Spatial and Syndromic Surveillance for Public Health

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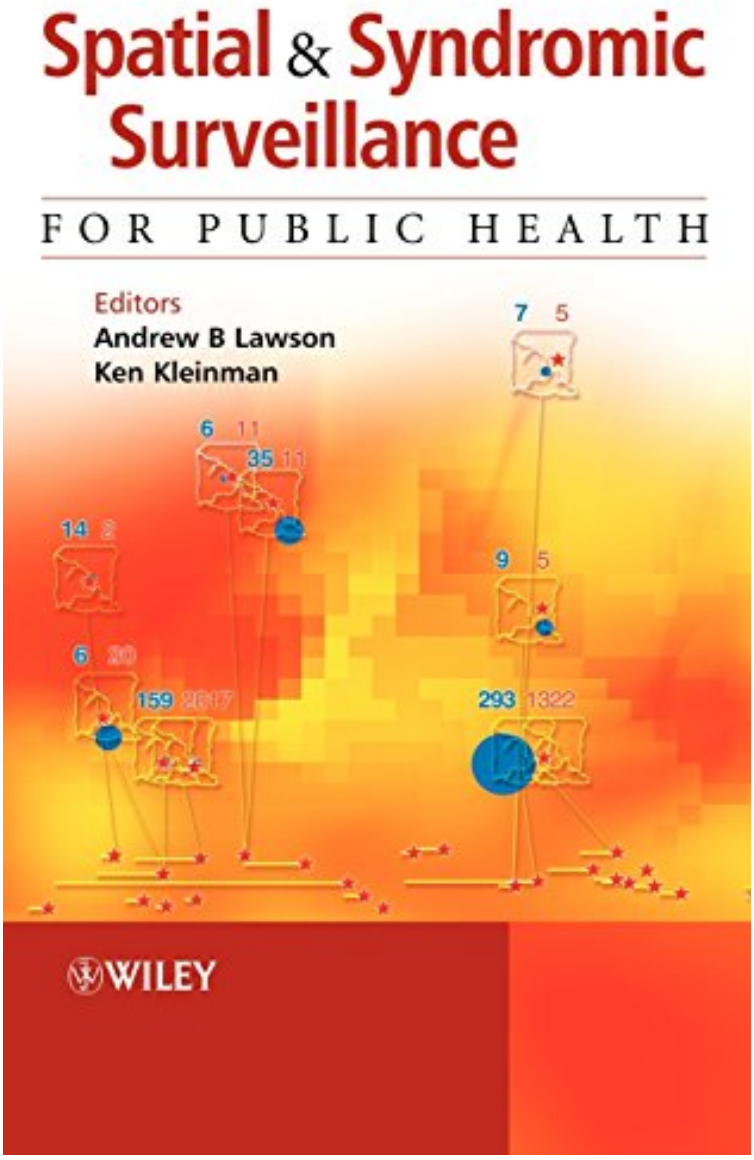

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From Wiley : Spatial and Syndromic Surveillance for Public Health before purchasing it in order to gage whether or not it would be worth my time, and all praised Spatial and Syndromic Surveillance for Public Health:

Following the events of 9/11 and in the current world climate, there is increasing concern of the impact of potential bioterrorism attacks. Spatial surveillance systems are used to detect changes in public health data, and alert us to possible outbreaks of disease, either from natural resources or from bioterrorism attacks. Statistical methods play a key role in spatial surveillance, as they are used to identify changes in data, and build models of that data in order to make predictions about future activity. This book is the first to provide an overview of all the current key methods in spatial surveillance, and present them in an accessible form, suitable for the public health professional. It features an abundance of examples using real data, highlighting the practical application of the methodology. It is edited and authored by leading researchers and practitioners in spatial surveillance methods. Provides an overview of the current key methods in spatial surveillance of public health data. Includes coverage of both single and multiple disease surveillance. Covers all of the key topics, including syndromic surveillance, spatial cluster detection, and Bayesian data mining.

" gives a sound introduction to a range of methods which are suitable for health surveillance purposes." (JRSSA: 169;3)From the Back CoverIn the current world climate of acute concern surrounding potential bioterrorism attacks, there is a call for increasingly sophisticated surveillance systems that will alert us to possible outbreaks of disease or contamination. Spatial and Syndromic Surveillance for Public Health is the first text to provide a survey of the state of the art in public health syndromic surveillance. The early detection of adverse disease outcomes is now an important capability of online public health surveillance systems. This volume lends particular focus to spatial surveillance, where disease maps are examined in conjunction with other data streams. Diverse statistical and data mining research from the main contributors to this fast growing area of concern have been gathered together; with statistical material ranging from process control and conventional temporal surveillance to advanced generalised linear mixed modelling and Bayesian hierarchical models. Focuses on spatial surveillance s non-spatial surveillance methods Deals with data mining and Bayesian methods; includes new developments in Bayesian syndromic modelling as well as advanced hidden Markov models Discusses clustering and space-time detection Evaluates both hierarchical modelling and testing in the area of cluster detection s optimal and multivariate surveillance Spatial and Syndromic Surveillance for Public Health is accessible to those in academia, public service and commerce alike. Epidemiologists, public health workers, statisticians, health planners or military personnel will all find the in-depth examination of these cutting edge techniques invaluable.