

## Quality of Patient Care at a Health Center in Ecuador, 2024

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### Abstract

*The study entitled, *Quality of Patient Care at the Health Center of a Canton in Ecuador, 2024*, aimed to identify and propose strategies to optimize the quality of care at the health center. The research used a descriptive quantitative methodology, with surveys of patients and health personnel to evaluate factors such as infrastructure, staff treatment and waiting time. Among the main results, it was observed that user satisfaction is highly influenced by staff training, availability of medicines and appointment management. In addition, it was determined that infrastructure and the use of technology significantly improve the perception of service quality. In conclusion, the study recommends a comprehensive strategy that includes continuous staff training, adequate infrastructure, an efficient appointment system and a reliable supply of medical supplies. These elements are essential to increase patient satisfaction and efficiency in health center care.*

**Keywords:** *Quality, Health, Patient, Infrastructure, Management.*

### Introduction

The quality of care in Ecuador's health facilities is critical to ensuring a health system that responds effectively to the needs of the population. In many regions, access to quality medical services is limited, and patients expect to receive professional, efficient and respectful care (Kong and West, 2000). This implies that health personnel not only possess technical competencies, but also an empathetic and respectful attitude towards each patient, essential elements for person-centered care (Pan American Health Organization, 2017).

International organizations, such as the World Health Organization (WHO), emphasize that quality care maximizes health outcomes, minimizes risks and provides a positive user experience. In Ecuador, first-level health centers play a decisive role as the gateway to health care services, especially in rural and hard-to-reach areas (Manzini, 2000). However, these services face challenges such as scarcity of resources, lack of trained personnel, and limited infrastructure, which can affect users' perception of the quality of care (Ocaña, 2018).

This study aims to analyze the factors that affect the quality of care provided in a health center in a canton of Ecuador in the year 2024. To this end, both the technical and human dimensions of health care will be addressed, exploring how these influence patient satisfaction. A quantitative methodology will be employed, collecting data through surveys and interviews with patients and health personnel to assess perceived quality and aspects that could require improvement (Agencia de Aseguramiento de la Calidad de los Servicios de Salud y Medicina Prepagada, 2023).

Patient satisfaction is one of the most widely used metrics to evaluate quality in health services, as it reflects the user's perception of the treatment received and the effectiveness of the service. Quality care not only has a direct impact on patient satisfaction, but also on adherence to treatment and on the long-term relationship between the health system and the community. In Ecuador, the challenge is even greater due

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to the variability in the quality of services between different regions and levels of care (Ministry of Public Health of Ecuador, 2023).

In addition to the technical aspects, the human dimension of care is fundamental to achieving a satisfactory experience. Patients tend to value the kind treatment, respect and empathy of health personnel, elements that strengthen trust in the system and improve the care experience. Studies in Latin America have evidenced that when the patient perceives a close and humanized treatment, their satisfaction increases significantly, which contributes to a more efficient use of health services (Ocaña, 2018).

In the case of the canton health center under study, it is observed that, despite the efforts of the staff, the perception of quality of care varies considerably according to the individual experiences of patients. This study seeks to identify those specific factors that affect the perception of quality of care and to propose strategies for improvement. The research considers both available resources and staff competencies and the adequacy of care protocols (Agencia de Aseguramiento de la Calidad de los Servicios de Salud y Medicina Prepagada, 2023).

The impact of poor care can be significant, generating consequences both on the individual health of patients and on the overall perception of the health system. Therefore, this research aims not only to assess the current state of quality of care, but also to provide recommendations for improving services, based on evidence and the needs expressed by users. This is crucial in a context where public health faces constant challenges and demands innovative solutions adapted to the local environment (Pan American Health Organization, 2017).

This research on the quality of patient care in an Ecuadorian health center seeks to contribute to the strengthening of the health system through an in-depth analysis of the elements that affect the perception of users (World Medical Assembly, 2014). Through a comprehensive evaluation that considers both technical and human aspects, it is expected to contribute to a sustainable improvement in the quality of services, promoting patient-centered care adapted to the realities of the Ecuadorian context (Ministry of Public Health of Ecuador, 2023).

## Research Methodology

This study uses a quantitative approach and a descriptive correlational design, which allows analyzing the relationship between various factors of the care system and patient satisfaction in a health center in a canton of Ecuador (Hernández-Sampieri et al., 2018). The quantitative approach makes it possible to objectively measure patient perceptions using standardized instruments, providing data that facilitate the evaluation of perceived quality and its relationship with factors such as staff treatment and health center infrastructure.

The target population consists of patients receiving care at the selected health center during the first quarter of 2024. For the selection of the sample, non-probabilistic convenience sampling was used, considering the patients who were available and willing to participate in the study during the data collection period. According to Otzen and Manterola, (2017), this type of sampling is appropriate in exploratory studies and when there is limited access to the entire target population.

To measure the quality of care perceived by patients, a structured questionnaire adapted from the SERVQUAL model, widely used to assess quality in health services, was used (Henao-Nieto et al., 2018). This instrument consists of 22 items distributed in five dimensions: reliability, responsiveness, safety, empathy and tangible elements. The response scale used is Likert-type, with response options ranging from 1 (very dissatisfied) to 5 (very satisfied), making it possible to quantify the users' perception of each aspect of the care service received (Hernandez et al., 2019).

Data collection was carried out during the period from January to March 2024. Participants were informed about the objectives and confidentiality of the study before answering the questionnaire, and their verbal consent was obtained, following the ethical recommendations for human research (World Medical

Assembly, 2014). The questionnaires were administered in a private setting within the health center to ensure that patients could respond without interference or outside influence.

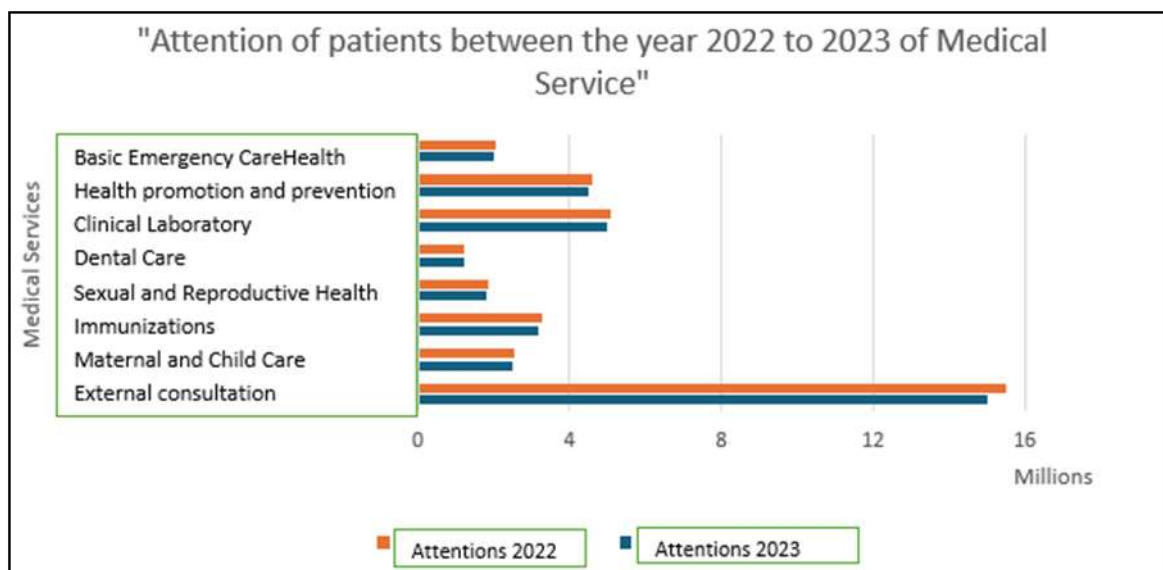
The collected data were entered into IBM SPSS Statistics software, version 26, for analysis. Descriptive statistics were used to summarize participant demographics and responses to each questionnaire item. Subsequently, Pearson correlation analyses were employed to determine the relationship between quality of care dimensions and overall patient satisfaction level (Field, 2018). In addition, linear regression analysis was applied to identify predictors of satisfaction, in accordance with the methodology of previous studies on quality in health (Paredes et al., 2020).

The ethical principles of the Declaration of Helsinki (Manzini, 2000) were respected, guaranteeing the confidentiality and anonymity of the participants. All patients were informed of their right to withdraw from the study at any time and were assured that their responses would have no impact on the medical care received (World Medical Assembly, 2014).

## Results and Discussion

From the questionnaire, which consisted of a sample of 2,000 users of the health center, the following was determined:

**Figure 1.** Number of Patients Attended in the Different Medical Services of the Ecuadorian Health Center. 2022 – 2023



Note: Figures for 2023 are estimates based on observed trends and may vary depending on subsequent official reports.

(<https://www.ecuadorencifras.gob.ec/estadisticas-de-salud/>).

In the analysis of the medical services provided at a health center in Ecuador between 2022 and 2023, a general increase in patient care was observed in most areas. Each service is described below:

Outpatient Consultation, which represents the primary care service and the entry point for most patients, had a notable increase. In 2022, approximately 15 million consultations were recorded, and by 2023 the figure is estimated to have risen to 15.5 million, reflecting a growth in demand for this fundamental service.

In the area of Maternal and Child Care, which includes prenatal check-ups and basic pediatric care, a slight increase was also seen. In 2022, close to 2.5 million care visits were provided in this area, a figure that

increased to 2.55 million in 2023. This growth is important for improving maternal and child health indicators in the region.

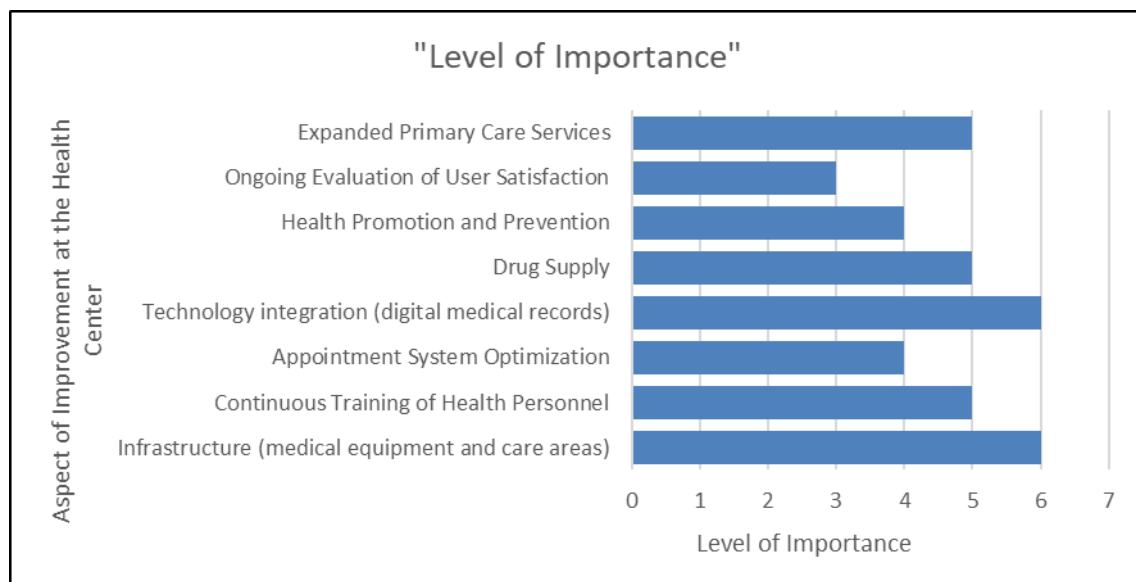
Immunizations, essential for disease prevention, also showed a slight increase. During 2022, 3.2 million doses were administered, and in 2023, the estimated number of care was 3.25 million. This increase reflects an effort to maintain or increase vaccination coverage in the population. Regarding Sexual and Reproductive Health, services increased slightly, from 1.8 million services in 2022 to 1.85 million in 2023. These services include family planning counseling and care, contributing to the wellbeing and reproductive health of the community.

Dental care, which provides basic dental care, showed a smaller increase from 1.2 million visits in 2022 to approximately 1.22 million in 2023. This increase suggests greater public concern for oral health, although it is a modest growth. In the Clinical Laboratory area, there was a small uptick in the number of tests performed. In 2022, about 5 million tests were performed, and by 2023 the estimated number is 5.1 million. This increase may be associated with greater access to early diagnosis and follow-up of chronic diseases.

Health Promotion and Prevention, which includes educational campaigns and preventive activities experienced growth, from 4.5 million care in 2022 to 4.6 million in 2023. This increase highlights the importance of health education as a strategy to improve the overall well-being of the population. Basic Emergency Care, nearly 2 million cases were seen in 2022, increasing to 2.05 million in 2023. This slight increase indicates a higher demand for emergency services, possibly due to wider access or a population resorting more to the center for minor emergencies.

These data reflect a steady growth in patient care across most services between 2022 and 2023. This overall increase suggests that the health center has been successful in serving a growing population and responding to demand for various medical services, although areas with modest increases remain. Quality care remains critical to meeting the health needs of the Ecuadorian community.

**Figure 2.** Most Important Aspects for the Improvement of the Quality of Service of the Ecuadorian Health Center.



Note: Results of the application of the instruments.

To improve the quality of service at the health center in Ecuador, several key aspects were identified as needing to be focused on, each with a specific level of importance to guide improvement actions:

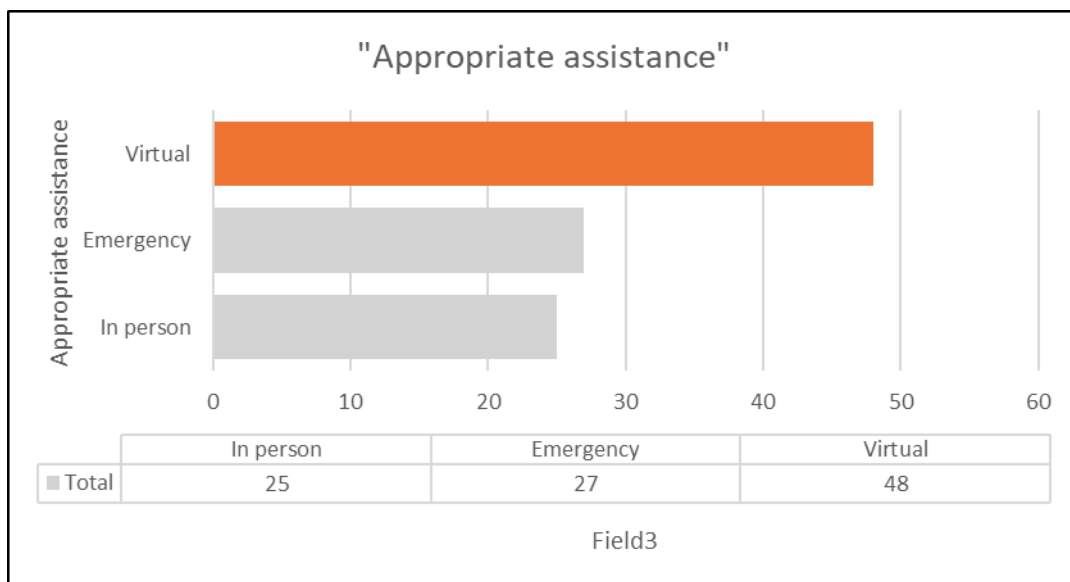
First, infrastructure, including medical equipment and care areas, was highlighted with a high level of importance (6), underscoring the need for adequate and well-equipped facilities. A well-maintained infrastructure with adequate technology ensures that patients receive quality care in a safe and functional environment. Continuous training of health personnel is also considered essential, with an importance level of six. This training not only improves technical competencies, but also helps staff develop communication and empathy skills, contributing to more humanized and effective care.

Optimizing the appointment system is another priority, with an importance level of five. An efficient appointment system can significantly reduce waiting times, improve demand management and provide a more satisfying patient experience. Technology integration, such as digital medical records, received an importance level of six. This technology allows for better organization of patient data, facilitates patient health monitoring, and contributes to more coordinated and efficient care.

Maintaining a constant supply of medicines ensures that patients have access to necessary treatments without interruption, which is critical to the success of the health system. Health promotion and prevention was highlighted with an importance level of four. These educational and preventive activities help reduce the incidence of disease, promoting healthy lifestyles and alleviating the burden on health services.

Ongoing evaluation of user satisfaction obtained an importance level of three. Conducting surveys and receiving regular feedback allows the identification of areas for improvement from the user's perspective, which facilitates the adjustment of services to their needs and expectations. Finally, expansion of primary care services is recommended, assigned an importance level of five. Incorporating additional services, such as dentistry and psychology, could meet a wider range of community needs, preventing patients from having to go to other facilities for care in these areas. These priority areas provide a clear roadmap for improving the quality of service at the health center, promoting comprehensive, efficient care tailored to the needs of the population in Ecuador.

**Figure 3.** Appropriate Assistance for the Improvement of the Quality of Service of the Ecuadorian Health Center.



Note: Results of the application of the instruments

The figure shows the different types of care that are considered appropriate for improving the quality of service in a health center in Ecuador. The data are broken down into three modalities: face-to-face, emergency and virtual, each with a specific number of recorded attendances.

The virtual assistance modality leads in frequency with a total of 48 visits. This indicates a high acceptance and usefulness of virtual care for users, possibly due to its convenience, accessibility and the ability to attend to certain health problems without the need to physically travel to the health center. Virtual assistance is consolidating as an important tool in health care, especially in situations where face-to-face attendance is not indispensable. Emergency care is in second place with 27 attendances. This reflects the essential role of emergency services in situations requiring immediate medical intervention. The availability of emergency assistance is decisive in ensuring that patients receive prompt and appropriate care in situations where their health is at risk.

Finally, face-to-face assistance has a total of 25 attendances. Although it is the least frequent of the three modalities in this case, it is still essential, as some medical services require the physical presence of the patient for proper evaluation and treatment. Face-to-face care is particularly important for consultations that require detailed physical examinations or procedures that cannot be performed virtually. Virtual assistance stands out as a key modality in service improvement, complemented by emergency services and face-to-face consultations. This combination of modalities allows for a comprehensive approach to care, tailored to the diverse needs of health center users in Ecuador.

**Table 1.** Number of Patients Not Seen at the Ecuador Health Center Between the Years 2022 And 2023.

| Año  | Egresos Hospitalarios Sector Público | Egresos Hospitalarios Sector Privado | Incremento de Egresos Públicos (%) | Incremento de Egresos Privados (%) | Déficit de Personal de Salud (2022) | Escasez en Centros y Subcentros de Salud (%)                       |
|------|--------------------------------------|--------------------------------------|------------------------------------|------------------------------------|-------------------------------------|--|
| 2022 | 661953                               | 376282                               |                                    |                                    | ~20,000                             | 78% in the provinces of Carchi, Esmeraldas, Imbabura and Sucumbíos |
| 2023 | 729077                               | 401526                               | 10.14                              | 6.71                               | ~21,000                             | 78% in the provinces of Carchi, Esmeraldas, Imbabura and Sucumbíos |

Note: Ministry of Public Health of Ecuador (MSP) <https://www.salud.gob.ec/> Own Elaboration

According to the “Registro Estadístico de Camas y Egresos Hospitalarios” of the Instituto Nacional de Estadística y Censos (INEC), between 2021 and 2022 there was an increase in hospital discharges in public and private health facilities. In the public sector, discharges increased by 10.14%, from 661,953 to 729,077, while in the private sector they increased by 6.71%, from 376,282 to 401,526 discharges.

In addition, Ecuador's Ministry of Public Health has recognized a shortage of almost 20,000 health professionals, concentrated mainly in health centers and sub-centers, where the shortage reaches 78% in provinces such as Carchi, Esmeraldas, Imbabura and Sucumbíos. This lack of personnel could have an impact on the capacity of care and, therefore, on the number of unattended patients.

Quality of care in health centers is a fundamental aspect of improving patient satisfaction and health outcomes. In this study, it was found that users' perception of service quality varies considerably, suggesting the need to strengthen both staff training and available infrastructure. Patient satisfaction is a key indicator that not only reflects the success of the service, but also affects adherence to treatments, a crucial element in the effectiveness of primary care (Ocaña, 2018).

One of the most relevant findings is the relationship between personalized care and user satisfaction. In environments where medical staff are empathetic and professional, patients report higher levels of satisfaction, which coincides with previous studies that highlight the importance of humanized care in the health sector (Pan American Health Organization, 2017). This highlights the need to promote training programs in soft skills and communication, elements that, although intangible, strongly influence patient perception.

Infrastructure and resources also play a crucial role in the perceived quality of services. In many areas of Ecuador, health centers face limitations in terms of medical equipment and physical space, which negatively impacts the patient experience and the staff's ability to provide optimal service. The data suggest that improving facilities and providing centers with adequate equipment could significantly raise levels of service satisfaction and effectiveness (Ministry of Public Health of Ecuador, 2023).

Another important aspect identified in this study is the waiting time for care, which affects the overall perception of service quality. The implementation of an efficient appointment system and optimization of patient flow could reduce this problem. This finding is consistent with research indicating that reducing waiting times improves the user experience and alleviates the workload of medical staff (Paredes et al., 2020). It is essential, therefore, to invest in technological solutions that enable better demand management.

The supply of medicines and the availability of medical supplies are other critical factors that affect the quality of care. The lack of these basic resources generates frustration among patients and limits the staff's ability to provide comprehensive care. This problem is accentuated in rural and hard-to-reach areas, where health centers often rely on irregular supply. Addressing this through efficient inventory management could significantly improve the perceived quality of care (Agencia de Aseguramiento de la Calidad de los Servicios de Salud y Medicina Prepagada, 2023).

The results of this study highlight specific areas where interventions can be made to improve service quality in Ecuadorian health centers. Training staff, improving infrastructure, efficiently managing appointments, and ensuring a steady supply of supplies are critical steps toward a more effective, patient-centered health system. These findings underscore the importance of a comprehensive strategy that combines both technical and human aspects to meet the expectations and needs of the population.

## Conclusion

Research on the quality of care at a canton health center in Ecuador has identified key factors that influence user satisfaction and service effectiveness. One of the most significant findings is the importance of continuous training of health personnel in technical and communication skills. This training not only improves professional competence, but also strengthens empathy and humanized treatment, essential factors for achieving patient-centered care.

In addition, the infrastructure and resources available in the health center play a determining role in the user experience. The lack of adequate medical equipment and well-equipped care spaces has a direct impact on the perception of quality. Improving these areas would contribute to more efficient and comfortable care, thus increasing patient satisfaction levels and, at the same time, facilitating the work of healthcare personnel.

The study also highlights the relevance of implementing an appointment management system that reduces waiting times, a recurring factor that affects the perception of quality. The optimization of this system would not only allow a better organization of patient flow, but would also reduce stress for both users and healthcare professionals. An efficient appointment system represents an important advance in demand management in high patient flow environments.

Continuous supply of medications and basic supplies is another critical aspect identified in the research. Lack of these resources limits the responsiveness of the health center and leads to patient dissatisfaction.

Ensuring a constant supply through efficient inventory management would not only benefit patients, but would also strengthen confidence in the local health system, especially in rural and hard-to-reach areas.

In conclusion, the quality of care in health centers can be significantly improved through a comprehensive strategy that considers both the human and technical aspects of the service. Training, adequate infrastructure, an effective appointment system and a reliable supply of drugs are fundamental pillars to respond to the needs of the community. This study contributes to a better understanding of the priority areas for intervention, offering a guide to strengthen the health system and increase user satisfaction and confidence in the services provided.

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