should move quickly and aggressively to control fertility preservation.

"If we're concerned about women becoming infertile, why are we not looking at the essential reasons that women can't have babies and men are not producing good sperm. Let's deal with the social problems first before turning to fertility treatments."

Health Canada is currently reviewing the freezing of eggs and is developing regulations to control the technology under the Assisted Human Reproduction Act.

Michael welcomes federal regulation but would oppose any effort to dictate eligibility criteria. "If we can offer it to cancer patients, why can't we offer it to healthy women as well?" he asks. — Dan Lett, Winnipeg

DOI:10.1503/cmaj.070814

Dalhousie helps address mental health crisis

The need was and is extensive: more people in this South American country suffer from a mental health condition than HIV/AIDS, tuberculosis and malaria combined. Yet, Guyana may now be among the world's most progressive nations in treating mental health problems, under a 3-year program developed in conjunction with the Dalhousie University Department of Psychiatry.

The seeds for the partnership were sown in 2005 when the Pan American Health Organization asked Dr. Stan Kutcher and his colleagues to assist in the aftermath of floods that were devastating the country. "It became apparent the issue wasn't mental health issues arising out of the floods they were having but that there was no mental health policy or infrastructure," says Kutcher, professor of psychiatry at Dalhousie Medical School and project co-leader.

There is today. As a result of the initiative, Guyana now has a mental health policy and a national mental health plan is nearing completion. Training has been provided to Medexes, who provide frontline health services, and primary care physicians.

As well, says Kutcher, "we're just starting to apply a very innovative model based on integrating mental health care into every aspect of health care."

"Interestingly," the director of the World Health Organization Collaborating Centre in Mental Health Training and Policy Development adds, "it could move mental health care ahead of where we are [in Canada]." — Donalee Moulton, Halifax

DOI:10.1503/cmaj.070815

Dr. Stan Kutcher

A 3-year program to develop a national mental health plan for Guyana is nearing completion with the aid of the Dalhousie University Department of Psychiatry.

Mercury disposal sole health concern with fluorescent lights

The mythology is certainly pervasive: fluorescent lighting variously causes carcinomas, breast cancer, high blood pressure and other cardiovascular diseases, headaches, eye strain, fatigue, depression and even sexual dysfunction. Break a compact fluorescent light bulb and you might as well be mainlining mercury or, at a minimum, should be calling in experts in white suits and helmets to clean up the toxic waste zone that once was your bedroom.

Yet, health and lighting experts say that there's no valid scientific evidence to support any of the above propositions and that there are few, if any, health consequences that will result from government moves to outlaw incandescent light bulbs. In the interest of energy efficiency and reducing greenhouse gas emissions, the province of Ontario has announced it will ban bulbs by 2012, following the lead of Australia and Nunavut.

"As far as health goes, outside of the remote possibility of some subpopulations that we haven't identified, I'd say there aren't any consequences," says Dr. Jennifer Veitch, senior research officer in the Indoor Environment Research Program at the National Research Council Institute for Research in Construction.

Even clean-up and disposal of broken fluorescent bulbs shouldn't pose an immediate health risk, provided that recommended clean-up procedures (see Box 1) are followed, says Rennsselaer Polytechnic Institute Lighting Research Centre Senior Research Scientist Dr. John Bullough. "You don't want to run over and sniff it up."

The average compact fluorescent bulb contains 5 milligrams of mercury, as compared with 500 in older household thermometers. "It's true that if you break a fluorescent lamp, you don't want to be breathing the elemental mercury. It's not desirable. However, there's a lot less mercury in a fluorescent lamp today than there used to be,"

Box 1: US Environmental Protection Agency guidelines for disposing of broken fluorescent bulbs

- Open a window and leave the room (restrict access) for at least 15 minutes.
- Remove all materials you can without using a vacuum cleaner. Wear disposable rubber gloves if available (do not use your bare hands). Carefully scoop up the fragments and powder with stiff paper or cardboard. Wipe the area clean with a damp paper towel or disposable wet wipe. Sticky tape (e.g., duct tape) can be used to pick up small pieces and powder.
- Place all cleanup materials in a plastic bag and seal it. If your jurisdiction permits you to put used or broken compact fluorescent lamps in the garbage, seal the compact fluorescent lamp in 2 plastic bags and put in the outdoor trash (if no other disposal or recycling options are available). Wash your hands after disposing of the bag.
- The first time you vacuum the area where the bulb was broken, remove the vacuum bag once you have finished cleaning the area (or empty and wipe the canister) and put the bag or vacuum debris, as well as the cleaning materials, in 2 sealed plastic bags in the outdoor trash or a protected outdoor location for normal disposal.

says Veitch. "Your bigger risk, if you broke the lamp, is you'd have a lot of slivers of broken glass around."

Both Veitch and Bullough say the more problematic issue surrounding mercury and compact fluorescent bulbs lies in their disposal. The mercury in bulbs dumped at landfills can leach out into the water supply, be converted into a highly toxic form called methylmercury and work its way back into the food chain. Ideally, the mercury should be recycled, Bullough says. But there are other environmental trade-offs that must to be factored into the long-term equation when considering bulb disposal, he adds. A power plant emits 10 milligrams of mercury to produce the electricity needed to run an incandescent bulb, compared with 2.4 milligrams for a compact fluorescent, so the net effect of using fluorescent bulbs is still an overall reduction in environmental mercury.

When compact fluorescent bulbs became widely available in the mid-1980s, several studies were published suggesting there was an elevated melanoma risk, but those have since been discredited, Veitch adds. "With respect to cancer risk, there is no good evidence that anyone need fear from the use of compact fluorescents or regular fluorescent tubes. There's no risk for melanoma from either of those lamp types."

Bullough says the average person would have to go out of their way to find a special compact fluorescent bulb that emits a large amount of short-wave, ultraviolet radiation and then spend untold hours under the lamp trying to induce sunburn before there would be anything like a risk of skin melanoma. "You'd really have to work at it."

Experts also say that other health effects often anecdotally associated with fluorescent lights, such as headaches, eye strain and depression, are similarly difficult to quantify, scientifically.

Earlier versions of fluorescent bulbs operated at much lower frequencies (120 Hertz) compared with newer ones (typically, 30 000–40 000 Hertz) and used a different ballast (magnetic rather than electronic) to stabilize the current in the circuit, causing some people to perceive a flicker in the lighting and experience headaches or eye strain. But newer bulbs are "way beyond the ability of the nervous system to detect any kind of oscillation in the output," Veitch says.

Still, "it's possible there are subgroups, of which we're not aware, that could be particularly sensitive" to fluorescent lighting, she adds.

Dr. Julia Knight, senior investigator and leader of the Prosserman Center for Health Research at the Samuel Lunenfeld Research Institute associated with the University of Toronto's Mount Sinai Hospital, says there may be similar remote possibilities and uncertainties related to the impact of fluorescent lighting on circadian rhythms and the production of the hormone melatonin. Studies have linked disruption of the melatonin cycle with the growth rate of malignant tumors. Limited evidence suggests the cycle is disrupted by exposure to very bright light from the blue end of the visual spectrum, Knight says. As for the difference between incandescent and fluorescent lighting: "I'm not sure we know enough to be sure, but I'm not concerned about it."

Veitch, a psychologist by training, says that some people will be far more distressed by "aesthetic" effects resulting from a shift to fluorescent, as opposed to incandescent, bulbs. The 2 types are weighted differently towards differing parts of the visual spectrum, so colours will appear slightly different, while the light that is generated will diffuse differently and have a differing "directionality," leading some people to believe that fluorescents are less bright, even though they're emitting the same amount of light.

Yet, even then, there should be no ill-consequence in terms of eye strain, and no impact on activities like reading, Veitch adds. "If there is, then people may want to choose a slightly higher wattage of CFL [compact fluorescent lamp] but even if they do that, they'll still be saving energy." — Wayne Kondro, *CMAJ*

DOI:10.1503/cmaj.070816

News@ a glance

Mumps misery: Some 460 confirmed cases of mumps have now been reported in 8 Canadian provinces in the ongoing outbreak of the acute viral infection, according to the Public Health Agency of Canada. As of June 8, the outbreak remains centred in Nova Scotia, where 350 cases have been confirmed, and New Brunswick, where 88 have contracted the disease. Ontario has 13 confirmed cases, while PEI, Manitoba, Alberta and BC each have 2, and Newfoundland 1. The majority of cases continue to occur among university-aged individuals (see editorial, page 121).