

Listeriosis is the least of it

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In August, Canada experienced the worst epidemic of listeriosis in the world. Contaminated cold cuts from a Toronto meat processing plant have, as of Sept. 12, 2008, killed at least 16 Canadians from among 43 confirmed cases of listeriosis in half the country's provinces. Already the death toll is more than double that of the notorious *Escherichia coli* outbreak in Walkerton, Ontario. And since *Listeria monocytogenes* can remain latent for 2 to 3 months, the deaths, illnesses and other effects such as spontaneous abortions may not be over yet.

What went wrong? As in the Walkerton and SARS epidemics, an outbreak of this size may point to systemic failures across multiple levels. *Listeria* is the biological agent, cold cuts the vector, but the ultimate cause may be found in risky government decisions.

Last November the Canadian government instituted a strategic review of the Canadian Food Inspection Agency (CFIA). Among its outcomes was to transfer inspection duties for ready-to-eat meats from the government inspectors to the meat industry. Cabinet decided to "shift from full-time CFIA meat inspection presence to an oversight role, [thereby] allowing industry to implement food safety control programs and to manage key risks."¹

In practice, the new policy meant that CFIA inspectors would rarely enter meat plants to test for bacteria and testing was left mostly to companies. Self-inspection came largely to substitute for, and not just to supplement, government inspection. Self-inspection mechanisms have worked effectively in other countries, but in Canada something went very wrong. One troubling sign is that even now, months after the policy change, the CFIA's required sampling procedure remains under development.

Maple Leaf Foods, the company at whose plant the *Listeria* contamination originated, was an early adopter of the government's new plan. And why not? The new policy made self-inspection easy: the company had to keep up good manufacturing practices in its plant and to test finished products just once monthly.²

Canada's government also left national standards for *Listeria* lower than in many other countries. Health Canada tolerates up to 100 *Listeria* bacteria per gram of ready-to-eat foods at the start of the product's life, even though the dose of *Listeria* ultimately ingested may be higher because the bacteria can replicate during the product's life even if refrigerated.³ In contrast, the United Nations / World Health Organization Codex Alimentarius Commission grudgingly tolerates 100 bacteria per gram, but only at the end of the product's life.⁴ The United States government is tougher still and tolerates no *Listeria* bacteria at all.⁵

Confronted with the reality of its lax *Listeria* standards,

Canada's government did not raise them, but instead lobbied to have America's standards lowered.² In particular, CFIA opposed "daily visits" by inspectors and "finished product testing for *Listeria*," precisely the safeguards that might have spotted Maple Leaf Foods' *Listeria* problem sooner and avoided or reduced the impact of this outbreak.⁶

Government policy errors helped bring about this epidemic. Yet surprisingly, government has taken no remedial steps beyond issuing a food recall. Instead, officials praise the success of our infectious disease surveillance system — as if, with 16 dead, there were cause to celebrate — while food safety standards remain as low as ever.

The listeriosis epidemic is a timely reminder that the Harper government has reversed much of the progress that previous governments made on governing for public health. Following the 2003 SARS epidemic and subsequent recommendations of the National Advisory Committee on SARS and Public Health,⁷ the Public Health Agency of Canada (PHAC) was created and given its own minister in government — a direct line to the prime minister. But in 2006, among Prime Minister Stephen Harper's first acts was to eliminate the PHAC minister and public health's seat at the Cabinet table. His government also left the chief medical officer of health within the ranks of the civil service, working under the minister of health. In so doing, it left our country without a national independent voice to speak out on public health issues, including providing visible leadership during this crisis.

And listeriosis may be the least of it. The same November 2007 Cabinet decision that handed self-inspection to the owners of meat plants did the same for operators of animal feed mills and cut back the avian influenza preparedness program. Yet bad animal feed led to the epidemic of bovine spongiform encephalitis (mad cow disease), and in an influenza pandemic tens of thousands of Canadians may die.⁸ Listeriosis pales in comparison. Overall, it would seem that, as a country, Canada is far less prepared now for epidemics than in the past.

To address the increasingly serious public health problem, just 1 day before heading into an election, Prime Minister Harper called for an "independent investigation" of the listeriosis epidemic. But the structure of the proposed investigation is deeply disappointing. According to the investigation's terms of reference, listed on the prime minister's website, no investigator at arm's length from the government has been or will be chosen; the investigator will not have any power to subpoena witnesses or documents; the investigation will be closed to public participation; and there is no commitment to publish the investigator's findings or to report to Parliament.⁹

Such an investigation will be inferior to every epidemic in-

quiry in recent Canadian history. The inquiries into the tainted blood scandal, the Walkerton outbreak and the SARS epidemic all were arm's-length exercises convened by an independent commissioner (usually a judge) who held open and public hearings and who wielded all the powers listed above. The public reports of those past inquiries catalogued the institutional failures that caused the epidemics and made sensible governance and medical recommendations to protect Canadians better. The Krever commission of inquiry into the tainted blood scandal, for example, has as its legacy the creation of one of the best blood collection and banking systems in the world.¹⁰

Prime Minister Harper has said he is "very troubled" by the *Listeria* outbreak. So are we: *Listeria* is a ubiquitous soil bacterium. Future food-borne epidemics of listeriosis are certain. A full-scale public inquiry into the major failings of Canada's food inspection system is necessary to protect Canadians from future epidemic threats, and the Canadian public should settle for nothing less than that. This will be the first and most important step toward making our food chain safer. Politicians would do well to explain their positions on such an inquiry before election day.

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REFERENCES

1. Treasury Board. *Decision of the Treasury Board — meeting of November 13, 2007. T.B. 834007*. Ottawa (ON): The Board; 2008. Available [Globe and Mail website]: www.theglobeandmail.com/v5/content/pdf/cfimemo.pdf (accessed 2008 Sept 12).
2. Ha TT, Curry B, McIlroy A. Inspectors failed to adopt more rigorous US measures. *Globe and Mail* [Toronto] 2008 Aug 27. Available: www.theglobeandmail.com/servlet/story/RTGAM.20080827.wmeat27BNSStory/National/home (accessed 2008 Sept 12).
3. Food Directorate, Health Products and Food Branch, Health Canada. *Policy on Listeria monocytogenes in ready-to-eat foods*. Ottawa (ON): Health Canada; 2004. Available: www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/legislation/policy_listeria_monocytogenes_politique_toc-eng.pdf (accessed 2008 Sept 3).
4. European Food Safety Authority. Request for updating the former SCVPH opinion on *Listeria monocytogenes* risk related to ready-to-eat foods and scientific advice on different levels of *Listeria monocytogenes* in ready-to-eat foods and the related risk for human illness. Scientific opinion of the Panel on Biological Hazards. *EFSA Journal* 2007;599:1-42. Available: www.efsa.europa.eu/cs/BIobServer/Scientific_Opinion/biohaz_op_ej599_listeria_en_3.pdf?ssbinary=true (accessed 2008 Sept 3).
5. United States DHHS Food and Drug Administration's Center for Food Safety and Applied Nutrition (FDA/CFSAN). *Quantitative assessment of relative risk to public health from foodborne Listeria monocytogenes among selected categories of ready-to-eat foods*. Rockville (MD): The Administration; 2003. Available: www.foodsafety.gov/~dms/lmr2-1.html (accessed 2008 Sept 12).
6. Curry B. Ottawa wanted US to accept more lenient meat inspection regime. *Globe and Mail* [Toronto] 2008 Aug 12.
7. Health Canada. *Learning from SARS: renewal of public health in Canada: a report of the National Advisory Committee on SARS and Public Health October 2003*. Ottawa (ON): Public Health Agency of Canada; 2003. Available: www.phac-aspc.gc.ca/publicat/sars-sras/pdf/sars-e.pdf (accessed 2008 Sept 12).
8. Public Health Agency of Canada. *The Canadian pandemic influenza plan for the health sector*. Ottawa (ON): The Agency; 2006. Available: www.phac-aspc.gc.ca/cpip-plcpi/s02-eng.php#23 (accessed 2008 Sept 12).
9. Prime minister announces terms of reference for an independent investigation of the listeriosis outbreak [news release]. Ottawa (ON): Office of the Prime Minister of Canada; 2008 Sept 6. Available: <http://pm.gc.ca/eng/media.asp?category=1&id=2268>.
10. Wilson K. The Krever Commission — 10 years later. *CMAJ* 2007;177:1387-9.