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QUALITY DIMENSION EVALUATION IN A PUBLIC PRIMARY HEALTHCARE ASSISTANCE NETWORK IN A SOUTH REGION OF SAO PAULO BRAZIL.

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Abstract

This research involves the evaluation of a public primary healthcare assistance services by the perception of patients. The study provides knowledge of quality services in the Primary Healthcare Assistance and also contributes to indicators mentioning which issues related to quality dimensions directly impact the patient satisfaction.

Key Words: Brazilian National Health System (SUS), Networks, Customer Satisfaction, Quality Evaluation.
1. Introduction

The Brazilian National Health System, over the past decades has been improving management in the National Health Network System in order to provide quality services. The São Paulo Public Health Model (SUS) involves an integrated network composed by General Practitioners or Gatekeepers (UBS), Ambulatory Care (AMAE or AE), Hospitals and Laboratories.

The SUS (National Health Secured Program) was created after the Federal Constitution (1988) for structure and provide HealthCare Program to the population.

The SUS model is an integrated service network, formed by several connected units, each one with its duties, organized in accordance with the complexity of services provided.

The guidelines for the functioning of this network, in the city of São Paulo, comprehend: the hierarchy of care depending on the complexity of the diseases; the public service that works in a wide service network comprising:

- Health Care Workers - responsible for the dissemination of information related to the functioning of the public health system in its region of coverage, promoting health prevention programs, personal hygiene and sanitation;

- Basic Health Units (UBS) - responsible for activities of primary care and comprehensive evaluation of patients through the actions of health promotion, disease prevention, care and treatment;

- Ambulatory Medical Care (AMA) - This has immediate care to patients with diseases of low and medium complexity, in the areas of: general practitioner, pediatrics, general surgery, and gynecology.
• Ambulatory of Specialties (AMA-E or AE) - that meet users scheduled by the Basic Health Units, or patients with medical request for consultations in the following specialties: cardiology, neurology, dermatology, general orthopedics, general surgery, gynecology, otorhinolaryngology, ophthalmology, pulmonology, psychiatry and social service. Some clinics still rely on other specialties.

• Hospitals - serving serious cases, emergencies and perform highly complex procedures;

• Laboratory Services.

The users of a network of health services are crucial, because without them there is no service. According to Parasuraman et al. (1988) user satisfaction increases confidence in the quality of services, generating reliability to the health system.

Historically, public health has long waits for care, lack of specialized services, and specially dissatisfaction of the population. It is therefore fundamental rethinking professional and procedures practices aiming at the improvement and user satisfaction. According to Benazzi et al. (2010), user satisfaction should be a goal to be evaluated periodically.

In short, the quality of health care should be evaluated for compliance or appropriateness with expectations or standards and not solely by technical or medical practice, but by a set of factors involving individual and collective elements.

Parasuraman et al. (1985) define the quality of service as a measure of how the service meets or exceeds the expectations of the client or user. User satisfaction is characterized as an evaluation of outcomes and is associated with effectiveness of care or a specific gain for a particular type of intervention (VUORI, 1987).
The studies of Parasuraman et al. (1988) and Cronin and Taylor (1992, 1994) proved a strong relationship between user satisfaction and service quality. In evaluating the quality of service, knowledge of positive and negative aspects allows separate aspects of being assertive in improvement.

Thus, this research aims to evaluate the quality of services provided by General Practitioners or Gatekeepers (UBS) in the Microregions M'Boi Mirim, located in the Southern city of São Paulo, on the perspective of satisfaction of users with respect to services for high risk pregnancies.

2. Objective

This research aims to evaluate the quality of services provided by General Practitioners or Gatekeepers (UBS) in the Microregions M'Boi Mirim, located in the Southern city of São Paulo, on the perspective of satisfaction of high risk prenatal patients.

Attempt into the satisfaction of patients regarding the quality of health services provided by public sector can be a first step towards developing improvement actions build trust.

For the manager, this understanding helps direct strategies and actions to be implemented. For other industry professionals, this information is valuable not only for the humanization of these services, but also to increase the reliability of customers for services rendered.

Thus, knowledge of the satisfactions and dissatisfactions of the users of the network for quality of service leads to better results for the network in each of its operating units as the network as a whole.
3. Theoretical Framework

This chapter covers two topics. The first related to the issue of healthcare networks involving the major theoretical issues and associating it with a brief account of the network object of this dissertation. The second refers to evaluating the quality of services, from the perspective of user satisfaction.

3.1 Network HealthCare Services

According to Shortell et al (1993), organized system of providing health services, are organizations of networks that provide services on an ongoing basis to a specific population and are responsible for clinical, financial and supporting care on this population.

These authors in 1996 studied the health care networks in the United States. According to them, "integrated health network systems ", are characterized by:

• Focus on health needs of the population;

• Coordination and Integration of Health Care in a continuous manner;

• Information systems that connect consumers, providers and service users daily;

• Information about cost, quality and user satisfaction;

• Use of financial incentives and organizational structures to align governance, management and healthcare professionals in order to achieve its objectives, and;

• Continuous improvement of services.
According to Kongstvedt and Gates (2001), the Network Integrated Health Service models should involve:

• Health professionals;

• Professionals and healthcare facilities, and

• Professionals, businesses and health insurers.

Montenegro (2003) defines "health service networks," as the operation of units providing services with the following characteristics: specific nature; hierarchical levels of complexity; geographic location known; single coordinating; operational standards; standard information systems and use of shared resources and logistics; and that has a common purpose.

PAHO (2010) defines "integrated networks of health" as the management of health services provided to the population in a continuous and preventive manner, involving the treatment, diagnosis, monitoring of diseases, rehabilitation and palliative care, through different levels and places of service during the course of their lives.

Health networks can be organized through the integration of agents or public actors (local, state and federal) and private (mainly formed by laboratories and hospitals). According to PAHO (2010), there is no need for the services that comprise the network are the sole property and may be formalized complementary services through strategic alliances.

According to the Pan American Health Organization in 2010, the networks can be integrated to form horizontal, vertical, real or virtual.
3.2 QUALITY OF HEALTH SERVICES

Lee and Jones (1933, p.6) define quality as "a matter of judgments with respect to certain aspects, properties, ingredients or dimensions of a process called health service." Donabedian (2005, p.692) defines quality as a reflection of values and goals of a health system, in accordance with users expectation.

Donabedian (1980) proposes that the quality assessment of the health service is performed using three aspects:

• Structure, involving: the administrative organization, the characteristics of facilities, medical staff available, appropriateness to the current guidelines, preparation and experience of professional employees;

• Process, including: the analysis of medical treatment of health problems and use of protocols in attendance, and;

• Income, including: physical capacity and functional status of the patient, the impact of diseases on the health of the individual and personal perception of the quality of healthcare.

Concerning the last point raised, the author emphasizes that some results are usually neglected, but are easy to measure how the patient's death in terminal cases, whereas others are more complex, such as patient satisfaction, social reintegration and physical rehabilitation (Donabedian, 2005).

Oliver (1980) applied a satisfaction survey to the American Federal Program to Prevent Influenza. The sample had a return of 3,000 (three thousand) questionnaires to evaluate the program before the vaccination procedure and after the application of
vaccines. The author concluded that user satisfaction was directly related to the difference between expectations and perceptions after using the service.

Also, according to Oliver (1980), the client makes a pre-trial of the product or service, forming a pattern, for which the assessment is made real. Satisfaction, according to the author, is conceptualized as a pattern formed by expectations and perceived quality modified by the consumption of the product or service. In this model, expectations are goals to be reached and either confirm or not these expectations, changes the resulting satisfaction.

Grönroos (1984), as well as Oliver (1980) defines perceived quality that arises from the difference between customer expectations and their judgments about the performance of the service, adding an analysis of a number of features, including the location and its resources available for consumption. The model of Grönroos (1984) showed a percentage for each of the applied questions, guiding numerous subsequent works.

The research of Grönroos (1984) was applied using questionnaires to executives in the Swedish service sector, involving the following industries: banking, insurance worker, lodging and meals; air (companies), maintenance and cleaning; rental cars and tourism (agencies). The variables adopted in this research involved several issues, such as daily contact with customers, corporate image, courtesy and communication with clients and the understanding of customer needs. The result of his research was the focus of other researchers in defining the dimensions of quality (and Salome Miguel, 2004).
Parasuraman, Zeithaml and Berry (1988) applied the model "SERVQUAL to measure the GAP 5 in four types of companies involved in: food retailing; credit card companies; securities dealers; and firms in repairs and maintenance. The authors in this study outlined the issues that contribute to the formation of expectations and perceptions of service quality in general, which relate to: trust, responsibility, competence, access, courtesy, communication, credibility, security, understanding or knowledge about client, and other tangible aspects.

**Figure 2: GAP’s Model by Parasuram, Zeithaml and Berry (1988)**

The GAP 1, discusses the difference between the perceptions of managers and executives about the expectations that users should take in relation to the real expectations of users. The GAP 2, follows from understanding the difference between the perceptions of executives regarding consumer expectations and the translation of what would be an expectation of quality service. The GAP 3 also rated by the the difference between the specification of the quality of service expected and the service actually delivered to the consumer. In the GAP 4, executives point out the differences between what was promised (communicated) to consumers and the service actually performed. Consumers have an expectation of services and a perception as to what was effectively handed to him. Thus, in the GAP 5 is measured by the difference between consumer expectations of service quality and perceptions regarding this.

Carman (1990) used the tool SERVQUAL, emphasizing the concentration of the dimensions of perceived user satisfaction regarding the assessment of quality proposed by Parasuraman et al (1988) in three categories: a tire store, a dental clinic, and a retail shopping center. In applied research, the author noted that the dimensions of the perception of quality do not vary for tangible, reliability and security.

Parasuraman et al (1991) reassessed the original version of SERVQUAL (1985, 1988) summarizing the quality into five dimensions:

• Reliability - including the ability to deliver as committed;

• Empathy - involving the possibility of individualized attention to customers;

• Responsibility - which refer to the responsiveness to customers;

• Security (Assurance) - which represents the knowledge, the courteous staff, the skills of persuasion, and confidence, and;
• Tangibility - which refer to the physical structure, equipment, communication materials and information.

Cronin and Taylor (1992, 1994) developed a model called SERVPERF, based solely on the perception of performance of services in general. The clear distinction between the two models (SERVQUAL and SERVPERF) has great importance, because the suppliers of service have a need to know what your goal is to have customers who are satisfied with their performance, or provide services with a highest level of quality perceived.

To justify their model, Cronin and Taylor (1992) emphasize that quality is defined more as a customer attitude with regard to the dimensions of quality, that should be measured based on the model of satisfaction Oliver (1980) and not through differences between expectations and performance as recommended by the model of Parasuraman et al. (1985).

Cronin and Taylor (1992, 1994) also asserted that the services, the perceived quality precedes customer satisfaction and that satisfaction has a significant effect, while service quality has a minor influence on purchase intentions. In this sense these authors reaffirm the conclusions reached by Oliver (1980) in their research.

Thus, these authors propose the model SERVPERF as an alternative to SERVQUAL. First, consider the dimensions of quality in service, previously proposed by Parasuraman et al. (1988), are sufficiently supported, but considered irrelevant to the evaluation of user expectations.

However, Cronin and Taylor (1992) found that quality service leads to customer satisfaction. This causal relationship between service quality and customer satisfaction was measured using the technique of structural equation modeling with latent variables.

Cronin and Taylor (1992, 1994) concluded that the instrument is more sensitive
SERVPERF in depicting the variations in quality compared to other scales tested. This conclusion was based both on the use of statistical test of “qui-squared "as proof of compliance of the empirical distributions of data and also of the coefficient of determination in linear regression.

According to Parasuraman, Zeithaml and Berry (1985), quality of service is defined in general as the service that meets or exceeds the expectations of the client or user. In 1996, these same authors suggest the use of model assessment of customer satisfaction regarding quality of services, "Servqual" to adapt the services offered to meet what the customer wants. The authors acknowledge the difficulty in measure quality in services, due to the fact of service quality represent an abstract issue, intangible, inseparable, heterogeneous product. The authors established a model based on an understanding of five GAP's (the difference between perception and expectation of customers) that measures the quality of services, as Figure 2.

Miguel e Salome (2004), noted that few empirical studies, such as Lee et al. (2000), indicate that the model SERVPERF better reflect the quality of services that the SERVQUAL model. However, it is understood that it is not possible to be conclusive at this point.

More recently, a number of authors has applied the SERVQUAL and SERVPERF models to assess satisfaction with service delivery in health, among which are:

• Akter et al (2008) used the model "Servqual" in a public hospital in Bangladesh. The survey results concluded that the services provided were not satisfactory to users for the following reasons: lack of prompt service, availability and attention of officials, lack of confidentiality and warmth; deficiency in terms of expertise, lack of preventive actions and inadequate spaces used in cleaning.
• Quader (2009) investigated the satisfaction of users of health services provided by a hospital in England, examining the GAP's between users' expectations regarding the quality and perception of the same post-service use. The research result showed that the hospital superate the users quality expectatives. The good result of this research is attributed to cultural issues, technical knowledge and motivation of employees.

According to Quader, improving the quality of a health service generates an expectation of benefits, among which are: retention of staff, ethics in professional conduct, loyalty and recommendation of the service user, or treatment of the resolution problem, appropriate allocation of investments, and even improving the quality of services. Thus, good quality improves user satisfaction, which directly impacts the number of patients who use or choose the Hospital.

• Lonial et al (2010) used the model of service evaluation Servqual of Parasuraman et al (1985, 1988 and 1991) for patients in Turkey. The results suggest that the dimensions of quality in the SERVQUAL model are reliable, valid and applicable in different cultural and economic countries.

4. Methodology

This research is a multiple case study, quantitative and qualitative assessment about the quality of service delivery of public health system, made from high-risk pregnant who participated in the program "Mother Paulistana" in a Regional Health of São Paulo.

The use of an operational model of multiple cases was adopted to provide better opportunities for analysis of the elements (nodes) that make up the public health system in two Sub Health Regions of South Zone of Sao Paulo. The project will rely on the techniques of case study outlined by Yin (2005).

According to Yin (2005), a case study refers to a multivariate empirical research that investigates a contemporary phenomenon within its real context, ie the evaluation
of the quality of the health service be searched in all phases of the network, allowing a comparative study on the perception of high risk pregnant.

The project was organized into seven phases, as explained below:

Phase 1 - Preliminary Study - In the first phase, a study was undertaken in order to capture the information available in a Social Organization, in charge of several health units, located in a Regional Health in São Paulo. With such information, we designed a mapping in this region, involving all units of the network at all levels of complexity in health services, namely UBS Hospital, administered either by social organizations, such as the Public Sector (Municipal and State) and Private Sector.

Phase 2 - Selection of program to be evaluated - To ensure that the information to reflect the reality of the network of health services, meetings were held with experts in the area, seeking to select an activity or program involving the use of all types units, according to the complexity of care, which form the public health system, in a region of São Paulo. Thus, the program was chosen "Mother Paulistana" because it allows evaluating from the provision of services for women during childbirth, the entire path of these mothers.

The Complexity of High-Risk refers to a set of procedures that in the context of the SUS, involves high technology and high cost, for example, surgery, dialysis, chemotherapy, radiotherapy, hemotherapy, etc., aiming to provide people access to services more qualified, by integrating it with other levels of Health Care ("Primary"and "Average Complexity ").

Phase 3 - The target group of research - The choice fell on the high risk patient, as this during their pregnancy, not only ran all kinds of SUS units, but also makes more frequent use of the services provided by UBS. Your prenatal monitoring is performed in
the unit of medium and high complexity (AMA-E or AE), where it returns after giving birth to an assessment, while monitoring the other (low risk) is done directly in units low complexity (UBS), not going through all kinds of units that comprise the network.

Phase 4 - Theoretical Basis - The questionnaire contemplates the five dimensions of quality proposed by Parasuraman et al (1988), Reliability; Empathy; Accountability; Security, and Tangibility.

Cronin and Taylor (1994) criticize the measurement model of quality proposed by Parasuraman et al. (1985, 1988) in their studies and say that it is not necessary to measure the user's expectation, but their perception regarding quality of services provided.

Although they confirm that there is a relationship between user satisfaction and service quality, Parasuraman et al. (1988) argue that user satisfaction increases the quality of provision of a service, while Cronin and Taylor (1992, 1994) stated that quality service leads to user satisfaction, this position also was adopted in this work.

Phase 5 - Preparation of the questionnaire - The questionnaire was designed to be answered by high-risk pregnant assisted by the Program "Mãe Paulistana" at the time of his return after childbirth for the AMA-E or AE, when there is the finalization of care during pregnancy.

The questionnaire involves the "quality dimensions" proposed by Parasuraman et al. (1985). For the evaluation of satisfaction of users regarding the quality of services to be as objective as possible, was not used as the Likert scale in the studies of Parasuraman et al. (1985, 1988 and 1991).
Phase 6 - Model - In this study the model was adapted to be used covering the last five dimensions proposed by Parasuraman et al. (1985), specifically in relation to perceptions of users about the quality of a service, as proposed by Cronin and Taylor (1992, 1994).

Phase 7 - Quantitative Methods - Two quantitative methods were applied. Besides the use of descriptive statistics was used the method of multiple correspondence factorial analysis. Factor analysis is used to identify groups of pregnant that had similar responses, evaluating the quality of services provided by each UBS unit.

5. SAMPLE

The sample was composed by high risk pregnant covered by “Mãe Paulistana” program that give birth from the period of November, 2010 until April, 2011. The sample covers 41% of the total high risk pregnant supported by “Programa Mãe Paulistana” in a south São Paulo City region and 90% were older than 18 years.

The questionnaire was applicable by phone or at pregnant house.

6. RESULTS

The research results after the multiple factorial analyses pointed three groups. The first group, denominated “satisfied” patients was represented by 41 pregnant (51% total sample), the second group denominated “partially satisfied” patients was represented by 31 pregnant (39% of total sample) and the third group denominated “dissatisfied” patients was represented by 8 pregnant (10% of total sample).

The first group, named satisfied patients pointed that reliability, empathy; security and tangibility were the most important quality dimensions in the health care. The queries for patient satisfaction for reliability were the possibility of monthly doctor visit, quickly lab tests performance (schedule and realization) and the timing attendance
(wait for less than 30 minutes for a doctor appointment). The excellent team courtesy pointed the patient satisfaction in the dimension empathy. The security was highlighted in the research due to the pregnant adoption of all doctor treatment requests. In terms of Tangibility, the Group felt "great" health unit's location and the condition of "local cleanup". This group of workers who have stood out for having "expectations with respect to the service met"; they were "satisfied" and evaluated as "great services rendered by UBS".

The second group, "partially satisfied" with the quality of services rendered stood on the dimensions Empathy and Reliability. With respect to Empathy dimension considered "good" courtesy of reception, nurses and doctor of UBS, while in terms of the reliable dimension, the patients reported having had "monthly" medical monitoring, and that their examinations were conducted in the period of "fifteen days after the medical request". With respect to the Responsibility dimension, prenatal began "from the third month of pregnancy" and about the Security dimension, claim that "relied partly on the third month of pregnancy "and about the Security dimension, claim that" relied partly on the medical team "of UBS. In short, the Group of "partially satisfied" assessed as "good" the standard of services provided by UBSs.

The third group of "dissatisfied" with the quality of services rendered, stood primarily in dimension empathy, because they consider "bad" the services provided by reception, nurses and doctors in terms of courtesy. This group also had featured in dimension security "do not trust the team of UBS, and" do not understand the medical guidelines ". In relation to the Responsibility dimension, the patients were forwarded to hospitals after the fourth doctor visit.
In the third group, namely dissatisfied, it was possible report the problems by UBS units which can help managers better quality performance in the health care service.

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