Outbreaks of *Salmonella* infections attributed to beef --United States, 1973-2011

A. S. Laufer\textsuperscript{a1a2}, J. Grass\textsuperscript{a2}, K. Holt\textsuperscript{a3}, J. M. Whichard\textsuperscript{a4}, P. M. Griffin\textsuperscript{a2} and L. H. Gould\textsuperscript{a2}

\textsuperscript{a1} Epidemic Intelligence Service, Division of Scientific Education and Professional Development, CSELS, CDC, Atlanta, GA, USA; \textsuperscript{a2} Enteric Diseases Epidemiology Branch, DFWED, NCEZID, CDC, Atlanta, GA, USA; \textsuperscript{a3} Food Safety and Inspection Service, USDA, Washington, DC, USA; \textsuperscript{a4} Enteric Diseases Laboratory Branch, DFWED, NCEZID, CDC, Atlanta, GA, USA

Abstract

Non-typhoidal *Salmonella* is estimated to be the most common bacterial cause of foodborne illness in the United States, causing an estimated one million domestically acquired foodborne illnesses annually. Recent, large outbreaks have highlighted the importance of ground beef as an important source of multidrug-resistant *Salmonella*. We analysed the epidemiology of salmonellosis outbreaks that were attributed to beef in the United States reported to the Centers for Disease Control and Prevention (CDC) from 1973 to 2011. During 1973–2011, of the 1965 outbreaks of *Salmonella* where a food vehicle was implicated, 96 were attributed to beef, accounting for 3684 illnesses. We observed a shift in the type of beef implicated in salmonellosis outbreaks, from roast to ground beef. Delicatessen-style roast beef cooked in commercial processing establishments was the predominant type during the 1970s and early 1980s; regulations on cooking and processing essentially eliminated this problem by 1987. Ground beef emerged as an important vehicle in the 2000s; it was implicated in 17 (45%) of the 38 beef-attributed outbreaks reported during 2002–2011. Although this emergence was likely due in part to increased participation in CDC's PulseNet, which was established in 1996, and proactive decisions by the United States Department of Agriculture's Food Safety and Inspection Service, stronger measures are needed to decrease contamination of ground beef with *Salmonella*.

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