Seminars in Medical Writing and Education. 2025; 4:217
doi: 10.56294/mw2025217

ORIGINAL

Diagnosis of the evaluation of the professional performance of the Comprehensive General Stomatologist in the care of dentoalveolar fracture

Diagnóstico de la evaluación del desempeño profesional del Estomatólogo General Integral en la atención de la fractura dentoalveolar

Gilberto Carlos Corbillón Labrador[1], Nadina Travieso Ramos[2], Litney Corbillón Labrador[3]

[1]Universidad de Ciencias Médicas de Pinar del Río, Hospital Provincial Clínico Quirúrgico Dr. "León Cuervo Rubio", Cirugía Maxilofacial. Pinar del Río, Cuba.
[2]Universidad de Ciencias Médicas de Pinar del Río, Dirección de Ciencia e Innovación Tecnológica. Pinar del Río, Cuba.
[3]Universidad de Pinar del Río Hermanos Saíz Montes de Oca. Pinar del Río, Cuba.

Cite as: Corbillón Labrador GC, Travieso Ramos N, Corbillón Labrador L. Diagnosis of the evaluation of the professional performance of the Comprehensive General Stomatologist in the care of dentoalveolar fracture. Seminars in Medical Writing and Education. 2025; 4:217. https://doi.org/10.56294/mw2025217

Submitted: 03-06-2024 **Revised:** 16-10-2024 **Accepted:** 18-04-2025 **Published:** 19-04-2025

Editor: PhD. Prof. Estela Morales Peralta

Corresponding author: Gilberto Carlos Corbillón Labrador

ABSTRACT

Introduction: the evaluation of the professional performance of the Comprehensive General Stomatologist is vital for the stomatological care of dentoalveolar fracture.
Objective: to diagnose the professional performance of the Comprehensive General Stomatologist in the care of dentoalveolar fracture.
Method: theoretical and empirical methods were used that allowed to establish the foundations that led to systematizations, as well as to the diagnosis of the current state of the professional performance of this specialist at the "Hermanos Cruz" Teaching Polyclinic in Pinar del Río.
Results: problems were identified according to the dimensions in the Care dimension, they have inaccuracies in the identification of FDA risk factors, difficulty in the classification of dentoalveolar trauma, in the clinical diagnosis, in the FDA reduction and splinting technique, in the interpretation of radiographic data and in the therapeutic integration of FDA. In the Research Improvement dimension, they have little motivation for organizational activities of improvement related to FDA and self-improvement in this subject. There is little interest in publishing in scientific journals, which leads to little scientific production related to the care of patients with FDA._In the Educational dimension, they have difficulties in patient and family orientation and in carrying out educational activities on FDA. The level of communication is considered an aspect in development. In the Managerial dimension, they have insufficient knowledge for decision-making in relation to FDA. Aspects in development are considered to be the ability to develop teamwork, to maintain flexible human relations through affective dialogue and the level of critical demand. In the Professional and Human Behavior dimension, aspects in development are considered to be the level of maintaining discretion regarding patient information, the ability to achieve empathy in the stomatologist-patient and family relationship, the ability to achieve empathy in the stomatologist-work colleagues relationship and the level at which the application of bioethics and professional ethics is manifested. The potential identified in the performance of the EGI was the frequent participation in ICT improvement courses. Potentialities were identified in the subjective order, such as the will to improve, the support of management to facilitate the process, the material assurance of the system and the logistical infrastructure to undertake actions to improve performance.
Conclusions: the diagnosis allowed us to identify problems and potentialities of the object studied. An alternative to solve the scientific problem is proposed, which is the development of a strategy for professional development.

Keywords: Professional Performance; Dentoalveolar Fracture; Dental Care.

RESUMEN

Introducción: la evaluación del desempeño profesional del Estomatólogo General Integral es vital para la atención estomatológica de la fractura dentoalveolar.
Objetivo: diagnosticar el desempeño profesional del Estomatólogo General Integral en la atención de la fractura dentoalveolar.
Método: se utilizaron métodos teóricos y empíricos que permitieron establecer los fundamentos que condujeron a sistematizaciones, así como al diagnóstico del estado actual del desempeño profesional de este especialista en el policlínico Docente "Hermanos Cruz" en Pinar del Río.
Resultados: se identificaron problemas según las dimensiones en la dimensión Asistencial, tienen imprecisiones en la identificación de los factores de riesgo de la FDA, dificultad en la clasificación del trauma dentoalveolar, en el diagnóstico clínico, en la técnica de reducción y ferulización de la FDA, en la interpretación de datos radiográficos y en la integración terapéutica de la FDA. En la dimensión Investigación Superación, tienen poca motivación por actividades organizativas de superación relacionadas con FDA y la auto-superación en este tema. Es pobre el interés por publicar en revistas científicas, lo cual conlleva a la poca producción científica relacionada con la atención a pacientes con FDA. En la dimensión Educativa, tienen dificultades en la orientación al paciente y familiares y en la realización de actividades educativas sobre FDA. El nivel para comunicarse se considera un aspecto en desarrollo. En la dimensión Gerencial, tienen insuficientes conocimientos para la toma de decisiones en relación a la FDA. Se consideran aspectos en desarrollo, la capacidad para desarrollar trabajo en equipo, de mantener relaciones humanas flexibles mediante el diálogo afectivo y el nivel de exigencia crítica. En la dimensión Comportamiento profesional y humano, se consideran aspectos en desarrollo, el nivel para mantener la discreción sobre informaciones de los pacientes, la capacidad para lograr empatía en la relación estomatólogo-paciente y familiares, la capacidad para lograr empatía en la relación estomatólogo-colegas de trabajo y el nivel en que se manifiesta la aplicación de la bioética y la ética profesional. La potencialidad identificada en el desempeño de los EGI fue la participación frecuente en cursos de superación sobre las TIC. Se identificaron potencialidades en el orden subjetivo como es la voluntad de superarse, el apoyo de los directivos para favorecer el proceso, el aseguramiento material del sistema y la infraestructura logística para acometer las acciones de mejoramiento del desempeño.
Conclusiones: el diagnóstico permitió identificar problemas y potencialidades del objeto estudiado. Se propone una alternativa propia de las ciencias de la educación médica para resolver el problema científico, que es la elaboración de una estrategia de superación profesional.

Palabras clave: Desempeño Profesional; Fractura Dentoalveolar; Atención Estomatológica.

INTRODUCTION

Science, technology, and society are evolving dizzyingly; man is breaking paradigms faster than in the last century. One process that enables evolution in science is self-improvement, which increases and improves the professional performance of human capital, a research subject for many authors.[1]

Higher education has demonstrated its capacity to benefit society's progress.[2] It is defined as "...all types of training or research training at the post-secondary level, provided by universities or other educational establishments that are accredited by the competent state authorities as institutions of higher education".[1,3]

In Cuba, Higher Education is favored by a broad and organized educational system. In this context, Medical Education is developed by integrating the university into the health system,[3] facilitating the fulfillment of its substantive functions from the services. This process takes place in two stages: undergraduate and postgraduate. The former begins the preparation for the graduation of a professional.[4] In contrast, the postgraduate guarantees the relevance of the professionals and promotes permanent education through academic training and professional improvement; the latter aims to systematically update university graduates, improve performance, and enrich the cultural heritage.

The development of postgraduate teaching-learning processes is currently one of the least explored areas in scientific research. Therefore, it requires consistent systematization that provides innovations based on the most urgent needs, especially if these are focused on solving a health problem.[5] Professional development is integral to so-called permanent or continuing education to improve health professionals' skills.

The Professional Improvement System in Cuba began to be implemented in 1976 with the creation of the Ministry of Higher Education (MES). Different forms were developed to complement or update knowledge and skills (courses and training), reorientation, or specialization (studies and professional specialization programs), the latter only in medical sciences.[6] The continuous scientific and technical development in this area requires

health professionals to update new content and complement the knowledge acquired during their studies while also professionalizing their human resources to address the deficiencies and problems identified in their level of competence during their work performance.[7] In this sense, it is recognized as a way that allows professionals to deepen their knowledge and skills or to solve insufficiencies on specific subjects, which will redound to their benefit and that of the community with a resolutive approach that has an impact on the improvement of the quality of life of the population being served.

In the exploration carried out in the printed and digital scientific literature, different aspects are addressed in which professional improvement has been investigated based on the need for continuous individual professional development for the maintenance and improvement of the degree of competence;[8] the need for permanent updating of stomatologists due to the rapid obsolescence of knowledge,[9] and the need for preparation in specific subjects of each specialty that they have not received either in undergraduate or postgraduate studies,[10] or that the difficulties in postgraduate training are reflected in the modes of action and in professional performance to satisfy the needs of society.[11]

In this analysis, a significant idea emerges: the need to improve the professional performance of the specialist in General Comprehensive Stomatology which, in the case of the work of the stomatologist, requires the understanding of an increasingly complex and comprehensive preparation, demanding a multidimensional analysis of reality. The existence of an approved and widely accepted conceptual framework of what constitutes good professional performance is a requirement for shaping the training of Comprehensive General Stomatologists (CGS) in that direction in an exercise of collective reflection and generating in specialists the level of learning expected through continuous improvement.[12]

Professional development aims to develop the subject for their professional and human betterment. Its objectives are to expand, perfect, update, and complement knowledge, skills, and abilities, consolidate values, and promote development and modes of professional action.

In 1993, the specialty of Comprehensive General Stomatology emerged for three years, being modified in 2003 to two years. The specialist must carry out health actions such as promoting, preventing, diagnosing, dispensing, treating, rehabilitating, referring, and inter-consulting clinically and socially. Through these actions, they should diagnose and treat in their community, but this is often not the case, which causes the signs and symptoms that accompany these conditions to worsen.[13, 14] In order to respond efficiently to any of the exit profiles of this graduate, it is essential to have a good professional performance in the corresponding stomatological procedures of the EGI, which is in line with the satisfaction of the ever-increasing needs and demands of society.[14]

The EGI needs to continue updating knowledge and consolidating skills and values in primary care through different forms of improvement, thus contributing to adequate performance and elevating the quality of life. Oral trauma is a subject taught at the undergraduate level, and once graduates have completed the specialty of Comprehensive General Stomatology, one of their duties is to attend to this stomatological emergency, which they must know how to treat, refer, and follow up in Primary Health Care (PHC).

In the printed and digital scientific literature examination, no research was observed on professional improvement of the EGI for the care of dentoalveolar fractures (FDA). Still, research was seen related to other aspects within the field of professional improvement of the EGI, among which the following stand out: improvement to modify the current state of knowledge on the health administration of stomatological service managers.[15] The implementation of a professional development program in teaching based on the demands and particularities of the teaching-learning process in Stomatology.[16] and periodontal care for older people. In the latter, it is defined that professional performance for the EGI is of special importance through the theory of Advanced Education, which promotes the procedures and methods that can enable better performance.[17]

Currently, the incidence of acute dental fractures in the population treated at the Hermanos Cruz Teaching Polyclinic constitutes one of the causes of tooth loss and aesthetic, functional, and psychological sequelae in these patients. Therefore, it is necessary for the EGI to improve in the care of this type of trauma to reduce these indicators through the improvement of this specialist's professional performance.

This subject is beginning to be taught at the undergraduate level, it is reaffirmed during the training of the general medical internist, and it is in the improvement of this subject that the actions are focused on achieving the best performance of the professionals in primary health care as a process where significant learning is developed to achieve the treatment of acute abdomen. The aforementioned scientific research, the limited bibliography found, and the author's experiences as a researcher allowed him to appreciate a gap in the knowledge of the EGI for the care of patients with ABD.

An important aspect of supporting the professional development process of human resources in the health sector is identifying learning needs. Knowing these is essential to guaranteeing the quality of professional development programs, in any of their variants.

The insufficient preparation of nursing technicians for the treatment of ABD manifests in irregularities in professional performance during this condition's treatment. For this reason, alternatives must be sought that enable professional development with a view to improving performance. It is necessary to use integrated

postgraduate forms that allow nursing technicians to develop actions focused on the care of ABD through the systematic updating of knowledge and skills.

The background and situations identified made it possible to establish the contradiction between the results of the therapeutic actions carried out under the FDA's care and the systemic and systematic nature of the professional improvement activities related to improving the EGI's performance in this area.

This is based on the following scientific problem: What is the current state of evaluating the professional performance of the EGI in the FDA's care?

This research offers the basis for an ongoing master's thesis on the development of a strategy for improving the professional performance of the EGI in the treatment of dentoalveolar fractures. The strategy is based on the foundations conceived and contributes to improving the performance of this specialist through a system of actions.

For this reason, the objective of this work is to diagnose the current state of the evaluation of the professional performance of the EGI for the FDA's care in the "Hermanos Cruz" Teaching Polyclinic in Pinar del Río.

METHOD

An educational research study was carried out in the field of medical education. It was conducted in the stomatology department of the "Hermanos Cruz" Teaching Polyclinic from December 2022 to December 2024. For the study, the population of 35 stomatologists specializing in IMS who were actively working in the stomatology department of the "Hermanos Cruz" Teaching Polyclinic and in the extensions of the stomatology services provided by this institution, located in the Briones, Ovas and Conchita popular councils, as well as in educational institutions such as the "Manuel" Faculty of Pedagogical Sciences, was considered. Hermanos Cruz" and in the extensions of the stomatological services that this institution attends to, located in the popular councils Briones, Ovas and Conchita, as well as in educational institutions such as the Faculty of Pedagogical Sciences 'Manuel María de Mendive,' Vocational Pre-University 'Federico Engels', Pre-University 'Antonio Guiteras,' EIDE 'Ormani Arenado,' during the period of the investigation.

From the dialectical-materialist conception, the following theoretical methods were used:

Historical-logical: It allowed an analysis of the historical evolution of the object of study and the field of research through the evaluation of the different theoretical positions of national and foreign researchers, as well as the analysis of the professional performance of the IMS from the perspective of the Medical Education Sciences, in the care of the ADR.

Documentary analysis: Different bibliographic sources were studied, referring to the Sciences of Medical Education and regional and national guidelines for the care of AHF, as well as the medical records of the affected patients, which made it possible to gather information related to their treatment and to determine the critical aspects in the process of overcoming AHF to treat the disease.

Analytic-synthetic: Used in all stages of the research, it allowed us to corroborate the relationships established between the categories and summarize the information, facilitating the arrival of conclusions for the construction of the proposed Overcoming Strategy.

Systematization: Based on the analysis carried out by other authors of the professional improvement and performance of the EGI for care during the treatment of the FDA. It made it possible to establish regularities, standards, and general features and identify relationships in the approaches used as theoretical references in historical background research. It contributed to enriching, updating, and broadening knowledge about improvement from the conceptions of Medical Education, Education at Work, and Lifelong Learning. It allowed for the confrontation of other criteria, which, together with one's own, contributed to the construction of the variables, indicators, and instruments applied in the research and the theoretical bases of the proposed strategy.

Induction-deduction: assessing the specific characteristics of the object of study and inferring generalizations.

Systemic-structural-functional: It allowed us to consider the links and relationships of coordination, subordination, and hierarchy established between the strategy's components. It enabled the analysis of the professional improvement process with a systemic conception in the parameterization process and in the design of the proposal itself.

Modeling allows us to conceive the process of abstraction for designing the structure of the Upgrading Strategy to improve the professional performance of the EGI in the FDA's care.

Empirical level

Scientific observation is used to verify the level of professional performance of the EGI in care during the FDA treatment based on their knowledge, skills, and values.

Survey: This was used for the self-assessment of the EGI specialists and for the assessment of the performance of the maxillofacial surgeons, which facilitated the elements of diagnosis by identifying problems and potential.

Interview with managers: it was applied to the Provincial and Municipal Head of Stomatology, Head of the Provincial Chapter of EGI, Director and Head of Postgraduate Studies in Stomatology, Head of the Provincial

https://doi.org/10.56294/mw2025217

Group of Maxillofacial Surgery, Head of the Department and Teaching Coordinator of the "Hermanos Cruz" Teaching Polyclinic in the province of Pinar del Río, to estimate their criteria on the subject.

Performance test: This was designed to assess general stomatologists' current state of professional performance.

Interview with experts on the subject: Consultant professors and assistants of the Stomatology degree in Pinar del Río.

RESULTS

Analysis of the survey of General Dentists

It was applied to the 35 GDs to identify the cognitive needs in the techniques for the care of patients with DMF and the motivation and awareness to improve.

In the question responding to the care dimension, referring to knowledge of FDA risk factors related to indicator 1.1, 17 % of the IGEs report that they have a good command of these factors, 14 % state that they have a partial command of these factors, and 69 % of the respondents stated that they do not have a good command of identifying the risk factors for FDA.

Regarding independence in classifying dentoalveolar trauma related to indicator 1.2, 77 % stated that they are not capable of classifying it. A similar result was obtained when analyzing indicator 1.3, which refers to the level of independence in the FDA's clinical diagnosis.

According to indicator 1.4, when referring to independence in the FDA's reduction and splinting skills, 66 % stated that they lack skills, 20 % have few skills, and 14 % have skills.

Indicator 1.5, which measures the interpretation of radiographic data, found that 30 % do not have a good grasp of interpretation, 50 % said they have a partial grasp, and 20 % said they have a good grasp.

However, about the therapeutic integration of ABD by indicator 1.6, 90 % do not consider it necessary, and 10 % do consider it essential.

In the question corresponding to the research self-improvement dimension, referring to the use of research results in the care of patients with FDA, related to indicator 2.1, 100 % of those surveyed agreed that they did not use the results of research work in the care of patients with this trauma.

A similar result was obtained when asked about the frequency of participation in the different organizational forms of professional development. (Related to indicator 2.2).

In the question referring to the realization of self-improvement in topics related to the care of patients with FDA (related to indicator 2.3), 80 % answered that they do not self-improve in this trauma, and 20 % said that they sometimes self-improve in these entities. Regarding the frequency of publication in scientific journals (by indicator 2.4), 100 % of those surveyed responded that they do not publish.

Regarding participation in ICT training courses (in accordance with indicator 2.5), 74 % responded that they do participate in these courses, and 26 % said that they sometimes do.

Concerning the educational dimension, the question referring to the ability to communicate related to indicator 3.1 found that 70 % agreed that they achieved assertive communication in practical activity, and 30 % stated that they partially mastered this aspect.

In the question referring to the orientation that the patient with DFU receives according to indicator 3.2, 70 % responded that they orient the patient adequately, and 30 % said that they do it briefly.

75 % stated that they do not carry out health promotion and prevention activities related to ABD care in accordance with indicator 3.3, while 25 % said that they do carry out these educational activities.

The question corresponding to the managerial dimension, referring to the domain of decision-making, related to indicator 4.1, 25 % stated that they dominate this aspect. In comparison, 75 % reported having partial mastery in decision-making related to this dentoalveolar disease.

When asked about their ability to achieve human relations and an acceptable working environment, about indicator 4.2, 60 % said they were proficient in this area, and 20 % said they were partially proficient in maintaining a suitable working environment. In comparison, 20 % said they were not skilled in achieving suitable human relations.

When exploring the level of mastery in achieving critical demand and self-criticism related to indicator 4.3, 50 % said they had mastered this aspect, 20 % said they had partial mastery in critical demand, and 30 % said they did not have the mastery to achieve these demands.

Regarding the ability to work in a team with other specialists, indicator 4.4 showed that 51 % of those surveyed said they were proficient in this area. In comparison, the other 49 % said they were not proficient in teamwork.

The question corresponding to the professional and human behavior dimension, referring to the ability to maintain discretion about patient information, related to indicator 5.1; 75 % reported having mastery in this field, and 25 % expressed having little mastery to keep the necessary discretion about patient-related facts. A similar result was obtained when asked about the ability to empathize in the dentist-work-colleague relationship (related to indicator 5.3) and to apply the norms of bioethics and professional ethics (related to

https://doi.org/10.56294/mw2025217

indicator 5.4).

When asked if they could empathize in the dentist-patient-family relationship, in accordance with indicator 5.2, 51 % said they could, while 49 % said they could not.

In the results obtained in the dimensions of care and research improvement, 85 % of those surveyed rated the professional performance of the EGI in the care of patients with the FDA as inadequate. The educational, managerial professional, and human behavior dimensions showed similar behavior on the inadequate scale among 45 and 50 % of those surveyed.

In the comprehensive assessment of the survey variable, 60 % of the study universe rated EGI's professional performance in treating patients with the FDA as inadequate.

Analysis

Performance was observed using the observation guide in the emergency rooms where the EGIs who made up the study population work.

In the care dimension, when analyzing indicator 1.1, which refers to the independence to identify the risk factors of dentoalveolar trauma, 10 % of the IGEs were observed to have a good command of these factors, 20 % had a partial command of these factors, and 70 % had no command of these factors.

Indicator 1.2 highlights that 51 % of the IMGs did not demonstrate mastery of the classification of dentoalveolar trauma. A similar result was observed when analyzing indicators 1.3 and 1.6.

When analyzing indicator 1.4, 85 % of the IMGs did not demonstrate mastery of independence in the FDA reduction and splinting skills. However, 15 % of the IMGs had a good command of this technique.

When evaluating indicator 1.5, 29 % of the IMGs showed no command of the interpretation of radiographic data, and 51 % showed little command. However, 20 % showed a good command of this technique.

In the dimension of research and self-improvement, when analyzing indicator 2.1, the use of research results in caring for patients with AIS was not observed in 100 % of the IMGs. A similar result was obtained when analyzing indicators 2.2 and 2.4 related to the participation of IMGs in the different organizational forms of professional improvement on this trauma and publication in scientific journals.

The analysis of indicator 2.3 showed that in 90 % of the EGI, there was no evidence of self-improvement in matters of care for patients with FDA, and in 10 %, there was little evidence of self-improvement in this area.

The analysis of indicator 2.5 revealed that 80 % of the IMSs participated in ICT improvement courses, and in 20 %, there was little participation.

In the educational dimension, the analysis of indicator 3.1 showed that 70 % of the IMSs had a level of communication, and 30 % had a low level. When assessing the orientation that the DFA patient receives with indicator 3.2, it was observed that 70 % of the IMS orient the patient adequately, and 30 % do so briefly. Indicator 3.3 showed that health promotion and prevention activities were observed in 25 % of the IMSs and that these activities were not observed in 75 %.

Derived from the analysis of the managerial dimension, indicator 4.1, referring to the level of decision-making in terms of care for patients with DFA, was observed in 25 % of the IMSs, and in 75 %, this aspect was partially observed. According to the level of development of human relations and collective working environment in indicator 4.2, it was observed that 60 % of the IMS have this aspect; in 20 %, this aspect analyzed was observed little. In 20 % of the cases, the capacity to achieve an adequate working environment was not observed.

When analyzing indicator 4.3, it was observed that 51 % of the EGI have a good level of critical demand. In 30 %, partial mastery is observed in this aspect. In 14 %, there is no critical demand. According to indicator 4.4, it was observed that 51 % of the IMS have the ability to develop teamwork, and in 49 %, no ability to develop teamwork was observed.

In the professional and human behavior dimension, according to indicator 5.1, which assesses the level of discretion maintained regarding patient information and situations, it was observed that 75 % of the IMSEs comply with these ethical values. In comparison, in 25 %, this aspect was poorly observed in their professional performance. About indicator 5.2, it was observed that 45 % of IGEs have the independence to achieve empathy in the dentist-patient and family relationship; in 55 %, this analyzed aspect was not observed.

According to indicator 5.3, it was observed that 40 % of the IGEs have the independence to achieve empathy in the stomatologist-work colleague relationship, and in 60 %, this relationship was not observed. In indicator 5.4, it was observed that 55 % of the IGEs apply bioethics and professional ethics, and in 45 %, the application of these norms was not observed.

When applying the evaluation scale, the results obtained in the care dimension were inadequate since none of the IGEs observed showed mastery of the skills being investigated. In the dimension of self-improvement, it was observed that only 10 % of the total carried out self-improvement activities, which is why it was rated as inadequate on the scale. In 51 % of the study universe, deficient professional performance of the EGI was observed in the care of patients with FDA in the educational, managerial, experienced, and human behavior dimensions.

For the comprehensive assessment of the variable, the arithmetic mean was applied to the results of the

five dimensions, which qualified on the assessment scale as inadequate level since only 25 % of the total showed mastery of the skills and knowledge necessary for the care of patients with FDA and carried out activities for the sake of improvement.

Assessment of the results obtained with the performance test for the initial diagnosis

It was applied to the 35 IMGs of the "Hermanos Cruz" Teaching Polyclinic, which comprise the study population, to identify the knowledge, skills, and cognitive needs to provide care to patients with BPS.

The results obtained from the analysis of the Care dimension in indicator 1.1, related to the level of independence in identifying risk factors for the FDA, showed that 30 % of the IGEs achieve occasional independence in identifying risk factors for the FDA. In 70 % of the examinees, the identification of risk factors for this trauma is deficient, and they did not act with the necessary independence.

In the analysis of indicator 1.2, 100 % of the IMGs evaluated could not classify dentoalveolar trauma, an aspect that negatively impacts the diagnosis of dental trauma. A similar result was obtained when evaluating indicators 1.3 and 1.6, related to independence in the clinical diagnosis of dental trauma and independence in the therapeutic integration of dental trauma.

When evaluating indicator 1.4, 90 % of the IMGs did not have reduction and splinting skills for ABD, and 10 % had difficulties performing this technique. In the analysis of indicator 1.5, 70 % of the IMGs evaluated the interpretation of radiographic data, and 30 % achieved occasional independence in identifying radiographic data.

The results obtained in the analysis of the Research dimension indicate that, in indicator 2.1, 100 % of the evaluated IMS did not use the research results in the care of patients with DFA. These results coincided with the analysis of indicators 2.2, 2.3, 2.4, 2.5, 2.6, and 2.8, corresponding to participation in different organizational forms of professional development about ACP care and publication in scientific journals.

In indicator 2.7, 90 % of those evaluated never self-improved in ACP issues. In indicator 2.9, 80 % of those evaluated systematically participated in ICT improvement courses.

The results obtained when analyzing the educational dimension in indicator 3.1 show that 60 % of those evaluated demonstrated excellent communication with patients, family members, and coworkers. The ability to guide the patient with the FDA is shown in indicator 3.2, in which it was found that 70 % of those evaluated need preparation to develop this function. 25 % of those evaluated only occasionally carried out health promotion and prevention activities with patients and students, and 75 % did not carry out these educational activities by indicator 3.3 of this dimension.

The results obtained from the analysis of the management dimension showed that 70 % of those evaluated did not make decisions related to the FDA, according to indicator 4.1. In indicator 4.2, 55 % of those evaluated reported good communication with their coworkers, and 35 % had communication problems. In contrast, in indicator 4.3, 50 % of those evaluated were critical, self-critical, and demanding of themselves and their group, and the other 50 % did not always recognize the accusations made against them. When evaluating indicator 4.4, it was found that 50 % of those evaluated frequently carried out teamwork activities.

The results obtained from the Professional and Human Behavior dimension, indicator 5.1, showed that 45 % of those evaluated had a very good ability to maintain discretion about patient information with a respectful attitude, while 25 % had difficulties in this aspect.

45 % of those evaluated in indicator 5.2 showed an excellent capacity to achieve empathy in the stomatologist-patient and family relationship, and 30 % had difficulties. In indicator 5.3, 40 % of those evaluated demonstrated a fantastic ability to achieve empathy in the stomatologist-work-colleague relationship, while 25 % had problems achieving this.

In indicator 5.4 on the ability to apply the norms of bioethics and medical ethics in their professional work, 15 % had difficulties.

The care dimension was rated as inadequate, as 90 % of those evaluated did not demonstrate mastery of skills in FDA reduction and splinting techniques, 70 % in identifying risk factors for dentoalveolar trauma, and the clinical diagnosis of the FDA. Regarding the research self-improvement dimension, only 10 % carried out self-improvement activities, which is why they scored inadequate on the scale.

The educational dimension scored at an inadequate level since only 34 % of the total showed mastery of the skills that were investigated. The managerial dimension was rated as insufficient since only 40 % of the total showed mastery of health management skills related to the FDA. The professional and human behavior dimension was also rated as inadequate on the scale since only 45 % of the examinees showed ethical and bioethical values with high commitment to the profession and society. The comprehensive assessment of the variable revealed that the professional performance of the nursing team in caring for patients with ABD was rated as inadequate by 60 %.

Based on the systemic structural-functional method and by analyzing the results of the instruments applied in this research, facilitated methodological triangulation to group and compare the data that show the current state of the professional performance of the EGI in the care of patients with FDA as the only variable of the

research, based on the dimensions studied, which shows the most significant impact in the dimensions of Care and Research Improvement.

Ruiz et al., explain the importance of triangulation in educational and social research. Triangulation aims to reinforce the veracity of the results through their convergence or divergence. Several types of triangulation are described, including data, researcher, theoretical, methodological, and multiple triangulation.

Discussion:

Different methods are used to gather information about the phenomenon under study, sharing the same research objective, contrasting the results, and analyzing the coincidences and differences. In the research, methodological triangulation is applied using different methods, techniques, and methodological strategies (quantitative and qualitative) based on the survey of general stomatologists, the observation guide, and the initial performance test.

The variable's integral behavior was analyzed by instrument in the initial diagnosis. As can be seen in figure 1, shows that the variable is evaluated as inadequate between 60 % and 65 % in the three instruments applied.

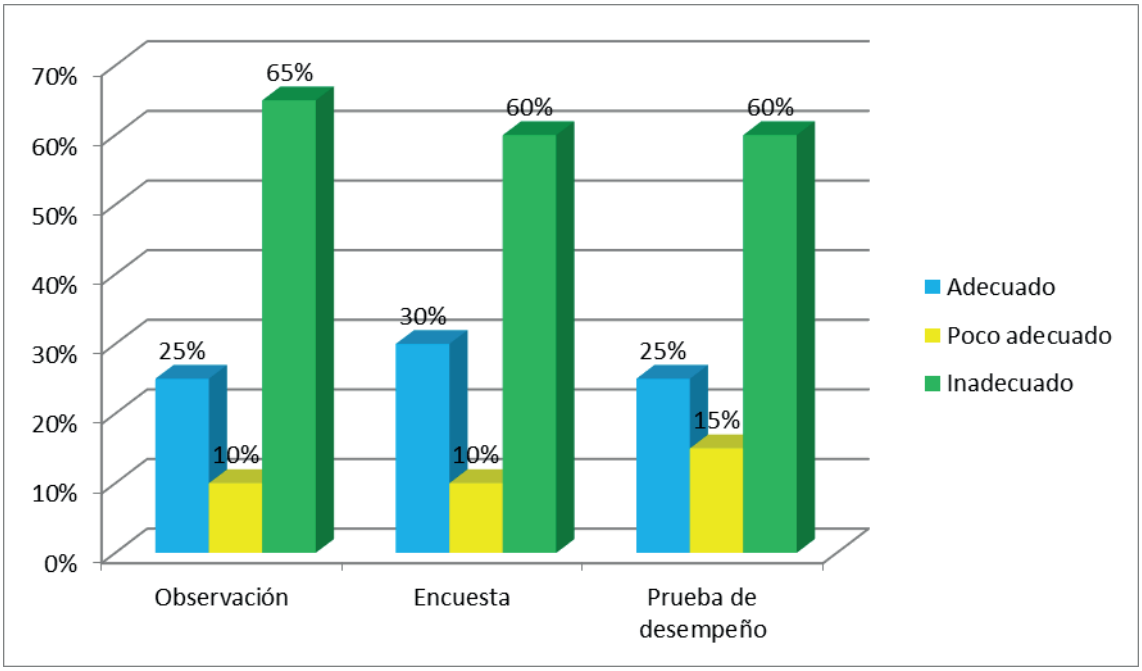

Figure 1. Distribution of the variable by instrument

The professional performance of the EGI in the care of patients with ABD, taking into account the values obtained by the three instruments, was inadequate in 65 % of the evaluations, as can be seen in figure 2.

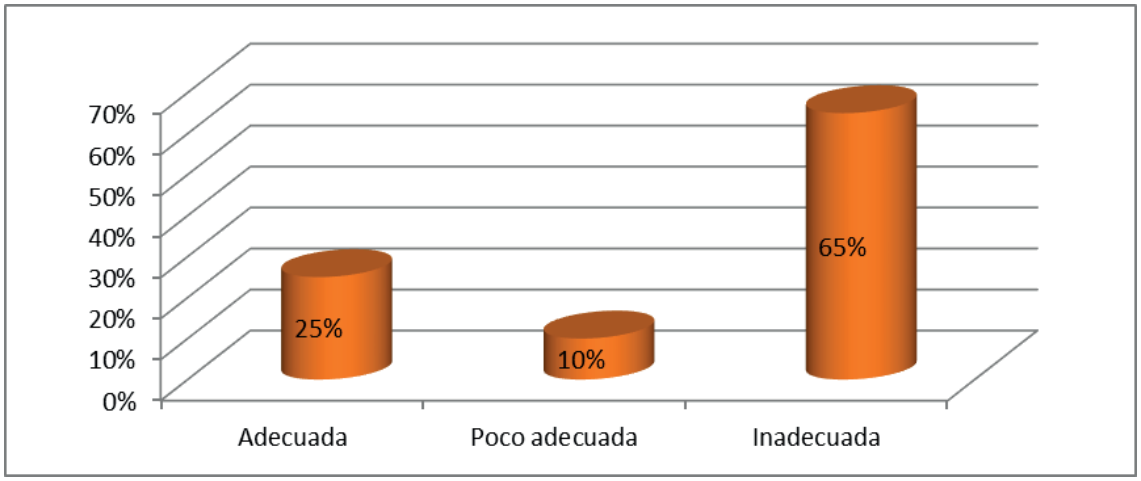

Figure 2. Distribution of the variable

In applying this procedure, it was identified that the general medical practitioners responsible for caring for patients with ABD at the "Hermanos Cruz" Teaching Polyclinic in Pinar del Río have shortcomings in their professional performance, and there are few opportunities for improvement that would allow them to update

https://doi.org/10.56294/mw2025217

and deepen their knowledge of this trauma. It was determined that the most significant deficiencies are focused on specific techniques for reduction and splinting of the ABD, scarce investigative skills, and participation in improvement activities.

The following decision rule is used to identify the proposed levels:

- If the indicator obtains an adequate level between (90 % and 100 %), it is considered a potentiality.
- If the indicator obtains a level that is not very adequate in the instruments applied between (70 % and 89 %), it is considered an aspect of development.
- If the indicator obtains an inadequate level in the instruments applied (less than 69 %), it is considered insufficiency.

This procedure helped in the research to make an inventory, where a group of insufficiencies and potentialities are identified in the diagnosis of the current state of the EGI's professional performance in the care of patients with DFA.

The survey results applied to the EGI indicate that the most significant weaknesses are in the dimensions of Care, Research, Improvement, and Education. However, in the dimensions of Management and Professional and Human Behavior, most indicators are considered to be aspects of development.

The results obtained in the observation guide and the initial performance test indicate difficulties linking theory with practice in on-the-job training. When patients with DFA show deficiencies in the application and interpretation of radiographic data, the clinical-epidemiological and therapeutic methods are insufficiently applied. The scarce correspondence between the professional training received by general dentists and the need to improve care for patients with dental trauma is revealed.

In summary, from this analysis, the following can be identified as professional shortcomings:

In the Care dimension, they have inaccuracies in identifying risk factors for DFU, difficulty in classifying dentoalveolar trauma, clinical diagnosis, the technique of reduction and splinting DFU, the interpretation of radiographic data, and therapeutic integration of DFU.

In the Research Improvement dimension, they have little motivation for organizational activities related to improving their knowledge and skills and self-improvement. There is little interest in publishing in scientific journals, which leads to little scientific production related to the care of patients with UADs.

In the Educational dimension, they have difficulties providing guidance to patients and families and carrying out educational activities on UADs. The level of communication is considered an aspect of development.

In the management dimension, they have insufficient knowledge for decision-making regarding the FDA. Aspects considered to be in development are the ability to develop teamwork, maintain flexible human relations through affective dialogue, and maintain critical demand.

In the dimension of Professional and Human Behavior, aspects under development are considered to be the level of maintaining discretion regarding patient information, the ability to achieve empathy in the dentist-patient and family relationship, the ability to achieve empathy in the dentist-work colleague relationship, and the level at which the application of bioethics and professional ethics is manifested.

The potential for improvement identified in the performance of the IMSs was frequent participation in ICT training courses, indicator 2.9 of the Research and Development dimension. Potential for improvement was identified in the subjective order, such as the will to improve, the support of managers to encourage the process, the material assurance of the system, and the logistical infrastructure to undertake performance improvement actions.

CONCLUSIONS

The diagnosis results led the author to take stock of the shortcomings and potential in the professional performance of general dentists in their care of patients with ULD, which is the variable under study. The way to solve the problem is through a Professional Improvement Strategy modeled to provide a solution to the scientific problem posed.

BIBLIOGRAPHICAL REFERENCES

1. Basain Valdés J M, Fernández Oliva B, Valdés Alonso M C, Garí Herrera Y I. A Professional Improvement Strategy for the Comprehensive Care of the Patient with Type 1 Diabetes Mellitus. REMS [Internet]. 2023 Dic [citado 2025 Feb 17]; 37(4). Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21412023000400003&lng=es

2. López Espinosa G J, Valcárcel Izquierdo N, Yera Alós I B, Pérez de Armas A M, Rodríguez Cruz O, de Armas Molerio I de la C. Fundamentos que sustentan la estrategia de superación profesional para la atención médica integral al trabajador. EDUMECENTRO [Internet]. 2023 [citado 2025 Feb 17]; 15: .Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2077-28742023000100021&lng=es

3. Enríquez CJO, Cabrera CL, Cabrera GAG. La profesionalización pedagógica y su necesidad en los docentes de la educación médica cubana. EduMeCentro. 2021; 13(2):287-300. Disponible en: https://www.medigraphic.com/cgibin/new/resumen.cgi?IDARTICULO=106805

4. Marin Muñoz MA. Determining the cost-benefit ratio of financial advice in the implementation of sustainable practices in the cultivation of turmeric long. Enviromental Research and Ecotoxicity. 2022; 1:13. https://doi.org/10.56294/ere202213

5. Del Rio Pérez O, Fernández Duharte J, González Purón M. Superación profesional de los docentes de enfermería para el desarrollo de su cultura pedagógica. MEDISAN [Internet]. 2023 Oct [citado 2025 Feb 17]; 27(5). Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192023000500014&lng=es

6. Guamán Gómez V J, Espinoza Freire E E. Problem-based learning for the teaching-learning process. Revista Universidad y Sociedad [Internet]. 2022. [citado 2025 Feb 17], 14(2), 124-131. Disponible en http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2218-36202022000200124&lng=es&tlng=en.

7. Santana Martínez L, Toledo Fernández AM, Coello Santana S, Morales Maya M J. Algunas consideraciones sobre la superación permanente de los profesionales de salud en Cuba. REMS [Internet]. 2024 [citado 2025 Feb 17]; 38. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21412024000100016&lng=es

8. Almirón Cuentas JA. Bernedo-Moreira DH. Bioclimatic Design in Modern Architecture: Towards a Greener, More Resilient Future. Enviromental Research and Ecotoxicity. 2024; 3:103. https://doi.org/10.56294/ere2024103

9. Arboleda JC, editor. Libro La educación médica en Matanzas: dinámica de la relación universidad -sociedad [Internet].New York: REDIPE; 2020 [citado 24/11/2021]. Disponible en: Disponible en: https://redipe.org/wp-content/uploads/2021/03/cidep-2020-2-parte-v.pdf

10. Martín Zurro A. Compendio de Atención Primaria. Docencia en atención primaria y medicina de familia [Internet]. 2 ed. España: Editorial Elsevier; 2018 [citado 15/11/2022]. Disponible en: https://edimeinter.com/catalogo/medicina-familiar/atencion-familiar-salud-comunitaria-2a-edicion-2018/

11. Galli A, Mastandueno R, Enríquez D, Flichtentrei D. Estrategias de educación médica continua. FEM [Internet]. 2015 [citado 15/11/2020]; 18 (4): 247-251. Disponible en: Disponible en: https://scielo.isciii.es/pdf/fem/v18n4/original2.pdf

12. Gambino Nodarse D. Conocimientos del sistema de peritaje médico laboral en la formación médica. Rev Cubana de Salud y Trab [Internet]. 2012 [citado 30/03/2020]; 13(3):16-20. Disponible en: http://bvs.sld.cu/revistas/rst/vol13_3_12/rst03312.pdf

13. Almirón Cuentas JA, Bernedo-Moreira DH. Designing Spaces for Learning: The Role of Architecture in Education. Land and Architecture. 2023; 2:54. https://doi.org/10.56294/la202354

14. Díaz Díaz A A. Modelo de evaluación de los procesos formativos de los residentes de Medicina General Integral [Tesis de opción al grado de Doctor en Ciencias Pedagógicas]. Universidad de Ciencias Pedagógicas "Enrique José Varona". La Habana; 2012. Disponible en: http://scielo.sld.cu/scielo.php?pid=S168418242024000100052&script=sci_arttext&tlng=pt

15. Rivero Morales A, Hernández Linares E E, Martí Núñez Ao Erasmo, Mesa Ridel G. Desempeño profesional del equipo básico de salud en reducción de desastres con enfoque "Una Salud". Rev Cub Sal Públ [Internet]. 2022 Jun [citado 2025 Feb 17]; 48(2): .Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662022000200011&lng=es

16. Almirón Cuentas JA, Bernedo-Moreira DH. Multisensory Design in Education: How Architecture Enhances the Learning Experience. Land and Architecture. 2024; 3:104. https://doi.org/10.56294/la2024104

17. Betancourt Valladares M, Bermejo Correa Rolando M, García González M C, Betancourt Gamboa K. Análisis histórico de la enseñanza- aprendizaje de las ciencias básicas biomédicas y su integración en Estomatología. Rev Hum Med [Internet]. 2022 Abr [citado 2025 Feb 17]; 22(1): 103-125. Disponible en: http://scielo.sld.

cu/scielo.php?script=sci_arttext&pid=S1727-81202022000100103&lng=es

18. Paneque GMR, Torres MVE, Pérez BBR, et al. Evolución histórica del proceso enseñanza aprendizaje en Atención integral a la Familia II. Mul Med. 2021; 25(5). Disponible en: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=111496

19. Pérez Vázquez I A, Mellado Lezcano I. Estrategia educativa de superación en administración de salud para directivos de servicios estomatológicos. Infodir [Internet]. 2022 Abr [citado 2025 Feb 17]; (37). Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1996-35212022000100009&lng=es

20. Enríquez CJO, González HG, Cobas VME, et al. Implementación de un programa de superación profesional sobre Didáctica en docentes noveles de Estomatología. EduMeCentro. 2021;13(3):180-195. Disponible en: https://www.medigraphic.com/cgi-bin/new/resumen.cgi?IDARTICULO=108938

21. Peña Sisto M, Robinson Rodríguez R J, Alí Pérez N A, Peña Sisto L A. Level of knowledge and needs for improvement in periodontal regenerative medicine with blood components. EDUMECENTRO [Internet]. 2022 [citado 2025 Feb 17]; 14. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2077-28742022000100111&lng=es

FINANCING

The authors did not receive any funding for the development of this research.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

CONTRIBUTION OF AUTHORSHIP

Conceptualization: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Data curation: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Formal analysis: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Research: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Methodology: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Project management: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Resources: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Supervision: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Validation: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Visualization: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Writing - original draft: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.
Writing - revision and editing: Gilberto Carlos Corbillón Labrador, Nadina Travieso Ramos, Litney Corbillón Labrador.