



Geoinformatics System in Public Health in India

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Abstract

Geographic Information Systems (GIS) and therefore the accompanying methods and data are adopted increasingly in diverse health-related domains and national settings with the goal of improved response to public health problems. The spatial perspective is often of particular importance because the spatial patterns of distribution of diseases, both infectious and noninfectious, help us understand the dynamics of transmission and spatial determinants of the diseases. The main target of this review is to look at how the uses of geographic methods to deal with public health issues in India have developed over time, to assess the present status of their use, and to gauge the trail forward.

Keywords

Geographic Information Systems, lymphatic filariasis.

Introduction

India bears the world's largest burden of dengue, features a high potential for emerging zoonotic diseases and continues to face significant mortality from pneumonia and diarrheal disease. At an equivalent time, chronic conditions like cancer and diabetes increasingly affect people of all income levels. Many of those conditions are closely associated with environmental conditions and spatial parameters, so geographic methods including GIS are often central to figure associated with understanding the spatial and environmental determinants of diseases.

In the past, descriptive geographical epidemiology of diseases was restricted to describing their state wise or regional prevalence, and detailed analysis of epidemiological data at an area level was rarely administered. For instance, the distribution of kala-azar in Bihar which of lymphatic filariasis in coastal regions indicate that spatial factors contribute to their transmission. Historically, these sorts of observations were satisfying achievements of medical geography and field epidemiology, but with the increased availability of spatial data and technologies, it's possible to live and assess scientifically the precise relationships between the environmental factors and health outcomes to raised target interventions. The use of geospatial technologies and spatiotemporal epidemiological tools is increasing round the world as a way to know the dynamics of communicable disease transmission and noncommunicable disease distribution, but its usage in India is comparatively restricted in spite of its demonstrated utility. Here, we review the published scientific literature to gauge a cross section of samples of how geographic technologies and modern spatial statistical methods supported by digital data are getting used to deal with public health concerns in India, to spot challenges faced within the application of GIS in India and to propose some possible solutions. In several of the analyses where mapping was a primary function, the authors used a more GIS-intensive but still relatively descriptive approach by interpolating values from points to raised visualize the spatial distribution of some phenomenon.

The analysis assessed locationbased efficiency of health facilities considering both period of time supported distance and optimizing the size of the population served. The analysis predated most use of geospatial digital techniques and would have benefited from having access to those. A more modern application of distance analysis, where the most target was on chikungunya, a mosquito-borne virus. The written description of rapid diffusion of the virus emphasized geography and would be simpler with a map of the region.

Citation: Andersen K (2021) Geoinformatics System in Public Health in India. *Geoinfor Geostat: An Overview* 9:6.

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Received: July 06, 2021 Accepted: July 20, 2021 Published: July 27, 2021

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Top

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