1. Record Nr. UNINA9910877785703321 Autore Lawson Andrew (Andrew B.) **Titolo** Statistical methods in spatial epidemiology / / Andrew B. Lawson Pubbl/distr/stampa Chichester, England; ; Hoboken, NJ, : Wiley, c2006 **ISBN** 1-118-72317-1 0-470-03577-3 0-470-03578-1 Edizione [2nd ed.] Descrizione fisica 1 online resource (424 pages) Collana Wiley series in probability and statistics Disciplina 614.4/2 Soggetti Epidemiology - Statistical methods Medical geography - Statistical methods Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references (p. 367-388) and index. Nota di bibliografia Nota di contenuto ""Title Page "": ""Contents"": ""Preface and Acknowledgements to Second Edition""; ""Preface and Acknowledgements""; ""I The Nature of Spatial Epidemiology ""; ""1 Definitions, Terminology and Data Sets ""; ""1.1 Map Hypotheses and Modelling Approaches""; ""1.2 Definitions and Data Examples""; ""1.2.1 Case event data""; ""1.2.2 Count data""; ""1.3 Further Definitions"; ""1.3.1 Control events and processes""; ""1.3.2 Census tract information""; ""1.3.3 Clustering definitions""; ""1.4 Some Data Examples""; ""1.4.1 Case event examples""; ""1.4.2 Count data examples"" ""2 Scales of Measurement and Data Availability """"2.1 Small Scale""; ""2.2 Large Scale""; ""2.3 Rate Dependence""; ""2.4 Data Quality and the Ecological Fallacy""; ""2.5 Edge Effects""; ""3 Geographical Representation and Mapping ""; ""3.1 Introduction and Definitions""; ""3.2 Maps and Mapping""; ""3.2.1 Statistical maps and mapping""; ""3.2.2 Object process mapping""; ""3.2.3 Geostatistical mapping""; ""3.3 Statistical Accuracy""; ""3.4 Aggregation""; ""3.5 Mapping Issues Related to Aggregated Data""; ""3.6 Conclusions""; ""4 Basic Models ""; ""4.1 Sampling Considerations"" ""4.2 Likelihood-Based and Bayesian Approaches"""4.3 Point Event Models""; ""4.3.1 Point process models and applications""; ""4.3.2 The basic Poisson process model""; ""4.3.3 Hybrid models and

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Sommario/riassunto

Spatial epidemiology is the description and analysis of the geographical distribution of disease. It is more important now than ever, with modern threats such as bio-terrorism making such analysis even more complex. This second edition of Statistical Methods in Spatial Epidemiology is updated and expanded to offer a complete coverage of the analysis and application of spatial statistical methods. The book is divided into two main sections: Part 1 introduces basic definitions and terminology, along with map construction and some basic models.