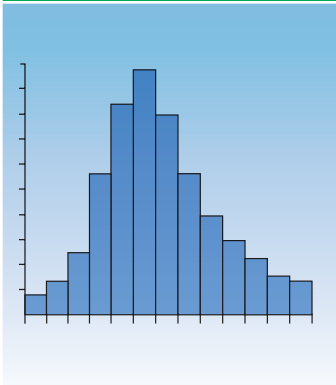
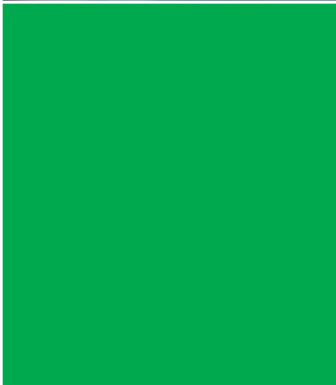
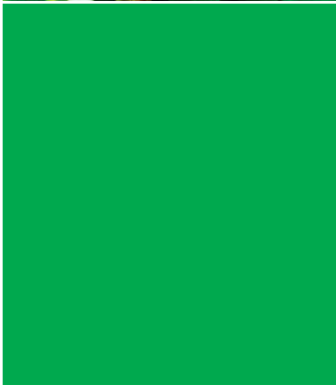
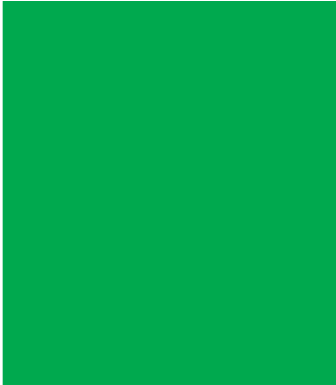
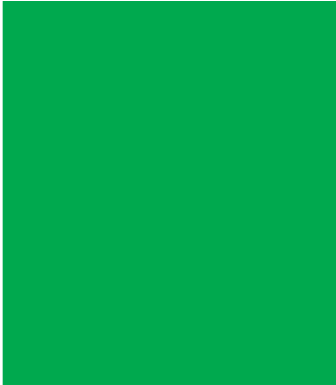
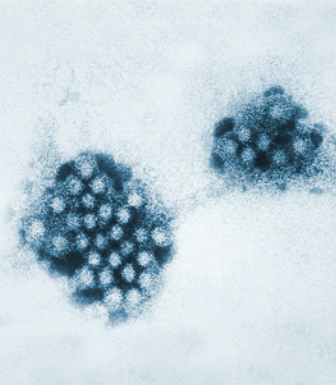


SECOND EDITION

GUIDELINES FOR FOODBORNE DISEASE OUTBREAK RESPONSE



CIFOR Council to Improve Foodborne Outbreak Response

Detect • Investigate • Control • Prevent

Dedication

This second edition of the CIFOR *Guidelines for Foodborne Disease Outbreak Response* is dedicated to the memory of Dr. William (Bill) E. Keene, who passed away unexpectedly on December 1, 2013, after a short illness. Bill was a charter member of CIFOR in 2006 and a driving force in the organization until his death. He played a monumental role in writing and editing the original, as well as this new (second), edition of the CIFOR Guidelines.

Bill joined the Oregon Public Health Division in 1990 and worked there for 23 years as a foodborne disease epidemiologist. During that time he became known nationally and internationally as a leading expert on foodborne disease surveillance and outbreak investigation. Bill was well known for his passion for public health and dogged determination in solving foodborne outbreaks, often working around the clock to do so. He was a strong, vocal leader during investigations of multistate foodborne outbreaks and solved many, frequently documenting new outbreak vehicles or pathogen–vehicle associations.

Bill profoundly influenced virtually all recent national efforts to improve response to foodborne disease outbreaks in this country (such as CIFOR). His innovations were at the cutting edge of new surveillance and outbreak investigation methods. Bill's passion for foodborne outbreak investigations was reflected in his office's additional role as a national museum of foodborne illness outbreaks. Bill's office memorialized famous outbreaks from the last 2 decades with shelves containing the packages of the implicated food vehicles. His personal license plate was Oregon O157H7.

The following words or phrases have been used to describe Bill: energetic, zealous, dedicated, diligent, food safety hero, public health jewel, superior intelligence, brilliant, hard-working, dry wit, uncompromising candor, innovative, pioneer, inimitable, passionate, high standards, exemplified determination and stamina when investigating outbreaks, tireless, tremendously personable, freely shared his expertise, ever-available, warm, gregarious, and generous. We agree—but to many of his colleagues on CIFOR and throughout the public health community, Bill was most of all an admired, respected, and cherished colleague and friend. He will be missed terribly. Those of you who are familiar with Bill's work will recognize some of the outbreak investigation examples in these Guidelines as his investigations. In addition, the conversational tone, dry humor, and almost poetic nature of the writing in innumerable places throughout these Guidelines can unmistakably be recognized as Bill's work. It follows, then, that these Guidelines serve as one small way to memorialize Bill's incredible contributions to the field of foodborne disease epidemiology.

Foreword

We congratulate the Council to Improve Foodborne Outbreak Response (CIFOR) for issuing this second edition of the *Guidelines to Improve Foodborne Outbreak Response*. This new edition incorporates lessons learned over the past few years, along with new and improved techniques for surveillance, detection, investigation, and response to foodborne disease outbreaks.

CIFOR was conceived in 2005 by a small group of forward-looking leaders at the Council of State and Territorial Epidemiologists, Association of Public Health Laboratories, and the Centers for Disease Control and Prevention. They recognized the need to improve the way local, state, and federal government agencies coordinate their respective roles in the surveillance, detection, and investigation of and response to outbreaks of foodborne illness. One of the first projects the newly formed CIFOR took on was to develop guidelines to help government agencies improve their foodborne disease outbreak response activities.

The first edition of the *Guidelines to Improve Foodborne Outbreak Response*, published in 2009, and the *Guidelines to Improve Foodborne Outbreak Response Toolkit*, published in 2011, made a major contribution to improving government's response to foodborne disease outbreaks. The Guidelines and Toolkit are now referenced in many documents that address foodborne disease response. They have been used as criteria for measuring the effectiveness of programs, as key references in training courses, and as tools by government workgroups who have been meeting to identify and prioritize tasks for improving joint responses to foodborne disease outbreaks. A 2013 RAND Health survey of intended users found that 80% of respondents reported being familiar with the Guidelines and 65% with the Toolkit.

Since their issuance, the CIFOR *Guidelines* have influenced the way multiagency outbreak responses are conducted by epidemiologists, laboratorians, and environmental health/food regulatory agencies at the local, state, and federal levels. Agencies are communicating better, they better understand their respective roles and responsibilities, and they are responding quicker and more effectively because of the implementation of the CIFOR Guidelines.

CIFOR also has established a close working relationship with the food industry, the sector that bears primary responsibility for the safety of the food supply. The standing CIFOR Industry Workgroup led to development of the recently published *Foodborne Illness Response Guidelines for Owners, Operators and Managers of Food Establishments* to facilitate the food industry's response to outbreaks of foodborne illness.

We are confident that this second edition will lead to further improvement in response to foodborne disease outbreaks by the thousands of dedicated local, state, and federal employees who are working together toward that goal.

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Acknowledgements for the First and Second Editions

The original development of the *CIFOR Guidelines for Foodborne Disease Outbreak Response* took thousands of hours of work by dozens of individuals over a 3-year period. Each of these individuals had a full-time job, and many of them were repeatedly pulled to investigate foodborne disease outbreaks over the course of the project. They gave their time, energy, and expertise because of a strong commitment to improving the quality of foodborne disease outbreak response.

Because of the solid foundation established in the first edition of the Guidelines, no major changes were needed in the second edition. Most of the original chapter authors and many of the original members of CIFOR and its workgroups stepped up to make necessary revisions to ensure the Guidelines stay current. Many other individuals who were not involved in the first round gave their time and expertise to help CIFOR reach this goal. We express our deep gratitude to everyone who participated.

Among the many individuals involved in the first edition, we particularly acknowledge John Besser, Craig Hedberg, Patrick McConnon, Donald Sharp, and Jeanette Stehr-Green, who repeatedly stepped up to provide extra guidance and support whenever the need arose. Jac Davies, the editor and lead author, had a particularly large role in creating this document and was committed to giving her time and effort to this project. We would like to especially acknowledge her involvement.

For the second edition, Jeanette Stehr-Green played a major role, not only taking the lead on two chapters but also repeatedly reviewing the entire document and providing many helpful suggestions for improvements. We are grateful for her engagement in this effort. Craig Hedberg, John Besser, Donald Sharp, Dhara Patel, and Jac Davies also contributed significantly to the second edition, which would not have been possible without their ongoing commitment and support.

The following organizations and agencies participate in CIFOR, and their representatives participated in the development of these Guidelines:

- Association of Food and Drug Officials (AFDO)
 - Association of Public Health Laboratories (APHL)
 - Association of State and Territorial Health Officials (ASTHO)
-

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- Centers for Disease Control and Prevention (CDC)
- Council of State and Territorial Epidemiologists (CSTE)
- Food and Drug Administration (FDA)
- National Association of County and City Health Officials (NACCHO)
- National Association of State Departments of Agriculture (NASDA)
- National Association of State Public Health Veterinarians (NASPHV)
- National Environmental Health Association (NEHA)
- U.S. Department of Agriculture/Food Safety and Inspection Service (USDA/FSIS)

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