

Health technologies for spatial analysis and situational diagnosis of the territories: contributions to nursing

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In order to establish an organizational basis for work processes in primary health care geared towards a new social practice, it is important to recognize territories and their contexts, as these materialize human interactions, conflicts, health problems and human needs.

In the process of recognition and situational diagnosis of territories, technologies for spatial analysis can facilitate planning, evaluation and decision-making by professionals and managers in the face of health situations, including those that require a rapid diagnosis⁽¹⁾. The aim of this editorial is to communicate the importance of spatial analysis technologies in the arsenal available for community nursing, and their possible effects on tackling social determinants of the health-disease process.

It is noteworthy that the concept of technology employed in this editorial refers to that used by Silva⁽²⁾, which defines it as “a body of knowledge, tools or techniques derived from science and practical experience, that is used in the development, design, production, and implementation of product, processes, systems and services”.

In this sense, spatial analysis technologies enable definition of geographic areas and populations under the responsibility of the primary health care (PHC) network, monitoring of these over time, and definition of cooperative health regions and governance, thus contributing to implementation of the Brazilian public unified health system (SUS).

In a short amount of time, application of spatial analysis using geographic information systems (GIS) makes it possible to define an area under the responsibility of the PHC network, thereby surpassing the traditional model of visits to territories in order to map areas, an “artisanal” process that was time-consuming (time that could be spent on other health care actions in the territory) for nurses and other members of the health care team.

By means of spatial analysis technologies, nurses can collect information, execute health intervention projects, and build maps and discuss them with various actors such as users, health professionals, managers, and students. Hence, spatial analysis can be a technology that facilitates and enhances nursing practice, by mapping areas at risk for diseases prevalent in communities, socially vulnerable territories and health conditions, and monitoring growth and development in a community.

Spatial analysis can also contribute to intersectoral management, by mapping social facilities, schools, churches and recreation areas for the elderly, children and adults, thereby amplifying their accessibility and making them clearly available to the community.

Although it is presented as an important technology for management of health care, it has not been widely used in public health or nursing management, either due to lack of familiarity of this technique among health care professionals, or to gaps in their training on new instruments for managing collective and community health care. Another factor that must be considered is the unequal distribution of computer resources among health care services in different regions of Brazil.

In conclusion, spatial analysis is a technology that can enable adjustment of availability of health care actions based on equity, by defining services that are stronger and more robust in territories with a greater need for social and health care resources. Therefore, this technology can make important contributions to the advanced practice of community nursing.

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