

Chapter 12

Quality Based on a Spatial SERVQUAL Model in Healthcare

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ABSTRACT

The main purpose of this work is to represent an alternative effective model for measuring the quality of healthcare (SERVQUAL) considering the geographical location of the under examination healthcare sectors. Based on that consideration, a new modeling is taking place introducing a spatial interaction between neighboring regions (spatial-SERVQUAL model). New directions are analyzed implementing specific questionnaires taking advantage of the spatial information given by the evaluation of the model. Moreover the role of spatial information in the health sector in relation to, for example, local health improvement performance management, is analyzed to support needs assessment and resource targeting as one of the principal action points in healthcare policies. Finally, the benefits of the GIS systems are illustrated, combined with the spatial assumptions, introducing a real-time health and disease monitoring tool to identify significant health trends in real-time data streams and geographic information systems.

INTRODUCTION

User satisfaction and/or service quality (SERVQUAL) constitute essential components of healthcare. Users determine the strategy for quality management in healthcare services. Methodological issues concerning service quality measurements of healthcare have been discussed in the international literature for many years and

have been the subject of topical studies throughout the world.

Worldwide, systems to measure service quality have been developed which have subsequently been modified according to the particular case and adopted by major organizations. With reference to the nature and structure of the service provided, the public sector is conducting user-satisfaction measurement research in competitive environ-

ments in order to develop prior principal and support services with the aim of improving the relationship between the provider and the user. Satisfaction with service quality depends on a large number of dimensions - both tangible and intangible attributes of the product-service offer. The impact of intangible dimensions on consumer satisfaction is of particular interest at this point. To explain the importance of adopting common semantics when developing health geo- information services that span administrative boundaries, geographical information for the evaluation of the healthcare sectors are considering. Geography plays a major role in understanding the dynamics of health, and the causes and spread of disease. The classic public health emphasizes the importance of geographic location (environment or space where we live) in health and disease. Today's health planners aim at developing health policy and services that address geographical and social inequalities in health, and therefore should benefit from evidence-based approaches that can be used to investigate spatial aspects of health policy and practice, and evaluate geographical equity (or inequity) in health service provision. It is therefore crucial to develop an alternative modeling approach where spatial analysis techniques and geographical locations are combined suggesting a more effective model for the evaluation of the customer satisfaction in healthcare. In this work the benefits of the geographical information are analyzed considering specific tasks (directions) inside the SERVQUAL model.

In more complex spatial models it would also be possible to include a spatial density of the location of the healthcare sectors, thus allowing for distinguishing between more rural and urban areas. This would translate into a more sophisticated approach of the availability factor. However, it is expected that such sophisticated models are more appropriate to address issues such as loca-

tion planning and management policies. Finally because there is a close relationship between spatial analysis and GIS systems, in this work the benefits of these systems in healthcare decisions making policies are presented taking advantage the information from the evaluation process.

Motivation

User satisfaction and/or service quality (SERVQUAL) constitute essential components of healthcare (Donabedian, 1988). Users determine the strategy for quality management in healthcare services (Hasin et. al., 2001). Methodological issues concerning service quality measurements of healthcare have been discussed in the international literature (Lin and Kelly, 1995) for many years and have been the subject of topical studies throughout the world (Ovretveit, 2000). In Greece, significant efforts have been made to develop user satisfaction models (Grigoroudis and Siskos, 2002; Athanasopoulos et. al., 2001) as well as to assess user satisfaction in healthcare services (Angelopoulou et.al 1998; Merkouris et. al., 1999; Moumtzoglou et. al., 2000; Camilleri and O'Callaghan, 1998). The fact is that "user satisfaction" and/or "service quality" are complex phenomena involving intricate operations such as the measurement of quality in healthcare services, currently under examination, their perceived "value", and the social image of the organization. Geography plays a major role in understanding the dynamics of health, and the causes and spread of disease. The classic public health emphasizes the importance of geographic location (environment or space where we live) in health and disease. It is therefore crucial to develop an alternative modeling approach where spatial analysis techniques and geographical locations are combined suggesting a more effective model for the evaluation of the customer satisfaction in healthcare.

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