

# Geographic Health Data

## Fundamental Techniques for Analysis

Edited by Francis P. Boscoe

Geographic information systems (GIS) are invaluable when responding to disease outbreaks and disasters, both natural and man-made. Designed to help public health professionals and students answer some of the most fundamental questions that arise about geographic health data and its uses, this book is written by authors working and carrying out research in the field of GIS across the globe.

Beginning with the core facts and algorithms of GIS and spatial analysis, the book covers data collection, the potential applications of virtual globes in infectious disease surveillance, and the process by which addresses can be converted into coordinates and used in public health investigations. Moving on to explore methods of spatial data analysis such as cluster analysis and smoothing, later chapters cover geographic access to health services and models for disease mapping. Providing an accessible overview of recurring global problems in the display and analysis of health data involving a geographic component, this book includes clear, straightforward explanations, real-world examples and solutions. Focusing on proven techniques, it is a comprehensive introduction to geographic information systems for public health researchers and practitioners who may not be familiar with the applications of GIS in public health settings, as well as for epidemiologists.

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ISBN 978-1-78064-089-1



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