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EPIDEMIOLOGICAL APPROACH IN THE PROCESS OF TRAINING HUMAN RESOURCES IN MEDICAL EDUCATION

ENFOQUE EPIDEMIOLÓGICO EN EL PROCESO DE FORMACIÓN DE LOS RECURSOS HUMANOS EN LA EDUCACIÓN MÉDICA

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ABSTRACT

Introduction: the training of human resources in Medical Sciences has been as old as humanity itself, given by the different diseases and plagues that have hit the people, dismantling them economically and socially. Men of science have always been searching for causes and solutions that would scientifically address these devastating problems, with the least loss of resources and lives. Nowadays, man, in his vertiginous advance through the fields of knowledge, has caused that his own development constitutes a serious problem in the appearance of diseases and damages to the human health. The Academy has also been immersed in the solution of the problems to be solved through its training and carry the health or epidemiological thinking that should characterize them. The *aim* of the article is to identify, through their study plans, the presence of this thought in the selected formations, which was distinguished in the review made by observing the presence of disciplines and subjects, that from the praxis and with the guiding principle of Medical Education and the action of tutors and teachers in general, impregnate the students in the difficult thinking of this science.

Key words: *public health, epidemiological approach, disciplines*



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RESUMEN

Introducción: la formación de los recursos humanos en Ciencias Médicas, ha sido tan antigua casi como la propia humanidad, dado por las diferentes enfermedades y plagas que han azotado a los pueblos, desbastándolos económica y socialmente. Los hombres de ciencias siempre han estado en la búsqueda de causas y soluciones que permitieran enfrentar científicamente estos desbastadores problemas, con la menor pérdida de recursos y vidas. En la actualidad, el hombre, en su avance vertiginoso por los campos del saber, ha propiciado que su propio desarrollo constituya un grave problema en la aparición de enfermedades y daños a la salud humana. La Academia, no a espaldas de esta situación también se ha visto inmersa en la solución de los problemas a resolver a través de sus formaciones y llevar el pensamiento salubrista o epidemiológico que debe caracterizar a los mismos. El artículo presentado tiene como *objetivo* identificar a través de sus planes de estudio la presencia de este pensamiento en las formaciones seleccionadas, lo que se distinguió en la revisión realizada al observar la presencia de disciplinas y asignaturas, que desde la praxis y con el principio rector de la Educación Médica y la actuación de tutores y profesores en general, impregnen a los educandos en el difícil pensar de ésta ciencia.

Palabras claves: salubrista, enfoque epidemiológico, disciplinas

INTRODUCTION

The scientific and technological advances, to which society is subject, bring with it a social commitment to the universities committed to the training of their human resources. At present, there are multiple changes that occur at the level of the planet, where the development reached by man, places it at the center of this problem. You cannot separate the academies from the environment where they are stuck, and less is indifferent to the problems that affect the communities. It is of vital importance that the scientific community unites all its forces so that science can contribute to the solution of those problems that are increasing day by day.

There are different Schools of Medical Sciences that are located in the different territories and all with the responsibility of training different professionals from all branches, and this diversity of training is a great challenge, because at the same time it is a diversity of professionals facing from the praxis the problems that must be solved. In 1962 the development of a process of extension of Higher Medical Education to the whole country began. There are currently 21 Schools of Medical Sciences, and the Latin American School of Medicine, and it is the Medical Sciences University of Havana, the leading center in the country. ^(1, 2)

The level of health of the Cuban population is one of the highest in Latin America and the third world, comparable to those offered in the world. The Cuban health care system provides comprehensive, integral, universal medical care with coverage and universal accessibility, at all levels of care: from the health centers of the Community to the hospital network and specialized secondary and tertiary services. ^(1, 2)

In this article, the authors have made an analysis of some formations that show Medical Sciences, such as the careers of Medicine, Dentistry and Nursing and as a professional career. Its inclusion is considered important. That's why, we rely on the macro curriculum of each of them where the disciplines and subjects are located, as well as the proposed curricular strategies for the achievement of the epidemiological approach that should prevail in their professional performance.

One of the aspects that is analyzed in each of them in the training is that the different levels of the studies are structured in the right way for professionals, once the graduates of the universities, possess the necessary skills to solve the problems in the form of the different rights with a true salubrious approach that must prevail in the different formations.



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DEVELOPMENT

I. Synthesis of careers in Medicine, Dentistry and Nursing

Medicine career: it was one of the 4 foundational careers of the Royal and Pontifical University of San Geronimo of Havana, in January of 1728. Since its foundation there was in Cuba, during 234 years, a single School of Medicine founded in the capital; to the growing health care needs of the Cuban population and generates resources to offer medical assistance to other countries. ⁽³⁻⁶⁾

The medical career curriculum is unique to the entire Higher Medical Education system, corresponding to D plan, with the greatest flexibility, the purpose of the information, the situation and the health situation. It has subjects such as Promotion and Prevention in Health, Community Medicine, Comprehensive General Medicine and Public Health, as well as one year course of the career, a training period, where it appears as a medical training the Comprehensive General Medicine with a total of 416 hours in 7 weeks. ⁽³⁻⁶⁾

Dentistry career: in Cuba, in 1878, it was founded in the first dental academy in the training of dental surgeons, although previously in 1842 in the Royal University of Havana, in the School of Medicine. ^(7,8) Several generations of experimental, transitional, phase and hemiphasic experimental planes follow each other and continue with the planes called A, B and C; in 1989 the latter with its characteristics such as: early involvement of the student with clinical and community work, introduction of subjects with social content, among others.

At this moment, the career shows the study plan D, current curriculum, with the efforts that strengthen, in addition, a comprehensive professional training, research activity, self-learning that gives continuity of studies to graduate from the race, prepared to begin the specialty of comprehensive general dentistry and follow later, second specializations, diplomas, masters, and doctorates. ^(7,8) Such as: health promotion, health education of the population, prevention of diseases, timely detection of risks to perform or indicate individual and collective prevention, indication and application of Natural and Traditional Medicine, identification of risks and modification or elimination of them as part of the health team. ^(7,8)

Bachelor in Nursing: with over a century of experience, has been the subject of a sustained process of changes, which has led to an important contribution in achieving the indicators that support the efficiency and effectiveness of the international career. ⁽⁹⁻¹¹⁾ He is a professional who has acquired scientific - technical skills to care for and help sick people (child, pregnant, adolescent, adult and elderly), family and community.

His way of acting allows him to carry out the Nursing Diagnosis applied to the person, the family and the community taking into account the context in which it is treated and his professional competence. This diagnosis refers to human needs and real health problems risk or potential. It contains the aspects that should be treated independently by the nursing professional. It implies the precision of individual and collective responses. ⁽⁹⁻¹¹⁾

II- Synthesis of two careers of Health Technologies: Clinical Bio analysis and Medical Physics Radio and Imaging

Of the eight careers of Health Technology, the Degree in Clinical Bio analysis and Medical Imaging and Radio physics form university professionals with a broad profile, with basic and specialized training; trained to perform in the wide field of technological processes in health in an active way as a member of the basic health group.



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It participates in the control of communicable and no communicable diseases, not only from the point of view of the diagnosis of the laboratory, but also with the implementation of preventive, therapeutic and productive actions with a solid human and scientific formation. They provide necessary information for the doctor, where the work modes are carried out according to the fulfillment of the basic functions: assistance, teaching, research and administration. ⁽¹²⁾ The formation of the modes of action is carried out in the real scenarios where the services are provided, all the available assistance resources are used in the teaching and research function, based on the teaching-assistance-research integration.

In the services, this Bachelor in Clinical Bio analysis guarantees the performance of the cytological, histopathological, physiological and immunoallergic studies, the processing of the relationships of the people and the media, the application of it and the improvement of the processes for the evaluation of the process biomedicine under normal and contingency conditions, production of biological products and biological reagents for diagnostic, therapeutic and research procedures, quality management systems that guarantee compliance with biosafety norms and the continuous improvement of procedures. ⁽¹²⁾

From the main integrating discipline (Integral laboratory diagnosis), which is integrated with the other horizontal and vertical curricular axes, which are tight in the function of the teaching process, learning as an epidemiological approach, from the first semester of the career to deepen in the fourth and eighth semester, upon receiving the subjects of introduction to public health, public health and epidemiology.

Elements analyzed in the career of Bachelor in Medical Imaging and Radio Physics, career design in the Plan D. In the study plan, reading times for eight subjects of the curriculum itself, the optional and the elective curriculum. As an object of work technologies for diagnostic imaging and radiation for treatment in health. ^(13, 14)

This professional is prepared to face new technologies and develop the technological process with quality, obtaining images of the human organism for its diagnosis, using ionizing radiation for radiant treatments to patients, as well as taking care of the environment through the use of them, applying conventional and advanced methods.

The Bachelor when applying the scientific method to the problems that arise in the performance of his duties perfects the processes in which he participates in correspondence with the principles of ethics that characterize health professionals. In addition, it offers the tools to face situations related to the professional act and to establish the adequate bi-directional relationship with the patient, their relatives and other health workers, in situations of difficult emotional management, allowing them to identify the psychosocial factors involved in the health process - illness and characterize the patient's reactions to their illness, in relation to their personality, their social environment and lifestyle and carry out actions of promotion and prevention, treatment and recovery of their health according to their needs, since this professional will attend to healthy people, subjects with risks of getting sick and sick people. ^(13, 14)

On the other hand, Article 19 of January 1999 (About Biological Safety), Resolution No. 103 of October 3, 2002 of the Ministry of Science Technology and Environment (Regulation for the establishment of biological safety requirements and procedures in facilities used for the use of biological agents and their products, organisms and fragments of these with genetic information), which makes innovative in good environmental practices.

Training in the environment, including biosecurity, guarantees the correct individual protection and the rational exploitation of natural resources, by applying the National Environmental Strategy that Ministry of Science Technology and Environment (MSTE). The authors explain it, as well as the graduate of the two analyzed



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technology careers, like the three previous explanations, they are in the conditions to apply the health approach in their actions, since they have the preparation for the functions of communication, clear, precise and with the members of the healthy or sick community, with the work team in their professional practice and in the professional training activities in which they intervene.

In addition, it is a humanistic, communicative professional, in compliance with medical, social and environmental ethics in its nature, capable of carrying out health actions in the field of their profession with a comprehensive approach that considers the dynamic influence of environmental factors in the health - disease process and that contributes to the preservation and quality of these, enhancing lifestyles.

CONCLUSIONS

- The Medical Sciences formations analyzed in this paper, its content in its curriculum, the subjects and curricular strategies so that their modes of action have an epidemiological approach.
- The curricular strategies foreseen in the curricula need to be articulated from the transversal and vertical axes, by professors and tutors for their correct fulfillment.
- Within the guiding principles of medical education, education at work, the fundamental activity of students, to obtain the fundamental skills since the epidemiological point of view in order to guarantee a community work according to the main problems of the population in its different territories.

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