

have estimated that consumers are willing to pay \$0.70 per meal to upgrade to a safer meal in experimental auction markets (Shogren 1993, Hayes *et al.* 1995). Moreover, consumers are not homogeneous; increasingly, special populations such as people with HIV/AIDS, the immunocompromised elderly, and pregnant women face higher risk of acquiring foodborne diseases than others. These groups may be willing to pay even more than \$0.70 for a safer meal.

The costs to society of foodborne diseases as computed by the COI method may comprise only a portion of society's willingness to pay to reduce such diseases. However, government agencies can act pragmatically to estimate the individual cost components of foodborne diseases while continuing to develop new theory, methods, and tools to estimate the value of food safety more comprehensively.

References

- American Gastroenterological Association. "Consensus Conference Statement on *E. coli* O157:H7 Infections, An Emerging National Health Crisis," July 11-13, 1994. *Gastroenterology*. 108(1995):1923-1934.
- Archer, D. L. "Diarrheal Episodes and Diarrheal Disease: Acute Disease with Chronic Implications," *J. Food Prot.* 47(1984):321-328.
- Archer, D. L. "Enteric Microorganisms in Rheumatoid Diseases: Causative Agents and Possible Mechanisms," *J. Food Prot.* 48(1985):538-545.
- Archer, D. L., and J. E. Kvenberg. "Incidence and Cost of Foodborne Diarrheal Disease in the United States," *J. Food Prot.* 48(1985):887-894.
- Archer, Douglas L., and Frank E. Young. "Contemporary Issues: Diseases with a Food Vector," *Clinical Microbiology Reviews*. 1(1988):377-398.
- Armstrong, D. "*Listeria monocytogenes*." In Mandell, G. L., R. G. Douglas, Jr., and J. E. Bennett (eds.), *Principles and Practice of Infectious Diseases*. 2nd ed. Wiley Medical, New York, 1985.
- Aserkoff, B., S. A. Schroeder, and P. S. Brachman. "Salmonellosis in the United States—A Five Year Review," *Am. J. Epidemiol.* 92(1970):13-24.
- Bean, N. H., and P. M. Griffin. "Foodborne Disease Outbreaks in the United States, 1973-1987: Pathogens, Vehicles, and Trends," *J. Food Prot.* 53(1990):804-817.
- Bean, N. H., P. M. Griffin, J. S. Goulding, and C. B. Ivey. "Foodborne Disease Outbreaks, 5 Year Summary, 1983-1987," *CDC Surveill. Summ. Morb. Mort. Weekly Rep. (MMWR)*. 39, SS-1(March 1990):15-59 and *J. Food Prot.* 53(1990):711-728.
- Bjerkedal, T., and J. D. Erickson. "Association of Birth Outcome with Subsequent Fertility," *Am. J. Obstet. Gynecol.* 147,4(Oct. 15, 1983):399- 404.
- Belongia, E. A., M. T. Osterholm, J. T. Soler, D. A. Ammend, J. E. Braun, and K. L. MacDonald. "Transmission of *Escherichia coli* O157:H7 Infection in Minnesota Child Day-care Facilities," *J. Am. Med. Assoc.* 269,7(Feb. 17, 1993):883-888.
- Benenson, Abram S. (ed.), *Control of Communicable Diseases in Man*. Amer. Public Health Assoc., 15th edition, 1990.
- Bennett, John V., Scott D. Holmberg, Martha F. Rogers, and Steven L. Solomon. "Infectious and Parasitic Diseases." In Robert W. Amler and H. Bruce Dull (eds.), *Closing the Gap: The Burden of Unnecessary Illness*. New York: Oxford University Press, 1987, pp. 102-114.
- Bergdoll, Merlin S. "*Staphylococcus aureus*." Chapter 11 in Doyle, Michael P. (ed.), *Foodborne Bacterial Pathogens*. New York: Marcel Dekker, Inc. 1989.
- Blaser, Martin J., D. N. Taylor, R. A. Feldman. "Epidemiology of *Campylobacter jejuni* Infections," *Epidemiologic Reviews*. 5(1983a):157-165.
- Blaser, Martin J., J. G. Wells, R. A. Feldman, R. A. Pollard, J. R. Allen, and the Collaborative Diarrheal Disease Study Group. "*Campylobacter* enteritis in the United States; A Multi-center Study," *Ann Intern. Med.* 98(1983b): 360-365.
- Blaser, M. J., I. D. Berkowitz, F. M. LaForce *et al.* "*Campylobacter* enteritis: Clinical and Epidemiologic Features." *Ann Intern. Med.* 91(1979):175-185.

Butzler, J. P., and M. B. Skirrow. "Campylobacter enteritis," *Clin. Gastroenter.* 8(1979):737-765.

CAST Report. "Foodborne Pathogens: Risks and Consequences." Task Force Report No. 122, Washington, DC: Council for Agricultural Science and Technology, Sept. 1994.

Celum, C. L., R. E. Chaisson, G. W. Rutherford, J. L. Barnhart, and D. F. Echenberg. "Incidence of Salmonellosis in Patients with AIDS," *J. Infect. Dis.* 156(1987):998-1002.

Centers for Disease Control and Prevention (CDC). Memorandum on the "U.S. annual incidence estimates for illness due to infection from *E. coli* O157:H7, *Salmonella*, and *Campylobacter*." Foodborne and Diarrheal Disease Branch, Division of Bacterial and Mycotic Diseases, National Centers for Infectious Disease, Atlanta, GA: CDC, Oct. 31, 1994.

Centers for Disease Control and Prevention (CDC). *Salmonella* Surveillance Annual Summary. Atlanta, GA: Centers for Disease Control (issued Nov. 1981) 1979.

Centers for Disease Control and Prevention (CDC). "Update: Multistate Outbreak of *Escherichia coli* O157:H7 Infections from Hamburgers - Western United States, 1992-1993," *Morbidity and Mortality Weekly Report*. (MMWR). Apr. 16, 1993.

Centers for Disease Control and Prevention. *Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States*. Atlanta, Georgia: U.S. Dept. of Health and Human Services, Public Health Service. p. 11., 1994.

Chalker, R. B., and M. J. Blaser. "A Review of Human Salmonellosis: III. Magnitude of *Salmonella* Infection in the United States," *Rev. Infectious Diseases*. 10,1(1988):111-124

Cimolai, N., J. E. Carter, B. J. Morrison, and J. D. Anderson. "Risk Factors for the Progression of *Escherichia coli* O157:H7 Enteritis to Hemolytic- Uremic Syndrome," *J. Pediatr.* 116,4(Apr. 1990):589-592.

Cochi, S. L., C. V. Broome, and A. W. Hightower. "Immunization of U.S. children with *Hemophilus influenzae* Type b polysaccharide vaccine," *JAMA*. 253(1985):521-529.

Cohen, M. L., R. E. Fountaine, R. A. Pollard, S. D. VonAllmen, T. M. Vernon, and E. J. Gangarosa. "An Assessment of Patient-related Economic Costs in an Outbreak of Salmonellosis," *N. Eng. J. Med.* 299,9(1978):459-460.

Cohen, M. L., and R. V. Tauxe. "Drug-resistant *Salmonella* in the United States: An Epidemiological Perspective," *Science*. 234(Nov. 1986):964- 969.

Conley, R.W. *The Economics of Mental Retardation*. Baltimore and London: The Johns Hopkins University Press, 1973.

Curtin, Leo. 1984. "Economic Study of *Salmonella* Poisoning and Control Measures in Canada." Working paper no. 11/84. Marketing and Economics Branch, Agriculture Canada, Ottawa, Canada.

D'Aoust, Jean-Yves. "*Salmonella*" Chapter 9 in Doyle, Michael P. (ed.), *Foodborne Bacterial Pathogens*. New York: Marcel Dekker, Inc. 1989.

Deming, M. S., R. V. Tauxe, P. A. Blake, S. E. Dixon, B. S. Fowler, T. S. Jones, E. A. Lockamy, C. M. Patton, and R. O. Sikes. "*Campylobacter enteritis* at a University: Transmission from Eating Chicken and From Cats," *Am. J. Epidemiol.* 126,3(1987):526-34.

A Dictionary of Epidemiology. Last, J. (ed.), 3rd ed., New York: Oxford Univ. Press, 1995.

Dorland's Illustrated Medical Dictionary. 28th ed., Philadelphia: W. B. Saunders Co., 1994.

Doyle, Michael P. "Effect of Environmental and Processing Conditions on *Listeria monocytogenes*," In *Listeria monocytogenes: a Foodborne Pathogen*. Institute of Food Technologists' Overview: Outstanding Symposia in Food Science and Technology. Chicago, IL: 1988.

Economic Indicators. U.S. Government Printing Office. No. 0-81-812, July 1994.

Eggers, Paul, Health Care Finance Administration, Baltimore, MD. Personal communication with ERS researchers, 1991 and 1993.

Eggers, Paul. Tables 48 and 49 from FAX on March 3, 1993. *Medicare End Stage Renal Disease Program Expenditures per Person by Treatment Group, 1990*.

Health Care Finance Administration, Office of Research and Demonstration, Baltimore, MD.

Farber, J. M. "Current Research on *Listeria monocytogenes* in Foods: An Overview." *J. Food Prot.* 56(1993):640-643.

Federal Food and Drug Administration. *FDA Consumer*. 28,1(Jan.-Feb. 1994):7-11.

Federal Register. "Procedures for the Safe and Sanitary Processing and Importing of Fish and Fishery Products: Final Rule," 60, 242, (Dec. 18, 1995), 65095-65200.

Federal Register. "Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems." Preliminary Regulatory Impact Assessment for Docket No. 93-016P, 60, 23, (Feb. 3, 1995), 6774-6889.

Federal Register. "Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems: Final Rule," 61, 144, (July 25, 1996), 38805-38989.

Feldman R. A., and M. J. Blaser. "Do You Have a *Salmonella* in Your Future?" [editorial] *West. J. Med.* 133(Nov. 1980):435-438.

Fisher, A., L. G. Chestnut, and D. M. Violette. "The Value of Reducing Risks of Death: A Note on New Evidence," *J. of Policy Analysis and Management*. 8,1(1989):88-100.

Food Chemical News, various issues.

Food and Drug Administration, Food Safety and Inspection Service, and Centers for Disease Control and Prevention. Joint Release No. 0561.95, July 1995.

Garner, Thesia I. "Economic Analysis of End-Stage Renal Disease Treatments." University of Maryland Ph.D. Dissertation, Department of Textiles and Consumer Economics, 96. Ann Arbor, MI: University Microfilms International, 1984.

Gellin, B., C. V. Broome, R. Weaver, and A. W. Hightower. [Listeriosis Study Group.] "Geographic Differences in Listeriosis in the U.S." (Abstract). In Program and abstracts of the twenty-seventh International Conference on Antimicrobial Agents and

Chemotherapy. p. 155. Washington, DC: American Society for Microbiology, 1987.

General Accounting Office (GAO). *Food Safety and Quality: Uniform, Risk Based Inspection System Needed to Ensure Safe Food Supply*. GAO/RCED-92-152, June 1992.

General Accounting Office (GAO). *Food Safety: New Initiatives Would Fundamentally Alter the Existing System*. GAO/RCED-96-81, Mar. 1996.

Gransden, W. R., M. A. S. Damm, J. D. Anderson, J. E. Carter, and H. Lior. "Further Evidence Associating Hemolytic Uremic Syndrome with Infection by Verotoxin-Producing *Escherichia coli* O157:H7," *Infect. Dis.* 154,3(Sept. 1986):522-524.

Griffin, Patricia. Personal communication with Tanya Roberts, July 1993.

Griffin, P. M., S. M. Ostroff, R. V. Tauxe, K. D. Greene, J. G. Wells, J. H. Lewis, and P. A. Blake. "Illnesses Associated with *Escherichia coli* O157:H7. Infections: A Broad Clinical Spectrum." *Ann. Intern. Med.* 109(1988):705-712.

Griffin, Patricia, and Robert Tauxe. "The Epidemiology of Infections Caused by *Escherichia coli* O157:H7, Other Enterohemorrhagic *E. coli*, and the Associated Hemolytic Uremic Syndrome," *Epidemiologic Reviews*. 13(1991):60-98.

Haddix, A. C., S. M. Teutsch, P. A. Shaffer, and D. O. Duñet (eds.). *Prevention Effectiveness: A Guide to Decision Analysis and Economic Evaluation*. New York: Oxford University Press, 1996.

Harrington, Winston, and Paul R. Portney. "Valuing the Benefits of Health and Safety Regulations," *J. Urban Econ.* 22,1(1987):101-112.

Harris, N. V., N. S. Weiss, and C. M. Nolan. "The Role of Poultry and Meats in the Etiology of *Campylobacter jejuni/coli* Enteritis," *Am. J. Public Health*. 76,4(1986a):407-411.

Harris, N. V., D. Thompson, D. C. Martin, and C. M. Nolan. "A Survey of *Campylobacter* and other Bacterial Contaminants of Pre-market Chicken and Retail Poultry and Meats, King County, Washington," *Am. J. Public Health*. 76(1986b):401-406.

- Hartunian, Nelson S., Charles N. Smart, and Mark S. Thompson. "The Incidence and Economic Costs of Cancer, Motor Vehicle Injuries, Coronary Heart Disease, and Stroke: A Comparative Analysis," *Amer. J. Public Health*. 70,12(Dec. 1980):1249-1260.
- Hauschild, A. H. W., and F. L. Bryan. "Estimate of Cases of Food- and Waterborne Illness in Canada and the United States." *J. Food Prot.* 43(1980):435-440.
- Hayes, Dermot J., Jason F. Shogren, Sueng Youll Shin, and James B. Kliebenstein. "Valuing Food Safety in Experimental Auction Markets," *Am. J. Agr. Econ.* 77(Feb. 1995):40-53.
- Health Care Fin. Admin., (HCFA), Dept. of Health and Human Services. *End Stage Renal Disease*, 1990. HCFA Pub. No. 03328, May 1992.
- Heddleson, R. A., and S. Doores. "Factors Affecting Microwave Heating of Foods and Microwave Induced Destruction of Foodborne Pathogens—A Review." *J. Food Prot.* 57,11(Nov. 1994):1025-1037.
- Heersink, Mary. 1994. Letter to Tanya Roberts, Apr. 18.
- Helmick, C. G., P. M. Griffin, D. G. Addiss, R. V. Tauxe, and D. D. Juranek. Chapter 3 in Everhart, James. E. (ed.), *Digestive Diseases in the United States: Epidemiology and Impact*. U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases: U.S. Government Printing Office, May 1994, NIH Pub. No. 94-1447, pp. 85-123.
- Hopkins, R. S., and A. S. Scott. "Handling Raw Chicken as a Source for Sporadic *Campylobacter jejuni* Infections," *J. Infect. Dis.* 148,4(Oct. 1983):770.
- Hutt, Peter B., and Peter B. Hutt, II. "A History of Government Regulation of Adulteration and Misbranding of Food." *Food Drug Cosmetic Law Journal*. 39(1984):2-73.
- Institute of Medicine (IOM). Division of Health Promotion and disease Prevention. *New Vaccine Development: Establishing Priorities*. Washington, DC:, 1985.
- "International Classification of Diseases, 9th Revision." Adapted for Use in the United States (ICDA), DHHS. Public Health Services and Health Care Finance Adm. Washington: Public Health Service, 1993.
- Jackson, G. J., C. F. Langford, and D. L. Archer. "Control of Salmonellosis and Similar Foodborne Infections," *Food Control*. (Jan. 1991):26-34.
- Jones, Julie Miller. *Food Safety*. St. Paul, MN: Eagan Press, 1992.
- Just, Richard E., Darell L. Hueth, and Andrew Schmitz. *Applied Welfare Economics and Public Policy*. Englewood Cliffs, New Jersey: Prentice-Hall, 1982.
- Karmali M. A., M. Petric, C. Lim, P. Fleming, G. S. Arbus, and H. Lior. "The Associated Between Hemolytic Uremic Syndrome and Infection by Verotoxin-Producing *Escherichia coli*," *J. Inf. Dis.* 151,5(May 1985):775-782.
- Keene, W. E., J. M. McAnulty, F. C. Hoesly, L. P. Williams, K. Hedberg, G. L. Oxman, T. J. Barrett, M. A. Pfaller, and D. W. Fleming. "A Swimming-Associated Outbreak of Hemorrhagic Colitis Caused by *Escherichia coli* O157:H7 and *Shigella sonnei*," *N. Eng. J. Med.* 331,9(Sept. 1, 1994):579-584.
- Kendall, E. J., and E. I. Tanner. "*Campylobacter* Enteritis in General Practice." *J. Hyg. (Cambridge)* 88(1982):155-163.
- Labbe, Ronald. "*Clostridium perfringens*" Chapter 5 in Doyle, Michael P. (ed.), *Foodborne Bacterial Pathogens*. New York: Marcel Dekker, Inc. 1989.
- Landefeld, J. Steven, and Eugene P. Seskin. "The Economic Value of Life: Linking Theory to Practice," *Am. J. Public Health*. 6(1982):555-566.
- Layden, William M. "Food Safety: A Patchwork System," *The G.A.O. Journal*. 15(Spring/Summer 1992):48-59.
- Lin, C.-T. Jordan, Milton Madison, and Tanya Roberts. "Producing Safer Poultry: Modernizing the Methods." *Agr. Outlook* 198(July 1993):33-38.

- MacDonald, K. L., M. L. Cohen, N. T. Hargrett-Bean, J. G. Wells, N. D. Puhr, S. F. Collin, and P. A. Blake. "Changes in Antimicrobial Resistance of *Salmonella* Isolated From Humans in the United States," *JAMA* 258,11 (Sept. 1987):1496-1499.
- MacDonald, K. L., M. J. O'Leary, M. L. Cohen, P. Norris, J. G. Wells, E. Noll, J. M. Kobayashi, and P. A. Blake, "*Escherichia coli* O157:H7, an Emerging Gastrointestinal Pathogen: Results of a One-Year, Prospective, Population-Based Study," *JAMA*. 259,24(June 24, 1988):3567-3570.
- Marsden, James. Issues briefing. Washington, DC: American Meat Institute, July 1992.
- Martin, D. L., K. L. MacDonald, K. E. White, J. T. Soler. and M. T. Osterholm. "The Epidemiology and Clinical Aspects of the Hemolytic Uremic Syndrome in Minnesota," *New Eng. J. Med.* 323,17(Oct. 25, 1990):1161-1167.
- Martz, Eston. "Putting a Lid on Pathogens," *Penn State. Agr.* Fall/Winter 1994- 95, p. 22-33.
- McCarthy, Michael. "How *E. coli* Attacks the Body." *Washington Post*. Feb. 9, 1993. page 10A.
- Merck. *The Merck Manual*, Vol. 1; *General Medicine*. Vol. 2; *Specialties*. 16th ed; Rahway, N.J.: Merck & Co., Inc. 1992.
- Mishu, Ban, and Martin J. Blaser. "Role of Infection Due to *Campylobacter jejuni* in the Initiation of Guillain-Barré Syndrome," *Clinical Infectious Diseases*. 17(1993):104-108.
- Mossel, D. A. A. "Impact of Foodborne Pathogens on Today's World, and Prospects for Management." *Anim. Hum. Health* 1(1988):13-23.
- Neill, M. A., P. I. Tarr, C. R. Clausen, *et al.* "*E. coli* O157:H7 as the Predominant Pathogen Associated with Hemolytic Uremic Syndrome: A Prospective Study in the Pacific Northwest," *Pediatrics*. 80,1(July 1987):37-40.
- Nolan, Charles M., and Noreen Harris. Surveillance of the Flow of *Salmonella* and *Campylobacter* in a Community. HHS/PHS/FDS/BVM contract No. 223-81- 7041, Aug. 1984.
- Ostroff, Stephen M., John M. Kobayashi, and Jay H. Lewis. "Infections with *Escherichia coli* O157:H7 in Washington State: The First Year of Statewide Disease Surveillance," *JAMA*. 262,3(July 21, 1989):355-359.
- O'Shay, Mary. Personal conversation with Susanne Marks (previously with ERS), 1993.
- Pai, C. H., R. Gordon, H. V. Sims, and L. E. Bryan. "Sporadic Cases of Hemorrhagic Colitis Associated with *Escherichia coli* O157:H7: Clinical, Epidemiologic, and Bacteriologic Features." *Ann. Intern. Med.* 101,6(1984):738-742.
- Park, R. W. A., P. L. Griffiths, and G. S. Moreno. "Sources and Survival of *Campylobacters*: Relevance to Enteritis and the Food Industry." *J. Applied Bacteriology Symposium Supplement*. 70(1991):97S-106S.
- Park, C. E., Z. K. Stankiewicz, J. Lovett, J. Hunt, and D. W. Francis. "Effect of Temperature, Duration of Incubation, and pH of Enrichment Culture on the Recovery of *Campylobacter jejuni* from Eviscerated Market Chickens." *Can. J. Microbil.* 29(1983):803-806.
- Pavia, A. T., C. R. Nichols, D. P. Green, R. V. Tauxe, S. Mottice, K. D. Greene, J. G. Wells, R. L. Seigler, E. D. Brewer, D. Hannon, and P. A. Blake. "Hemolytic-Uremic Syndrome During an Outbreak of *Escherichia coli* O157:H7 Infections in Institutions for Mentally Retarded Persons: Clinical and Epidemiologic Observations," *J. Pediatr.* 116,4(Apr. 1990):544-551.
- Peppers, L. G., and R. J. Knapp. "Maternal Reactions to Fetal Infant Death," *Psychiatry*. 43(1980):155-9.
- Pinner, R. W., A. Schuchat, B. Swaminathan, P. S. Hayes, K. A. Deaver, R. E. Weaver, B. D. Plikaytis, M. Reeves, C. V. Broome, J. D. Wenger, and the *Listeria* Study Group. "Role of Foods in Sporadic Listeriosis, II. Microbiologic and Epidemiologic Investigation," *JAMA*. 267, 15 (Apr. 15, 1992):2046-2050.
- Putnam, Judith J., and Jane E. Allshouse. *Food Consumption, Prices, and Expenditures, 1970-93*. U.S. Dept. Agr., Econ. Res. Serv. Statistical Bulletin No. 915, Dec. 1994.

- Ratnam, S., S. B. March, W. D. Sprague, D. Severs, and R. M. Sullivan. "Are Humans a Source of *Escherichia coli* O157:H7, the Agent of Hemorrhagic Colitis?" *N. Eng. J. Med.* 315,25(Dec. 18, 1986):1612-1613.
- Remuzzi, G. "HUS and TTP: Variable Expression of a Single Entity," *Kidney Int.* 32(1987):292-308.
- Renwick, S. A., J. B. Wilson, R. C. Clark, H. Lior, A. A. Borczyk, J. Spika, K. Rahn, K. McFadden, A. Brouwer, A. Crops, N. G. Anderson, D. Alves, and M. A. Karmali. "Evidence of Direct Transmission of *Escherichia coli* O157:H7 Infection Between Calves and a Human," *J. Infect. Dis.* 168(1993):792-793.
- Ries, A. A., S. Zaza, C. Langkop, R. V. Tauxe, and P. A. Blake. 1990. "A Multistate Outbreak of *Salmonella Chester* Linked to Imported Cantaloupe," Interscience Conference on Antimicrobial Agents and Chemotherapy. Atlanta, GA, Oct. 21-24. Abstr. #915.
- Riley, L. W., R. S. Remis, S. D. Helgerson, H. B. McGee, J. G. Wells, B. R. Davis, R. J. Hebert, E. S. Olcott, L. M. Johnson, N. T. Hargrett, P. A. Blake, and M. L. Cohen. "Hemorrhagic Colitis Associated with a Rare *Escherichia Coli* Serotype," *N. Engl. J. Med.* 308,12(Mar. 1983):681-685.
- Riley, L. W., M. L. Cohen, J. E. Seals, M. J. Blaser, K. A. Birkness, N. T. Hargrett, S. M. Martin, and R. A. Feldman. "Importance of Host Factors in Human Salmonellosis Caused by Multi-resistant Strains of *Salmonella*," *J. Infect. Dis.* 149(1984):878-883.
- Roberts, T. "A Retrospective Assessment of Human Health Protection Benefits from Removal of Tuberculous Beef," *J. Food Prot.* 49,4(April 1986):293-298.
- Roberts, Tanya. "Salmonellosis Control: Estimated Economic Costs," *Poultry Science* 67(1988):936-43.
- Roberts, Tanya. "Human Illness Costs of Foodborne Bacteria," *Am. J. Agr. Econ.* 71,2(1989):468-474.
- Roberts, Tanya, and Peggy M. Foegeding. "Risk Assessment for Estimating the Economic Costs of Foodborne Disease Caused by Microorganisms." Chapter 6 in Caswell, Julie A. (ed.), *Economics of Food Safety*. New York: Elsevier Science Publishing Co., Inc., 1991.
- Roberts, Tanya, and J. K. Frenkel. "Estimating Income Losses and other Preventable Costs Caused by Congenital Toxoplasmosis in People in the United States," *JAVMA* 196,2(1990):249-256.
- Roberts, Tanya, and Suzanne Marks. "The Cost-of-Illness Method and the Social Costs of *Escherichia coli* O157:H7 Foodborne Disease." Chapter 9 in Caswell, Julie A. (ed.), *Valuing Food Safety and Nutrition*. Boulder: Westview Press, 1995, pp. 173-205.
- Roberts, Tanya, and Robert Pinner. "Economic Impact of Disease Caused by *Listeria monocytogenes*, In Miller, A. J., J. L. Smith, and G. A. Somkuti (eds.), *Foodborne Listeriosis*. Amsterdam, The Netherlands: Elsevier Science Publishing Co., Inc., 1990, pp. 137-149.
- Roberts, Tanya, and David Smallwood. "Data Needs to Address Economic Issues in Food Safety," *Am. J. Ag. Econ.* 73,3(Aug. 1991):933-942.
- Roberts, Tanya, and Ewen Todd. "Approaches to Estimating the Cost of Foodborne Disease," WHO Consultation on the Economic Implications of Animal Production Food Safety, Washington, DC, June 8-10, 1995.
- Roberts, Tanya, and Laurian Unnevehr. "New Approaches to Regulating Food Safety," *FoodReview*. May-Aug. 1994, pp. 2-8.
- Robinson, D. A. "Infective Dose of *Campylobacter jejuni* in Milk," *Br. Med. J.* 282(1981):1584.
- Rosenberg, J. L., J. S. Marr, E. J. Gangarosa, R. A. Pollard, M. Wallace, and O. Brolnitsky. "CDC news; *Shigella* Surveillance in the United States, 1975," *J. Infect. Dis.* 136,3(Sept. 1977):458-460.
- Ryan, C. A., M. K. Nickels, N. T. Hargrett-Bean, M. E. Potter, T. Endo, L. Mayer, D. W. Langkop, C. Gibson, R. C. McDonald, R. T. Kenney, N. D. Puhr, P. J. McDonnell, R. J. Martin, M. L. Cohen, and P. A. Blake. "Massive Outbreak of Antimicrobial-Resistant Salmonellosis Traced to Pasteurized Milk," *JAMA*. 258,22(Dec. 1987):3269-3274.
- Ryan, Caroline, Centers for Disease Control and Prevention. Personal communication with Tanya Roberts, 1987.

Sacks, J. J., S. Lieb, L. M. Baldy, S. Berta, C. M. Patton, M. C. White, W. J. Bigler, and J. J. White. "Epidemic Campylobacteriosis Associated with a Community Water Supply," *Am. J. Public Health* 76,4(Apr. 1986):424-429.

Schuchat, Anne, Centers for Disease Control and Prevention. Personal communication with Tanya Roberts, 1994.

Schuchat, A., K. A. Deaver, J. D. Wenger, B. D. Plikaytis, L. Mascola, R. W. Pinner, A. L. Reingold, C. V. Broome, and the *Listeria* Study Group. "Role of Foods in Sporadic Listeriosis," *JAMA*. 267,15(April 15, 1992):2041-2045.

Schwartz, B., C. Ciesielski, C. V. Broome, S. Gaventa, G. R. Browne, B. G. Gellin, A. W. Hightower, and L. Mascola. "Dietary Risk Factors for Sporadic Listeriosis: Association with Consumption of Uncooked Hot Dogs and Undercooked Chicken," *Lancet*, ii. 8614(1988):779-782.

Seattle-King County Department of Public Health. Surveillance of the Flow of *Salmonella* and *Campylobacter* in a Community. Seattle: Communicable Disease Control Section, Seattle-King County Dept. of Public Health, 1984.

Shelef, L. A. "Survival of *Listeria monocytogenes* in Ground Beef or Liver During Storage at 4 and 25° C," *J. Food Prot.* 52,6(1989):379-383.

Shogren, Jason F. "Experimental Markets and Environmental Policy," *Agriculture and Resource Economics Review*. 22(Oct. 1993):117-129.

Siegler, Richard L., Andrew T. Pavia, Ryan D. Christofferson, and Mark K. Milligan. "A 20-Year Population-Based Study of Postdiarrheal Hemolytic Uremic Syndrome in Utah," *Pediatrics*. 94,1(July 1994):35-40.

Sjögren, Eva, and Bertil Kajser, "Serotyping Studies of *Campylobacter* from Naturally Colonized Chickens," *Serological Characteristics of Campylobacter Jejuni/Coli: Pattern of Colonization in Humans and Animals*. University of Göteborg, Göteborg, Sweden, 1988.

Skirrow, Martin B., and Martin J. Blaser. "Clinical and Epidemiologic Considerations." Chapter 1 In

Nachamkin, Irving, Martin J. Blaser, and Lucy S. Tompkins (eds.), *Campylobacter jejuni: Current Status and Future Trends*. Washington, DC: American Association of Microbiology, 1992.

Smith, G. S., and M. J. Blaser. "Fatalities Associated with *Campylobacter jejuni* Infections," *JAMA*. 253(1985):2873-2875.

Sockett, Paul, and R. Stanwell-Smith. "Cost Analysis of Use of Healthcare Services by Sporadic Cases and Family Outbreaks of *Salmonella Typhimurium* and *Campylobacter* Infection," *Second World Congress Foodborne Infections and Intoxications*. Volume II, May 26-30, 1986, pp. 1036-1039.

Spika, J. S., J. E. Parsons, D. Nordenberg, J. G. Wells, R. A. Gunn, and P. A. Blake. "Hemolytic Uremic Syndrome and Diarrhea Associated with *Escherichia coli* O157:H7 in a Day Care Center," *J. Pediatrics*. 109,2(Aug. 1986):287-291.

Steahr, Thomas E. Department of Agricultural and Resource Economics, University of Connecticut, preliminary tabulations of the National Hospital Discharge Survey, 1993.

Stern, Norman J. "Reservoirs for *Campylobacter jejuni* and Approaches for Intervention in Poultry." Chapter 6 in Nachamkin, Irving, Martin J. Blaser, and Lucy S. Tompkins (eds.), *Campylobacter jejuni: Current Status and Future Trends*. Washington, DC: American Association of Microbiology, 1992, pp. 49-60.

Stern, Norman J. and Shahana U. Kazmi. "Campylobacter jejuni" Chapter 3 in Doyle, Michael P. (ed.), *Foodborne Bacterial Pathogens*. New York: Marcel Dekker, Inc. 1989.

Swerdlow, D. L., B. A. Woodruff, R. C. Brady et al. "A Waterborne Outbreak in Missouri of *Escherichia coli* O157:H7 Associated with Bloody Diarrhea and Death," *Ann. Internal Med.* 117,10(Nov. 1992):812-819.

Tappero, J. W., A. Schuchat, K. A. Deaver, L. Mascola, and J. D. Wenger; for the Listeriosis Study Group. "Reduction in the Incidence of Human Listeriosis in the United States," *JAMA*. 273,14(Apr. 12, 1995):1118- 1122.

- Tarr, P. I., M. A. Neill, J. Allen, C. J. Siccardi, S. L. Watkins, and R. O. Hickman. "The Increasing Incidence of the Hemolytic-Uremic Syndrome in King County, Washington: Lack of Evidence for Ascertainment Bias," *Am. J. Epidemiol.* 129,3(1989):582-586.
- Tauxe, R. V. "Epidemiology of *Campylobacter jejuni* Infection in the United States and Other Industrialized Nations." Chapter 2 in Nachamkin, Irving, Martin J. Blaser, and Lucy S. Tompkins (eds.), *Campylobacter jejuni: Current Status and Future Trends*. Washington, DC: American Association of Microbiology, 1992, pp. 9-19.
- Tauxe, R. V. "Salmonella: A Postmodern Pathogen," *J. Food Prot.* 54,7(July 1991):563-568.
- Tauxe, R. V. Personal communication with Tanya Roberts in 1987.
- Tauxe, R. V., and P. A. Blake, "Salmonellosis." Chap. 12 in Last, J. M., R. B. Wallace, E. Barrett-Conner (eds.), *Public Health & Preventive Medicine*, 13th ed. Norwalk, Connecticut: Appleton & Lange, 1992, pp. 266-268.
- Tauxe, R. V., M. P. Tormey, L. Mascola, N. Hargrett-Bean, and P. A. Blake. "Salmonellosis Outbreak on Transatlantic Flights; Foodborne Illness on Aircraft: 1947-1984," *Am. J. Epidemiol.* 125,1(1987):150-157.
- Tauxe, R. V., N. Hargrett-Bean, C. M. Patton, and I. K. Wachsmuth. "Campylobacter Isolates in the United States, 1982-86," *Morbidity and Mortality Weekly Report.* (MMWR). 37,SS-2(1988):1-13.
- Thompson, M. S. "Willingness to Pay and Accept Risks to Cure Chronic Disease," *Am. J. Public Health.* 76,4(Apr. 1986):390-396.
- Todd, E.C.D. "Economic Loss for Foodborne Disease Outbreaks and Non-Illness Related Recalls Because of Mishandling by Food Processors," *J. Food Prot.* 48,7(July 1985):621-33.
- Todd, E.C.D. "Preliminary Estimates of Costs of Foodborne Disease in the United States," *J. Food Prot.* 52,8(Aug. 1989):595-601.
- Tomsyck, R. R. "The Grief of a Mother/Physician on the Death of her Infant," *J. Am. Med. Wom. Assoc.* 43(1988):51-7.
- U.S. Department of Commerce, Bureau of the Census. *Statistical Abstract of the United States: 1993.* (113th Edition.) 1993.
- U.S. Department of Commerce, Bureau of Labor Statistics (BLS). *Employment and Earnings.* monthly, 1993, and personal communication with Jean Buzby, 1994.
- USDA:APHIS:VS. "Escherichia coli O157:H7: Issues and Ramifications." U.S. Dept. of Agr. and An. Plnt. Health Insp. Serv. Centers for Epidemiology and Animal Health, Fort Collins, CO, Mar. 1994.
- U.S. Department of Health and Human Services. "Addressing Emerging Infectious Disease Threats: A Prevention Strategy for the United States." Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services, p. 11, 1994.
- U.S. Department of Health and Human Services. 1979-84, Vital statistics.
- Viscusi, W.K. "The Value of Risks to Life and Health," *J. Econ. Lit.* 31(Dec. 1993):1912-1946.
- Vogt, Donna U. "Foodborne Illness: Recent Outbreaks of *Escherichia coli* O157:H7." Cong. Res. Serv., No. 94-99 SPR, Feb. 1994.
- Webster's II New Riverside University Dictionary. Boston: Houghton Mifflin Co., 1988.