suicides about 10% of the time; 46 out of a total of 482 suicides in 2001, and 54 out of 430 suicides in 2000.

A Nova Scotia study by the non-profit research group GPI Atlantic released in October 2004 showed problem gambling as a factor in 6.3% of suicides. In addition, Nova Scotia's Office of Health Promotion, Focal Research Consultants found that almost 50% more residents in that province are at potential risk for gambling problems than 10 years ago.

Nova Scotia is now conducting Canada's first study of the socioeconomic costs of gambling, due for completion in September 2007. Australian and US federal governments are conducting similar studies.

In a June 2004 paper (*Psychol Addict Behav* 2004;18:49-55) on the tendency to suicide and depression among youth gamblers, authors Lia Nower and colleagues analyzed the incidence of suicide, depression and problem gambling among middle and high school students in Ontario and Quebec.

Among 3941 students in a 1996 study in Quebec, 49.2% of the problem and pathological gamblers had thoughts of suicide, as compared to 28.4% of non-gamblers, and 29.9% of social gamblers. A 2001 Ontario study of 2142 students showed that the 4.8% classified as problem gamblers, and that pathological gamblers had significantly higher levels of depression and suicidal tendencies (28.2%). That number jumped to 60% among females, with a significantly high proportion of suicide attempts (13.6%).

Nower, an associate professor at Rutgers University, says, "Canada does more than any other country in the world about problem gambling and treatment. The only thing that will help long-term will be to take ATM and credit card machines out of the gambling venues and to launch campaigns to deglamourize gambling, especially among adults. Most kids who gamble, started at home and clearly, the adults facilitate this."

Nower has divided problem gamblers into 3 types, one of which is predisposed to anxiety, depression and gambling (*Addiction* 2002;97[5]:487-99). "This group, which we suspect is the largest," Nower says, "is prone to the risk-taking behaviour and superstitious beliefs that escalate the gambling addiction."

Nower is developing screening instruments to more easily identify problem gamblers for treatment. "Right now, everyone is being treated with a broad brush," she says. — Margot Andresen, Ottawa

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More data needed on drug to delay the onset of diabetes

A Canadian-led phase 3 trial has shown that taking 8 mg of rosiglitazone (Avandia) daily, coupled with lifestyle counselling, can reduce the risk of developing Type 2 diabetes by 62% in individuals at high risk.

The study results made headlines worldwide, but a drug expert argues that lifestyle changes can do the same thing and that more data are needed before widespread use of the drug.

In the 3-year DREAM (Diabetes REduction Assessment with ramipril [Altace] and rosiglitazone Medication) randomized controlled trial, led by Dr. Hertzel Gerstein of McMaster University in Hamilton, 5269 middle-aged, overweight adults from 21 countries, all with poor glucose regulation but no heart disease, were randomly assigned to receive either rosiglitazone, a drug currently used to treat of Type 2 diabetes, or a placebo.

Canapress

Rosiglitazone has been shown to delay the onset of Type 2 diabetes, but critics say lifestyle changes do the same thing.

Among the 2635 taking rosiglitazone (*Lancet* 2006;368:1096-105), 306 developed diabetes or died, compared to 686 of the 2634 in the placebo group. As well, 51% of those taking the drug had their blood sugar levels return to normal, compared to 30% in the placebo group. Positive liver function results were also noted. The ramipril (15 mg daily) arm of the study (*N Engl J Med* 2006;355: 1551-62) showed increased regression to normoglycemia (16%), but no effect on the risk of developing diabetes or dying.

"Five years ago we had no way of preventing diabetes," Dr. Gerstein told *CMAJ*. "Now we know that we can prevent diabetes through diet and exercise and pharmacotherapy, and this is so far the most powerful pharmacotherapy agent that we have. It has risks associated with it; whether it gets used in an individual patient is part of a doctor–patient discussion and assessment of the risks and benefits for that person."

But several observers argue that similar results can be attained through diet and exercise, and more research is needed on the drug's side effects. They note that 14 participants on rosiglitazone developed non-fatal heart failure, compared with 2 cases in the placebo group, and the group gained 3% (2.2 kg) more in body weight than the placebo group.

The study authors say heart failure was easily managed with drugs, and conclude the weight gain was "favourable" because it was focused on hips rather than waist (abdominal obesity is a strong diabetes indicator).

But pharmacologist Dr. Jim Wright, managing director of UBC's Therapeutics Initiative, called the results "nonsensical." Evidence that rosiglitazone lowers blood sugar was known, he says. And while the drug might delay when someone at high risk crosses the "threshold" and is labelled diabetic, the study results do not measure whether diabetes-related problems, such as heart disease, are prevented.

In fact, he says, the study's negative cardiovascular outcomes make him suspicious about the benefits of having people with non-diabetic hypoglycemia take a costly ($2.88/day) drug daily rather than focus on diet and exercise. Wright says hospitalization and

mortality rates of the DREAM study participants "must" be followed for the next decade to measure long-term effects from having taken the drug. "Any reasonable person would have major concerns looking at the results," said Wright.

Gerstein agrees diet and exercise are important, but says pharmacotherapy is the answer now for those unable to comply, or who remain in a pre-diabetes state despite efforts. He says analysis of physical activity data gathered in the study is underway.

Meanwhile, the DREAM study continues. Participants without diabetes at the end of the study have been taken off medication and are being followed for a 2-month "washout" phase to determine if effects are long lasting. Those results will be presented in December. Study participants will also be followed for up to 2 more years to assess the long-term effects of rosiglitazone, and left ventricular function and other indices of cardiac function are being tested on 300 participants.

The trial was funded by the Canadian Institutes of Health Research, Sanofi-Aventis, GlaxoSmithKline PLC (rosiglitazone's manufacturer) and King Pharmaceuticals (ramipril). — Pauline Comeau, Ottawa

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New health academy must be financially independent

Financial independence is essential to the future credibility and success of the Canadian Academy of Health Sciences (CAHS), says the former head of the US Institute of Medicine (IOM).

Modeled after the IOM and similar national bodies, the recently-minted CAHS, 1 of 3 member academies of the equally embryonic Council of Canadian Academies (CCA), ultimately hopes to serve as the nation's primary source of objective, evidence-based research on health issues.

To achieve this, it's vital that the CAHS establish a diversified source of funding during its formative years, former IOM president Kenneth Shine told the new academy's second annual meeting, held in Ottawa Sept. 26–28. "Depending on government money will compromise independence. In the [US], if the government doesn't like what you do, they will cut your funding."

In the interest of maintaining credibility and ensuring that it isn't conflicted, the US National Academies have opted to turn down government money for studies that aren't science-based, he said. When they do take federal funding, it's under contract, so the academies can determine the conditions of the study.

The IOM, established in the 1980s, funds its 40 or so reports each year through contract work for governments, other institutions and organizations. It's also built an endowment fund through planned giving and annual gifts. Approximately 70% of its research is proposed by others, and the remainder has been self-generated, including a headline-grabbing report on medical error.

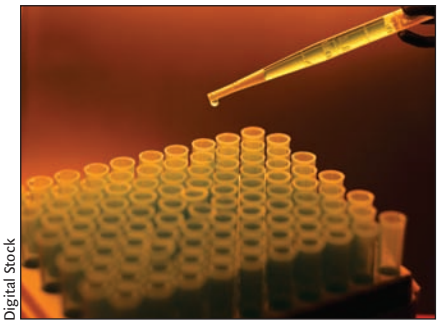
CAHS President-Elect Dr. Martin Schechter agreed that diversified funding would be preferable in terms of the long-term viability of the academy and, ultimately, will augment its credibility. "We'd be acting as honest brokers to everybody."

For now, though, the CAHS has nothing in the way of a pot of money, although, as a member of the CCA, it could theoretically be asked to conduct a study for the federal government under the latter's agreement with the CCA. Ottawa provided $30 million over 10 years in exchange for a commitment to conduct roughly 5 studies annually on federally chosen topics.

CCA President Peter Nicholson said "there is little to no room" within the arrangement to investigate issues at the scientific community's initiative. The first CCA report was recently delivered in response to a June request to assess the state of science and technology in Canada (see *CMAJ* 2006;175: 1046).

Shine argued that the CAHS' reputation will ultimately build on its capacity to initiate studies in areas of national need. "If you are all over the place, you won't have the impact ... to develop credibility and make a difference."

There's no doubt Canada needs a credible source of unbiased advice on health-related issues, CAHS founding President and University of Alberta professor of medicine Dr. Paul Armstrong said. Other nations are far more advanced in developing such a resource, including the UK, which is establishing the Academy of Medical Sciences, and France, with its Académie nationale de médecine.



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The Canadian Academy of Health Sciences hopes to be Canada's primary source of objective, evidence-based research on health issues.

"Canada has lagged behind other countries," Armstrong said, adding that the CAHS voice could potentially be unique due to its multidisciplinary nature, with fellows from medicine, nursing pharmacy, dentistry, rehabilitation sciences and veterinary medicine. Fittingly, the academy's first self-initiated project assessed the barriers to, and benefits of, fostering interdisciplinary health research (*CMAJ* 2006;175:763-71).

Shine also stressed that an academy is only as good as "the quality of your membership." In the IOM's case, one-quarter of members are from outside the health professions, including lawyers, historians and ethicists. By contrast, the current CAHS membership (roughly 220) is primarily comprised of biomedical researchers and administrative luminaries.

The IOM, established in 1970 as a private, independent non-profit organization, has drawn rave reviews for pivotal reports like *To Err is Human: Building a Safer Health System* (1999). No one wanted to fund the medical errors study, said Shine. But the IOM saved up for four years and used a $1.2-million endowment to conduct the study, which made international headlines and resulted in policy