machines. Statistics Canada reports 26% of Canadian children aged 2 to 17 are overweight or obese. — Andréa Ventimiglia, Ottawa

BC is best: A report from the Conference Board of Canada finds that British Columbia and Alberta have the top performing health systems in Canada overall, but all 10 provinces have room for improvement. *Health Provinces, Health Canada: a Provincial Benchmarking Report* compared performance among provincial health care systems based on 70 comparable health indicators in 2004. BC was the top performer in terms of overall population and health outcomes, but posted second-lowest in terms of patient satisfaction. The report also compared Canada's health performance to the 23 leading OECD countries, finding, once again, that Canada places in the middle range at number 11, tied with Iceland, Luxembourg and the Netherlands. The Conference Board of Canada is an independent, not-for-profit applied research organization.

Premium increase: Nova Scotia seniors will see their annual pharmacare premium rise to $400 a year as of Apr. 1, an increase of $10 a year. The province is also raising the annual cap on seniors' co-payments on each prescription by $10, to $360 per year. In total, the province anticipates it will spend $172 million in 2006–07 for the Seniors' Pharmacare program. It serves more than 95 000 people in the province. Thousands of low-income seniors, including those who receive the federal Guaranteed Income Supplement, are either exempt from paying the premiums, or else pay a reduced amount. "The Seniors' Pharmacare program is an important part of the health care system that must remain both affordable to seniors and sustainable over time," Health Minister Chris d'Entremont said in a statement announcing the increases. "As prescription drug costs continue to rise, a model increase in the fees will allow the program to continue to provide benefits to the greatest number of seniors." —Compiled by Barbara Sibbald and Laura Eggertson, *CMAJ*

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Bench to Bedside

New mechanisms of antibiotic resistance

In the 1970s the bacterium *Acinetobacter baumannii* was sensitive to most antibiotics; but over the last 35 years, some *A. baumannii* strains have become resistant to virtually all antibacterial drugs. In some countries, infections with this organism have become a public health problem: *A. baumannii* is responsible for up to 10% of all gram-negative infections in intensive care units in Europe.

So what has changed?

Pierre-Edouard Fournier and colleagues recently attempted to answer this question when they compared the genomes of 2 strains of *A. baumannii*: one from an outbreak in France that is resistant to virtually all antibiotics versus one associated with human body lice that is extremely susceptible (*PLoS Genetics* 2006;2(1):e7). The resistant strain had caused 26% of the people infected with it to die (*J Clin Microbiol* 2003;41:3542-7).

The scientists discovered that the genome of the resistant strain of *A. baumannii* possesses a chromosomal region — a so-called resistance island — containing 45 genes that contribute to antibiotic resistance. Many of these genes are of types not seen before, and their various roles in antibiotic resistance still need to be verified.

Analysis of these "resistance" genes revealed similarities with species of *Pseudomonas*, *Escherichia* and *Salmonella*, which suggests that exchanges of genetic information have likely occurred. Since all of these bacteria are commonly found in aqueous environments in hospitals, Fournier and colleagues suggest that antimicrobial pressure in such settings probably promotes genetic exchanges between and among these pathogens. Moreover, the areas around the resistance genes seem to be primed to capture additional genes, which perhaps explains why the organism has been so quick to develop drug resistance.

Antibiotic resistance in human pathogens is a major clinical problem; genome comparisons will illuminate some aspects of how this occurs. Our understanding of these mechanisms is crucial to the development of novel agents to overcome these pathogens' defenses. — Compiled by David Secko, Vancouver

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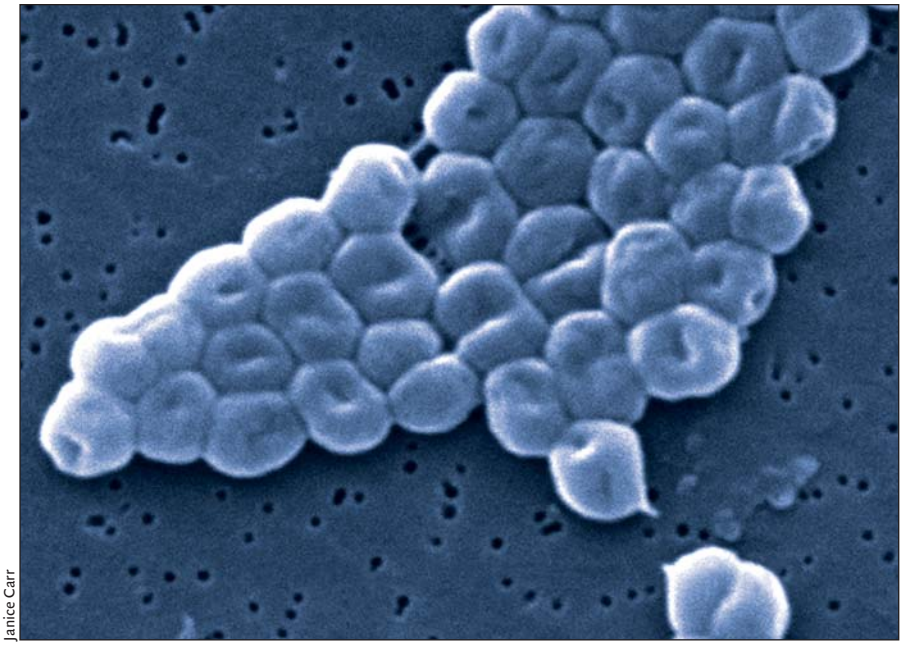

Janice Carr

A scanning electron micrograph of a cluster of gram-negative, nonmotile *Acinetobacter baumannii* bacteria, highly magnified (×165 000).