



ORIGINAL ARTICLE

## Training Ecuadorian specialists of family and community medicine in Caumatology. Present and improvement

Preparación a especialistas ecuatorianos de medicina familiar y comunitaria en Caumatología. Presente y mejora

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**Received:** September 08, 2024

**Accepted:** September 18, 2024

**Published:** September 21, 2024

**Citar como:** Lema-Balla JC, García-Muñoz JJ, Urbay-Rodríguez M. Preparación a especialistas ecuatorianos de medicina familiar y comunitaria en Caumatología. Presente y mejora Rev Ciencias Médicas [Internet]. 2024 [citado: fecha de acceso]; 28(S2): e6540. Disponible en: <http://revcmpinar.sld.cu/index.php/publicaciones/article/view/6540>

### ABSTRACT

**Introduction:** the preparation of general and community medicine specialists for the care of burn patients in the Ecuadorian context is vital to guarantee comprehensive treatment.

**Objective:** to design a training program for Ecuadorian family and community medicine specialists in Caumatology.

**Methods:** mixed study, with exploratory character that uses quantitative and qualitative educational research methods, among them: documentary analysis, historical-logical, analytical-synthetic, modeling, systemic-structural, register of experiences with the intention of carrying out the search and integrated interpretation of the information gathered on the subject and to be able to determine from the diagnosis the foundations that sustain the structuring of the design of the preparation program that is designed for the improvement of the performance of Ecuadorian specialists in family and community medicine in Caumatology.

**Results:** Ecuadorian specialists in family and community medicine recognize the relevance and timeliness of training in Caumatology for the improvement of their professional practice. The current conceptions of the treatment of the content of Caumatology lack an integrative approach, the use of information and communication technologies, based on the science, technology and society approach. As well as the need to contextualize the algorithm of care in the integral treatment of burn patients (diagnosis, treatment and rehabilitation).

**Conclusions:** the preparation of specialists in family and community medicine in subjects such as Caumatology, with an integral approach to burn patients at the primary health level for the improvement of their professional performance is opportune in the Ecuadorian context.

**Keywords:** Caumatology; Preparation Program; Professional Development.

## RESUMEN

**Introducción:** la preparación de especialistas de medicina general y comunitaria para la atención de pacientes con quemaduras en el contexto ecuatoriano es vital para garantizar un tratamiento integral.

**Objetivo:** diseñar un programa de preparación a especialistas ecuatorianos de medicina familiar y comunitaria en Caumatología.

**Métodos:** estudio mixto, con carácter exploratorio que utiliza métodos de la investigación educativa de corte cuantitativo y cualitativo, entre ellos : análisis documental, histórico lógico, analítico-sintético, modelación, sistémico estructural, registro de experiencias con la intención de realizar la búsqueda e interpretación integrada de la información recopilada sobre el tema y poder determinar a partir del diagnóstico los fundamentos que sustentan la estructuración del diseño del programa de preparación que se diseña para la mejora del desempeño de especialistas ecuatorianos en medicina familiar y comunitaria en Caumatología.

**Resultados:** los especialistas ecuatorianos en medicina familiar y comunitaria reconocen pertinente, oportuna la preparación en Caumatología para la mejora de su práctica profesional. Las concepciones actuales del tratamiento del contenido de la Caumatología carecen de un enfoque integrador, el uso de las tecnologías de la información y las comunicaciones, sustentado en el enfoque ciencia, tecnología y sociedad. Así como la necesidad de contextualizar el algoritmo de atención en el tratamiento integral a pacientes quemados (diagnóstico, tratamiento y rehabilitación).

**Conclusiones:** la preparación de especialistas en medicina familiar y comunitaria en temas como la Caumatología, con un enfoque integral a los pacientes quemados en el nivel primario de salud para la mejora de su desempeño profesional resulta oportuna en el contexto ecuatoriano.

**Palabras clave:** Caumatología; Programa De Preparación; Superación Profesional.

## INTRODUCTION

In Ecuador, it is recognized that Primary Health Care must be the basis for the organization and operation of the National Health System and the comprehensive public health network. From this, it is important to reorient the care model towards strengthening promotion and prevention, equitable and continuous access to comprehensive health services that meet the needs and demands of the population, recognizing and responding to the specificities that arise from ethnic and cultural diversity, the moment of the life cycle, gender and territory.

Currently, the Republic of Ecuador recognizes Caumatology as a medical specialty, integrative and holistic for health problems, using methods for early diagnosis, comprehensive treatment, prevention of complications, and rehabilitation based on traditional medical systems and other therapeutic modalities that are integrated with each other.

In this line of thought, the Ecuadorian government makes great efforts to promote and develop adequate care in the comprehensive treatment of burn patients.

Among other educational policies, the Ministry of Public Health of Ecuador, in order to respond to this demand, incorporated into the curriculum of the Medicine degree the curricular strategy of Caumatology content for the initial and ongoing training of professionals. However, the training scope of professionals, even specialists in family and community medicine, has been dispersed and uneven, which depends essentially on the will of the teachers of some or other subjects.

The theme, focused on the training of specialists in Family and Community Medicine is an essential element and a demand of the World Health Organization (WHO)., of interest to the Ministry of Public Health of the Republic of Ecuador, at the request of the medical authorities of the province Chimborazo, city of Riobamba at the Riobamba Provincial General Teaching Hospital and the Chimborazo Polytechnic School (ESPOCH), Riobamba Ecuador as a commission to graduates of the Latin American School of Medicine based in Cuba.

According to Ramos BN,<sup>(1)</sup> Cuban researcher, the quality of care has to be present in the entire health system, being necessary that the first contact of the individual with the health system through primary care is represented by a service of excellence and its main actor: the Comprehensive General Physician.

Studies carried out by Cuban researchers Igarza-Milian MG and González-Ortega AM,<sup>(2)</sup> They highlight that one of the medical emergencies that occur with prevalence in primary health care are burn accidents, and the main cause is home accidents, considered a challenge for different reasons: their prevalence in daily medical practice, the importance of the skin as the largest organ that regulates the internal environment within all its functions, influencing the quality of life of people, and because in this first attention to the patient, there is no staff trained in this specialty.

The above was corroborated in an analogous way in Ecuador by Lema-Balla JC,<sup>(3)</sup> through scientific research based on his studies as a Master in Educational Sciences and Specialist First Degree in Plastic, Reconstructive and Aesthetic Surgery in Family and Community Medicine. The results of the investigations carried out make it necessary to search for new forms of preparation for Ecuadorian specialists in family and community medicine in Caumatology focused on improvement through postgraduate education.

It is thus recognized the need to promote, from a strategic vision based on the improvement of preparation actions aimed at the professional development of specialists in family and community medicine that respond to the Ecuadorian context, focused on the meaning of the content of Caumatology that enhances the integration of knowledge and the development of skills as basic premises for the improvement of their professional performance in Primary Health Care as the base link of the National Health System of the Republic of Ecuador.

The above implies, in addition to assuming the advances of science and technology, from a didactic perspective, recognizing the subject who learns as the axis of the teaching-learning process; ensuring that learning is meaningful for him and provides him with an education that provides special value to the ethical and moral aspects.

Recognizing the need for training of family and community medicine specialists for the diagnosis, treatment and rehabilitation of patients with burns from Primary Health Care as a problem, the objective of this work is declared: to propose the design of a training program for Ecuadorian specialists in family and community medicine in Caumatology.

## METHODS

The methodology responds to a mixed study, with an exploratory character that uses quantitative and qualitative educational research methods, including: documentary analysis, logical historical, analytical-synthetic, modeling, structural systemic, record of experiences with the intention of carrying out the integrated search and interpretation of the information collected on the subject and being able to determine from the diagnosis the foundations that support the structuring of the design of the preparation program that is designed to improve the performance of Ecuadorian specialists in family and community medicine in Caumatology.

## RESULTS

The results of the diagnosis and the justification of the need for training of Ecuadorian specialists in family and community medicine in Caumatology are established as immediate antecedents to the design of the proposed program.

The integrated analysis of the processing of the information collected on the identified problem allows us to reveal, in summary, the following results on the diagnosis.

Ecuadorian specialists in family and community medicine recognize that training in Caumatology is pertinent and timely for improving their professional practice. Current concepts of the treatment of Caumatology content lack an integrative approach, the use of information and communication technologies, based on the science, technology and society approach.

As well as the need to contextualize the care algorithm in the comprehensive treatment of burn patients (diagnosis, treatment and rehabilitation). The offers of preparation programs that respond to the demands of postgraduate education focused on improving the professional performance of Caumatology specialists are limited or almost non-existent. The use of the potential of health centers and basic hospitals as a resource center for support to the family and the community for the comprehensive treatment of burn patients is not optimal.

In accordance with the guidelines stated above, the need to project the foundation and design of the training program for Ecuadorian specialists in family and community medicine in Caumatology to recognize the postulates of postgraduate education is identified as an immediate antecedent.

One of the organizational forms of postgraduate education is professional development. The Ministry of Higher Education in Cuba recognizes that Professional development aims to contribute to lifelong education and systematic updating of university graduates, the improvement of the performance of their professional and academic activities, as well as the enrichment of its cultural heritage.

López Espinosa GJ et al.,<sup>(4)</sup> point out that professional development - as one of the postgraduate subsystems - achieves relevance to the extent that it is oriented towards solving problems related to the updating and professionalization of human capital in interest in promoting the permanent improvement of man in society, with the with the intention of ensuring their own development and in the area of their performance. Therefore, he programs should be flexible, highlighting the heuristic and developmental value of the improvement activity.

Rodriguez-Aguilar Andand col.,<sup>(5)</sup> reveal that professional development constitutes a set of teaching-learning processes that enable university graduates and workers to acquire and continuously improve the knowledge and skills required to improve the performance of their responsibilities and work functions in different sectors and branches of production, service, art, scientific research and teaching in accordance with the advances in science, technology, art and the economic and social needs of the country.

In this line of thought, the summary that states is interesting Muñoz-Lazo A et al.,<sup>(6)</sup> lead author of the scientific article published in the electronic journal Mendive of the University of Pinar del Río. Cuba on the criteria that characterize professional development.

In recent years, there are several authors,<sup>(4,6)</sup> from different areas of knowledge who have handled the concept of professional development, associating it with continuing education, ongoing, permanent, preparation and training, to refer to the ongoing training of professionals.

In summary, these authors attribute professional development as: a pedagogical process of postgraduate activity focused on ongoing training, systematic updating that contributes to the improvement of professional performance and personal and institutional growth. Therefore, the proposed training program responds to the "Advanced Education" paradigm, aimed at the professional and human improvement of labor and community resources by organizing the improvement in the performance of teachers from the search for alternatives that favor the solution to professional problems that arise in the context of Ecuadorian universities by addressing the care in the comprehensive treatment of burn patients assumed by teachers as managers of the transformations required to address pedagogical diversity.

Añorga-Morales J.,<sup>(7)</sup> defines professional performance as: "the capacity of an individual to carry out actions, duties and obligations inherent to his or her position or professional functions required by a job. This is expressed in the actual behavior or conduct of the worker in relation to the other tasks to be performed, during the exercise of his or her profession."

These postulates prove that the value of today's societies is directly related to the level of education of their citizens, and their capacity for innovation and entrepreneurship.

But knowledge, nowadays, has an expiration date and this forces us now more than ever to establish formal and informal guarantees so that citizens and professionals constantly update their skills. We have entered a society that demands that professionals engage in ongoing training and learning.

From a philosophical point of view, the program is based on the dialectical materialist conception enriched by Martí's thought with emphasis on the principles that govern the professional activity of the specialist in family and community medicine in a harmonious and flexible way, starting from specifying the relationship between knowledge and practice from the theory of knowledge, which guides the logic of change and transformation that occurs in the activity seen as a source of development of the subject.

Of special significance are the foundations of Ecuadorian pedagogy published in 2016 as a scientific article in the journal *Universidad: "Epistemological problems of Ecuadorian pedagogy"*, due to the significance of the study carried out by the authors in declaring the following laws:

- Law of the relations between the economic, social and political model of the Republic of Ecuador and the aims and objectives of the pedagogical process.
- Law of unity between instruction – education and training – development in the pedagogical process.
- Law of unity between theory and practice in the pedagogical process.
- Law of the interrelation of the social order with the individual particularities of the actors in the pedagogical process.

The authors of this study recognize, in line with the previous analysis, the value of Didactics as a science, and therefore it shares, due to its projection and power of synthesis, the two laws stated by the Cuban researcher Alvarez de Zayas:<sup>(8)</sup> The first law of didactics is that of the relations of the teaching-educational process with the social context: The school in life, the second law of didactics is that of the internal relations between the components of the teaching-educational process, since for this author Didactics is the way of developing the process to achieve the objectives, the structure of the activity that is developed in each session of the process, in each form of teaching.

The authors of this work also share the results of a group of researchers from the Technical University of Northern Ecuador, led by Abreu O et al.,<sup>(9)</sup> as a basis for the design of the proposed preparation program, recognizing from an Epistemological perspective that:

"... Didactics is one of the sciences of education in full development. It is closely linked to other sciences that intervene in the integrated and institutionalized teaching-learning process, especially with Pedagogy, but it retains its particularities and its own essence. As a science, it guides, socializes, integrates and systematizes in a theoretical body in ascending, continuous and systematic evolution, the results of research and accumulated experience in educational practice, aimed at exploring the reality of the classroom, detecting, studying and finding successful solutions to the problems that affect and prevent the optimal, effective and efficient development of the teaching-learning process in its broadest and most contemporary manifestation, which involves emotionally and physically teachers and students and places them in a position of success, in different roles, but with a similar purpose, the former as guides, conductors of the same and the latter as subjects of their own learning capable of learning the content of the subjects and the methods to achieve it and critically assess the strategies applied to achieve it, reveals the method as part of the content, creates and develops participation structures that are based on dialogue and feedback, which facilitate the construction and development of learning, conceived, executed and directed within the framework of educational institutions, to explain, relate, demonstrate and apply knowledge necessary for practical life, based on the comprehensive development of the personality, through the progressive rise from dependence to self-regulated independence and the ability to learn by oneself throughout life,

in accordance with one's social, group and individual aspirations and the context, in a specific historical environment.

Therefore, it is confirmed that the concept of improving the training of specialists in family and community medicine in Caumatology in the Ecuadorian context for the comprehensive treatment of burn patients must be in accordance with the University curriculum and the continuing education of specialists in family and community medicine to improve their professional performance.

In this way, the sociological support appears in the university-society relationship, since the improvement in the preparation of specialists in family and community medicine, for the comprehensive treatment of burn patients has a specific scope in the development of the training process of the content of Caumatology in the Ecuadorian context.

From a psychological perspective, the basic postulates of the historical-cultural theory of Vygotsky and his followers are assumed. The professional development program is projected from the relationship between activity and communication in the preparation of specialists in family and community medicine for the comprehensive treatment of burn patients, as well as taking into account the link between the cognitive and affective, the conception of work with the "zone of proximal development" (ZDP) highlighting the use of potential and specifically emphasizing one of the essential contributions of said theory referred to the premise that conceives teaching as a guide to development.

This implies that the main agents involved in the transformation process of the preparation of specialists in family and community medicine for the comprehensive treatment of burn patients must be provided with assistance from an active position of the subjects, based on the creation of a socio-psychological climate that favors the exchange and communication between directors, teachers, specialists in family and community medicine and other agents of the University, as well as of provincial hospitals and private clinics in Ecuador.

The pedagogical foundation appears in the background of the theory on education that is presented in the best of the work of prestigious Latin American teachers in different historical periods, constituting a highly appreciated legacy, the pedagogical ideology of José Martí in relation to the role of universities.

In accordance with the "Advanced Education" paradigm, aimed at the professional and human improvement of labor and community resources by organizing the improvement in the performance of teachers from the search for alternatives that favor the solution to professional problems that arise in the context of Ecuadorian universities when addressing the care in the comprehensive treatment of burn patients.

The use of information and communications technologies, based on the science, technology and society approach, are also considered to be foundations for the nature of post-pandemic education.

## DISCUSSION

The proposed program responds to the ideas of Salmerón and Quintana,<sup>(10)</sup> these researchers warn that, when used as a scientific result in research, it indistinctly adopts in its conception, characteristics, structures in different variants and its essence is not specified exactly, there being no uniformity in its use and definition.

In this order of ideas, the program is understood as "the set of planned, systematic actions, oriented to the solution of a problem in educational practice, aimed at complementing a determined objective in whose design, execution and evaluation the transformation of the object of research in a determined context must be implicit."

Based on the stated postulates, the following design is proposed for the preparation program for Ecuadorian specialists in family and community medicine in Caumatology, which includes five areas, which are interrelated:

Area I-Diagnosis: is defined as the set of methods, techniques and procedures through which the needs and potentialities are determined in relation to care in the comprehensive treatment of burn patients, obtaining the regularities, a fundamental aspect in the projection of the actions to be developed.

This area will be aimed at determining the training needs of specialists in family and community medicine in the Ecuadorian context, in relation to preparation for comprehensive care for burn patients.

Area II- Planning of the actions to be developed: in each of the actions the objectives, contents, methods, means and evaluation are determined, as well as other indicators required by the type of program to be developed.

The planning area will be carried out based on the determination of the needs for improvement of specialists in family and community medicine detected in the Ecuadorian context, in relation to the preparation for comprehensive care for burn patients.

On this basis, actions are planned aimed at determining the objectives, the forms of organization of professional development (courses, seminars, workshops, specialized conferences, self-preparation, and consultation), the development of programs, the evaluation of each organizational form of development and the determination of the dissemination of the results of the development.

The use of information and communications technologies, interactive online learning platforms, the creation of learning communities and digital educational resources is also proposed.

Area III - Methodological guidelines for the execution of actions: sets out how to proceed in the development of the proposed actions, as well as the programme in general.

Guidance actions are planned that respond to the nature of post-pandemic education, the use of information and communications technologies, based on the science, technology and society approach, will allow establishing the necessary guidelines for its correct application with the necessary knowledge in this regard in a flexible way with some room for creativity and proposal of innovative dynamics.

The use of information and communications technologies, mediated by interactive learning platforms, reveals enormous possibilities for collaborative knowledge management.



Area IV - Execution and development of actions: the essential objective of this area is to implement the actions planned in the prepared program.

During the execution and development of this area, it is also suggested to create a systematization record so that participants reveal the meaning of their learning and project actions to improve their professional performance around the quality of their professional practice in primary care of patients with burns from a comprehensive perspective.<sup>(11)</sup>

This stage responds to what is planned and oriented, supported by two basic pillars: improvement, which is considered a continuous vision, measurement and feedback on the optimal performance of the academic, professional and scientific preparation process of family and community medicine specialists in Caumatology based on continuous review and updating based on optimization in favor of creativity and innovation.<sup>(12)</sup>

Area V - Evaluation: this constitutes an essential and important aspect through which the results of the application of the program will be obtained, as well as the fulfillment of its objective.

It allows the verification of the transformation of the object of study and therefore its contribution to the solution of the problem posed. In this sense, the evaluation will be applied and interpreted as a process and as a result, whose orientation must be theoretical-practical with a conception of a system based on quality indicators in three dimensions of performance: academic, professional and commitment with social relevance.<sup>(13,14)</sup>

## CONCLUSIONS

In the diagnosis of needs, it is noted that the strength of specialists in family and community medicine. They recognize the relevance of the preparation proposed for the improvement of their professional practice and demand the need to update the current concepts of the treatment of the content of Caumatology with an integrative approach, the use of information and communication technologies, mediated by the science, technology and society approach.

The design of the professional development program responds to the "Advanced Education" paradigm and is aimed at professional improvement with a dialectical-materialist vision, focused on improvement and the approach of Science, Technology and Society, supported by psychological and pedagogical foundations, which accredits its structuring in five areas: diagnosis, planning, orientation, execution and evaluation.

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