

Preface[†]

This symposium, ‘Emerging statistical issues in public health for the 21st century’, is the seventh in a series of statistical methods symposia that the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) have sponsored since 1988. Previous symposia were ‘Statistics in surveillance’ (1988), ‘Clustering and health events’ (1989), ‘Statistical methods for evaluation of intervention and prevention strategies’ (1990), ‘Quantitative methods for utilization of multi-source data in public health’ (1993), ‘Small area statistics in public health’ (1995) and ‘Statistical bases for public health decision making’ (1997). As increasingly sophisticated methods of data collection and analysis have become available, the importance of statistical and other analytic methods in understanding and preventing disease, injury and other unhealthy conditions has become more evident. The aim of these symposia has been to provide a forum for presenting current research in statistical methodology and innovative applications of statistical methods.

As we enter the 21st century, increasing emphasis on the performance of public health data systems make it more important than ever to base public health decisions on solid qualitative and quantitative evidence. Data systems are being developed to support the types of analyses needed while also satisfying requirements such as respondent confidentiality. The continued development of statistical methodologies for use in areas such as spatio-temporal data analysis, survival analysis, longitudinal data analysis, evaluation of public health interventions and mechanistic modelling, increase the utility of data being collected in these systems. Furthermore, in an era of shrinking resources and increasing scrutiny, the manner in which public health practitioners and statisticians can report data findings to an audience through the media is important for continued support of public health research. This symposium on statistical issues in public health represents an attempt to recognize some of these challenges so that we may be better prepared to respond to them.

This symposium consisted of a mixture of plenary sessions, parallel presentations and poster sessions. Over 300 participants representing local, state and federal governments, academia, and others all contributed to the symposium. The symposium began with a day-long course, ‘Privacy, confidentiality, and the protection of health data – a statistical perspective’. The course was taught by members of the U.S. Office of Management and Budget’s Interagency Confidentiality and Data Access Group. Topics discussed included legal issues relating to the confidentiality of health data, statistical disclosure limitation techniques to protect confidentiality, and restricted access procedures. Additional statistical issues were addressed during the symposium’s plenary sessions: ‘Emerging statistical issues in public health for the 21st century: what to tell whom?’; ‘Modern approaches for classic settings’, and ‘New methodology for toxicological and environmental data’. The symposium was rounded out by 71 additional oral and poster presentations focusing on the application of statistical methodologies in a variety of settings.

[†] This article is a U.S. Government work and is in the public domain in the U.S.A.

This symposium was enriched by the efforts of its co-sponsors: the Atlanta Chapter of the American Statistical Association; the Biostatistics Department, Rollins School of Public Health, Emory University; and the Biostatistics Department, University of Cincinnati. We thank them for their significant contributions to the scientific programme and administrative aspects of the symposium. We thank all speakers, moderators and poster presenters for their excellent scientific contributions to the symposium, and Dr Ralph D'Agostino, Boston University and co-editor of *Statistics in Medicine* for his continuing support of these symposia.

My special thanks to the symposium planning committee members, to its committee chairs and members, and to the editorial board and reviewers of abstracts and papers submitted for the symposium and for this special issue. Without their many hours of effort, this symposium would not have been the success that it was. Thanks also to our meeting planner, Bachmann and Associates Inc., for handling the details for registration, publicity, site selection, travel, editing and logistics.

A selection of papers that contain the flavour of the overall symposium is presented in this issue.

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