



A Spatial Agent-Based Simulation Modeling in Public Health: Design, Implementation, and Applications for Malaria Epidemiology (Hardback)

By S. M. Niaz Arifin, Gregory R. Madey, Frank H. Collins

John Wiley Sons Inc, United States, 2016. Hardback. Book Condition: New. 236 x 162 mm. Language: English . Brand New Book. Presents an overview of the complex biological systems used within a global public health setting and features a focus on malaria analysis Bridging the gap between agent-based modeling and simulation (ABMS) and geographic information systems (GIS), Spatial Agent-Based Simulation Modeling in Public Health: Design, Implementation, and Applications for Malaria Epidemiology provides a useful introduction to the development of agent-based models (ABMs) by following a conceptual and biological core model of Anopheles gambiae for malaria epidemiology. Using spatial ABMs, the book includes mosquito (vector) control interventions and GIS as two example applications of ABMs, as well as a brief description of epidemiology modeling. In addition, the authors discuss how to most effectively integrate spatial ABMs with a GIS. The book concludes with a combination of knowledge from entomological, epidemiological, simulation-based, and geo-spatial domains in order to identify and analyze relationships between various transmission variables of the disease. Spatial Agent-Based Simulation Modeling in Public Health: Design, Implementation, and Applications for Malaria Epidemiology also features: * Location-specific mosquito abundance mans that play an important role in malaria

Reviews

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