



ORIGINAL ARTICLE

Regularities of the professional improvement process on Community Acquired Pneumonia for Internal Medicine teachers

Regularidades del proceso de superación profesional sobre Neumonía Adquirida en la Comunidad para profesores de Medicina Interna

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ABSTRACT

Introduction: the improvement of health professionals is a necessity due to the continuous scientific and technical development. Objective: to identify the regularities of the professional improvement process on Community Acquired Pneumonia (CAP) for specialists of Internal Medicine teachers at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, in the period of time from June 2019 to June 2020.

Methods: an educational research was developed with the assumption of the dialectical materialist method that made possible the integration of methods of the theoretical and empirical levels and statistical method. The universe consisted of 35 specialists in Internal Medicine teachers, the sample was selected intentionally and consisted of 25 specialists in Internal Medicine teachers. The variable studied was the professional training process on NAC

Results: insufficient training actions on NAC directed to teachers. Deficient integration of NAC contents in on-the-job education through the use of the clinical method. Improvement actions with a sequential approach to the objectives and contents of NAC have not yet been organized. Weaknesses in the pedagogical preparation of teachers to have an impact on the improvement of NAC management performance.

Conclusions: The planned professional development process does not allow the updating and deepening of the contents of CAP, which are necessary to improve the performance of teachers in order to transform the health status of admitted patients and improve their quality of life.

Keywords: Pneumonia; Internal Medicine; Community.

RESUMEN

Introducción: la superación de los profesionales de salud constituye una necesidad por el continuo desarrollo científico técnico.

Objetivo: identificar las regularidades del proceso de superación profesional sobre Neumonía Adquirida en la Comunidad (NAC) para especialistas de Medicina Interna profesores en el Hospital Clínico Quirúrgico Docente Dr. León Cuervo Rubio de Pinar del Río en el período de tiempo de junio 2019 a junio 2020.

Métodos: se desarrolló una investigación educativa con la asunción del método dialéctico materialista que posibilitó la integración de métodos de los niveles teórico y empírico y método estadístico. El universo conformado por 35 especialistas en Medicina Interna profesores, la muestra fue seleccionada de forma intencional y quedó conformada por 25 especialistas en Medicina interna profesores. La variable estudiada el proceso de superación profesional sobre NAC

Resultados: insuficientes acciones de superación sobre NAC dirigidas a los profesores. Deficiente integración de los contenidos de la NAC en la educación en el trabajo a través del empleo del método clínico. Aún no se organizan acciones de superación con enfoque secuenciado de los objetivos y contenidos de la NAC. Debilidades en la preparación pedagógica de los profesores para incidir en el mejoramiento del desempeño sobre manejo de la NAC.

Conclusiones: se constatan limitadas acciones para el perfeccionamiento del manejo de la NAC, el proceso de superación profesional planificado no posibilita la actualización y profundización en los contenidos de la NAC, necesarios para elevar el desempeño de los docentes que transforme el estado de salud de los pacientes ingresados y mejorar su calidad de vida.

Palabras clave: Neumonía; Medicina Interna; Comunidad.

INTRODUCTION

The professional development of health professionals is a necessity due to the continuous scientific and technical development that this area demands, which requires updating of new contents and complementation of the knowledge acquired during the career, while professionalizing their human resources by facing the deficiencies and problems identified in their level of competence during their work performance.^(1,2)

In this sense, it is recognized as a way that allows professionals to deepen knowledge, skills or solve insufficiencies on certain topics, which will benefit themselves and the community with a resolute approach that affects the improvement of the quality of life of the population served.

In the exploration carried out in the printed and digital scientific literature, different edges are approached in which the professional improvement has been investigated from the need for individual continuous professional development for the maintenance and improvement of the degree of competence;⁽³⁾ need for permanent updating of physicians due to the rapid obsolescence of knowledge,⁽⁴⁾ and preparation in specific topics of each specialty that they have not received either in undergraduate or postgraduate,⁽⁵⁾ or that the difficulties in postgraduate training is reflected in the modes of action and professional performance to meet the needs of society.⁽⁶⁾

In this analysis, a significant idea emerges: the need to improve the pedagogical performance of professionals which, in the case of the physician's work, requires the understanding of an increasingly complex preparation demanding a multidimensional analysis of reality, focused on interactions in the recognition of the personal, the disciplinary and the pedagogical as referents of professionalization. The existence of an approved and widely accepted conceptual framework about what a good pedagogical performance is, is a requirement to outline the preparation of teachers in that direction in an exercise of collective reflection and to generate in students the expected level of learning.⁽⁷⁾

In the specific case of the professor of Internal Medicine, the academic and scientific pedagogical preparation requires high levels of integration of the contents of medical science, towards a better professional-personal-social performance, a distinction that assumes that professional improvement is not limited to one or another aspect of its contents, but to the interrelation between them, dynamized by the evaluation of learning.^(8,9)

The spectrum of clinical presentation and causal agents of the entity under study is very broad, it is a frequent reason for consultation in emergency departments, it represents a significant burden of care and high consumption of resources,⁽¹⁰⁾ aspects that point to the precision of those contents that are essential for the management of the same.

In accordance with these approaches, updating knowledge on CAP management is vital for teachers of the specialty Internal Medicine because in recent years there have been important changes in its epidemiology and treatment, since new pathogens have come to play a leading role in the etiology of the disease and traditional pathogens have developed new patterns of resistance to antimicrobials, Besides constituting a health problem produced by microorganisms of extrahospital acquisition, which compromise the pulmonary parenchyma with high morbimortality, with clinical presentation that requires hospital admission in a high percentage of patients and implies a socioeconomic conflict when it appears in the form of epidemic.^(8,9,10)

In the literature consulted, there are no antecedents of research directly related to the pedagogical perspective of professional development in topics related to the management of Community Acquired Pneumonia or the integration of its contents through the clinical method in the forms of education at work.

The author's experience as a teacher makes it possible to identify deficiencies in the process for the development of professional training on CAP management, which are not appreciated in works of completion of the specialty of residents, nor raised by teachers in scientific conferences or in controls carried out by quality committees, in addition to the following: insufficient pedagogical preparation of the teaching staff, mostly made up of teachers of lower teaching category (instructors or assistants), scarce projection of improvement actions whose objectives are focused on the integration of contents of CAP The clinical cases presentation, the clinical history of patients with this condition does not reflect the judgments established in the different stages of the clinical method, the criterion of improvement persists without articulating or specifying the preparation objectives, among others; indicators for which it is considered an

inadequate process to have an impact on the improvement of the teacher's pedagogical performance.

In the professional training on the management of community-acquired pneumonia by teachers of Internal Medicine at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, which is manifested in insufficiencies for the integration of the contents of CAP with the use of the clinical method and in the lack of sequencing of knowledge in the different forms of organization that constitute it, which affects an inadequate pedagogical performance of teachers in on-the-job education.

In order to solve this problem, the present study was carried out with the objective of identifying the regularities of the professional improvement process on community-acquired CAP of Internal Medicine teachers at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

METHODS

An educational research based on the dialectical-materialistic approach was developed. Theoretical level methods such as historical-logical, systemic-structural and functional, documentary analysis and empirical level, documentary review, surveys, interview and observation were used. In addition, descriptive and inferential statistical methods were used.

In the framework of this research, the selected variable is the process of professional improvement on NAC management of Internal Medicine teachers at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, in the period of time from June 2019 to June 2020.

The sample used 25 specialists in Internal Medicine teachers selected intentionally, applying as inclusion criteria, being a teaching specialist in Internal Medicine and working in the wards of the Internal Medicine service. Hospital managers, all of them specialists in Internal Medicine, were also selected within the sample.

The variable was defined as the professional improvement process on the management of CAP of Internal Medicine teachers as: a set of sequentially organized and planned stages to update, complement and deepen knowledge on diseases of the upper and lower respiratory tract, the risk stratification of severity and mortality of patients associated with them and the definition of their hospitalization in secondary health care institutions, linked to the use of the clinical method in education at work, which affects the conscious pedagogical performance of the teacher.

The diagnostic process in this research was carried out through a system of information search procedures on the essential elements that allow characterizing the current state of professional improvement on NAI acquired in the community for Internal Medicine teachers at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

From this perspective the declared methods were applied. The analysis of normative documents of Secondary Health Care and others related to the process of professional improvement in Medical Sciences was carried out. In the same way, we proceeded to conceptualize the two dimensions, from there, to determine the indicators of each dimension.

Dimension 1. Cognitive-procedural: domain of knowledge, skills and values of the NAC that are organized in education at work for their integration through the use of the clinical method.

Indicators

- 1.1. Level of content mastery of the NAC of the professor of Internal Medicine.
- 1.2. Level of knowledge of the action protocols established for the management of CAP.
- 1.3. Level of integration of the contents in education at work through the clinical method.
- 1.4. Level of performance in the management of CAP in education at work.

Dimension 2: Methodological: planning, execution, control and evaluation actions that allow an adequate performance in the management of CAP in education at work.

Indicators

- 2.1. Level of relevance of the planned actions for professional improvement in the management of CAP in education at work through the clinical method.
- 2.2. Level of execution of actions for professional improvement in the management of CAP in education at work through the clinical method.
- 2.3. Level of control over the actions carried out for the management of CAP in education at work.
- 2.4. Level of evaluation of the pedagogical performance based on the results of the planned professional improvement actions.

Within the empirical level methods used, the documentary review was very useful, to collect information and reach conclusions, determining the predominant aspects in the process of professional improvement on the management of CAP.

At this same level, the interview made it possible to verify the mastery of the directors of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, on strategies aimed at professional improvement on NAC and specify the magnitude of the problem.

In particular, instruments are prepared to apply each one of them and it is based on the documentary review guide, with the objective of analyzing in normative documents of the specialty of Internal Medicine and others related to the process of professional improvement in the Medical Sciences, the organization of the process of professional improvement of the specialist in Internal Medicine on the management of CAP.

Likewise, an observation guide for education at work was prepared with the aim of observing the integration of the contents of Community-Acquired Pneumonia in education at work.

Questionnaires were prepared for managerial interviews with the aim of assessing the current state of the process of improvement in the management of CAP, based on the postgraduate management at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

The questionnaire was also applied to apply the survey to specialists in Internal Medicine with the aim of assessing the state of opinion on the relevance of the contents of the NAC and professional improvement actions on it.

The methodological triangulation technique was used to determine the coincidences and discrepancies in the information obtained through the instruments applied.

The frequency distribution of the variable was carried out with descriptive and inferential statistical methods and was represented in a table.

Ethical aspects were taken into account by obtaining the informed consent of the Internal Medicine teachers included in the study and of the institution's management.

RESULTS

Results of the documentary review

The analysis of the postgraduate documents of the specialty of Internal Medicine allows us to recognize that the training plan does not include training activities on the management of CAP, and those related to the clinical method are deficient.

The review of the legal documents related to the study plan of the specialty showed that the contents are structured according to knowledge and skills and there is no characterization of the professional performance in terms of enhancing the use of the clinical method from the teaching function of the specialist.

The analysis of the Internal Medicine study plan and program showed the inclusion of CAP in the second year of the specialty, but not in the first year subjects, which would be very necessary for the acquisition of skills in the management of this disease for residents, considering that in this institution, as in many others in our country, it is the most frequent cause of admission and death due to infectious diseases and, at the national level, the fourth cause of death.

The hospital's training plan does not currently include professional training activities on the management of CAP. Therefore, it is confirmed that the contents of CAP are weakly treated and that there is no sequence of actions to be taken.

In conclusions of several specialty completion works, CAP is identified as a health problem in the province due to its high incidence, the impact of prognostic factors of bacterial pneumonia is characterized, prospective investigations are recommended to confirm the previous results and a better definition of the guidelines to follow, it is also suggested to foster relations with primary health care in order to achieve adequate management of patients with CAP.

Also, in the review of the medical records, formalism and rigidity in the treatment of the indicators for the collection of the primary data on admission (reason for admission, APP, previous admissions, time elapsed after admission) are observed, which would facilitate a correct diagnostic impression.

Results of the Observation of educational activities at work

The application of this method made it possible to appreciate insufficiencies for the integration of the contents of the NAC through the clinical method, fundamentally, in the visits, not applying adequately each of its stages and traditionalist teaching predominating where learning is rote, focused on the knowledge transmitted by the teacher and the receiving and passive attitude of knowledge by the resident, meanwhile, the visits passes are converted into dissertations by the professor, mainly those who have the teaching category of instructor and assistants. This observation confirms both weaknesses in measuring the level of mastery of the condition itself and of the clinical method in the residents.

It was also observed that despite CAP being the leading cause of infectious diseases and death at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, the contents of CAP that are addressed in diagnostic discussions in radiological rooms and clinics are insufficient.

In the Fresh Piece, it is addressed more frequently due to the high mortality from pneumonia in the hospital, as mentioned above.

Result of the survey applied to specialists in Internal Medicine

As a result of the survey of the specialists, it was possible to verify that the cognitive-procedural dimension was evaluated with a medium level, according to the survey carried out to the Internal Medicine professors of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, where the existence of difficulties in the management of Community Acquired Pneumonia and the integration of its contents in education at work through the application of the clinical method were verified.

In indicator 1.1 of the 25 Internal Medicine professors surveyed, 20 (80 %) have a high command of the NAC content. Of the teachers surveyed, 5 representing 20 % have a moderate command of the contents of CAP, the difficulty being in knowing the scales for risk stratification of severity of CAP in the patient.

In the analysis of indicator 1.2, this was evaluated as medium since of 25 of the respondents, 15 corresponding to 60 % adequately mastered the contents of the action protocols, on the other hand, 4 (16 %) of the respondents have low command of the NAC protocol of the Internal Medicine service of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, the deficiency being mainly in the management of elements for diagnosis and therapeutic policy.

On the other hand, the indicator 1.3 level of integration of the NAC contents in the forms of education at work with the clinical method was evaluated as low, 14 (56 %) of the respondents have difficulties integrating the contents of the NAC through the clinical method, with the faculty as the main limitation being made up mostly of novice teachers and with the category of instructors, with poor methodological and didactic preparation, acquired mainly through self-preparation, on the other hand during the visit pass they did not the stages of the clinical method are adequately applied, finding deficiencies in the identification of the problem and the ratification of the hypothesis through the interrogation, which has its maximum expression in the quality of the preparation of the clinical history, this aspect of interrogation is significantly deficient in the emergency room during the medical call, to which is added the violation of the sequence of the method stages in question.

Finally the indicator 1.4. The level of execution of the contents of the NAC in the different forms of education at work was also evaluated as low, 15 (60 %) of the respondents recognized the deficient execution of these contents in the different forms of education at work despite the fact that NAC was the leading cause of admission and death in the Internal Medicine service of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, the diagnostic discussions in the ward on the subject are insufficient, in the clinics In the radiological studies, the subject does not have priority, in the fresh pieces the subject of CAP is addressed more frequently since, as stated, it is the first cause of death in the aforementioned center, however, the difficulties with the collection of the primary data in the preparation of the clinical history on many occasions makes it difficult to reach a diagnosis and thus delve into the subject.

In general, the cognitive-procedural dimension was evaluated as medium, considering that one of its indicators was evaluated as high, another as medium, and two as poor, the latter related to the contents of the NAC and its integration into education at work through the clinical method and the execution of these contents in the different forms of education at work.

On the other hand, in the interview carried out with managers of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, the methodological dimension of the dependent variable was evaluated with its four indicators, the analysis carried out, both quantitatively and qualitatively, made it possible to evaluate the state of management of the process in the area studied.

In relation to indicator 2.1, level of relevance of the planned actions of the improvement process for teachers on the management of NAC, the total of interviewed managers four (100 %) consider the planning, execution, control and evaluation actions of the process of professional improvement for teachers on NAC management not adequate.

They state that it would be very useful and necessary to promote improvement in this issue, within the framework of a system of activities that strategically provide feedback and update on the management of CAP for the professional performance of the specialist professor in Internal Medicine that belongs to the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

In indicator 2.2 level of execution of actions of the improvement process for teachers on NAC management, the following aspects are summarized:

The actions of professional improvement are carried out based on what is regulated in the legal documents of the Postgraduate.

It was a consensus of the managers interviewed that no actions are organized that allow the continuity of knowledge in the process of overcoming CAP management in the institution.

On the other hand, they agree that it is a very important aspect in the teaching performance of the Internal Medicine specialist. Therefore, it is evaluated at a low level according to the scale to evaluate the achievement of the indicators.

The level of control over the actions carried out in the improvement process for teachers on the management of CAP, indicator 2.3 with a low level, where the total of the managers interviewed, four 100%, recognize that no actions are carried out in the improvement process on this subject at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

Regarding the level of evaluation of the actions carried out in the improvement process for teachers on the management of CAP, indicator 2.4 was also evaluated with a low level, the total of managers interviewed four 100 %, they refer to no evaluations of the actions carried out in the improvement process on this subject at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

Based on the previous analysis, the methodological dimension was considered low, while the planning, execution, control and evaluation actions of the improvement process for teachers on the management of CAP that allow the integration of the contents for the performance of the Internal Medicine professor, are limited by the weak knowledge and limited transmission of the same, taking into account the new forms of application and learning, also demonstrated, when evaluating the first dimension. Therefore, all the indicators measured were evaluated as low.

In general and according to the application of the scale to evaluate the variable (The improvement process for teachers on the management of CAP) at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, it was considered medium, while its cognitive-procedural dimension was evaluated as medium and its methodological dimension was low.

Following the application, to the subjects and objects linked to the investigation, of a set of instruments (surveys, interviews, documentary review guide and observation), whose objectives were in correspondence with the purposes of the investigation, the results were triangulated.

The quantitative and qualitative analysis of the results of the applied instruments (graph 1), shows that when interpreting and integrating all the results produced by the vertically applied instruments, there was a low level of the indicators, on the other hand, a horizontal analysis of each one of the indicators also showed a tendency to a low level, so that the methodological triangulation of these results was carried out, which allowed determining the regularities of the improvement process for teachers on the management of CAP at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

TRIANGULACIÓN METODOLÓGICA

Indicadores	Instrumentos del diagnóstico			
	Encuesta	Entrevista	Observación	Revisión documental
1.1.	A	B	M	
1.2.	M	M	M	
1.3.	B	M	M	X B
1.4.	B	B	B	X M
2.1.	B	B	B	X B
2.2.	B	B	B	X M
2.3.	B	B	B	X B
2.4.	B	B	B	

Leyenda
Alto (A) Medio (M) Bajo (B) Presencia (X)

Planes de superación profesional individual del docente, del Hospital y el RECIS, Plan de estudio, Programa de la especialidad, Actas de reunión del comité académico, Historias clínicas de las salas A y B de Medicina Interna en la Institución

graph 1 Methodological triangulation of the results of the applied instruments. Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río.

By triangulating the information obtained, the following regularities of the improvement process on the management of CAP for Internal Medicine teachers at the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río were determined.

- Insufficient improvement actions on NAC aimed at teachers, which facilitate better academic and pedagogical preparation, which allows them to perform their teaching and care function more efficiently.
- Deficient integration of the contents of the NAC in the different forms of education at work through the use of the clinical method, which allows students to acquire the skills, knowledge and values that improve their performance.
- Limited actions to direct the improvement process that outlines the preparation of teachers.

An analysis of the results obtained as part of the information processing, refers to a demand by the professors of the Dr. León Cuervo Rubio Teaching Clinical Surgical Hospital in Pinar del Río, of the need to overcome Acquired Pneumonia in the community, which contributes to perfecting their professional performance improvement.

Higher Education professors have a decisive role in the development of human resources, which is why the improvement process constitutes a primary way for these professionals to gradually help solve the country's problems and promote social well-being.⁽¹¹⁾

The professional development of Internal Medicine professors assumes the formative guidelines of medical education appropriate to the postgraduate course, from which health professionals develop the formative process based on the principle of linking study-work, which is called in this area of knowledge, education at work, a fundamental modality of educational teaching organization in different careers and the guiding principle of Cuban Medical Education.^(12,13,14)

The Internal Medicine specialty study plan is structured so that the resident is essentially trained in on-the-job education under the supervision of a tutor. A total of 2,528 hours are dedicated to education at work in its different modalities of teaching-assistance activities, for preparation in clinical practice.⁽¹⁵⁾

The different forms of education at work constitute the appropriate framework for the integration of the contents of CAP, in other words (creation of an adequate doctor-patient relationship, skills in conducting the questioning, mastery and semiography of symptoms and signs specific to each patient, physical examination, formulation of a diagnostic hypothesis, risk stratification of severity and mortality), coinciding with the criteria of the authors consulted, the use of the clinical method constitutes a methodological tool for the proper management of CAP.

It is concluded that there are limited actions to improve the management of CAP, the planned professional improvement process does not make it possible to update and deepen the contents of CAP, necessary to increase the performance of teachers to transform the health status of hospitalized patients and improve their quality of life.

Conflict of interests

The authors declare that there is no conflict of interest

authorship contribution

NHZ and BFG: Responsible for conceptualization, research, project management, supervision, visualization, writing - original draft, writing, proofreading, and editing.

RLA and IITB: was in charge of the conceptualization, research, visualization, writing-original draft, writing, revision and editing.

MSS: participated in the conceptualization, research, writing - original draft.

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BIBLIOGRAPHIC REFERENCES

1. 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: <https://redipe.org/wp-content/uploads/2021/03/cidep-2020-2-parte-v.pdf>

2. Piñero Marín M I, Esteban Rivera EG, Rojas Cortina AR, Copulle Becerra SF. Tendencias y desafíos de los programas de postgrado Latinoamericano en contexto de COVID 19. Revista Venezolana de Gerencia [Internet]. 2021 [citado 01/01/2022]; 26(93):123-138. Disponible en: <https://www.redalyc.org/journal/290/29066223009/html/>

3. 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/>
4. 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: <https://scielo.isciii.es/pdf/fem/v18n4/original2.pdf>
5. 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
6. Díaz Díaz AA. 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.
7. Soria Ramírez, Llesica, Ortega Chávez Wilmer, Ortega Maliqui Arnulfo. Desempeño pedagógico del docente y aprendizaje de los estudiantes universitarios en la carrera Educación. Revista de investigación y Pedagogía. Praxis & Saber [Internet]. 2020 [citado 30/03/2021]; 11(27): e10329. Disponible en: <https://doi.org/10.19053/22160159.v11.n27.2020.10329>
8. Alonso R, Santillán Barletta M, Rodríguez C, Mainero FA, Oliva V, Vénica DP, et al. Neumonía adquirida en la comunidad en pacientes que requirieron hospitalización. Rev de Medicina [Internet]. 2021 [citado 24/11/2021]; 81(1): 37-46. Disponible en: <https://pesquisa.bvsalud.org/portal/resource/pt/biblio-1287239>
9. Corona Martínez L, González Morales I, Fragoso Marchante M, Cruz de los Santos H. Factores relacionado con la letalidad en pacientes con neumonía adquirida en la comunidad hospitalizados. Medisur [Internet]. 2021 [Citado 28/10/2021]; 19(1): 42-53. Disponible en: <http://www.medisur.sld.cu/index.php/medisur/article/view/4500>
10. Martínez Vernaza S, Mckinley E, Soto MJ, Gualtero S. Neumonía adquirida en la comunidad: una revisión narrativa. Samuel Universitas médica [Internet]. Oct-dic 2018 [citado 30/04/2021]; 59(4): 1-10. Disponible en: <https://doi.org/10.11144/Javeriana.umed59-4.neum>
11. Bonal Ruiz R, Díaz Díaz AA, Sotomayor Escalona R. Factores asociados al mejoramiento del desempeño a través de actividades de superación. Rev haban cienc méd [Internet]. 2020 [citado 24/11/2021]; 19(6): e3240. Disponible en: <http://www.revhabanera.sld.cu/index.php/rhab/article/view/3240->
12. Alfonso de León JA, Mondéjar Rodríguez JJ, Blanco Aspiazu MA. Fidel Ilizástigui Dupuy y su concepción de la educación en el trabajo. Revista Científico Pedagógica "Atenas" 96-111 [Internet]. 2016 [Citado 21/03/2021]; 2(34): 96-111. Disponible en: <https://www.redalyc.org/journal/4780/478054643008/html/>
13. Rodríguez Fernández Z, Rizo Rodríguez R, Mirabal Fariñas A, Nazario Dolz AM, García Céspedes ME. Educación en el trabajo en la enseñanza médica superior. MEDISAN [Internet]. 2017 Jul [citado 07/02/2023]; 21(7): 913-925. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1029-30192017000700017

14. Salas Perea RS, Salas Mainegra A. La educación en el trabajo y el individuo como principal recurso para el aprendizaje. Rev EDUMECENTRO [Internet]. 2014 [Citado 28/02/2021]; 6(1): 6-24. Disponible en: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2077-28742014000100002

15. Ministerio de Salud Pública. Plan de Estudio y Programa de Especialidad. Medicina Interna. La Habana: Dirección Nacional de Postgrado. Área de docencia e Investigaciones. Ministerio de Salud Pública; 2015.