



April 16, 2010

Honourable Kevin Falcon  
Minister of Health Services  
Room 337, Parliament Buildings  
Victoria BC V8V 1X4

Dear Minister Falcon:

As Director of the sole anglophone School of Optometry in Canada I am writing to you on behalf of the internationally known faculty of this institution, some of whom are authors of the literature that you have chosen to discount, disregard or failed to uncover before making sweeping and regressive policy changes related to eyecare in British Columbia. I am also writing to offer our assistance, since the decision you have taken to put the vision health of the British Columbia public completely aside for the interests of a single company with 120 employees, cannot possibly be construed as one based on even a selective review of the world literature.

If we first disregard the potential systemic or ocular health effects of this recent decision and look solely at the procedure called refraction, it is clear that a better understanding of what is truly encompassed in a complete refraction is necessary. Sight testing is not only an inadequate substitute for an eye examination, it does not even constitute a full refraction. A refraction is not a single test but a series of both objective and subjective procedures. A refraction determines not just the exact optical power needed to focus light ideally in each eye but also encompasses the results of tests to determine how the eyes work together and other factors to ensure that the patient's individual visual needs are optimally met. As but one example, in patients who have significantly different refractive errors in their two eyes, providing them with a prescription representing the output of a sight test of each eye could produce double vision through the resulting spectacles. When a complete refraction is done by a trained clinician, additional important factors are considered that often make the final prescription different and better informed than what a sight test would produce. This is no different from the analysis required to provide "the most suitable antibiotic" rather than just "an antibiotic" when infection looms.

To explore the issue of refraction versus prescription, the University of Waterloo has recently completed a retrospective study of 6,937 consecutive general clinic visits to determine the percentage of patients who ultimately received a prescription that differed from the result of their refraction when binocular status, age, height and other factors including visual needs were

considered. These elements are a regular part of a complete eye examination – but not a sight test. With the most stringent criteria, 50% of patients received a prescription that differed from the results of their refraction as a stand-alone determination. Even if looser criteria on the amount of difference allowable between the two values were applied ( $\pm 0.50$  diopter) 30% of patients still received a prescription that differed from their refraction.

Returning to the potential ocular and systemic health implications of your decision, awaiting the presence of symptoms for conditions that afflict the eye is an unacceptable standard for any health care system in any jurisdiction in a developed country. If one only considers glaucoma, the risk should be deemed unacceptable. In its most common forms, symptoms only occur very late in the course of glaucoma, when nothing can be done to regain what has been lost and little can be done to prevent patients from losing their remaining vision. Studies at Johns Hopkins have shown that nearly half of the fibers of the nerve that conveys the sense of vision to the brain have to be lost BEFORE the first detectable change in vision is observed in glaucoma.<sup>1</sup> More important, this “first change” is NOT one that reduces visual acuity, and visual acuity is the only parameter assessed in a sight test. Hence, even at this advanced stage, your sight testing protocols and protections will not detect these patients.

Current data suggests that as much as 50% of existing glaucoma remains undiagnosed-much of it in patients under the age of 65.<sup>2</sup> Statistics Canada’s Canadian Community Health Survey of 2002-2003 showed that 3 in 100 Canadians report that they have glaucoma, meaning that 6 in 100 actually have glaucoma.<sup>3</sup> This means that 3% of the British Columbia population beyond the 3% who could report it to a sight tester (roughly 123,000 of your citizens) have undiagnosed glaucoma today. Given the sound evidence from Canadian studies that an earlier diagnosis of glaucoma improves quality of life and improves outcomes while decreasing productivity lost to this disease,<sup>4</sup> is it plausible to expect that this situation will improve by having such patients get the false assurance that their vision is 20/20 (6/6) with a stand-alone sight test? All but the most advanced of these undiagnosed glaucomas will remain undiagnosed, notwithstanding client self-reporting and your checklist. Doing a sight test as a stand-alone assessment in asymptomatic individuals is analogous to checking the dipstick in your car and using the oil level as assurance that the transmission, the brakes, the suspension, the steering and the tires, the wipers, the headlights and emissions are all fine.

We know that others have addressed the ill-informed decision to eliminate the need for a prescription for contact lenses and therefore the professional care that is necessary to wear them safely. If your staff reviewed the literature at all they are aware that contact lens related complications, including avoidable blindness, increase 4-5-fold if wearers order lenses unsupervised.<sup>5</sup> Moreover, we would question whether your Ministry has the legal standing to override Health Canada’s federal classification of contact lenses with optical power as medical devices requiring a prescription. The Health Canada website itself offers the following regarding the purchase of medical devices over the internet. Quoting Health Canada, the following situations could pose risks to your health.<sup>6</sup>

- You may not receive the medical treatment that you need.
- You may change treatment doses or make lifestyle changes based on faulty results of devices that do not work properly (e.g., blood pressure monitors, glucose test kits, etc.)

- You may get an incorrect diagnosis that causes needless worry. It could also lead to further medical tests that are unnecessary and may pose a risk of side effects.
- You may try to use a medical device that can harm your health (e.g., contact lenses that may damage your eyes if they have not been prescribed and fitted by a health care professional).

By proposing that there is little significant systemic or visual health risk associated with sight-testing in asymptomatic individuals aged 19-65 years, the health ministry has followed the paradigm of an *argumentum ad ignorantiam* (i.e. 'absence of evidence is evidence of absence'). Specifically, these are "...arguments that present no real evidence, but then use the claim of absence of counter-evidence to invite a hasty leap that has not been supported by the kind of evidence that should be required to secure acceptance."<sup>7</sup> You astonishingly argue that "...our staff scoured medical evidence and ... there is no strong scientific evidence that regular eye health examinations for asymptomatic individuals between the ages of 19-65 years improves health outcomes..." This may serve as a compelling argument for purposes of "first-glance" public persuasion, but as a basis for public health policy it is patently unsound.<sup>8</sup> It implies that little or no risk exists in persons of this age group who are asymptomatic. Moreover, applying standard methods to the current medical literature in evaluating evidence of risk, we are left with a stark conclusion. The absence of evidence that the Ministry has used to support the legislative changes actually results from staff either 1) lacking an understanding of the *objective* evidence in the literature, 2) lacking access to the body of *subjective* case studies and patient reports, or 3) ignoring or not seeking the existing evidence that would have made this rash and uninformed decision unthinkable. We would happily provide a literature review on this topic including such articles such as: *Picone G, Brown D, Sloan F and Lee P: Do routine eye exams improve vision? International J. Health Care Finance and Econ. 4:43-63, 2004.*

Among the most recent data available that relate to your decision are from studies by investigators at the University of Waterloo School of Optometry. These faculty members are salaried and thus have no vested interest in the economic impact of their studies. These investigators are preparing to report on a retrospective case analysis of 6,937 visits to our general eye clinic between January 2007 and January, 2008. Of these visits 2,657 presented for a "routine" exam, were asymptomatic and provided the examining clinician with no defined chief complaint. Patients ranged in age from less than one year to well over age 65. Data were grouped as age 20 and younger, age 20-64 and 65 and older. In the age 20-64 group there were 3,191 patients in total. Of these, 1,151 were asymptomatic at the time of presentation (36%). In the course of their complete eye examination, 108 of these 1,151 or 10% proved to have a new diagnosis representing either an acute condition or one that would require careful monitoring to ensure that vision loss either did not arise or did not progress. (Complete data available on request).

If these data from Ontario are taken as a reasonable representation of the population of British Columbia, some projections can be made. Using the 2006 census data for British Columbia<sup>9</sup>, the population of British Columbia was 4,113,485. Of this group approximately 62.25% are shown to be between the ages of 20-64, representing 2,560,515 citizens. If we project the Ontario percentages onto this larger population then 36% of this population or 921,785 citizens would present for a routine eye exam as asymptomatic, with no chief complaint. Again, assuming similar percentages from the Ontario group, 10% or 92,178 citizens would be found to have a new

diagnosis of significant concern. Even if this estimate is off by 50% the projection is still ~46,000 citizens.

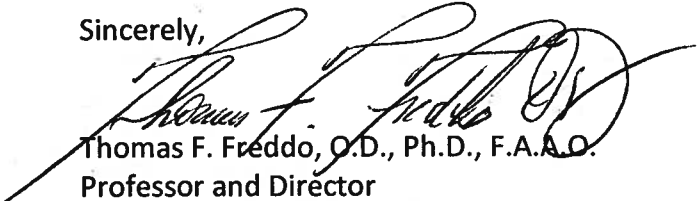
Further analysis of the Ontario data also shows that the risk of a significant finding in an asymptomatic individual increases progressively with age and that the aggregate risk of a significant finding increases with the time since the last eye exam. Taken together, this strongly suggests that the number cited above of 92,178 citizens is a minimum projection of the number of those who would remain undiagnosed or for whom diagnosis would be delayed under your new directive. As it is, Statistics Canada reports that 4700 citizens of British Columbia lose their vision every year at a staggering cost to the economy – one far greater than the impact of losing 120 jobs in one company.

In your radio interview, you confidently questioned the need for, and even ridiculed the notion of urging patients to do what is most certainly the best thing and get a regular eye exam including a complete refraction – a notion that contravenes firmly and wisely established policy in virtually every developed country in the world. The argument you make is that people will do what is in their best interest. If we assume that you are correct in that assumption then why would British Columbia feel compelled to pass a law REQUIRING the use of seat belts? Why would the British Columbia Safety Council have urged a ban on the use of cell phones while driving? Everyone has seen video of horrific fatal car crashes. If you are correct, why would anyone have to be compelled to wear a seat belt? How could they not understand and unfailingly act to avoid the potentially fatal consequence of diverting their eyes from the road to manage a cell phone or to text when travelling at 100 km/hr?

When these driving regulations are considered in light of your recent decision they suggest that the government of British Columbia is greatly concerned about things that would prompt drivers to divert their eyes away from the task of driving and yet unconcerned with how well those eyes see when they are pointed straight ahead.

Even in a letter of four pages (plus references), we could provide only a glimpse into the formidable literature that your staff has either failed to uncover, failed to consider or outright ignored in its “scouring of the literature” as a basis for this rush to judgment that puts 120 jobs above the health and safety of 4 million citizens. It looks as though your staff may have confused the various definitions of “scour” when they “scoured” the literature and selected the definition that says “to clean or polish by vigorous rubbing with abrasives, to make things on the surface appear clean and bright”. Again, in closing, our faculty stands ready to assist your staff in reaching a *bona fide* evidence-based conclusion on these matters if this is the standard to which the Ministry of Health in British Columbia measures itself.

Sincerely,



Thomas F. Freddo, O.D., Ph.D., F.A.A.O.  
Professor and Director

cc: Premier Gordon Campbell  
Health Canada Office of Medical Devices

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