Lessons from the listeriosis outbreak

Abhijat Kitchlu (Meds 2011) and Allanah Li (Meds 2012)
Faculty Reviewer: Dr. John Howard

Introduction

The recent outbreak of listeriosis has been called the worst epidemic of this illness that the world has ever seen.1 To date, there have been 53 confirmed cases across Canada and 20 confirmed deaths in which listeriosis has been the underlying or contributing cause of death.2 Despite the August 24, 2008 recall of over 220 different products, concerns of continued spread persist in the wake of a November 22 warning from the acting chief medical officer of health regarding the discovery of Listeria monocytogenes in seven provincial correctional facilities.3, 4 Given the magnitude of this outbreak, criticisms of the responses of all parties involved have been inexorable. The Public Health Agency of Canada (PHAC), the Canadian Food Inspection Agency (CFIA) as well as Maple Leaf Foods and other corporations have all been faulted as the toll of this outbreak continues to rise.5 Although opinions differ where, if at all, blame should be laid, most would agree that the listeriosis outbreak has given Canadians cause to examine one of the most vital areas of collaboration in our health care system – the interaction between the various organizations which safeguard our food.

Overview of the outbreak

As early as June 2008, Toronto Public Health Units noticed a minor increase in the number of reported listeriosis cases. By mid-July Toronto Public Health increased their investigations after a listeriosis case was discovered in a Toronto nursing home. Food samples from the nursing home were sent to Health Canada labs and on August 5, 2008, a sandwich was found to be contaminated with Listeria. Toronto Public Health then notified the CFIA of the positive food samples and on August 12 Maple Leaf Foods was informed by the CFIA that a formal investigation of their products was underway. CFIA officials met with public health officials two days later and the decision was made to stop serving certain meat products in hospitals and long-term care facilities. On August 16 the CFIA and Health Canada met and recommended a recall on certain Maple Leaf products. The following day Maple Leaf announced a voluntary recall of some products from their Toronto plant; over the period of August 17 – 24 the list of recalled products grew to 220 as the number of listeriosis cases and associated deaths continued to rise. The recalled products also included prepared sandwiches by other corporations including Lucerne Meats, Atlantic Foods Ltd. and Metro Ontario Inc. During this time Maple Leaf Foods’ Toronto plant was shut down to undergo cleaning and re-evaluation of safety practices. The Public Health Agency of Canada announced on August 23 that tests confirmed the link between the listeriosis outbreak to Maple Leaf Foods and the following day television ads begin airing featuring Maple Leaf CEO Michael McCain’s apologies on behalf of the corporation.6, 7

Since then, the Public Health Agency of Canada has been continually issuing updates on the number of confirmed and suspected cases. However, critics of the Ministry of Health and Long-Term Care (MOHLTC) and PHAC would argue that Michael McCain, rather than acting Chief Medical Officer of Health, Dr. David Williams or Chief Public Health Officer, Dr. David Butler-Jones, has been the major public figure informing Canadians about the outbreak.5 Similarly, critics of the CFIA have lambasted 2007 reforms that allowed the food industry itself a much greater degree of self-monitoring.
Considering both the controversy about the management of the outbreak and the extent of its spread Prime Minister Stephen Harper announced an investigation into the outbreak. This investigation includes an evaluation of the “efficiency and effectiveness of the response by federal agencies in terms of prevention, the recall of contaminated products, and collaboration and communication among partners in the food safety system and the public”.¹

The following discussion will examine the major agencies involved and review some of the criticisms elicited by the epidemic.

The Public Health Agency of Canada and the chief public health officer

The Public Health Agency of Canada (PHAC) was created in the aftermath of the SARS outbreak of 2003. It was initially its own ministry, with a cabinet seat reporting directly to the Prime Minister. However, in 2006 the government eliminated the ministry and cabinet position and relegated the Chief Public Health Officer to a civil service position under the Minister of Health.⁵

The tasks of the agency include preventing both chronic disease and outbreaks of infections. The latter task falls primarily under the Infectious Disease and Emergency Preparedness (IDEP) branch. This branch contains the subdivision known as the Centre for Infectious Disease Prevention and Control (CIDPC), which is responsible for public health surveillance and epidemiological studies during foodborne epidemics. The National Microbial Laboratory (NML) and the Laboratory for Foodborne Zoonoses (LFZ) are also involved in outbreak surveillance and provide pathogen strain differentiation and other analytical services.⁸

As per the current Canada Foodborne Outbreak Response Protocol, the PHAC and specifically the CIDPC has the responsibility of “communication with the public as it relates to the public health implications of the epidemiological investigation”, until a food source has been identified, at which point the CFIA “will have the lead for public communications as it relates to the food safety investigation and any necessary food safety recall activities”.⁹ Despite the specificity of this protocol, critics have suggested that the Chief Public Health Officer failed to act as “the leading national voice for public health, [particularly] in outbreaks and other health emergencies”.⁵ Some have noted the greater relative prominence of the Minister of Agriculture and Agri-Food Canada and Michael McCain of Maple Leaf Foods during the outbreak. Such criticism has led to concerns about the independence of the Chief Public Health Officer, who may be constrained by prevailing political considerations. As he or she serves under the Minister of Health and has less protection from dismissal than similar positions in the United States and United Kingdom, some have questioned this officer’s ability to raise public health concerns without fear of political repercussions. The independent investigation initiated by the Prime Minister will be able to assess the efficacy of the PHAC and the Chief Public Health Officer given their current apparatus and whether the agency acted with due diligence. However, new concerns are being raised that “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 report to parliament”.¹

The Canadian Food Inspection Agency and the role of industry

The Canadian Food Inspection Agency (CFIA) reports to the Minister of Agriculture and Agri-Food and is responsible for protecting the safety of Canada’s food supply. The CFIA implements surveillance and inspection programs intended to provide an early warning for problems within the food supply. In the event of a food safety emergency, the CFIA works in partnership with Health Canada, provincial agencies, and the food industry to operate an emergency response system, including food recalls.¹⁰

Inspection of ready-to-eat meat products, such as the contaminated cold cuts at the centre of the listeriosis outbreak, was formerly done by
CFIA inspectors. However, a Canadian government review of the CFIA in November 2007 resulted in various reforms to inspection policy. Of particular importance was a decision that effectively transferred inspection duties to the meat industry, with government inspectors taking on more of an oversight role. This decision meant that inspectors spent less time on plant floors conducting visible inspections and more time analyzing data collected by industry. Maple Leaf Foods was an early supporter of these inspection reforms.

The push towards greater industry self-regulation has not received universal support. Those who argue in favour of self-inspection say that industry has greater incentives to ensure safe products for their customers and are more likely to develop new scientific testing technologies and protocols. Those who argue against self-inspection say that industry is more concerned with profits than product safety. They are concerned that tests may not be performed adequately, results may be altered, or government inspectors may be denied full access to the data.

The listeriosis outbreak has affected the operations of both the CFIA and Maple Leaf Foods. Dr. Brian Evans, CFIA Executive Vice-President and Chief Veterinary Officer of Canada, has conceded that the agency should have done a better job communicating with the public during the outbreak. The CFIA is also revising its Listeria surveillance protocols to ensure greater transparency and more protection for consumers, including reinstating a rule compelling companies to inform inspectors of positive Listeria tests. For its part, Maple Leaf Foods estimated the outbreak and following recall cost the company over $25 million directly and another $14 million in lost sales. Moreover, the results of a class-action lawsuit filed against the company are yet to be determined. Following the outbreak, Maple Leaf Foods toughened its own policies regarding Listeria, to a level more rigorous than the proposed CFIA protocols.

**Conclusion**

Despite the many criticisms of all parties involved in the listeriosis outbreak, it remains unclear as to where the prevention and response systems failed. In fact, it can be argued that all parties responded adequately given the circumstances. Further investigations by the government may yield valuable recommendations to improve the response to foodborne illness and the safety of the food supply, provided that such investigations are thorough, objective, and transparent. However, the listeriosis outbreak has already demonstrated the importance of rapid communication and collaboration between private industry and all levels of government to ensure the health and safety of the public.

**References**