Optimize your EMRs

Doctors can now access simple and useful Practice Support Program (PSP) screening and diagnostic tools in their EMRs. PSP has partnered with EMR vendors to provide clinical, patient, and community resources. These specialized tools help identify patients with often-underdiagnosed conditions such as chronic pain, adult mental health, child and youth mental health, heart failure, and chronic obstructive pulmonary disorder. The free EMR tools make ongoing patient care easier by linking to patient registries, which simplifies the scheduling of recall appointments and periodic testing. For more information, visit www.pspbc.ca.

College: New professional standard on safe prescribing

The College of Physicians and Surgeons of BC has adopted a new professional standard, Safe Prescribing of Drugs with Potential for Misuse/Diversion, to assist physicians with prescribing opioids, benzodiazepines, and other medications. Many of the principles contained in the new standard reflect the US Centers for Disease Control and Prevention's (CDC) Guideline for Prescribing Opioids for Chronic Pain – United States 2016, which the Board of the College of Physicians and Surgeons of BC endorsed in April 2016.

The document contains both professional standards, which must be adhered to, as well as recommendations for physicians to consider based on their patients' situation and their own clinical judgment.

Specifically, the document directs physicians to have documented discussions with their patients about the benefits of nonpharmacologic and non-opioid therapies for the treatment of chronic pain. If a risk-benefit analysis indicates that opioid therapy is appropriate, then physicians are cautioned to avoid prescribing opioid pain medication and benzodiazepines concurrently, and to prescribe the lowest effective dosage with ongoing reassessment of the patient, including routine urine testing.

The document further directs that physicians review a patient's medication history on PharmaNet (when access is available) before prescribing opioids, sedatives, or stimulants. If access is not available, physicians are expected to consult with colleagues, including pharmacists, and prescribe only necessary medications until the patient's dispensing history is available.

Safe Prescribing of Drugs with Potential for Misuse/Diversion is available on the College website at www.cpsbc.ca/files/pdf/PSG-Safe-Prescribing.pdf. It replaces an earlier document that outlined precautions in prescribing opiates, Prescribing Principles for Chronic Non-Cancer Pain.

Resource for retiring physicians

The Vancouver Division of Family Practice has developed a 52-page booklet providing guidance for doctors at any stage of retirement planning. *How to Retire Guide* covers everything from starting a plan, to finding a replacement doctor, to closing a practice. View or download the guide from the Vancouver Division's website (https://divisionsbc.ca/vancouver/physicianretirement), or as part of the resources that form the Recruitment and Retention Toolkit (www.divisionsbc.ca/provincial/recruitmentretention).

Drop in walking speed predicts cognitive decline

A study led by Vancouver Coastal Health Research Institute (VCHRI) scientist Dr John Best examined the relationship between cognitive decline and gait speed (measured in metres per second) and found that a significant decrease in gait speed is a possible predictor of future cognitive decline among older adults.

Dr Best and colleagues collaborated with US researchers and drew from the Health, Aging, and Body Composition Study (a large longitudinal study of American older adults) to access the required longitudinal data. Researchers looked at a cohort of 2876 older adults (aged 70 to 79 years at baseline), with an equal sampling of men and women, who were all initially well-functioning community-dwellers studied over a 9-year period. Older adults who showed a decline in gait speed that was larger than the average decline found in their peers during the first half of the study period tended to show a stronger decline in cognition during the second half of the study period. And the reciprocal relationship was somewhat evident, but weaker. Researchers noted that the findings also point to a bit of directionality or a sequencing of aging such that you primarily see it in mobility first and then it might transition into changes in cognition.

Findings may lead researchers and clinicians to be better able to define populations where intervention to improve cognitive performance would be of greatest benefit.

Dr Best is a researcher at the Djavad Mowafaghian Centre for Brain Health and the Centre for Hip Health and Mobility, and a research associate in the Department of Physical Therapy, Faculty of Medicine, at the University of British Columbia.

The study, "An evaluation of the longitudinal, bidirectional associations between gait speed and cognition in older women and men," is

Continued on page 332

Continued from page 331
published in the *Journals of Gerontology: Series A: Biological Sciences and Medical Sciences* and is available at http://biomedgerontology.oxfordjournals.org/content/early/2016/04/10/gerona.glw066.abstract (login required).

Genetic cause of multiple sclerosis

Scientists at the University of British Columbia and Vancouver Coastal Health have proven that multiple sclerosis can be caused by a single genetic mutation—a rare alteration in DNA that makes it very likely a person will develop the more devastating form of the neurological disease.

The mutation was found in two Canadian families that had several members diagnosed with a rapidly progressive type of MS. The discovery of this mutation should erase doubts that at least some forms of MS are inherited. The prevailing view has been that a combination of many genetic variations cause a slight increase in susceptibility. In the two families described in this study, two-thirds of the people with the mutation developed the disease.

Canada has one of the highest rates of MS in the world. An estimated 100 000 Canadians are living with MS, and the disease is most often diagnosed in young adults, aged 15 to 40. Although only one in 1000 MS patients appears to have this mutation, its discovery helps reveal the biological pathway that leads to the rapidly progressive form of the disease, accounting for about 15% of people with MS. The discovery could also provide insight into the more common, relapsing-remitting form of MS, because that disease gradually becomes progressive in most cases.

Co-author Dr Anthony Traboulsee, the MS Society of Canada Research Chair at UBC and director of Vancouver Coastal Health's MS and Neuromyelitis Optica Clinic, notes that if a person has this gene, chances are they will develop MS and rapidly deteriorate. Screening for the mutation in high-risk individuals could enable earlier diagnosis and treatment before symptoms appear.

The findings could also help in the search for therapies that act on the gene itself or counteract the mutation's disease-causing effects.

Senior author Dr Carles Vilarino-Guell, assistant professor of medical genetics, and member of the Djavad Mowafaghian Centre for Brain Health, suggests that the mutation puts people at the edge of a cliff, but something still has to give them the push to set the disease process in motion.

The families with this mutation had donated to a Canada-wide collection of blood samples from people with MS, begun in 1993 by co-author Dr A. Dessa Sadovnick, a UBC professor of medical genetics and neurology. The 20-year project has samples from 4400 people with MS, plus 8600 blood relatives.

The study, "Nuclear receptor NR1H3 in familial multiple sclerosis," is published in the journal *Neuron* and is available online at http://dx.doi.org/10.1016/j.neuron.2016.04.039.

Virtual game helps young cancer patients

A virtual reality game that helps youth deal with cancer treatment is the latest pain management tool being developed in SFU's Pain Studies Lab. The game was created by two students in the university's School of Interactive Arts and Technology who spent time in hospital as youth, Mr Henry Lo and Ms Janice Ng.

During their research the students discovered that most pain studies involve adults rather than teenagers and youth, while it is younger patients who often experience pain and boredom when they are stuck in bed, and discomfort can be more extreme at a younger age.

Their creation, Farmooo, is inspired by games such as Pain Squad, Farmville (a 2D farm simulation), and Gardening Mama. The students tailored the game to the special needs of patients, who can conduct physical tasks in the virtual farm by using simple hand movements. The game is aimed at 12- to 18-year-olds and is run on a screen that plays at 70 frames per second to prevent dizziness.

Both students have spent extended periods of time in hospital—Mr Lo was diagnosed with lymphoma when he was in grade 11 and required chemotherapy treatment, and Ms Ng spent many hours in hospital with ear ailments. Their experiences led to a desire to develop games and software to speed up medical procedures and eliminate discomfort for patients and families.

SFU Professor Diane Gromala supervised the work and notes that the game is the latest in the lab's efforts to develop virtual reality approaches to address health care issues. Professor Gromala holds a Canada Research Chair in Computational Technologies for Transforming Pain at SFU, and has spent nearly 25 years creating systems to address acute, chronic, and cancer pain.

Farmooo will be tested later this year at BC Children's Hospital.

SAVE $100!
Early-bird tuition ends 15 July 2016

BC Medical Journal
CME Cruise
12-Night Quintessential Mexican
Family Practice Refresher
February 9–21, 2017
San Diego, CA, USA • Roundtrip

For more information:
1-888-647-7327
cruises@seacourses.com
www.seacourses.com