

E-Atlas of Health, Planning and Sustainable Development for Information Society Development

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ABSTRACT

Our aim is to propose a new decision-support tool through an e-Atlas for health care management to answer to specific problems in epidemiology and territory management. This e-Atlas is the second tool of our medical informatics project named 'POLESAT', and completes our health geomatics platform in Public Health. This e-Atlas prototype will improve and provide information to health responsible authorities, healthcare professionals (medical staff, physician and health decision-makers) and the public with geographical information, new knowledge discovery, analysis and scientific communications. At this time, this e-Atlas prototype only covers the North - Pas-de-Calais region of France.

Method: Database contains hospital stay activity in 2006 in the University Hospital of Lille. This application is developed using SAS software for the automation of data processing (input) and maps (output). For mapping, we used base maps of the Postal PMSI Zones and Health Proximity Zones. The setting webpage of map results is mainly carried out with the Jalbus software. To obtain interactive mapping, we added tooltip with a java script function in the html page. Then, additional statistical information from map database appears when the mouse moves over postal code areas. Maps can be downloaded or saved from the web server in several formats. The prototype is accessible by both login and password from a secured web server by simple authentication (Httpaccess), and strong authentication (certificate). The Secure Hypertext Transfer Protocol (HTTPS) allows a secure transport of HTTP queries and responses with encrypted passwords.

Results: e-Atlas provides mapping information about territorial supply and consumption of hospital care (needs), and displays maps of catchment hospital areas by department. Our e-Atlas allows doing an activity background inventory on the state of hospital activity (supply and demand). It has multiple uses and will answer users' needs.

Conclusion: e-Atlas should be enlarged to all public, private hospital stay activity of our region and become our second tool after the modeling process planning tool.

KEYWORDS: Atlases; Medical Informatics; Geographic Information System; Computer-Assisted; Decision-Making