Paper #0085
Forecasting the Vision Loss Epidemic in Canada – Projections of Cause-Specific Blindness

Ralf Burhmann, Michael Fielden, William G. Hodge

Abstract:

Purpose: Demographic modeling paints a grim picture of a rising epidemic of vision loss in Canada. The purpose of this study was to generate best estimates and projections of the burden of cause-specific blindness due to age-related macular degeneration (AMD), diabetic retinopathy (DR), and open angle glaucoma (OAG) as well as the overall visual impairment and blindness burden in Canadians 40 years and older. These estimates will enable advocacy efforts, health policy development and health care planning to more effectively address the vision loss epidemic.

Methods: We conducted a systematic literature review to obtain prevalence estimates for visual impairment and blindness applicable to the Canadian population. The best available estimates were from a published meta-analysis of the major eye examination surveys over the last 15 years. The cause-specific blindness contribution for AMD, DR and glaucoma was obtained from the CNIB client database in 2006. For demographic modeling we used median plausible population estimates from the Statistics Canada population growth model based on the 1996 census for 5 year age intervals from 2006 to 2031.

Results: The number of blind Canadians (¡Ý40 years old) was estimated to double from 108,000 in 2006 to 215,000 in 2031. For those 40 and older the estimated prevalence of blindness increased over this time period from 6.9 per 1000 to 9.8 per 1000, a change in prevalence of 43%. The leading cause of blindness was DR until the age of 64 and AMD over the age of 64. The number of blind persons by cause increased from 2006 to 2031 by 111% for AMD, 105% for OAG and 86% for DR. Two-thirds of the total increase in the number of blind was due to AMD. The increase in prevalence was 52% for AMD, 47% for glaucoma, and 34% for DR. The rate of increase in the number of blind was steady over the next 15 years at 2% to 3% per year but then doubled for the following 10 years. The projected increase in cause-specific blindness varied widely between provinces due to demographic differences.

Conclusion: Demographic modeling predicts a doubling of the number of blind Canadians over the next 25 years with the majority (two-thirds) of the increase due to AMD. Innovation, vigorous advocacy, policy development and health care planning are urgently required to prevent eye-care services from being overwhelmed.

**Paper #0113
Adjustment to Vision Loss: What patients really want to know!**

Deborah Gold, Terri Hulett

Abstract:

Purpose: The purpose of this session is to report on CNIB¡¦s Canada-wide focus groups with seniors about what they want to know about their vision health and vision rehabilitation. In an effort to assist seniors to take proactive steps toward better managing their vision health care, CNIB has created a vision health guide to raise professional and public awareness about risks, prevention, treatments and vision rehabilitation services that are available for the 4 major age-related eye conditions. There are over 300,000 seniors in Canada who have seeing disabilities (PALS, 2001), and CNIB assists over 24,000 people annually who are 60 years and older. Therefore, there was an identified need to explore what types of information assists people over the age of 60 to adjust to vision loss.

Method: The CNIB Research Department conducted 10 Canada-wide focus groups with 69 people over the age of 60 to ask them three questions about what kinds of information and resources would be most helpful to them in a vision health guide.

1) After being diagnosed with your vision impairment what kinds of information helped you to cope?
2) Did you have any questions or concerns about your vision impairment which you were unable to find relevant information? Please tell us what these questions or concerns were.
3) Based on your experience, is there any other information that others, in your situation would want to know?

Results: Seniors across Canada reported that the following information was important for their adjustment to vision loss:

• Information about low tech reading devices (magnifiers, lighting, etc.), and high tech reading devices (CCTVs, Zoomtext, etc.).

• Emotional Coping Strategies: Family, friends and peer support groups.

• Vision Rehabilitation Services: Such as skills for daily living, orientation and mobility training, and enhancing access to information.

• A list of questions to ask eye care professionals.

• Increased awareness about their vision health.

• Information about treatments, risk factors and what visual ability to expect for the future.

• Contact information of specialists and organizations to help reduce some of the fragmented information that presently exists.

Conclusion:
The information that was obtained from seniors included issues surrounding the ability to maintain daily activities and functioning, medical information, rehabilitation services and emotional coping strategies.

Paper #0138
Breaking Bad News in Ophthalmology: Should Ophthalmologists Receive More Communication Skills Training?

Duncan Anderson, Rosa Braga-Mele, Adelyn Ho, Peter Zakrzewski

Abstract:

Purpose: In response to concerns expressed by the public, governing bodies and practicing physicians, postgraduate medical programs are seeking to address weaknesses in the teaching of communication skills. Although these skills have been shown to improve patient outcomes, their teaching is often subordinated to that of medical knowledge and surgical skills needed for clinical competence. The teaching of communication skills has become a formal requirement of Canadian residency programs by the Royal College of Physicians and Surgeons (CanMEDS 2000 initiative). The purpose of this study is to determine whether formal communication skills training in breaking bad news to patients should be incorporated into Canadian ophthalmology residency training curricula.

Methods: All ophthalmologists, ophthalmology fellows and ophthalmology residents working in Canada who are members of the COS will be requested by email correspondence to participate in a single online survey. The survey will consist of both qualitative and quantitative questions. Appropriate statistical techniques will be used to generate means and standard deviations for Likert scale (quantitative) questions, while qualitative analysis of open-ended questions will be peformed using accepted analysis techniques, including data reduction, data display, conclusion drawing and verification.

Results: The survey will assess the amount of training, level of comfort, and degree of preparedness Canadian ophthalmologists and ophthalmologists in-training have in breaking bad news to patients in the following two settings: disclosing permanent vision loss and revoking a driver's licence. Further questions will elicit opinions on whether communication skills training in breaking bad news should be incorporated into ophthalmology resident education, the optimal format(s) that should be used, and the amount of time that should be devoted to the training.

Conclusions: There is currently only one article in the published literature specifically addressing the issue of communication skills in the field of ophthalmology, and none examining the issue in the context of breaking bad news or residency education. Conclusions generated from this study should provide valuable guidance for ophthalmology residency training programs when considering the implementation of communication skills training in accordance with CanMEDS directives.

Paper #0140
The role of traditional and non-traditional cardiovascular risk factors in the development of dry AMD: a case-control study.

   Maher El-Masri, Al Kadri, Jessica Lefort

Abstract:

Background: Age-related macular degeneration (AMD) is the leading cause of irreversible blindness among aging populations in most Western countries (Guymer et al. 2005). Early AMD begins with the formation of acellular, lipid-rich soft drusen and pigmentary abnormalities of the retinal pigmented epithelium (RPE). As the disease progresses, the number and size of drusen increase. Late stage AMD is characterized by well-defined areas of RPE loss, choroidal neovascularization, RPE detachment, and fibrous scarring of the macula. The interaction of oxidative stress and vascular remodelling is thought be responsible for the pathogenesis of AMD, and is a target for research into early intervention (Marieb 2001, Guymer et al. 2005, Rakoczy et al., 2006, Kliffen et al., 1997).

Purpose: The purpose of our case-control study is to determine to strength of association between traditional and nontraditional cardiovascular risk factors and the development of AMD. Cigarette smoking and age are the two main risk factors that have been consistently associated with AMD (Hymen & Neborsky 2002). Other cardiovascular risk factors have sometimes been shown to be associated with an increased the risk of AMD, but the data supporting this correlation is conflicting.

Methods: A case-control study will examine the traditional and non-traditional cardiovascular risk factors associated with the development of dry AMD. Medical records from the office of a local ophthalmologist will be used to conduct a chart review on a sample of 150 patients, divided into two groups of 75 AMD cases and 75 controls. In addition to the chart review, blood samples will be obtained from all participants for the measurement of calcium-phosphate product, PTH, CRP, and lipid markers. Patients qualifying for the study must be at least 50 years of age, not diagnosed with wet AMD, and not have a history of traumatic retinal injury or surgery.

Data Analysis: The SPSS statistical software package will be used to analyze the data. Prior to the actual analyses, data will be explored and may be transformed if univariate and multivariate assumptions of parametric testing are violated. Data analysis procedures will include basic descriptive statistics, univariate analyses (Chi square and t tests), and multivariate logistic regression analyses.

Results: Results are pending.

Conclusion: