




EDUCATIONAL ARTICLE

Prevention of chronic viral hepatitis as a content for the Basic Health Team's overcoming

Prevención de las hepatitis virales crónicas como contenido de la superación del Equipo Básico de Salud

Prevenção das hepatites virais crônicas como conteúdo de aprimoramento da Equipe Básica de Saúde

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ABSTRACT

**Introduction:** among the most frequent causes of mortality are infectious diseases, particularly in the third world. And among these is chronic viral hepatitis, which increases its incidence in Cuba. **Objective:** to present elements of an improvement system aimed at developing knowledge in the members of the Basic Health Team of the José Martí Teaching Polyclinic in the province of Camagüey, Cuba, on the prevention of chronic viral hepatitis in Primary Health Care. **Method:** a quantitative participatory research of a causal explanatory nature was developed, through the execution of the research project not associated with the System of Strategies for the Prevention of Chronic Viral Hepatitis program, from the provincial consultation, executed between 2017 and 2022. The universe involved 137 professionals for a sample of 68. **Results:** professionals acquired new experiences, recognized the need for training, as well as understanding their relationship with patients who suffer from these diseases to warn of the risk they run by not going to health services, to

be diagnosed and have follow-up with Primary Health Care services. The high index predominated as the rating of the output instrument questions for all participants. **Conclusions:** the system favors the development of knowledge on the prevention of chronic viral hepatitis of the Basic Health Team under study. The actions enhance the participation of community actors and their exchange sessions are distinguished by their active, dynamic and functional nature, in pursuit of better care practice, preventive of chronic viral hepatitis at the primary level.

**Keywords:** chronic viral hepatitis; overcoming; primary health care; knowledge



**RESUMEN**

**Introducción:** entre las causas más frecuentes de mortalidad se encuentran las enfermedades infecciosas, en particular en el tercer mundo. Y entre estas, están las hepatitis virales crónicas, las cuales aumentan su incidencia en Cuba. **Objetivo:** exponer elementos de un sistema de superación dirigido al desarrollo de los conocimientos en los miembros del Equipo Básico de Salud del Policlínico Docente José Martí de la provincia de Camagüey, Cuba, sobre la prevención de las hepatitis virales crónicas en la Atención Primaria de Salud. **Método:** se desarrolló una investigación participativa cuantitativa de carácter explicativo causal, mediante la ejecución del proyecto de investigación no asociado a programa Sistema de estrategias para la prevención de las hepatitis virales crónicas, desde la consulta provincial, ejecutado entre 2017 y 2022. El universo involucró 137 profesionales para una muestra de 68. **Resultados:** los profesionales adquirieron nuevas experiencias, reconocieron la necesidad de capacitación, así como la comprensión de su vínculo con los pacientes que padecen estas enfermedades para advertir el riesgo que corren al no acudir a los servicios de salud para ser diagnosticados y tener un seguimiento con los servicios de la Atención Primaria de Salud. Predominó el índice alto como calificación de las preguntas del instrumento de salida para todos los participantes. **Conclusiones:** el sistema favorece el desarrollo de los conocimientos sobre la prevención de las hepatitis virales crónicas del Equipo Básico de Salud objeto de estudio. Las acciones potencian la participación de los actores de la comunidad y sus sesiones de intercambio se distinguen por su carácter activo, dinámico y funcional, en pos de una mejor práctica asistencial, preventiva de las hepatitis virales crónicas en el nivel primario.

**Palabras clave:** hepatitis virales crónicas; superación; atención primaria de salud; conocimientos

**RESUMO**

**Introdução:** entre as causas mais frequentes de mortalidade estão as doenças infecciosas, principalmente no terceiro mundo. E entre estas estão as hepatites virais crônicas, que aumentam a sua incidência em Cuba. **Objetivo:** apresentar elementos de um sistema de melhoria que visa desenvolver conhecimentos nos membros da Equipe Básica de Saúde da Policlínica Escolar José Martí, na província de Camagüey, Cuba, sobre a prevenção das hepatites virais crônicas na Atenção Primária à Saúde. **Método:** desenvolveu-se uma pesquisa quantitativa participativa de natureza causal explicativa, através da execução do projeto de pesquisa não vinculado ao programa Sistema de Estratégias de Prevenção das Hepatites Virais Crônicas, a partir da consulta provincial, executada entre 2017 e 2022. O universo envolveu 137 profissionais para uma amostra de 68. **Resultados:** os profissionais adquiriram novas experiências, reconheceram a necessidade de capacitação, bem como compreenderam sua relação com os pacientes que sofrem dessas doenças para alertar sobre o risco que correm ao não procurarem os serviços de saúde. ser diagnosticado e ter acompanhamento nos serviços de Atenção Primária à Saúde. O índice alto predominou na classificação das questões do instrumento de saída para todos os participantes. **Conclusões:** o sistema favorece o desenvolvimento do conhecimento sobre a prevenção das hepatites virais crônicas da Equipe Básica de Saúde em estudo. As ações potenciam a participação dos atores comunitários e as suas sessões de intercâmbio distinguem-se pelo seu caráter ativo, dinâmico e funcional, na procura de melhores práticas assistenciais, preventivas das hepatites virais crônicas no nível primário.

**Palavras-chave:** hepatite viral crônica; superação; atenção primária à saúde; conhecimentos

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## INTRODUCTION

Infectious diseases are a cause of death, particularly in the Third World. Among these diseases are chronic viral hepatitis (CVH). Cuba is one of the first countries in the Americas to have a National Strategic Plan for the Prevention and Control of Viral Hepatitis. With the updating of this program, serological markers and identification of type A, B, C and E are used, from which notification and activities for focus control are defined; thus, the country distinguishes itself from the rest of the countries in the area.

According to Castellanos Fernandez, et al.<sup>(1)</sup> the World Health Organization (WHO) assumed the current hepatitis epidemic as one of the main health problems worldwide. The term hepatitis comes from the Greek *hepar* and means liver. It was first used by Bianchi in 1710. Betancourt Reyes, et al.<sup>(2)</sup> refer to diseases that inflame the liver. In Greek and Roman documents jaundice was mentioned, but it was not associated to an infectious process until the end of the 18th century and beginning of the 19th century, when epidemic hepatitis or catarrhal hepatitis was mentioned, since then different types of viral hepatitis have been recognized.<sup>(1,2)</sup>

Mason, et al.<sup>(3)</sup> and Montalvo Villalba, et al.<sup>(4)</sup> assume that, although hepatitis was already known, the first outbreak caused by hepatitis B virus was observed by Lurman in 1885, as a consequence of a smallpox outbreak in 1883 where 1289 shipyard workers were vaccinated and used lymph from other individuals.

Ledezma-Morales, et al.<sup>(5)</sup> describe that around 1970 there were cases of hepatitis with incubation periods different from A virus (HAV) and B virus (HBV), without serological markers for these viruses, which were then called non-A and non-B hepatitis. Then, according to Matos Morejón<sup>(6)</sup> the genetic profile of the C virus (HCV) was described in 1989. In the fourth decade of this century, the viral etiology of these infections was proven.

Razavi<sup>(7)</sup> defines viral hepatitis as infectious diseases of the liver characterized by hepatocellular necrosis and inflammation. There is a wide variety of viruses that cause hepatitis: hepatotropic viruses that infect the liver due to their tropism for this organ and non-hepatotropic viruses that cause clinical manifestations of hepatitis, but usually infect other organs in a primary way.

It is established that hepatitis usually evolves to spontaneous cure, but about 0.2 to 1% evolve to acute liver failure; specifically, infection by virus A. Only hepatitis B and C viruses progress directly to chronicity and are spread through contact with the blood, semen or other body fluids of an infected person.<sup>(5)</sup>

Infection by viral hepatitis B (VHB) and viral hepatitis C (VHC) constitutes an important health problem, because they are common causes of hepatic cirrhosis and hepatocarcinoma, even though there is an effective vaccine against B, especially in developing countries.<sup>(6,7)</sup>



Liver cirrhosis and other chronic liver diseases are among the ten first causes of death in Cuba.<sup>(8)</sup> Many are the results in the country since the implementation of the above mentioned national program; however, in the province of Camagüey prevention is far from what the population and health authorities expected. Patients in chronic stage and with complications frequently come for consultation due to insufficient preventive work in the population, including health workers, especially those where the job position presents greater potential risks; say multipurpose care rooms and dialysis services.

In Cuba, in 2015, 1056 patients with chronic viral hepatopathy were reported for a crude rate of 9.9x100 000 inhabitants declared by the Ministry of Public Health<sup>(8)</sup> and, as far as the documentary review carried out reached, no studies on prevention programs for this health situation were found in the period.

In Camagüey province there is a gradual increase in the incidence of VHB and VHC infection; note that in 2017, 193 patients were dispensed in the provincial consultation; while in 2018 the number grew to 317, of them: 22 carrier mothers, 23 of health personnel and 17 patients in hemodialysis services. By the end of 2021 the number rose to 630 patients.

The results of the diagnosis, plus the practical experience of the authors, identified that the residents of General Comprehensive Medicine present insufficiencies in the improvement related to the prevention of VHC, which was confirmed in their performance and in the documentary analysis carried out. All of the above made it possible to determine, among others, the following insufficiencies:

- Objectives that prioritize knowledge and skills systems, in the order of the natural history of the disease, but do not address the aspects of health activity and social participation to ensure the health components and quality of life in primary care, aimed at prevention in general and, in particular, to the VHCS; which results in lack of consistency and stability in community action to improve and solve social health problems caused by bad behaviors and habits that generate the prevalence of VHC.
- The postgraduate activity responds to prioritized programs, such as the Maternal and Infant Program, the Natural and Traditional Medicine Program, the Elderly Program, the Cervical Cancer Program, and the Chronic Non-Communicable Diseases Program. Therefore, there is a detriment of the activity aimed at modifying socioeconomic and cultural factors oriented to the prevention of VHC, so that the process of prevention of VHC from the functions of the resident of General Comprehensive Medicine is characterized by the lack of theoretical foundations in relation to infectious diseases of chronic course.
- In the community, professionals have shortcomings in the identification of vulnerable groups and are unaware of the medical follow-up when complementary findings suggest infection in screening groups and are only limited to the referents of the Mother and Child Program, in addition to the limitations in HBV immunization in children of carrier mothers and patients in need of hemodialysis replacement therapy and insufficient knowledge of preventive actions in the care of VHC.



It is worth clarifying that there is an underreporting as a consequence of instability in data collection and irregularity in the availability of reagents for diagnosis in previous years, according to data from the registry of patients in the Provincial Hepatitis Consultation.

Therefore, after the empirical and theoretical evidences, it is specified as an epistemic void, gaps in the theoretical and methodological order related to the process of prevention of VHC that prevent the successful performance of the resident in General Comprehensive Medicine; from which the following scientific problem derives: theoretical-methodological insufficiencies in the process of improvement of the resident in General Comprehensive Medicine for the prevention of VHC in Primary Health Care (PHC).

Therefore, the objective of this text is to expose elements of a training system aimed at the development of the knowledge of the members of the Basic Health Team on VHC.

## METHOD

The results derive from the research project not associated to program System of strategies for the prevention of HVC from the provincial consultation, which was managed from the Center for the Development of Social and Humanistic Sciences in Health, Unit of Science and Technological Innovation (UDI), attached to the University of Medical Sciences of Camagüey, in collaboration with the AmaliaSimoni University Hospital, executed between 2017 and 2022; whose experiences are extended to the current stage by means of a generalization project.

A participatory research of quantitative-qualitative character was carried out, in order to expose elements of an improvement system aimed at deepening knowledge on VHC in the Basic Health Team (BHT) of the José Martí Teaching Polyclinic, in function of the prevention of these diseases in the PHC area. It is an explanatory-causal research, since beyond the mere characterization; it establishes the distinctive regularities of the environment and the causes of the difficulties and successes that occur in the daily evolution of the population's care.

The universe involved 137 professionals for a sample of 68, who worked in the offices with the highest incidence of risk factors. The present generalization project confirms that the preliminary diagnosis reaffirms the difficulties and potentialities for the prevention of VHC from the community, in the resident of General Comprehensive Medicine.

The system of improvement actions was assumed as an independent variable, while the dependent variable is limited to the development of the BHT preparation on VHC for its prevention. The indicators established to determine the level of knowledge were measured with High, Medium and Low indexes, according to values defined by percentage calculation, according to the following ranges:

- High: 85 to 100 points.
- Medium: 65 to 84 points.
- Low: 50 to 64 points.



The indicators referred to the conceptual elements to be mastered by the BHT member, which then formed the content system of the exchange sessions:

- Causal agent of VHC.
- Definition of VHC.
- Clinical picture of VHC.
- Routes of transmission of VHC.
- Risk groups for contracting VHC.
- Passive immunoprophylaxis in VHB.
- Vaccination of the child of aVHB carrier mother.
- Knowledge about the actions to be taken by the BHT in case of VHB.

For the processing of quantitative information, descriptive statistics, tables, graphs and percentage analysis were used, while the Wilcoxon nonparametric test was selected from the inferential statistics to determine the effectiveness of the pre-experiment.

## RESULTS

The improvement system contains a postgraduate program prepared in accordance with the methodological indicators established by the Directorate of Sciences of the Medical Sciences University of Camagüey. Its objective was aimed at contributing to the improvement of BHT members in terms of knowledge of VHC for its prevention.

Part of the insufficiencies of BHT members to prevent VHC in the community is due to the lack of knowledge in relation to the subject of this health problem that derives from undergraduate and persists in postgraduate studies; therefore, the current research contributes to increase knowledge and, with it, to the professional performance to face this health situation in the population. It was based on theoretical foundations and returned to practice enriched by the experiences and recommendations of specialists and participants.

The implementation of the system of actions collaborates with the improvement process that takes place in the health improvement system, since it responds to the interests of the policy aimed at improving the levels of care. It is structured in actions and stages, from which the activities of collaboration, information management and scientific exchange derive, as shown in Figure 1.



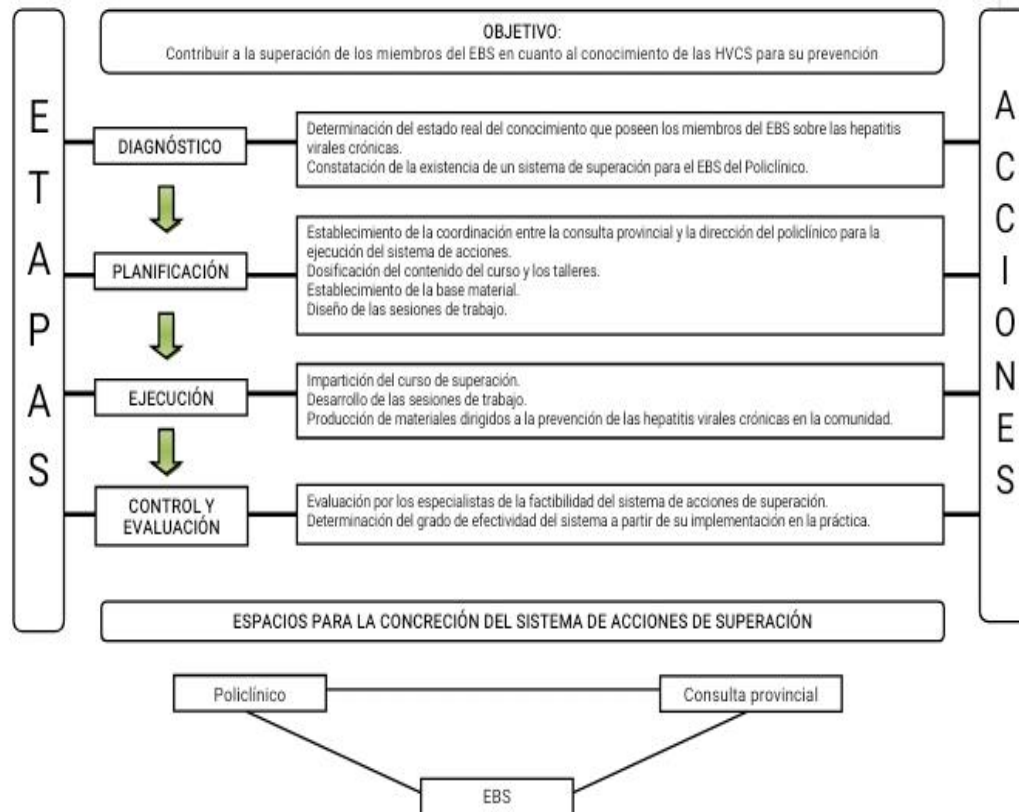


Fig. 1 Training system aimed at the BHT for the development of knowledge on the prevention of VHB from the community.

Source: Own elaboration.

The BHT members were organized into two groups. A weekly one-hour meeting was held. Ten sessions of scientific exchange and workshops for the creation of didactic materials were held. Participatory techniques favored interpersonal relationships.

The program had an active, dynamic and functional character, taking into account that participation is an important premise that implies the activity of the group and of the individuals for the construction of knowledge, of learning in the self-management sense, of the conception of man as an active subject of his own transforming process. The norms of group work were taken into account for the functioning of the group. With a 12-week laxity, the initial survey was applied as an exit instrument.

Typology of the actions of the improvement system:

#### a) Organizational actions

- Coordination with the polyclinic management for the inclusion of the actions in the center's improvement system.
- Design of improvement actions.
- Arrangement of exchange actions in the community.
- Establishment of the chronogram.



## b) Exchange actions

- Delimitation of the space-time for the realization of the actions.
- Selection of human resources for the execution of the actions.
- Evaluation of the feasibility of the actions, through consultation with specialists.
- Systematic evaluation of the degree of effectiveness of the actions, based on the individual and collective experiences of the BHT.

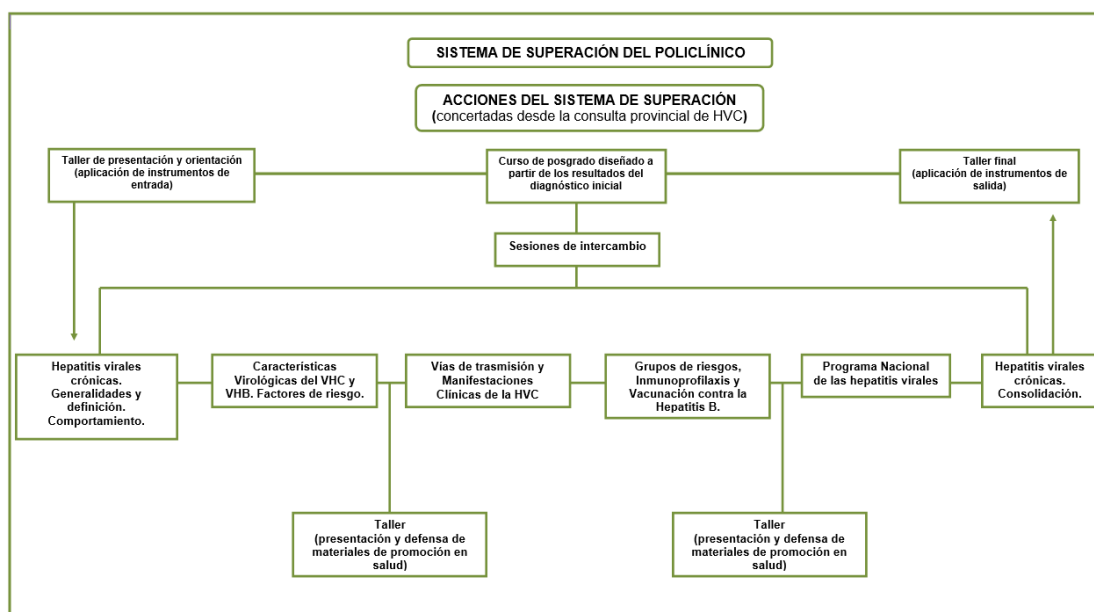
## c) Dissemination actions

- Selection of the elements inherent to VHC that will be disseminated through materials developed by the BHT, according to the risk situations of the context itself.
- Elaboration of new materials according to the requirements of the population's health situations and risk factors.
- Determination of spaces for the dissemination of the materials.
- Evaluation of the degree of effectiveness of the dissemination actions.

## d) Feedback actions

- Redesign of the actions according to the requirements of the BHT and the health situation ascertained in the provincial consultation.
- Evaluation of the degree of feasibility through consultation with specialists.
- Evaluation of effectiveness based on the application of exit instruments.

The postgraduate course was implemented through scientific exchange sessions and progressed through workshops, lectures and practical activities, in line with what is established in the system of improvement of the José Martí Teaching Polyclinic where the provincial consultation of VHC operates, as illustrated in Figure 2.



**Fig. 2** Flowchart of improvement actions

Source: Own elaboration





During the implementation of the system of improvement actions, professionals acquired new experiences, recognized the need for training, as well as the understanding of their link with patients suffering from these diseases to warn them of the risk they run by not going to health services to be diagnosed and to have a follow-up with PHC services and secondary care, in particular, with the specialty of Gastroenterology.

The implementation led to the elaboration of materials as resources for health promotion in the community space and in the consultation (Figure 3).

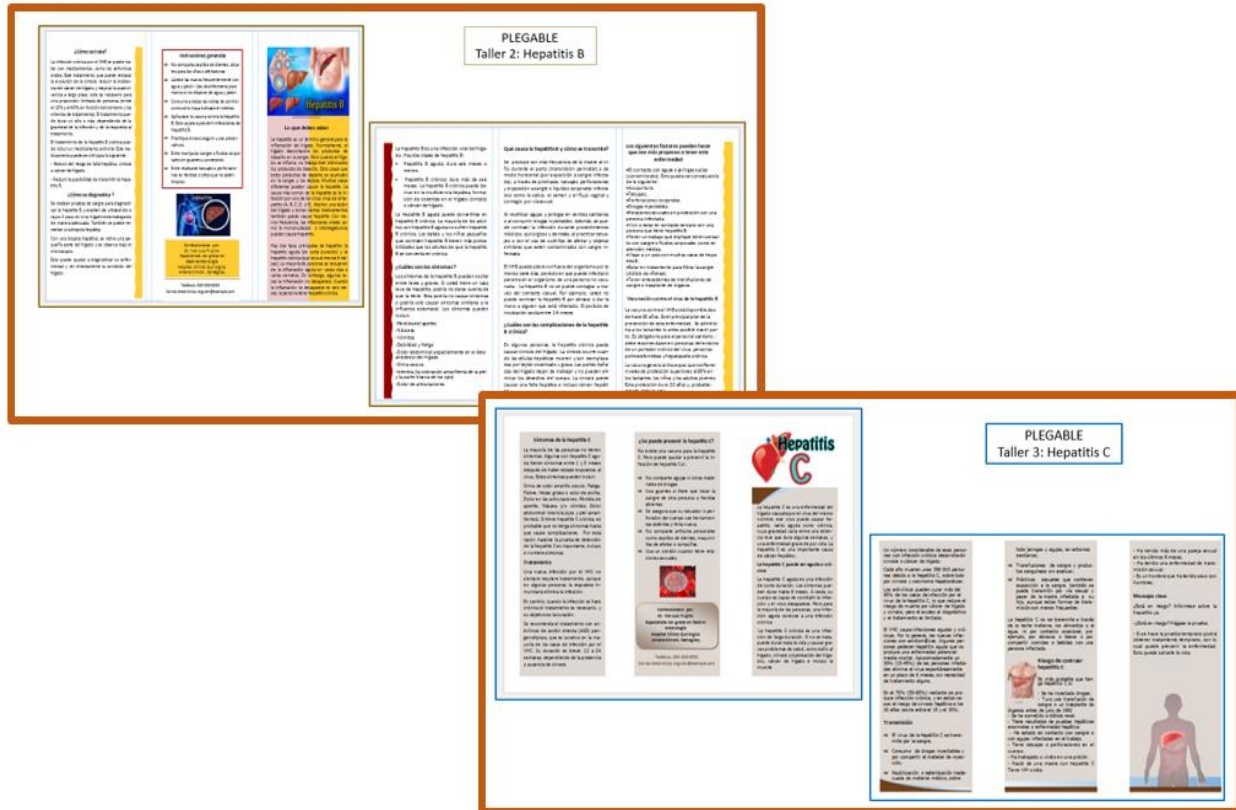


Fig. 3 Folding brochure, as an example of the materials prepared for the workshop exchange.

The overall results pointed to the predominance of the High index as a rating of the output instrument questions for all participants, followed by Medium; only one member of the BHT was evaluated with the minimum score, which is not significant for the results after the experimental stage. All this corroborated the effectiveness of the process of introducing the system of self-improvement in practice.

The results were socialized in provincial, national and international events in which recognition, mentions and, in the current year, the CITMA Award at provincial level were obtained. Two articles have been published in the Cuban scientific journals *MedisanyHumanidadesMédicas*.



## DISCUSSION

With the identification of the insufficient knowledge on VHC in the members of the BHT of the health area of the José Martí Teaching Polyclinic in the city of Camagüey, the improvement system was channeled from the action of the provincial consultation constituted as an output of the research project; with this, the participation of the community actors, the family doctor and nurse of the clinics with the highest incidence of VHC was managed.

Ramos Hernández et al.<sup>(9)</sup> quotes Salas, who states that the quality of a health service depends on the competence and performance of workers in the fulfillment of labor and social functions; he adds that motivating health professionals to improve their way of acting and adopt permanent professional improvement as a lifestyle in this new millennium is not only important but necessary to satisfy the social task.

In line with the above, he expresses that professional development has a permanent character, because every graduate needs elements that he did not receive in the career; that is, to deepen or update them and considers as a constant need for the improvement of professionals due to the dizzying technical scientific development of today's world.<sup>(9)</sup>

According to García Raga, et al.<sup>(10)</sup> training is a set of training processes that make possible the continuous acquisition and improvement of knowledge and basic skills required for a better fulfillment of responsibilities and work functions, as well as for the integral cultural development of the individual. In the methodological order, it allows the solution of identified problems, which optimizes time and resources and implements effective methods, through a planning process designed to achieve certain objectives.

In this sense, González Rodríguez, et al.<sup>(11)</sup> state that this form of intervention makes possible the basic and specialized training of BHT members, includes the organization of a set of contents, according to the objectives that address relevant research results, with the purpose of complementing knowledge.

They point out that the family doctor and nurse, in order to face the challenges demanded by the community scenario itself, are obliged to master the scientific knowledge to assume the prevention, promotion, healing and rehabilitation of the population, as well as the general professional skills and, according to the objectives, the use of didactic principles and the knowledge of methodologies that serve as a tool to develop such process with quality.

The authors consulted<sup>(9,10,11)</sup> defend that overcoming is a way to undertake in reality the search for solutions to the problematic situation, regarding the inadequacies that threaten the prevention of the disease and, at the same time, favor social change in such a way that its repercussion reaches the wellbeing of the patient and the family.



Therefore, to the extent that professionals appropriate tools, master alternatives to solve conflicts and develop their capacities through active participation that guarantees a better management of the patient, because it is in the community where an integral mode of action should be carried out, by executing effective actions in the prevention in the treatment of diseases and the confrontation of the problems of the socio-labor context. These actions in PHC are related to the improvement of professional performance in the face of the increase of chronic noncommunicable and communicable diseases.<sup>(9,10,11)</sup>

López Espinosa, et al.<sup>(12)</sup> affirm that the comprehensive care of the family physician involves the unity of curative and preventive aspects, the biological and social aspects, as well as the conditions of the physical environment that interact with the individual and the community and that condition the health-disease process. To fulfill this function, the BHT develops activities aimed at the prevention of risks, diseases and other damages to health, medical care, treatment and rehabilitation from its area of action, the community.

According to Fouces Gutiérrez, et al.<sup>(13)</sup> in order for the family physician to comply with the objectives set forth in the Family Physician and Nurse Practitioner Program and, specifically, with the actions to be developed in the community space, organizational forms of professional development that respond to the activities of health promotion, risk prevention, medical care, training and development are required. These aspects characterize the function of integral medical care and educational teaching to be performed by the BHT, bearing in mind that preventive activity occupies a third of the quality of life of people in full capacity and that the risks of communicable diseases affect health and have an impact on morbidity and mortality and on the family's economy.

A system of improvement aimed at the BHT corresponds to the budgets established by the Cuban educational policy for higher education, stipulated in the Manual for Postgraduate Management,<sup>(14)</sup> in particular, with regard to postgraduate education. This constitutes a subsystem within the general training system of the Cuban professional, which is structured in two other stages, namely: career and work training, which, together with postgraduate training, structure the training process of the university graduate. According to Macías Llanes<sup>(15)</sup> the training of professionals is the result of the social transformations that have taken place in the country since the triumph of 1959, thanks to which "the Higher Education System is outlined as a subsystem within a well-structured system and shaped within the framework of the historical development of general education".

This author also emphasizes that: a graduate education system should be characterized as an educational process organically linked to the formation of professional competencies and the confrontation of the realities of professional life with the new dynamics of knowledge production and innovations [...] Social development requires continuous processes of production, dissemination, transfer, adaptation and application of knowledge. Knowledge, closely linked to practice, is a transforming social force that the postgraduate program permanently fosters to promote the sustainable development of society.<sup>(15)</sup>



The system of actions described above meets the requirements, since it is based on the inadequacies of EBS members to prevent VHC in the community and takes for its implementation areas of the health area of the polyclinic that report the highest incidence of risk factors. The scientific exchange foresees the production of materials to disseminate information as a way of health education from the medical office. The system was based on theoretical foundations and was strengthened by the experiences of the participants, hence, its dialogic and experiential nature, and is nourished by the recommendations of the specialists.

## CONCLUSIONS

The training system favors the development of knowledge on the prevention of chronic viral hepatitis in the Basic Health Team of the José Martí Teaching Polyclinic in the city of Camagüey. The actions enhance the participation of community actors and their exchange sessions are distinguished by their active, dynamic and functional character, in pursuit of a better preventive health care practice of chronic viral hepatitis at the primary level.

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The authors declare that there are no conflicts of interest.

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Yon Luis Trujillo Pérez: conceptualization, data curation, formal analysis, research, methodology, supervision, original draft-writing, drafting-revising and editing.

Lourdes de la Caridad Cabrera Reyes: conceptualization, data curation, formal analysis, research, methodology, visualization, original draft-writing, drafting-revising and editing.

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