how to deal with the new technologies that will be used much more in the next few years.”
“To be able to treat people that don't live close to an optometrist”
“The possibility of offering remote optometric care in all possible conditions.”
“It allows them to work with patients from different places and some can live far from their clinic. It also allows them to save some time and space in their clinic and is an advantage for the patients.”
“Efficiency”
“Treat people from anywhere in the country/world”
“The opportunity to diversify the daily practice, but more importantly it could help answering the lack of rural access to optometric care in many Canadian regions!”
“Aider les communautés éloignées à prendre leur santé en mains. Continuer à travailler en temps de pandémie.”
“The ability to use their clinical judgment in an effective & time consuming way for them as well as for the patients. It will let new graduates gain experience faster with more patients taken care of in a day.”
“the possibility to work even if everything is close”
“Je ne comprends pas la question…”
“Can reach more people”
“See patients outside of clinic hours and remotely.”
“The ability to reach patients in a much wider range, allowing for diverse patient cases.”
“Accessibility”
“Unsure - not educated on this yet”

“To assist patients in rural areas that do not have a clinic that is easily accessible to them”
“Given the current pandemic I think teleoptometry will give new graduates some comfort knowing that they can still communicate with patients, even if they were required to limit patients coming in to see them, or have to close their practice all together.”
“working in emergency clinics”
“Greater outreach and communication”
“I have not yet learned about teleoptometry but look forward to learning about it in the future”
“Provides greater scheduling flexibility for both the optometrist and the patient.”
“More flexibility for patients”
“larger patient pool”
“Flexibility with schedule”
“Ability to work in pandemic”
“Allows for wider patient outreach”
“Teleoptometry may be a good way to practice for very recent grads who may not be able to find work due to the pandemic”
“The ability to access anyone anywhere right away not have to try to get people into your office as soon as possible. Potential private business opportunity. Live anywhere in the world.”
“ability to reach more patients”
“Ability to reach rural clients without the commute”
“Allows for wider patient outreach”
“I think it can help broaden the amount of relationships between patients and the new optometrist graduate, who may not have many connections to begin with so early in their career”
“More flexibility for patients”
“Exposure to more patients who may have rare ocular diseases”
“Being able to practice from anywhere”
“Saves travel time, more efficient, able to see more patient”
“- allows optometrists to provide care in a safe way during Covid”
“The ability to see more px in less time”
“Makes optometric care more accessible to patients in very rural locations, in emergency situations, etc..”
“In covid, it allows us to work from home.”
“Flexibility”
“Access to communities who are more remote, faster wait times”
“Gives access to rural areas where there may not be an optometrist”
“If we are unable to go to rural areas or times like 2020 where we have the pandemic.”

“Connect with patients virtually”
“Ability to practice during a pandemic”
“more patients”
“Treatment and care of patient regardless of time of day”
“more opportunities and new ways of practice”
“Facility of communicating with patients who are physically distant from their OD”
“To be able to practice optometry and provide for patients while also having an opportunity to explore other hobbies and spend time with family.”
“can provide more jobs for new graduates while allowing people in remote communities to receive optometric care”
“The opportunity to practice and still see patients when unable to make it into the office (ex. In a snow storm).”
“Flexibility”
“Job prospects”
“Allowing us to practice recognizing and diagnosing ocular conditions.”
“Being able to expand the amount of patients you can care for”
“The ability to provide treatment to patients who are unable to access the clinic”
“The ability to reach patients who cannot come into our offices - reduce barrier to access.”
“Ability to provide safe care amidst the pandemic, as well as ability to triage cases in more rural areas before travelling”
“Since new grads tend to work in more than one location, it allows their patients to keep in touch without needing to travel into the clinic (better doctor-patient rapport)”
“Teleoptometry could allow for screening of individuals in emergency situations in extremely rural settings to ensure that eye care is available to everyone.”
“It’s a great way to practice case based analysis and develop strong communication skills”
“Able to process patients faster”
“ability to help those in rural areas without having to relocate to that area”
“quicker exams”
“Being able to see more patients in a day”
“Teleoptometry will help new grads be better with taking case histories and counselling, since it is different from the standard in person model so the Optometrist needs to optimize what they are going to say. It also needs to be efficient like in person since other people are waiting for your next call.”
“It allows them to see patients in remote locations.”
“Allows them to be part of the ever-changing healthcare field. Also, financially you’re able to see more patients.”
“Helping more patients, especially while they can be safe at home during the pandemic.”

“Expanded patient base”
“I'm not sure”
“New graduates will be able to have a more flexible schedule especially if they are starting off working in multiple practices.”
“Possibility to see more/new patients”
“More patient variety”
“Increasing patient encounters especially when COVID has made it harder for new graduates to get new patients”
“More patients”
“Efficiency”
“Increased patient base”
“Increased patient base”
“It allows them to see patients in remote locations.”
“More patients”
“To maximize efficiency and leave more time for the things you want to work on. It’s also good to become familiar with what’s out there so you can learn to use it to your advantage/figure out where the gaps are in its abilities that you can still fill.”
“Greater outreach/accessibility for more patients”
“To maximize efficiency and leave more time for the things you want to work on. It’s also good to become familiar with what’s out there so you can learn to use it to your advantage/figure out where the gaps are in its abilities that you can still fill.”
“Exposure to a variety of populations/demographics”
“Allows them to be part of the ever-changing healthcare field. Also, financially you’re able to see more patients.”
“Ability to work with patients who are unable to come into the clinic”
“Helping more patients, especially while they can be safe at home during the pandemic.”
“To maximize efficiency and leave more time for the things you want to work on. It’s also good to become familiar with what’s out there so you can learn to use it to your advantage/figure out where the gaps are in its abilities that you can still fill.”
“Ability to reach many new patients an improve accessibility for younger populations”
“Ability to work if offices shut down”
“Ability to work if offices shut down”
“Would be useful in the time of COVID but also for patients who face challenges in leaving their homes.”
“Quick anterior segment diagnoses/advising patients on simple things they can do at home or with OTC meds”
“The ability to provide care to a greater variety of patients”

“Flexible practice options when starting out”
“The ability to grow your patient base outside of the city you practice in”
“Expanding patient base”
“An opportunity to address rural communities”
“The ability to provide patient care and gain experience in a different format in scenarios where a new graduate's schedule may be less filled (i.e. as they build a patient base and establish their career)”
“To see a broader base of patients”
“Ability to see patients during a pandemic.”
“The opportunity to have patients and provide patient care during this pandemic”
“An opportunity for a malpractice suit lol”
“Telehealth provides better access to younger patients”
“More easily reaching out to rural population”
“Keeping up with the shift towards remote service and care”
“Flexibility in work locations, especially to reach rural communities.”
“Time efficiency”
“More patients, more flexible scheduling if working between multiple clinics and efficient way to start building a reputation”
“Reaching those who do not have access to our clinic, due to proximity in small towns and day to day weather restrictions etc”
“Accessing more patients in remote areas”
“Ability to reach vulnerable patients and patients in rural areas to make care more accessible. Expanding the profession.”
“Ability to work in more offices”
“More convenient for the patient”
“Decreased chair time”
“Resolving common ocular issues without occupying an exam slot”
“Learning to triage and reducing burdens/ wasted time for both patients and doctors for simply-managed issues.”
“Will allow for better accessibility for services of patients who are unable to physically go to a clinic.”
“It enables new graduates to think critically regarding what conditions can be managed in vs. out of office, and the urgency with which certain conditions need to be treated.”
“Safety”
“Care for remote locations, flexibility in location and variable patient populations”
“Working from home, larger patient totals, decreased expenses for a practice owner”
“Helping/triaging people for “emergency” appointments to help reduce the patient load at hospital ERs”

“Increased availability”
“The ability to build a client base relatively quickly.”
“Protect the patient and doctor against germs in situations like a pandemic”
“I believe it will allow for better accessibility for patients who are unable to come in for their appointment due to proximity or mobility issues.”
“Providing more free labour for the government”
“Access to patients in areas that don’t have access to optometry care”
“I believe that teleoptometry provides new graduates the ability to work on their communication skills being that they would practice their ability to efficiently collect relevant information with brevity.”
“Seeing more patients”
“Allows us to "see" more patients”
“outreach to rural communities”
“Opportunity to provide direct care”
“Innovative way to engage with patients”
“An accessible was to provide care to patients in need.”
“It provides a wider scope of practice since it allows you to become more accessible to your patients. It is beneficial since location is no more a factor in practicing.”
“Get to interact with patients from different regions.”
“They provide a new and accessible way of providing services to those that have a harder time accessing care normally”
“allows for greater accessibility to patients who may otherwise not be able to commute into a clinic”
“More access to patients in locations where they may be too far to come see you otherwise. This can help really build your patient base.”
“The ability to see more patients with the extra time that one would have from not seeing patients directly.”
“Experience, especially when clinics may not allow/want/cant afford new doctors”
“It allows new graduates who are comfortable with technology to be able to see more patients in the midst of the pandemic.”
“It allows us to keep up with the evolving world.”
“I think overall it will provide more patient care, especially to those who need it most (can’t leave home/long term care facilities... for ex). It’s allowing us to provide care to the people we normally may not reach.”
“Allows treatment options for individuals unable to access clinic locations, thereby increasing the accessibility of optometry.”
“Ability to provide access to healthcare to a wider scope of patients, while increasing convenience for both the practitioner and patient.”
“To access patients in rural areas that have had minimal care in the past.”

“Collaboration with other optometrists or ophthalmologists”
“Higher profit margins”
“Increased ability to see a variety of patients”
“Many new graduates work at multiple locations so teleoptometry could allow them to work at different clinics without as much travel time and other disadvantages that typically come with working at multiple clinics.”
“Increased access of care and more flexibility of practice location.”
“If there are ever office closures”
“I think it would allow us to serve people that otherwise would not be able to access eye care.”
“Providing care to those who otherwise would not have access to care.”
“To provide new graduates with employment opportunities when they otherwise might not have them in the community they will live in.”
“flexibility”
“I honestly do not know”
“Provides better connection with patients and opportunities for management and care.”
“Opportunity to expand patient base”
“Ça nous permet d'aider les personnes en région plus éloignée qui n'ont peut-être pas de professionnels proche.”
“Ease of access for patients to get healthcare.”
“Increased opportunity to see patients”
“Access to rural patients or not easily accessible patients”
“Ability to treat during pandemic”
“to see a larger variety of patients”
“Care for rural patients who cant access an eye care professional easily”
“More access to patients in locations where they may be too far to come see you otherwise. This can help really build your patient base.”
“Allows treatment options for individuals unable to access clinic locations, thereby increasing the accessibility of optometry.”
“Widens the patient population and types of issues the grad can see.”
“Social distancing”
“Larger patient base, more accessible healthcare”
“Providing care to those who otherwise would not have access to care.”
“work from afar”

Q: Please use this space to comment on other prospects of teleoptometry, either benefit or drawback.

"I think the biggest risk is the capability of making accurate diagnosis for the patient. I am having a tough time imagining having anywhere near the capability of a slit lamp, 78/90, BIO, or even clear images for something as simple as Adnexa and Lids."
"I would be concerned about not being able to properly diagnose diseases without adequate tools. I would use teleoptometry as a way to triage the patient."
"With time and when more of the older population is familiar with certain technology and has access to it, tele optometry may be a better option at times otherwise I feel in person interaction is much more valuable"
"I think the quality of care and the whole purpose of healthcare will be diminished as the general public will value online opinions (such as 1800 contacts) over real in patient/doctor care. I believe teleoptometry will be abused over time and people will get away with things that could be a threat to patients care."
"I think it can become a benefit to optometry, but it might take some time to work out the kinks and explain the benefits to those who are skeptical."
"I believe that it is a good idea that would be very useful for patients who are unable to receive treatment either because they live in remote locations or simply cannot go to the clinic. But it is certainly no replacement for an actual in-person exam in terms of patient interaction and quality of care."
"I am concerned that the ocular health evaluation, diagnosis and follow up care will be compromised as we will not be able to get a three dimensional view of structures such as the cornea or retina. Particularly the retina, we will not be able to see far into the periphery like a BIO allows us to. Additionally, many procedures done in clinic such as foreign body removal, dry eye Meibomian Gland expression etc. will not be able to be done. In this platform, our scope of practice will be reduced."
"Especially during this climate, I think more people will consider incorporating teleoptometry in the future. The risk of spreading contagious diseases decreases with this method of diagnosing/treating patients."
"This would be optimal during covid. As things return to normal, the promotion of telemedicine will have a devastating impact on our careers which rely heavily on in-person procedures. If telemedicine is allowed for Optometrists, it'll be overtaken by corporations eventually. Think about Warby Parker and Clearly.ca'a effect on small businesses already when it comes to glasses…"
"It is the new future of optometry. Education of it is key."
"Difficult to confirm diagnosis"
"Needs to be carefully evaluated at a small scale operation to test out the responses"
"Needs to be carefully evaluated at a small scale operation to test out the responses"
"Teleoptometry is a good alternative during the pandemic for patients who need care, but are at risk of contracting the virus."
"I think options are crucial no matter how important a in person interaction might be. It may increase our decrease patient compliance depending on what is being managed but that means the optometrist needs to play an active role in teaching out and staying engaged. It can be ready to become complacent over these avenues of communication."
"So far, telehealth is still very new. It's not easy to know how beneficial it is in practice, outside of a

pandemic”
“I am looking forward to learning more about it and getting more experience with teleoptometry in my future rotations!”
“Teleoptometry can allow health care providers an easier way to provide care to their patients in a convenient way. However, due to the lack of in-person doctor-patient interaction, management can become an issue as patients may be less compliant towards treatments.”
“Teleoptometry is the future of optometry, much in the same way that autorefractors are part of its present. Tele-health in general can easily become a part of current practices and lend to increasing quality of patient care.”
“Though teleoptometry has a limited scope at present yet it's going to impact in coming future.”
“It's a good alternative when direct care is not possible.”
“I think the benefits would outweigh the threats only in rural areas.”
“I think that practitioner-patient interaction is the most important thing to give the best care in any condition. I wonder how could we keep this ability with teleoptometry.”
“It’s beneficial if the village have no optometrist near them.”
“I don’t really know a lot about this, but I would say the interpretation of the hesitation and emotions of the patient when he answers to questions, that can help to analyse them and make a better diagnosis.”
“My concern is that tele-optometry will be more refractive-centric, at the expense of ocular health. This could interfere with the early detection of certain pathologies, since patients still see us as professionals for refraction and not for the overall ocular health”
“Although I believe the prospect of teleoptometry is good, I’m worried about certain tests (such as Goldman tonometry or BIO) that usually require us to be physically present and are vital to the diagnosis or the research of a condition. It is quite difficult to imagine those techniques being adapted for teleoptometry.”
“The most important benefit, in my opinion, really is about delivering care to extremely rural and precarious populations such as Indigenous people.”
“It is an advance that follows modern times.”
“Hello, I’m currently studying teleoptometry with one of my teacher. I’m preparing a research project on tele-optometry and participated to one on telerefraction last summer. I wanna do a Master’s Degree on teleoptometry in two years with my research project. Therefore, I believe teleoptometry will be available in Canada soon with platforms allowing complete primary eyecare, just like in the USA with Digital Optometrics. It is important thought to keep optometrists at the center of the process so that quality of care remains as excellent. Benefits to rural population is to me the most interesting aspect to it, making teleoptometry inevitable in North America eventually. However, more studies on the subject have to be conducted before we safely get there in Canada. Feel free to contact me if you are looking for students to promote teleoptometry, I have a passion for it and will keep studying it in the years to come!”
“i think schools should introduce this type of optometry more”
“I am only a first year student so I don’t have extensive experience with telehealthcare in general. I do know, from what doctors I’ve worked with have told me, that there are a lot of things that they are limited from doing or doing effectively over video call. However, I also understand that there are a lot of opportunities to be explored and discussed in regards to the potentials of teleoptometry.”

“Use as a supplement but not replacement for clinic”
“Use as a supplement but not replacement for clinic”
“Convenient for the patient and practitioner but at the detriment of patient care as a lot of diagnostic tests need to be done in-person.”
“Honestly, I do not have a super great understanding of what teleoptometry is (it's only my 3rd day out here), but personally I don't see how you would be able to do a full exam (taking images etc) while the patient is home which is a drawback.”
“I don't know if the equipment is there yet to be able to accurately give holistic exams. Like I would like to see patients under slit lamps”
“Perhaps it would be beneficial to have a course about teleoptometry so that we can get more experienced and comfortable with using it.”
“I think the benefits that can be achieved from this, such as convenience and ability to still see patients when unable to make it into the office, are massive. Especially in southwestern Ontario, for something like snow storms when the office has to shut down due to road closures, patients could still be seen instead of having the issue of rescheduling those patients to a later date.”
“I believe that teleoptometry could be beneficial if not used as a replacement for OVAs, but for quick consultations and consequent referrals to an optometrist if indicated.”
“I do not know enough about tele-optometry to make an educated comment about whether the benefits outweigh the threats; I think this question is contextual and do not feel comfortable making a blanket statement (but I cannot submit the survey without doing so).”
“Teleoptometry offers a great tool for both reaching rural communities who wouldn't otherwise have access to healthcare. The main benefit it offers to more urban practices is the ability to triage patients - we can quickly determine if patients need a quick treatment (i.e. for a mild case of conjunctivitis) that they can deal with without coming into the office or have them come into the office immediately.”
“I am not sure how well UW will prepare me for practicing teleoptometry. I think I will have a better sense of this in 3rd and 4th year.”
“My only concern with teleoptometry is that it is hard to diagnose patients based solely on case history or a photo of their eye.”
“Although I mentioned the potential benefit for rural populations, we would have to first ensure that these individuals in remote locations had access to technology and connection to utilize the teleoptometry platforms. Without this, its benefit in the rural healthcare setting is diminished.”
“Obviously due to the pandemic it is a necessary approach however overall I do not think it’s largely beneficial to the patient to adhere to this route in the overall outlook of their health”
“Im just not a fan of technology, patients also don't like it either and most would want to have a physical doctor in front of them so Im just going to stick to that”
“Teleoptometry will be good since it allows people access to care who otherwise couldn't or wouldn't have gotten it (eg rural people or people in nursing homes). I think it will be safe and secure, and a great opportunity. My biggest concern is that it will be harder to diagnose conditions compared to in person, and this might be more problematic for things like glaucoma compared to a chalazion for example.”
“I do not think that teleoptometry is in the best interest of the patient at this time. Many standard test would be unable to be performed remotely and patient care would suffer.”

“I don’t believe teleoptometry could replace optometry but it might be an effective tool to help screen patients and to provide treatment of simple cases over the phone.”
“I think it is important to use to our benefit and be aware of so that we don’t lose patients because of it. But I am unsure how it will fit into practice outside of COVID.”
“Can only really get a case history”
“I do not think that teleoptometry is in the best interest of the patient at this time. Many standard test would be unable to be performed remotely and patient care would suffer.”
“I think it will allow you to see more patients because of the increased availability and convenience, but the remote location might lead to questions about reduced quality of care and whether that should translate into lower fees (it undermines the profession). But it’s something that can’t be avoided and there’s a good chance that it’s here to stay even after the current situation passes, so we’ll have to learn to work with it either way.”
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“It does keep everyone accountable and provide more means for communication, which are both positives.”
“I believe it is important to have a balance of teleoptometry with in person optometry. One of the main benefits could be doing refills on prescriptions such as allergy medication, etc. However, you could end up missing something else that the patient is not complaining about. I think it would be nice to do these for a small follow up in between annual appointments”
“I’m unsure as to how you would be able to come up with an accurate diagnosis for someone with a red eye when you can’t use a slit lamp. (Unable to look for papillae, cells/flare, etc.)”
“I think that we need to make it clear to patients that we are limited to what teleoptometry can offer and that it doesn’t replace the need for in person patient care. With that in mind - teleoptometry can help filter out some of the appointments that don’t necessarily need in person appointments”
“You can’t do an eye exam remotely. We have been trying for so long to prevent online vision tests selling themselves as actual eye exams. Yes you may be able to triage or even refract remotely, but you can’t use a slit lamp through a computer. You can’t diagnose off retinal photos alone and I think it’s a slippery slope to allow Yourself to practice sub standard care when in person care is accessible.”
“If done well, and if supported by other medical professions, teleoptometry has the potential to improve patient care, but it must be done carefully”
“There are certain situations where teleoptomery may be extremely beneficial and others where it can be harmful. If this is worked out and somehow regulated it can definitely help expand care in Canada”

“I have noticed a lot of patients prefer teleoptometry during COVID as they do not want to risk leaving their homes. It is nice to have the option to be able to triage the situation quickly using teleoptometry and if it is a situation that can be solved on the spot then it prevents unnecessary exposure as well as reassures the patient vs. staying at home and worrying”
“Many patients first go to their GP whenever they have a concern with their eyes. Teleoptometry, via appropriate advertising, may help to educate patients about optometrists’ scope of practice and encourage them to consider seeing one in those instances.”
“Drawback: not every province has telemedicine billing codes”
“benefit - teleoptometry provides opportunity for continued patient care during COVID while minimizing risk to both patient and practitioner.”
“In theory it sounds good but I’m not sure I know enough about it to trust it. Seems highly unlikely we would be able to do the same testing as we would if the patient was sitting in front of us. I feel like it may take away from optometrists/optometry rather than help us. Patients would need to know they are being assessed by trained professionals.”
“I would not feel comfortable yet as I have zero experience or training with teleoptometry but given some training I could see a place for it in my future practice.”
“I truly believe that teleoptometry is dangerous for the profession of optometry. It may come from a lack of knowledge about the subject. But I can so easily envision a future where huge companies like Luxottica absolutely dominate the market and are able to completely undercut prices. It also undermines the importance and skill of optometrists.”
“the drawback I believe would be the fact that AI may be able to take over this role in the future”
“not sure if I like it as we have not really done it in school”