

8:00 AM 2 hours
P-05

Room 228
Papers: Public Health
Moderator: TBD

8:00 AM. **DEVELOPMENT OF A NOVEL SYSTEM TO MEASURE
OPHTHALMIC QUALITY OF LIFE: THE EYE-TEM BANK (120072)**

Konrad Pesudovs, PhD, FCLSA, FAAO, Jyoti Khadka, OD, PhD, Flinders University
Optometry and Vision Science, Fenwick Eva, MA, Ecosse Lamoureux, PhD, University
of Melbourne

RESULTS: Ten domains of ophthalmic QOL (activity limitation, mobility, visual symptoms, ocular surface symptoms, general symptoms, convenience, health concerns, emotions, social and work/finance) were identified. Phase I for the glaucoma and diabetic retinopathy (DR) modules has been completed. A total of 249 and 120 novel items were identified from patient focus groups for glaucoma and DR modules respectively. These items were combined with existing unique items obtained from the literature to develop final sets of 349 and 314 items for glaucoma and DR respectively. The final sets have one third disease-specific items and two thirds common items (common items, 218). Patients are being recruited for Phase I focus groups across all other disease modules. Phase II data collection has commenced for the glaucoma (n=150) and DR (n=466) modules.

PURPOSE: To develop disease-specific quality of life (QOL) item bank modules which fit together to form a comprehensive ophthalmic item bank (Eye-tem Bank) to enable efficient, precise and adaptable measurement of QOL for all eye diseases across all populations.

METHODS: Each disease-specific Eye-tem Bank module is being developed in four phases: phase I: content identification (items/domains are identified from a literature review, disease-specific patient focus groups and expert panel input); phase II: calibration of pilot items using Rasch analysis; phase III: validation of the computer adaptive testing (CAT) implementation system; and phase IV: evaluation of ophthalmic QOL using each disease-specific module.

CONCLUSIONS: Glaucoma and DR modules have been developed and the majority of the items (>60%) were common, a pattern likely to continue across all disease groups. Therefore, we hypothesise that the final Eye-tem Bank will have a core item set and disease-specific items. Each disease-specific module will undergo a series of validation studies leading to an internet-based system for the comprehensive measurement of QOL in all eye diseases worldwide.

ADDITIONAL COMMENTS: Support: NHMRC Grant 1031838 & Novartis Australia #CRFB002DAU09T

8:15 AM. **WORKING TOGETHER TO MANAGE DIABETES:
DEVELOPMENT AND TESTING OF A COMPREHENSIVE CHECKLIST
(120164)**

W. Lee Ball, OD, FAAO, Vistakon

BACKGROUND: Objective: To improve diabetes team care by increasing communication and coordination among the many providers on a diabetes care team.

CASE REPORT(S): Methods: The NDEP (National Diabetes Education Program) PPOD (Pharmacy, Podiatry, Optometry, Dentistry) Workgroup developed a diabetes checklist to enable more effective communication and coordination among the varied providers on a diabetes team ? PPOD professionals and other health care professionals (physicians, diabetes educators, nurses, physician assistants, etc.) and to foster a team care approach. This checklist was based on the ADA standards of care and HEDIS criteria and was distributed to a sample of diabetes care providers via the internet. Recipients were asked to review the checklist and to complete a 17 question online survey about the relevance of the checklist and the likelihood of implementing the checklist in practice. Results: Most respondents agreed the content was appropriate and presented clearly. Forty-six percent responded that they were likely to change their practice to more of a team approach, incorporating other members of the diabetes team, or by referring to other professionals. The checklist was seen useful in actual practice, with many (30%) indicating its potential application in electronic medical record systems.

CONCLUSIONS: Conclusion: Coordination of care presents many challenges when delivered by multiple providers in a variety of settings. However, coordination helps ensure adherence to intended treatment plans, identify drug and disease management problems in a timely manner, and improves clinical outcomes. A comprehensive checklist can help improve diabetes team care by increasing provider communication.

ADDITIONAL COMMENTS: Inland Northwest Health Services (INHS), recipient of a Beacon Award from HHS adopted the checklist (with modification to include kidney, heart and vascular measures) as a tool for implementing overall diabetes care coordination and management through a large regional EMR/health information exchange.

8:30 AM. **SMOKING CESSATION EDUCATIONAL MATERIALS: A NATIONAL STUDY OF OPTOMETRISTS (120230)**

Marlee M. Spafford, OD, PhD, FAAO, University of Waterloo School of Optometry and Vision Science, Ryan Kennedy, PhD, Harvard University, Julie Brule, OD, MSc, University of Montreal School of Optometry

RESULTS: There were 850 respondents (19%): 77% English-surveyed, 60% women, 80% Canadian-educated, 90% non-smokers, 16 years (mean) practicing. Respondents wanted pamphlets (95%) and posters (89%) that focused on eye-specific education (98%) and cessation service referral forms (42%). Eye-specific educational posters about diabetes, hypertension and smoking were considered equally important (95%). Comparing 3 sample educational posters, preferences were highest for a white cane image (43%) and losing sight risk text (51%). Support for Health Canada's eye-related graphic warning label was rated for: inclusion of relevant risk information (94%), believability (90%), efficacy for the public (78%), graphic level (65%), and ability to motivate cessation (66%) and prevention (50%). Top perceived barriers to faxing cessation referrals were patient resistance (50%), practitioner time (48%) and role incongruity (44%). Most participants (89%) were interested in receiving free educational materials after the study.

PURPOSE: Health professionals, including physicians, nurses, pharmacists, and dentists are active in smoking cessation education. Optometrists must also be involved. A 2012

national Canadian study explored optometrist opinions regarding smoking patient education materials, cessation referrals and graphic warning labels.

METHODS: An on-line bilingual (English/French) survey was developed and sent to all 4,528 optometrists registered in Canada. Optometrists were asked opinions about graphic images and text suitable for smoking cessation and prevention patient education. The survey included sample patient education materials, the new Health Canada eye-related graphic warning label and the Smokers' Helpline referral form.

CONCLUSIONS: Optometrists see tobacco cessation education more than cessation referral as their role. They want tobacco cessation educational materials that are eye-specific and increase patient apprehension about vision loss.

8:45 AM. **FEDERAL AVIATION ADMINISTRATION (FAA) VISION REQUIREMENTS: WHAT ARE YOUR RESPONSIBILITIES WHEN A PILOT DEVELOPS A DISQUALIFYING VISUAL CONDITION? (120035)**

Juliane G. Flettner, OD, FAAO, Andrew B. Mick, OD, FAAO, San Francisco VA Medical Center

BACKGROUND: There are approximately 620,000 pilots licensed in the United States by the Federal Aviation Administration (FAA). To obtain a license pilots must pass an examination by an Aviation Medical Examiner that includes an assessment of visual acuity, visual field, color vision, and binocular vision status. Pilots must comply by rule CFR 61.53, a Code of Ethics, which states that if a new disqualify visual or medical condition develops, they must ground themselves and report it to the FAA before flying.

CASE REPORT(S): A 69 year old caucasian male suffered an occipital stroke resulting in a complete left homonymous hemianopic visual field defect. His central visual acuity, color vision, and binocular vision remained unchanged. Despite this obvious disqualifying condition, the patient resumed flying. One month after documented field loss from the stroke the patient was involved in a fatal plane crash. Witnesses reported that shortly after takeoff the plane veered sharply to the left.

CONCLUSIONS: Depending on their age and class, pilots are required to renew their certificates as frequently as every 6 months or as long as every 5 years. If the pilot fails to ground themselves, a disqualifying medical condition would go undetected by the FAA until these periodic mandated examinations. Multiple federal laws prohibit disclosure of personal health information without consent of the patient. The FAA was contacted and questioned about how to report a disqualifying visual condition. They advised contacting the anonymous Whistleblower Hotline. Investigation of the hotline uncovered that it was designed to be used by airline employees, not healthcare providers. Despite pledges from the FAA to keep reporting anonymous, use of the hotline would not protect a provider from litigation for unlawful disclosure of health information. Under current federal laws there is no recourse for an optometrist when they diagnose a disqualifying medical condition and the pilot fails to ground themselves.

9:00 AM. **KERATOCONUS IN THE RECRUIT POPULATION: A PROPOSED PRELIMINARY DETECTION STANDARD (120251)**

Andrew M. Archila, OD, FAAO, Naval Branch Health Clinic Yuma, Lisa Jones-Jordan, PhD, FAAO, The Ohio State University College of Optometry

RESULTS: During the 19 months reviewed, 57 Recruits were diagnosed with Keratoconus at boot camp and were medically separated, out of 57,000 Recruits who were processed. The separation data showed a mean cylinder power of -3.32 Diopters for eyes positive for abnormal corneal topography. The 95% confidence lower interval limit was -2.75 Diopters. The astigmatism recorded in eyes that had normal corneal topography had a mean cylinder power of -1.54 Diopters.

PURPOSE: The purpose of the review was to determine an optimal way to screen the Navy Recruit population for the presence of Keratoconus prior to boot camp. If this could be determined prior to shipping to boot camp, it could save the military and the taxpayer significantly due to a quicker diagnosis. Also, it could cause less distress to Recruits due to immediate discharge.

METHODS: A retrospective chart review of military entrance processing stations (MEPS) records was performed to determine if a common astigmatic refractive error could be identified that resulted in a diagnosis of Keratoconus while at MEPS. Also, data were prospectively collected to determine the incidence of Recruits who reported to boot camp with equal to or greater than 3.00 Diopters of astigmatic refractive error and were diagnosed with Keratoconus.

CONCLUSIONS: Based on the results of this study, it may be reasonable to set a data-driven MEPS screening standard. A suggestion is if auto-refraction is greater than or equal to -2.75 in cylinder power and the patient has reduced best corrected visual acuity of less than 20/20 in each eye, they should be sent to an eye care provider for corneal topography and slit lamp exam. Results should accompany the applicant package proving a negative result for Keratoconus. As this was merely an investigational study and rudimentary in nature, a more detailed study is warranted due to the public health and operational impact to the military.

ADDITIONAL COMMENTS: Special thanks to Mrs. Michelle Hartmann for careful collection of data.

9:15 AM. **ACCULTURATION AND THE USE OF CONTACT LENSES AMONG US HISPANICS (120344)**

Mark W. Swanson, OD, MSPH, FAAO, University of Alabama at Birmingham, School of Optometry

RESULTS: Based on estimates slightly less than 650,000 Hispanics used contact lenses on a daily basis during this period. Of those using contact lenses 83.7% (SE±7.6) were US citizens with the majority being born in the United States, 72.7% (SE±8.3). Among all Hispanics 33.4% (SE±2.9) spoke only or mostly English at home. Among spectacle users this percentage increased to 52.7%(SE±4.4) and among contact lenses users this percentage was 75.7% (SE±6.0). Less than 1% of Hispanics who use contact lenses spoke exclusively Spanish at home.

PURPOSE: Hispanics are the fastest growing ethnic group in the United States. While

diverse, as a group they have among the highest contact lens usage rates of all ethnic groups within the US population. Acculturation is process of change in culture that occurs when two or more different cultures come in contact with one another.

Adaptation to the use of the host culture language is a measure of the degree of acculturation. This study evaluates the reported use of the English language within the home of Hispanics in the US population who use contact lenses.

METHODS: Data from the 2005-2006 and 2007-2008 NHANES were obtained from the National Center for Health Statistics. All NHANES participants (n=1869, weighted n=14,389,874) over 12 who self identified themselves as Hispanic were asked if they spoke only Spanish, only English or some combination of both languages (eg mostly Spanish) at home. Estimates were developed for language(s) used at home for those who reported using contact lenses (n=646,574). All estimates were calculated to represent the US population taking into the complex sampling scheme of the NHANES using SAS Survey 9.3.

CONCLUSIONS: The majority of Hispanic contact lens users in the US population are native born US citizens. Hispanics who use contact lenses, as measured by the use of English within the home, have a high degree of acculturation to the broader US culture.

9:30 AM. **THE PERCEIVED NEEDS AND AVAILABILITY OF EYE CARE SERVICES FOR OLDER ADULTS IN QUEBEC NURSING HOMES** (120036)

Helene Kergoat, OD, PhD, FAAO, Helene Boisjoly, MD, MPH, University of Montreal School of Optometry, Ellen Freeman, PhD, Marie-Jeanne Kergoat, MD, Institut Universitaire de Geriatrie de Montreal, Johanne Monette, MD, MSc, Jewish General Hospital; Division of Geriatrics

RESULTS: A total of 139 (31.7%) NHs completed the questionnaire. The participating NHs had an average of 92.3 residents with a mean age of 83.0 yrs and 69% women. Mean length of stay was 2.9 yrs. Oculovisual problems were rated as frequent by 53%, not frequent by 42% and inexistant or do not know by 5% of NHs. 70% of NHs indicated that a majority of their residents wore glasses and 46% that a good portion took eyedrops for various conditions. 66% of NHs responded that only a minority of residents had eye diseases while 25% indicated not knowing if their residents had an eye disease. NHs have access to eye care services that are offered mainly outside the institution, on a per request basis. The biggest barriers to eye care were the perception that residents could not cooperate for an eye exam and the lack of professionals to offer the services. Overall, however, the NHs indicated being satisfied with the level of eye care offered to their residents.

PURPOSE: Evaluate the perceived needs and availability of eye care services for older residents living in nursing homes (NH).

METHODS: A Web Survey Monkey questionnaire targeting older adults ≥ 65 yrs of age was sent to all NHs (n= 438) in the province of Quebec, Canada. Questions were asked about the: 1) number of residents; 2) sex, age, length of stay; 3) most common types of eye-related problems; 4) barriers to eye care services; 5) eye care services offered; and 6) NH level of satisfaction regarding eye care services.

CONCLUSIONS: The fact that the NHs were satisfied with the eyecare offered to their residents, although not provided on a regular basis or to all residents, suggests that eye

care professionals should take a more proactive educational role in NHs for improving services to older institutionalized adults.

ADDITIONAL COMMENTS: Grant: Canadian National Institute for the Blind