Briefly

Whooping cough outbreak over: The largest New Brunswick whooping cough outbreak to date is now over, provincial health officials announced May 1. Since last year, 1421 cases of pertussis have been reported, mainly in children 14 and under. Officials say the outbreak was limited due to a province-wide immunization program they launched last year, where students in grades seven through nine were vaccinated against the respiratory infection. A child needs five doses of pertussis vaccine by age six to be fully immunized, followed by a booster shot between the ages of 14 and 16. — Catherine Cross, *CMAJ*

Thalomid linked to blood clots: Thalomid can cause arterial blood clots (healthycanadians.gc.ca/recall-alert-rappel-avis/hc-sc/2013/26873a-eng.php) according to a warning issued by Health Canada and the drug's manufacturer, Celgene Corporation. Thalomid, a thalidomide drug, is used to treat patients over age 65 suffering from multiple myeloma, a blood cancer. Health Canada advises that blood clots are uncommon and are most likely to occur in a user's first five months on the drug. The clots have caused fatal strokes and heart attacks among users, though the warning does not specify how many died or whether any deaths occurred in Canada. Smokers and patients with high blood pressure or cholesterol levels are at higher risk of blood clots. Pregnant women used thalidomide as an antinausea medication in the late 1950s and early 1960s until it was discovered that the drug caused fetal birth defects. — Catherine Cross, *CMAJ*

Drug-resistant malaria: Scientists have identified strains of the malaria-causing parasite *Plasmodium falciparum* resistant to artemisinin, one of the most effective malaria drugs. An international team of researchers sequenced the

genomes of 825 *P. falciparum* from Asia and Africa (www.nature.com/ng/journal/vaop/ncurrent/full/ng.2624.html). They discovered three drug-resistant strains of the parasite collected in Cambodia that differ genetically from specimens collected in other areas. These specimens have genetic markers indicating recent population growth and the "founder effect," a loss of genetic diversity indicating that the drug-resistant population traces back to a small group of "founder" parasites. The researchers say knowing these drug-resistant parasites' genomes will make it easier to identify them quickly and track their spread. Malaria-causing parasites have developed resistance to a succession of antimalarial drugs, and experts were concerned that it would happen again with artemisinin. Since 2008, reports of artemisinin-resistant malaria have come out of western Cambodia. Artemisinin-resistant malaria has since spread to other parts of Southeast Asia. In 2010, the WHO estimated there were 219 million cases of malaria worldwide, resulting in 660 000 deaths. — Catherine Cross, *CMAJ*

SOGC recommends HPV vaccination for boys: Provinces and territories should expand human papillomavirus (HPV) vaccination programs to boys, the Society of Obstetricians and Gynaecologists of Canada (SOGC) said in an Apr. 25 news release. Prince Edward Island will be the first province or territory to do so when it begins vaccinating boys this fall. Dr. Jennifer Blake, the SOGC's chief executive officer, has written letters to health ministers across Canada suggesting they follow PEI's lead. All provinces and territories have vaccination programs for girls. Two vaccines are effective against the most harmful strains of HPV: Gardasil by Merck Canada and Cervarix by Glaxo-SmithKline. Gardasil is approved for use in males, and in January 2012 the National Advisory Committee on

Immunization recommended vaccinating boys (www.phac-aspc.gc.ca/publicat/ccdr-rmtc/12vol38/acs-dcc-1/index-eng.php). Males can transmit HPV and are susceptible to HPV-related cancers and anogenital warts. — Catherine Cross, *CMAJ*

Perils of cinnamon challenge: The growing cinnamon challenge fad, where participants try to eat a spoonful of cinnamon in less than a minute without drinking water, can cause long-term lung damage, reports *Pediatrics*. A report in the journal by Dr. Stephen Lipshultz says research in rats indicates ingesting cinnamon can mildly inflame lungs for up to 30 days (<http://pediatrics.aappublications.org/content/early/2013/04/16/peds.2012-3418>). More serious conditions were reported one year later, including lost lung elasticity, inflamed air sacs and scarring of the lung tissue, all signs common in lung diseases such as pulmonary fibrosis and emphysema. The challenge has gained incredible popularity, with some YouTube videos garnering more than 19 million views. The number of calls to US poison control centres from those taking the challenge increased from 51 in 2011 to 178 in the first six months of 2012; 17% of those 178 calls resulted in medical attention. Lipshultz writes that parents and health care providers should speak to tweens and teens regarding the challenge and its risks. — Hanna Lange-Chenier, *CMAJ*

Breast cancer in young women: A report commissioned by Rethink Breast Cancer indicates that young women with breast cancer often face more difficulty in getting the help they need than older women (rethinkbreastcancer.com/wp-content/uploads/2013/04/BCYWC_Report_En_Final.pdf). Rethink Breast Cancer is a support organization for young people with breast cancer. The report compared

online surveys filled out by 372 women aged 20–45 to those of 202 women older than 45 who had been diagnosed with breast cancer in the last six years. The women were all from Canadian provinces. It found that one in five young women diagnosed with breast cancer felt their concerns were initially disregarded by medical professionals. They tended to feel more isolated than their older counterparts, lacking people with similar experiences in their age group. Among the young women surveyed, 84% were concerned about their fertility, but only 54% were referred to fertility specialists. Younger women had more difficulty navigating the health care system and in finding age-specific information about breast cancer. The report recommends that a national standard of care be developed for young women with breast cancer and that nurse navigator services be provided to all women with breast cancer. — Catherine Cross, *CMAJ*

Information commissioner to investigate muzzling of scientists: A complaint filed in February over the muzzling of scientists in federal agencies is being officially investigated by Canada's information commissioner, Suzanne Legault (<http://democracywatch.ca/wp-content/uploads/Info-Comm-Letter-Apr12013.pdf>). The information commissioner's office agreed Mar. 27 that it had a mandate to investigate the claims that scientists from Environment Canada, the Department of Fisheries and Oceans and the Department of National Defense, among others, are being restricted from talking to the media. Democracy Watch along with the University of Victoria's Environmental Law Centre submitted the complaint on Feb. 20 to protest "... the systematic efforts by the Government of Canada to obstruct the right of the media — and through them, the Canadian public — to timely access to government scientists," the complaint states. It is not yet known when the investigation will wrap up, but if the commissioner finds evidence to support the claim, she can recommend mediation solutions or refer the case to the Federal Court of Canada. — Hanna Lange-Chenier, *CMAJ*

PEI boys to get HPV vaccine: This fall, sixth-grade boys in Prince Edward Island will be vaccinated against human papillomavirus (HPV) as part of their school-based vaccination program. All provinces and territories currently have vaccination programs for girls, but PEI is the first province to publicly fund the vaccine for boys. The island has provided the HPV vaccination to girls since 2007 and is extending coverage to boys because they can both transmit the virus and are at risk of several types of HPV-associated cancers. Vaccinating boys in addition to girls will not cost PEI government more than the original program's costs because the vaccine's price has been halved since 2007, PEI's Deputy Chief Public Health Officer Dr. Lamont Sweet told the CBC. — Catherine Cross, *CMAJ*

New diabetes risk factors: A new study identifies preeclampsia and gestational hypertension as potential risk factors for type 2 diabetes, particularly when they occur in conjunction with gestational diabetes (www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.1001425#s1). The retrospective cohort study, funded by the Canadian Diabetes Association, examined the health records of over 1 million pregnant women who gave birth in Ontario between 1994 and 2008. Among those studied, 3.5% developed type 2 diabetes within the 16.5-year-long follow-up period. Researchers found that women with gestational diabetes (GDM) became diabetic 15 times more often than women without GDM, preeclampsia or gestational hypertension. GDM combined with either preeclampsia or gestational hypertension resulted in a 20- to 21-fold increased rate. Women in the study were between ages 15 and 50 and did not have diabetes before pregnancy. The researchers lacked information on body mass index and obesity, which may have been useful in interpreting the results. They suggest that women who have had preeclampsia or gestational hypertension may benefit from diabetes prevention strategies. — Catherine Cross, *CMAJ*

Avoid the carbon bubble: The Canadian Association of Physicians for the

Environment (CAPE) has urged everyone with a stake in human health, "to freeze any new investment in oil, gas, coal and pipeline companies, and to divest from direct ownership and any commingled funds that include fossil fuel public equities and corporate bonds within 5 years." The edict is in response to a Canadian Centre for Policy Alternatives report, *Canada's Carbon Liabilities*, warning that, "Canada is experiencing a carbon bubble that must be strategically deflated in the move to a clean energy economy." As noted by CAPE President, Dr. Jean Zigby, "divestment was an effective tool in the fight to end apartheid in South Africa and to reduce the influence of the tobacco industry." Now the group is hoping to apply the strategy to ensure a safe and healthy climate for future generations. As an added incentive, the greening of one's investment portfolio may prove to be financially rewarding should carbon enterprises become a liability. The leader of the World Bank, Jim Yong Kim, has even weighed in on the issue, stating that "the world's top priority must be to support low-carbon growth." — Erin Russell, *CMAJ*

Ban on small magnets: Health Canada plans to ban the sale of small magnets because of the serious health risks they can pose if swallowed. Last summer, these magnets were banned from children's toys in Australia and New Zealand, and specific culprit toys, such as the small but powerful Buckyballs, have been banned in the United States. While ingesting one magnet is typically not a health risk, ingesting multiple magnets can cause pressure necrosis and intestinal perforation if the magnets attract one another through the intestinal wall. A much-cited *CMAJ* article described the problems these magnets can cause, in a case presentation of a three-year-old boy who ingested three magnets (www.cmaj.ca/content/early/2013/03/11/cmaj.121847.full.pdf+html?sid=5bfc605b-7d38-48e2-aa60-36d2ca56d813). The magnets clustered through his intestinal walls and had to be surgically removed, and intestinal perforations repaired. While a ban on the sale of these magnets will

help prevent the sale of new unsafe toys, many toys containing small magnets are still in circulation. — Catherine Cross, *CMAJ*

Bio-inspired patch: A new “bed-of-needles” patch could provide an alternative to staples and traditional adhesive bandages, say researchers from Brigham and Women’s Hospital in Boston, Massachusetts (www.nature.com/ncomms/journal/v4/n4/full/ncomms2715.html). The patch is embedded with microneedles that swell when applied to a wound or skin graft. The needles are designed to cause minimal damage while still adhering strongly. The patch was inspired by the fish parasite *Pomphorhynchus laevis*, a worm that anchors itself with tiny, sharp spikes that swell when inserted into a host’s intestinal wall. The researchers suggest that their patches could be a good replacement for staples or stitches, which damage soft tissue and increase risk of infection, and adhesive bandages, which are very difficult to apply to wet skin. Removing the patch is also less traumatic than removing staples or stitches. The researchers suggest the patch could also be used to administer therapeutic drugs. The patch has been used successfully on pigs. — Catherine Cross, *CMAJ*

Involuntary testing: A new controversial act in British Columbia authorizes emergency health care providers to order involuntary testing of body fluids that they or other first responders such as good Samaritans, may have come into contact with in the course of providing care. This legislation, enacted Mar. 2, aims to protect these first

responders from communicable illnesses such as HIV and hepatitis. If, for example, a care provider or first responder was spit on, pricked with a contaminated needle or splashed with blood while providing care, and the patient was unwilling to be tested, a care provider could apply to have the patient involuntarily tested. To get a testing order, applicants must demonstrate that they have reason to believe they may have been exposed to disease, that tests done on themselves would not determine contamination quickly enough, that getting a sample would not endanger the patient and that no reasonable alternative exists. While the legislation is supported by the Ambulance Paramedics of BC union, it has been criticized for potentially violating the rights and privacy of those involuntarily tested. — Catherine Cross, *CMAJ*

Dengue fever re-evaluated: New research shows that dengue fever infects 390 million people each year, more than tripling the World Health Organization’s 2012 estimate. According to researchers at Oxford University (www.nature.com/nature/journal/vaop/ncurrent/full/nature12060.html), the new figure includes 96 million cases of severe dengue fever and 300 million mild or asymptomatic cases. The WHO’s estimate is 50–100 million cases per year. The researchers suggest many cases have been misdiagnosed as malaria or other symptomatically similar illnesses. Dengue fever is caused by a virus spread by mosquitos of the genus *Aedes*. Dengue fever presents with fever and severe pain. Most cases are not fatal, but some of those infected,

especially children, are at risk of serious complications. Knowing the number of mild cases is important because if someone has mild dengue fever and is later re-infected with another strain, they are likely to experience complications. Because of climate change and urbanization, the *Aedes* mosquito’s range has increased, exposing half the world’s population to the illness. No vaccine or drug has proven effective. — Catherine Cross, *CMAJ*

New chair in pediatric vaccinology: Dr. Joanne Langley has been awarded the first Canadian Institutes of Health Research (CIHR)–GlaxoSmithKline (GSK) Chair in Pediatric Vaccinology. The announcement was made yesterday by Senator Thomas Johnson McInnis at the Canadian Center for Vaccinology in Halifax, Nova Scotia, where Langley is director of the Clinical Evaluation Group. The new chair is supported by a \$700 000 grant from CIHR and GSK. “The work to be undertaken by Dr. Langley and her team will help advance immunization strategies for kids and ensure Canada remains a leader in this evolving field,” said Senator McInnis. Langley is a pediatric infectious disease specialist, a professor of pediatrics at Dalhousie University and a past-chair of the National Advisory Committee on Immunization. “Canada is fortunate to have a strong community of internationally recognized infectious disease researchers, such as Dr. Langley, who are truly putting patients first,” said Dr. Alain Beaudet, president of CIHR. — Erin Russell, *CMAJ*

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