

**Report to
Rapport au:**

**Ottawa Board of Health
Conseil de santé d'Ottawa
4 November 2019 / le 4 novembre 2019**

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**Submitted by
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Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE File Number: ACS2019-OPH-HPP-0011

SUBJECT: CHILD VISUAL HEALTH AND VISION SCREENING SERVICES

**OBJET: SANTÉ VISUELLE DES ENFANTS ET SERVICES DE DÉPISTAGE DES
PROBLÈMES DE LA VUE**

REPORT RECOMMENDATIONS

That the Board of Health for the City of Ottawa Health Unit:

- 1. Receive, for information, a report on the new public health mandate Child Visual Health and Vision Screening; and**
- 2. Approve staff to provide vision health services for the 2019-2020 school year, as outlined in this report.**

RECOMMANDATIONS DU RAPPORT

Que le Conseil de santé de la circonscription sanitaire de la ville d'Ottawa :

- 1. prenne connaissance, à titre d'information, d'un rapport sur le nouveau mandat de santé publique en matière de santé visuelle des enfants et de dépistage des problèmes de la vue; et**
- 2. approuve que le personnel donne des services de santé visuelle pendant l'année scolaire 2019-2020, comme prévu dans le présent rapport.**

BACKGROUND

The Ontario Public Health Standards 2018 introduced a new protocol in the School Health section. The Child Visual Health and Vision Screening Protocol, 2018 calls for the implementation of the following five program components:

1. Pre-screening notification to parents of school visual screening activity, with details for where parents can get more information and the method to opt out of the screening. Vision screening is not considered treatment, therefore parental signed approval is not required.
2. Vision screening of senior kindergarten (SK) students using three prescribed tools: a) HOVT visual acuity chart with crowding bars, b) Randot Preschool Stereotest; and c) Autorefractor; and/or assist families in accessing an optometrist for a comprehensive eye examination.
3. Post-screening notification to parents of all results, positive or negative, with the recommendation to see an optometrist, and issuance of reminder letters to those identified with possible vision problems. Encourage parents to book an appointment with an optometrist for a comprehensive eye exam for all children up to 19 years of age.
4. Navigation support to increase parents' awareness of access to and utilization of visual health services, including supports for purchasing glasses if needed. Develop partnerships to increase collaboration and promote vision health services with community partners and providers.
5. Collect and record vision screening data and conduct data analysis.

Most common eye problems are hard to detect without screening tests or eye examination. In 2017, approximately 55% of Ottawa's 4 to 5-year-olds (11,500 of an estimated 21,000) had at least one vision-related visit with a health professional since 2016¹. Annual eye examinations by optometrists are covered under OHIP for children

aged 19 years and younger. Vision screening involves a series of non-invasive tests designed to detect risk factors for amblyopia; reduced stereopsis and/or strabismus; and refractive vision disorder (See Document 1). Amblyopia, a condition where the eyes are misaligned, can result in blindness in one eye. With this condition, the conflicting visual images result in the brain ceasing to accept signals from one eye. Treatment for amblyopia is more successful before age 7². Stereopsis is a condition when eyes do not recognize depth of the image. Strabismus is a condition in which both eyes do not line up in the same direction. Refractive vision disorder occurs when the shape of the eye impacts the ability to focus well.

Every year in Ontario 7000 children lose the use of an eye because amblyopia was not identified and treated. Another 15,000 children have trouble learning to read because they need glasses to correct refractive vision disorder³.

The 2018 - 2019 school year was considered an implementation year for the new provincial vision-related standard, and provincial funding was provided in the amount of \$29,529 for the purchase of the required vision screening equipment. Ottawa Public Health (OPH) also requested and received a 1-time funding amount of \$86,000 for a vision and dental screening integration project. This funding provided a staff resource to prepare for the launch of the pilot project, which drew on the methods for dental screening in schools.

OPH'S 2019 Annual Service Plan and Budget submission to the Ontario Ministry of Health (OMOH) included a request for on-going funding to implement the vision screening services for all SK students in all Ottawa schools, however this funding request was not granted.

At this time, the OMOH has not provided specific funding for Vision Screening in Schools, yet the Public Health Standards require health units to do this new work. Health units of a similar size to OPH are only promoting vision health and not conducting individual-level vision screening in schools. This report provides a summary of OPH's work to date and outline the future directions for vision health programming.

DISCUSSION

Recommendation 1: Receive, for information, a report on the new public health mandate for visual health and vision screening in schools for senior kindergarten children.

During the 2018-2019 school year, OPH piloted vision screening in 32 schools. These schools were selected based on OPH's dental screening results. As part of this pilot, 1,088 children received vision screening. The Ministry chose screening result guidelines so that no child with a problem would be missed but some would be referred yet turn out to be okay. Of those screened, 45% of children screened were identified as needing further assessment and their parents were notified that the screening results indicated there may be issues with their child's vision. These parents were strongly urged to book an appointment at an optometrist for their child to have a comprehensive eye exam. Reminder letters were sent to these parents 20 days post-screening. Parents of all other children screened were notified that while no vision issues were identified during vision screening, it should be noted that the screening is not designed to detect all vision problems. These parents were also encouraged to contact an optometrist to book a routine comprehensive eye exam. System navigation was also in place to support families. Although no direct case tracking is required under the mandate, the number of senior kindergarten children wearing glasses in the classes screened had increased from 47 (4.3%) to 96 (8.8%) by the end of the school year; this is an increase of 4.5% in the targeted population screened.

Evaluation of this initial work has been used to understand the implications of vision screening in a school setting and to improve the process. Specifically:

- Staff and Lions Club volunteer evaluation resulted in adjustments, such as the screener staying with the same student for all tests rather than the student rotating through the stations, and the ideal number of children in testing area was determined to be 4.
- Teachers/Principals valued the program in terms of highlighting student vision needs; ability to communicate with parents in multiple languages; and system navigation to increase awareness of where to access vision health services.

The pilot project looked at the feasibility of providing dental screening and vision screening at the same time. Evaluation from the integration project showed:

- Operational efficiencies were identified, such as communication with schools and parents, as well as system navigation and follow-up.
- Challenges were identified, such as difficulty finding space for larger teams; children were easily distracted when both services were provided in the same room; and timing is difficult when offering these two services together because the dental screening is faster than the vision screening process.

- Joint services did not optimize the time spent at schools. Dental screening is offered to more grades, including junior and senior kindergarten classes plus grade 2, at a minimum, in all elementary schools, and more grades depending on the results of the school's screening in the previous year.

Moving forward and based on this evaluation, the model of providing vision and dental screening jointly is not recommended.

During the launch phase, OPH engaged local stakeholders, including the Ottawa Optometric Society (OOS) and the Canadian Council of the Blind (CCB), to understand the local optometric community and determine what other screening activity was occurring in schools. OPH found that other vision screening activities were being provided as follows:

- CCB offered optometrist examinations to 16 schools from the Ottawa Carleton District School Board in school year 2018-19. Their services are different from the provincial mandate as they require a parental signature, a medical history and an OHIP number for each child for billing purposes.
- The Ottawa area has 11 Lions Clubs and some members volunteer with CCB to offer vision screening. They use similar vision screening equipment, and also test for color blindness.
- The local optometric society is supportive of school screening and recommendations to parents to visit an optometrist. They are actively engaged in promoting OPH's social media messaging.

OPH developed new vision health resources, including a video to demonstrate the vision screening tools and process, and to inform parents and teachers of what to expect. A health promotion campaign was launched as a call to action for parents to schedule annual eye examinations for their children. Resources include social media messages and print cards (see Document 2) in 3 languages. OPH shared these resources with the OMOH and other health units, increasing the reach of the information.

Other health units have implemented the new vision health standard in different ways. For example, Peel Health Unit provides health promotion messaging to parents, encouraging them to schedule their children for OHIP-covered eye examinations with an optometrist, and does not provide screening. For the Toronto area, a variety of school vision health services are provided by different agencies and Toronto Public Health focuses on health promotion to promote optometrist visits. In other health units,

there are a range of services from a targeted school screening approach to offering screening in all schools.

Recommendation 2: Approve staff to provide vision health services in the 2019-2020 school year, as outlined in this report.

Given that the OMOH has not provided new, ongoing funding to support vision screening to all SK students, OPH is proposing to continue to collaborate with the Canadian Council for the Blind, the Essilor Foundation and the Lions Club to provide vision services in schools that have been identified to have greater needs.

In 2017, almost half (45%) of children aged 4 to 5 had no vision-related visit with a health professional since 2016¹. As a result, OPH will continue to target promotion of the comprehensive optometrist exam and monitor outcomes to increase the number from 55% of young children having completed a visual service. Health promotion approaches will include the following: the Parenting in Ottawa Facebook page will have optometrists as guests where parents can ask questions; vision health messaging on OPH social media platforms; and distribution of vision health print cards to all junior and senior kindergarten children, included in kindergarten registration packages and available at community health centres, client service and social service centres, daycares and physicians' offices.

By ensuring that every SK child in every school receives a vision health promotion card, OPH's recommended approach is in compliance with the provincial vision-related standard.

RURAL IMPLICATIONS

There are no rural implications associated with this report.

CONSULTATION

Community consultation was completed with the school boards, Ottawa Optometrist Society, Lions Club and Canadian Council for the Blind and the Essilor Foundation.

LEGAL IMPLICATIONS

There are no legal impediments to receiving the information contained in this report and in implementing recommendation 2.

RISK MANAGEMENT IMPLICATIONS

There are no risk management implications associated with this report.

FINANCIAL IMPLICATIONS

In the absence of new operating funding, the vision health services described at recommendation 2 will be undertaken with existing resources.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with this report.

SUPPORTING DOCUMENTATION

Document 1 - Child Visual Health and Vision Screening Protocol, 2018

Document 2 – Health Promotion Print Cards

DISPOSITION

Staff will implement the new vision screening mandate as described in this report.

Document 1

Child Visual Health and Vision Screening Protocol, 2018

Amblyopia: The medical term used when vision is reduced and not correctible to a normal level with optical devices. This condition is also sometimes called “lazy eye”. There are a variety of causes of amblyopia, including strabismus and anisometropia

Refractive Vision Disorder: A vision disorder in which the shape of the eye prevents a person from focusing well. The cause could be the length of the eyeball (longer or shorter), or changes in the curvature of the cornea or the lens. Common refractive errors are:

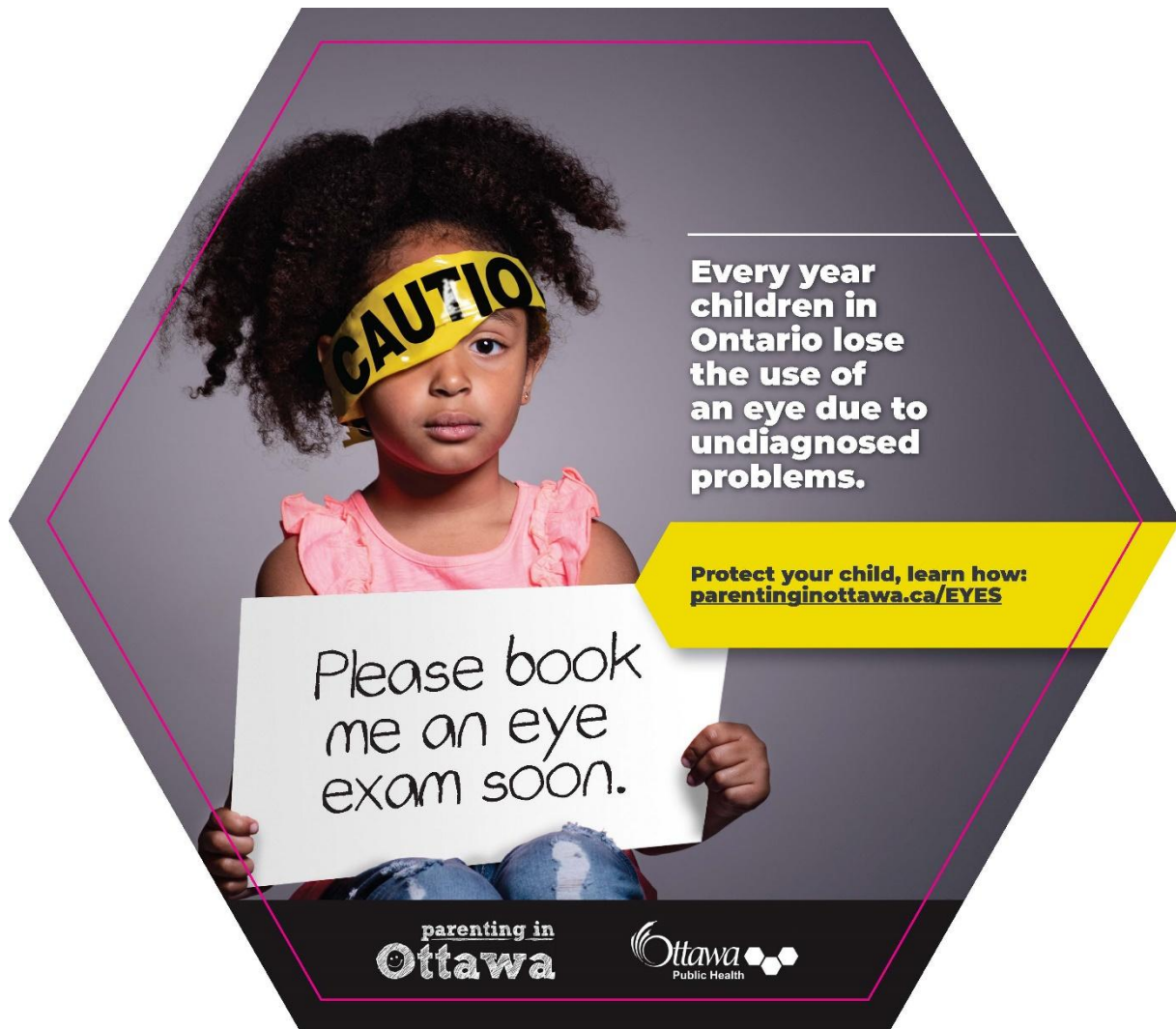
- ☐ Myopia, or nearsightedness: A disorder where there is clear vision close-up, but blurriness in the distance;
- ☐ Hyperopia, or farsightedness: A disorder in which distant objects can be seen clearly, but close ones do not come into proper focus;
- ☐ Presbyopia: A disorder where there is an inability to focus close-up as a result of aging;
- ☐ Anisometropia: A difference in refraction between the two eyes; and
- ☐ Astigmatism: A disorder caused by abnormality in the curvature of the cornea and/or the lens.

Stereopsis: The ability to visually recognize depth based on differences in the images created on the two eyes. Stereoacuity is a measure of the smallest difference in the two images that can be resolved as a single image in depth.

Strabismus: A disorder in which both eyes do not line up in the same direction, so they do not look at the same object at the same time. It is characterized by the misalignment of the visual axes of the eyes that affects **binocular vision** and depth perception. This results in one or both eyes turning inwards, outwards or upwards. The condition is more commonly known as "eye turn". A common form of strabismus is esotropia (the in-turning of one or both eyes).

Document 2

Health Promotion Print Cards



¹ Medical Services 2016-17, IntelliHEALTH Extracted: Oct 15, 2019, Ontario MOHLTC and Population Estimates 2016, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario, Date Extracted: June 2019

² Holmes et al. (2011). Effect of Age on Response to Amblyopia Treatment in Children. Arch Ophthalmol/Vol 129 (No. 11). doi:10.1001/arch ophthalmol.2011.179

³ Maurer, D., Wong, A., & Nishimura, M. (6 December 2018). Kindergarten Vision-Testing Programme 2015-2018 Report. Available from vision screening.ca.