



## Original article

# Perception of academic management on the curriculum construction of a medical course in a private institution

## *Percepção da gestão acadêmica sobre a construção curricular de um curso médico em instituição privada*

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### Abstract

**Objective:** To analyze the perception of academic management on the curricular construction of a private medical course. **Materials and Methods:** This is a qualitative research, carried out with 3 managers of the medical course of a private institution, who answered a semi-structured interview. Content analysis of the interviews was used, which were transcribed and revised. **Results:** The analysis emphasized the process of organizing the course and the participation of the actors involved in medical training. The manager highlights the structuring of the curriculum applied at the institution, discussing the role of academic management, communication between its sectors and the teaching method, in its characteristics and impacts on academic training. The interviewees' perception of the student's relationship with community health demands and with the faculty was identified, recognizing positive points and difficulties to be overcome in the quality of the teaching-learning process. **Final considerations:** The role of managers in the construction and application of the curricular structure is anchored in the adoption of an active methodology for medical training. The method is perceived as an advance, contributing to a holistic and contextualized training with the practice and health demands of the population. The participation of managers is relevant, directly or indirectly interfering with the quality of this process.

**Keywords:** Medical Education. Curriculum. Health management. Problem-based learning. Educational assessment.

### Resumo

**Objetivo:** analisar a percepção da gestão acadêmica sobre a construção curricular de um curso médico privado. **Materiais e Métodos:** trata-se de uma pesquisa qualitativa, realizada com três gestores do curso médico de instituição privada, que responderam a uma entrevista semiestruturada. Utilizou-se análise de conteúdo das entrevistas, que foram transcritas e revisadas. **Resultados:** a análise enfatizou o processo de organização do curso e a participação dos atores envolvidos na formação médica. O gestor destaca a estruturação do currículo aplicado na instituição, discorrendo sobre o papel da gestão acadêmica, da comunicação entre seus setores e do método de ensino, em suas características e impactos na formação acadêmica. Identificou-se a percepção dos entrevistados quanto à relação do estudante com as demandas comunitárias em saúde e com o corpo docente, reconhecendo pontos positivos e dificuldades a serem superadas na qualidade do processo ensino-aprendizagem. **Considerações finais:** a atuação dos gestores na construção e aplicação da estrutura curricular ancora-se na adoção de metodologia ativa para a formação médica. O método é percebido como um avanço, visto que contribui para uma formação holística e contextualizada com a prática e para as demandas de saúde da população. A participação dos gestores é relevante, interferindo, direta ou indiretamente, na qualidade desse processo.

**Palavras-chave:** Educação Médica. Currículo. Gestão em saúde. Aprendizagem baseada em problemas. Avaliação educacional.

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## Introduction

Medical education in Brazil has been debated in various areas, especially regarding the need for its reformulation for better care of social demands in health. In Brazil, the changes instituted with the implementation of the Unified Health System (UHS), especially in Primary Health Care (PHC), have been gradually implemented in the process of curricular construction of medical courses. The intersection between health and education is essential in professional training, both for specific technical action and for the introduction of pedagogical conceptions that develop skills for apprehension and critical application of these new techniques<sup>1,2</sup>. Schools increasingly seek to adopt health care from the perspective of care, showing an overcoming of the biological model, although there are still challenges in achieving objectives consistent with social reality, as well as effective planning in this sense<sup>3,4</sup>.

The performance of the medical professional, inserted in a scenario of constant expansion and new demands of PHC, implies important changes in the process of academic training. And these changes occurred mainly after the publication of the National Curricular Guidelines of the Graduate Courses in Medicine (DCNs), by the Ministry of Education in 2014, which propose a teaching focused on comprehensive health care, health education and health management<sup>5</sup>. The use of active methodologies contributed to improvements in the doctor-patient relationship, since it stimulates the early coexistence of academics in PHC environments. In this sense, the fundamental role of educational institutions in adopting more flexible curricular structures that provide greater autonomy to students, instigating critical and reflexive think<sup>6-8</sup>. In addition, in order to subsidize medical training that contributes to the demands in collective health, investment in permanent education of the students<sup>9,10</sup>.

Considering the various changes in the structure of medical training, professionalization and updating of the manager are a determining point, in that he must be an agent able to guide, plan and manage strategies for the improvement of the teaching process learning. Equipped with managerial skills, the manager of the medical course improves their performance in the institution, being able to explore the curriculum as a practical territory. In this perspective, the curricular construction becomes capable of being discussed and investigated, allowing continuous interventions and innovations that culminate in a more agile and organized institutional structure<sup>11,12</sup>.

The complexity of the medical practice environment makes it more challenging to prepare students to enter the job market and manage current responsibilities. Management can help fill the theory-practice gap since it understands the strengths and gaps in knowledge and the needs of their

practice areas. Managers can assess students' capabilities in dealing with these challenges and are considered leaders who offer a distinct view on top-level organizational preoccupations<sup>13</sup>. In this context, it is important to describe the participation of academic management in medical education, associating the main factors related to student development and its relationship with the need for health services. The objective of this study was to analyze the perception of academic management on the curricular construction of a medical course in a private institution.

## Materials and Methods

### Design

This is a qualitative research, developed in a private institution, located in the city of Montes Claros (MG), Brazil, whose medical degree has 16 years of implementation and uses the curricular structure related to the DCNs of 2014.

### Scenario

The medical course has 960 students enrolled from the first to the twelfth periods. The academic activities take place full-time, using the active methodology Problem-Based Learning (PBL) for the theoretical activities from the first to the eighth periods; while the practical activities are fulfilled in the Clinic of Medical Specialties, in hospital units and in the municipal health service. In the first periods, the theoretical activities take place through the tutorial sessions, in which, from a proposed problem, students are encouraged to seek information and understand about a certain theme. There is an insertion of students in Primary Care from the first period and, as they evolve, they begin to have contact with secondary and tertiary care. From the ninth period, the internship begins and, in this period, most of the activities developed are practices in hospital stages and Primary Health Care through the Family Health Strategy.

### Study population and research procedure

The sample had the participation of three managers of the medical course: 01 general coordinator, 01 coordinator of the Family and Community Health internship and 01 academic coordinator.

The contact with the managers took place in person, with initial presentation of the object of study and scheduling time for the interview. The research was done through the application of interviews, with semi-structured script, face-to-face and 01 in online format, through the Google Meet

platform. Before conducting the interviews, the Informed Consent Form was applied to the participants, in which they were addressed and noted by the researcher the personal sociodemographic issues, such as age, sex and education, beyond their experience as higher education managers. The interviews were recorded with subsequent full transcription, and analysis. To ensure the anonymity of the participants, the interviews were coded and then excluded, with no possibility of identifying the participants. The inclusion criteria were medical course managers, managers who coordinate the Primary Care Module and academic managers.

### **Research instrument**

The managers answered an interview with a semi-structured script, which addressed aspects related to the profile of these managers and their experience as coordinators of higher education. Moreover, it was explored their participation in the construction of the curricular structure, as well as on the actors involved in the application of this structure and the relationship with the training of the medical course. The interview also addressed the perception of the interviewees about the student's participation in their training. All interviews were conducted by the research team, assisted by the study coordinator.

### **Data analysis**

The content analysis of the interviews was used, which were transcribed and reviewed by the researchers. The floating reading was performed for the pre-analysis of the text, the exploration of the material, treatment of the results obtained and interpretation. From these steps, data were codified, from the identification of the units of record, and their respective context units, related to the objectives of the study and the classification of the elements with their similarities and differences. Then, ten intermediate categories were defined that allowed identifying central themes that aggregated different dimensions of the interviews and that built the three final categories of analysis.

Data saturation was achieved after 3 interviews with managers, without new approaches being observed in the final interviews.

### **Ethical care**

The study was approved by the REC/CONEP system under opinion number 3.594.029.

## Results and Discussion

The verification of the perception of the managers about the curricular structure and medical training emphasized the process of organization of the course and the participation of these actors in this process. The results of the analysis of the interviews were organized into three final categories constructed from ten intermediate categories according to table 1.

**Table 1** - Organization of the final categories from the intermediate categories, Montes Claros (MG), Brazil. 2022

| Intermediate category  | Final category  |
|--|---|
| Organization of the curricular structure<br>Curricular structure changes   | Curricular profile and its changes  |
| Coordination role<br>Role of academic management<br>Communication between course managers  | Profile of agents in the course of medicine and intersectoral communication |
| Perception of the training method<br>Application of the method in the institution<br>Academic education<br>Insertion of the academic in health services<br>Meeting community needs | Profile of the ideal teaching and training method applied to the demands    |

The population participating in this study was composed of three managers of the medical course of a University Center of the North of Minas Gerais, two men and one woman, with a mean age of 49 years. The general coordinator of the course has a degree in medicine for 33 years, has residency in general surgery and pediatric surgery; acts as manager of the institution's medical course for 11 years, having previous experiences in the area in other faculties. The coordinator of Primary Care has 16 years of training in medicine, residency in Family Medicine, specialization in dermatology and has worked as a manager of higher education for 14 years. Finally, the academic coordinator had a Biology degree for 22 years, in nursing for 15 years and has specializations in the field of occupational nursing and public health, working as a manager of higher education for 08 years. The analysis of the results allowed to observe that the manager, in the perception of the curricular structure, emphasizes the process of its construction; the organization of the contents

distributed in the disciplines; the changes in this structure; as well as the basis of the current curricular structure, which are the DCNs of 2014. These aspects consisted of the curricular profile category and its changes - organization and changes of the curricular structure, built from the units of record extracted from the text.

### **Category 1: Curricular profile and its changes - organization and changes in the curricular structure**

The curricular structure is important to guide the organization of undergraduate courses, reflecting directly on the professional profile that will be formed in the future. The analysis of the curricular profile allowed us to understand about the construction of the course grid, the foundation behind it and the main changes that occurred over time. Furthermore, it was possible to know the perceptions of managers about this curricular structure, both in the theoretical and practical component, and their suggestions for modifications for better effectiveness and applicability.

#### *Organization of the curricular structure*

In the analyzed speeches, there is a positive perception of the managers about the organization of the institutional curricular structure, being carried out and applied according to the proposals of the DCNs of 2014, and being satisfactory from a practical and theoretical point of view.

*Man. 1 [...] The structure of the curriculum is very well thought out in accordance with what the curriculum guidelines bring as a proposal. So, from a theoretical point of view, it is fully grounded. [...] And from a practical point of view, I understand that it is a grade that has a positive impact on the student's final education. [...]*

*Man. 3 [...] My view is that there was a great gain for students. [...]*

Another point addressed by the managers was regarding the distribution of the materials in the structure, in each period of the course, from the DCNs, and how the adjustments were made in the curriculum.

*Man. 2 [...] Taking this as a guideline, we structure the curriculum, and our tutorial modules are all in broad areas. [...]*

*Man. 3 [...] The Medicine course here ... is divided into skill modules. Each skill module, it goes from 1<sup>st</sup> to 8<sup>th</sup> period, with three sub-modules within it. [...]*

The 2014 DCNs focus on three major areas: Comprehensive Health Care, Health Education and Health Management, with proposals for the development of future professionals able to deal with societal adversities and public health<sup>14</sup>. Thus, it aims to bring a new look at the profile of these health workers, presenting numerous challenges to their construction to guide the curriculum development considering a better theoretical-practical basis in this graduation process<sup>15</sup>.

It is necessary to reflect on the ideal methodology that contributes to the student's growth and makes him a doctor of human values, including empathy, care, integrity, honesty and respect for himself, his patients and co-workers<sup>16</sup>. The interviews show that the construction of the curricular structure is also thought to value the training of professionals with such characteristics, which go beyond the technical knowledge.

*Man. 1 [...] It is a curriculum that goes far beyond scientism. He has valued points about relationships, about ethics, that this has increasingly dissipated in society. [...]*

### ***Curricular structure changes***

As for the changes in the curricular structure, the managers point out some specific modifications that were necessary, and that were implemented from 2015, to be in line with the DCNs of 2014, which guided the changes highlighted, as: new criteria for the organization of the contents of the internship, the need to make changes in the modules of the previous curricular structure, as well as the introduction of new disciplines throughout the course.

*Man. 2 [...] This guideline, it defines some parameters. It even defines the content, in addition to the basic content of biological and clinical sciences, it also draws attention to the management content that must be included in the course [...]*

*Man. 2 [...] In the previous curriculum, there were modules in specific areas such as, for example, pneumo, endocrine, neuro... and these modules started to be included in the course as a clinical medicine module [...], we also introduced a human sciences module, as provided for in the guidelines; we also introduced pounds as a mandatory [...]*

The new DCNs were approved by the resolution of the Ministry of Education N. 3, of June 20, 2014 (Brazil, 2014), with the main objective of bringing medical training closer to the needs of health services and the way the UHS is organized. Among the highlights of these guidelines are the importance of increasingly inserting the academic in Primary Care (PC), predominantly in the boarding school. In this sense, it is necessary to fulfill a workload of 30% in PHC and emergency services. Other emphases of the new DCNs are the improvement of the competence and understanding profile of the student in the context of management, care and health education, as well as the execution of student-centered methodologies, with the teacher as mediator of the teaching-learning process<sup>17</sup>. The managers evaluated in this study reaffirm the importance of these changes and confirm their contemplation in the curricular structure of the evaluated medical course.

These DCNs direct that active learning methodologies are used, whose adoption leads to the disruption of a teaching model, so that the act of teaching opens space for the act of learning. The student will be in a situation of being a builder of his own knowledge, in which he should be able to solve situations, do research and make decisions, in addition to developing the work in team<sup>18</sup>. These issues related to the increase of practice in PC and the application of active methodologies in graduation, valuing problem-based learning, are emphasized by the course managers, also clarifying that currently the curriculum is mixed, as noted in the lines below.

*Man. 3 [...] And also mainly on the issue of family health. The family's health, she went, she had an increase in the workload recommended by the new guideline, so the students, they stay longer within the FHS, especially in the internship [...]*

*Man. 2 [...] The guidelines also define that active methodologies must be used. Our curriculum is a mixed curriculum. We have activity, problem-based learning, but we also have lectures that explore other methodologies [...]*

When analyzing curriculum structure and educational strategies, there is the presence of hybrid or traditional curricula in medical schools. This indicates a certain resistance to definitive changes in the curriculum, or even that schools undergo a moment of transition<sup>4</sup>.

## **Category 2: Profile of agents in the course of medicine and intersectoral communication**

The analysis of agents in the medical course was subdivided into three intermediate categories, described below with their particularities.



### *Academic coordination: functions and limitations*

The course coordination presents itself as an essential agent for an efficient management and better organization and application of the curricular structure of the medical course. Thus, managers acquire an important role in higher education institutions, since, in addition to being responsible for activities related to teaching, research and extension, also, tasks such as promotion and stimulation of organizational development processes<sup>19</sup>.

In the performance of their functions, the course coordinators need to acquire knowledge of the demands and responsibilities, such as, choosing the best teaching methodology to be applied, organize the disciplines within the curricular structure and choose which professional best suits to teach a particular discipline. The coordination is also responsible for the development of extracurricular activities and for being responsible for the course with the collegiate and supervisory organs<sup>20</sup>.

Managerial competencies are understood as a set of knowledge, attitudes and skills in order to achieve effectiveness in actions and a conscious and responsible practice in the organization of the course, so that they can successfully perform their function<sup>21</sup>.

Concerning the role of academic coordination in the medical course, the interviewees highlighted the importance of knowing the course and participating in the construction of previous curricular structures. They also mentioned the fact that it is a decentralized management, that is, there are coordinators for each module, which have freedom of action. In addition, planning was commented as a key role of management. The challenges pointed out by managers include: the lack of professor training and infrastructure issues, exacerbated in the pandemic by the limitation of students in internship environments.

*Man. 1 [...] is the fact that they know the course, from beginning to end, and have lived the experience of building previous grids. [...]*

*Man. 2 [...] We have a very decentralized management structure here [...] The role of greater coordination is planning [...]*

*Man. 2 [...] the biggest challenge today is exactly in the training and that each teacher applies it in their day to day [...]*

*Man. 3 [...] now with the issue of the pandemic also the limitation of students within the spaces, so that made it difficult [...]*

Studies show that the quality of the medical course is related to the performance of teachers, in the sense of updating didactic-pedagogical procedures, mainly. Thus, it is essential to evaluate teacher training, one of the main actors involved in the teaching-learning process, with the coordinator having a relevant role in this sense<sup>22</sup>. Then, the role of management as mediator stands out, and it is perceived that regular professor training is necessary in order to give better guidance to students in accordance with the proposed teaching method and, consequently, have a more appropriate training.

### *Academic direction: performance and contributions*

Regarding the role of the academic direction, the managers point out that this has a contribution of normative and legal character, as a definition of workload, in addition to being responsible for hiring the faculty, analyzing the curricula and issues related to infrastructure.

*Man. 1 [...] of the regulations, of the definitions of workload. Of the rules themselves, of what can and cannot [...]*

*Man. 2 [...] when we have a demand for a professor to be hired, she has to manage this hiring at the higher level [...]*

*Man. 3 [...] we are passing on to the management what we need in terms of physical structure and faculty to take on activities in the medical course [...]*

Another point highlighted by the managers was the fact that the direction had participated in the development and curricular structuring of the course.

*Man. 3 [...] So it was a curriculum that was also structured with the approval of the direction, because the course coordination is subordinated to the academic direction [...]*

Organizational leaders, especially the academic directors in question, are expected to have competence to guide and sustain their followers within the ethical and legal bounds<sup>23</sup>.

Considering this new curriculum, research shows the existence of an unpreparedness of teachers, as well as lack of family and community doctors in college and internships, which is one of the major difficulties for improving teaching. As for physical structure, didactic resources are scarce within the institution, resulting in a disincentive for both teachers and students<sup>10</sup>. These major challenges pointed out in research demonstrate the importance of the role of academic direction in contributing to a greater resolution of these deficiencies that negatively affect medical education.

### *Communication between course managers*

In relation to the communication between coordinators and academic directors, the managers said that there are regular meetings for discussions on demands and necessary decisions regarding the medical course and its organization. Moreover, it is observed, by the speeches, that there is a certain autonomy on the part of each manager for better problem solving and, with the pandemic, communication was somewhat impaired by the lack of face-to-face interaction.

*Man. 2 [...] we have meetings, meetings, I would say that, almost weekly, I talk to the academic director and give her the demands and decisions [...]*

*Man. 3 [...] because they give me total autonomy to solve problems, but I only take to them what I can't solve [...]*

*Man. 3 [...] the pandemic made this communication a little difficult [...]*

Another point perceived in the interviews is a lack of integration between the course coordinators with regard to communication. Thus, there is little knowledge about the routine of these sectors.

*Man. 1 [...] Today, I coordinate the internship, so it's a point. I cannot say exactly how the routine of these sectors has been in relation to the applicability of the curricular structure [...]*

One way to achieve transparency in an organization, as in an educational institution, is to use a tool for management and mediation of internal communication between coordinators. It is necessary that this product is aligned to the needs of management and that it has practicality in its use. In this sense, the use of a web communication tool, in a way that makes data available to its users at any time or place, is proposed as a good solution for greater transparency in the communication between managers<sup>24</sup>.

Communication can be evaluated both internally, aiming at improving processes, and as a broader aspect, aiming at obtaining competitive advantage over time<sup>25-27</sup>. In recent years, the management system of universities has undergone major changes, especially the development of the role of strategic communication, which has proved to be an important aid in meeting the objectives of institutions<sup>26,28</sup>. Thus, there are difference and relevance of good communication in all areas,

among which are the managers of the institution, for greater visibility and resolution of processes, expanding and improving the relationship institution, professor and student.

### **Category 3: Profile of the ideal teaching and training method applied to the demands**

In this third sphere, there is the perception of the interviewees about the teaching method used in the institution, defining advantages, disadvantages and aspects to be appropriate in the application of this method. Moreover, this category allows analyzing the perception of respondents about the ideal academic profile and its reflexes in meeting the demands of the community.

#### *Perception of the training method*

Respondents have a positive perception of the nature and relevance of the PBL method in medical training. Managers guide the importance of a method that instigates the active and autonomous participation of the institution's academics, boosting the development of intellectual, personal and professional skills.

*Man. 1 [...] It is a method that leaves you in a constant zone of discomfort. [...]*

*Man. 2 [...] learning is also based on insecurity. This insecurity creates, makes the student mobilize more too. [...]*

*Man. 3 [...] we are always looking to work putting the student always active in the curriculum, so that they can take responsibility for their learning [...]*

It is also noted the contribution of the method to the extent that the student assumes the leading role in the construction of knowledge, with the tutor as a facilitator of the teaching-learning process. In this context, the student is encouraged to actively seek and study in order to solve problems, so that their skills and abilities are improved, focusing on attributes that constitute a good medical practice<sup>29</sup>.

*Man. 1 [...] the end result is the professional who knows how to get by on the basis of difficulty. [...]*

*Man. 1 [...] The issue of communication, applicability, team relationships (...) attributes that are consolidated, thanks to the method, that are irreplaceable. I'm 100% in favor of the methodology. [...]*

### *Application of the method in the institution*

When addressing the applicability of PBL, some obstacles were highlighted, such as difficulties in adopting the method in an integral way, in all subjects of the course, which makes the curricular structure be described as mixed by managers. Another point highlighted is the need to train teachers to understand and implement the proposals for an active methodology with regard to improving medical training. The DCNs propose that the curricular structure of medical courses privilege the active participation of the student in the construction of knowledge and that the teacher is only a facilitator of the learning process<sup>30,31</sup>.

*Man. 2 [...] The PBL method requires more courage to execute it than we have. [...] many tutorials turn into student lectures. That's not the idea. [...]*

*Man. 2 [...] Much better learning, but you don't fully achieve it. [...] then it became a mixed curriculum. [...]*

*Man. 3 [...] If we had (...) more trained professors, even to bring this responsibility to the academic, I think that would be better. If we had teaching skills, so that the professor really knows how to conduct a tutorial session. [...]*

Still in this sense, it is seen that the tutor needs to develop skills that involve from the mastery of the contents discussed to the competence in dealing with the dynamics of tutoring, adapting to the new educational reality. Thus, the unpreparedness of professors in PBL results in failures in the process of conducting learning, interfering with the quality of academic training and the development of teaching<sup>32</sup>.

### *Academic education*

Health education, in graduation, demands actions from the perspective of comprehensive care, involving students who articulate theory and practice, valuing the biopsychosocial aspects in the provision of care. This process begins from community demands, organizing so that students learn through actions - learning by doing - and sharing experience<sup>33</sup>.

*Man. 1 [...] a curricular structure that relates practice to theory for as long as necessary and, at the end of the course, an intensification of this practical activity, which I think the student really consolidates as a doctor, which begins in intership. Do, do, do, do. [...]*

In this context, it is noted, very often, in the statements of managers, a focus on an academic training focused on work, seeking to erect and improve professional skills determinant for medical practice.

*Man. 2 [...] the medical student trained at FUNORTE is today one of the students best prepared to work [...]*

*Man. 2 [...] Here our vocation is to train for work, for two aspects: work and medical residency. [...]*

### ***Insertion of the academic in health services***

In the approach of this topic, the interviewed managers emphasized the central role of including the student, in the first year of the graduation, in activities that involve the health care of the community in a continuous way and with stimulus to the autonomy. Such timely insertion of students in health services enables an experience in Primary Care, which allows the consolidation of a holistic view of collective health, greater social responsibility, emotional maturity and professionalism<sup>33,34</sup>.

*Man. 3 [...] the early insertion of the student in, already in skills practices, in family health practices, this is a very positive point. [...] so, when they graduate, they will already be familiar with that, so they will be able to solve more the problem of the community [...]*

*Man. 1 [...] I see a very close and secure relationship between the student and the community [...]*

As exposed in the new DCNs on health management, at the end of graduation, the student must have developed skills such as care management, valuing life, decision making, teamwork and leadership<sup>35</sup>. And such early insertion in services contributes to these characteristics being shaped in the student throughout the course, in addition to being seen as efficient by the professionals who form the faculty in the institution's internship fields.

A good medical course should promote, from the beginning, practical activities that add values, behavior patterns and efficient methodologies for the future approach of the doctor with his patient<sup>36,37</sup>. In view of this, it is essential that the academic has an early contact with the patient, enabling the formation of a professional with a look at the whole and making decisions based on ethical principles<sup>38</sup>.

*Man. 2 [...] today, in the daily life of medical services, whether private or public, the student figure is already very well inserted [...] I joke that the day the student misses work, for example, you went on vacation, and everyone feels relieved and doesn't miss it, it's because there's something strange. The student has to be important in that service. [...]*

*Man. 2 [...] Most of our students are interns in places where they assume responsibilities and do not have the intermediation of a postgraduate student. [...]*

### **Meeting community needs**

The 2014 DCNs maintained the link between medical and academic training and the health needs of the population and the UHS. Therefore, the interdisciplinary knowledge, the focus on an interprofessional education and the strengthening of relations between the HEI and the UHS emerge as devices to integrate knowledge and assign new meanings to health practices<sup>39</sup>.

*Man. 3 [...] as our focus is also to train a non-specialist student but a generalist student, I believe that we are training this professional to act as the Guideline recommends. [...]*

In an environment of exchange of knowledge and practices, there is an improvement in the functioning of the service, since the student's presence pressures professionals to reflective practice, increasing accessibility with the diversification of activities and service times<sup>40</sup>. Thus, it is a network of benefits that extends from the professionals of the team, through the students, to the community itself, which is assisted and supported, as described by the managers of the HEI.

*Man. 3 [...] So I see this insertion of the student as positive, because in the future he will work in that place of work, so he will really know the real needs of that population. [...]*

*Man. 2 [...] The service needs the student and the student also needs the service. It has to be a two-way street. [...] everyone wins [...] the student feels useful inside a gear [...] and the patient is the one who benefits most from this. We have to have this notion [...]*

## Conclusion

The participation of medical course managers in the construction and application of the curricular structure is essential to provide adequate training for these future professionals. It was observed that there is theoretical foundation and foundation behind the organization of the curriculum structure, which are supported by the National Curriculum Guidelines of 2014. The method used in the institution is a mixed model of learning and is seen as a generator of positive impact on academic training. In the perception of managers, there are, however, some limitations, including the unpreparedness of part of the professors in the application of the active methodology, with difficulties in stimulating the student to lead and take responsibility for their knowledge. In this context, it was evidenced, in the speeches, the need for actions aimed at the training and improvement of professors' skills in line with the objectives of the teaching method, activities that bring the student to a more active position in the learning process. In addition, each coordinator has a role, with autonomy, within this process, outlining the way communication occurs between them in the management of the HEI.

It was found the importance of the participation of the manager in the structuring of the course and in the application of interventions that aim to improve the quality in medical training and, consequently, to ensure satisfactory care to the needs of health services and the community.

## Authors' contribution

All authors approved the final version of the manuscript and declared themselves responsible for all aspects of the work, including ensuring its accuracy and completeness.

## Conflict of interest

The authors declare that there are no conflicts of interest.

## References

1. Vieira SP, Pierantoni CR, Magnago C, Ney MS, de Miranda RG. A graduação em medicina no Brasil ante os desafios da formação para a Atenção Primária à Saúde. *Saúde Debate*. 2018 Sep;42(spe1):189–207.
2. Cardoso FM, Campos GWS. Aprendendo a clínica do sofrimento social: narrativas do internato na Atenção Primária à Saúde. *Ciênc Saúde Colet*. 2020 apr;25(4):1251-60.
3. Machado C, Oliveira JM, Malvezzi E. Repercussões das diretrizes curriculares nacionais de 2014 nos projetos pedagógicos das novas escolas médicas. *Interface (Botucatu)*.



2021;25:e200358

4. Sordi MRLD, Mendes GSCV, Cyrino EG, Alexandre FLF, Manoel CM, Lopes CVM. Experiência de construção coletiva de instrumento autoavaliativo a serviço da formação médica referenciada nas Diretrizes Curriculares Nacionais (DCN) pautadas no Programa Mais Médicos. *Interface (Botucatu)*. 2020;24:e190527.
5. Coelho MGM, Machado MFAS, Bessa OAAC, Nuto SAS. Atenção Primária à Saúde na perspectiva da formação do profissional médico. *Interface (Botucatu)*. 2020; 24: e190740
6. Biffi M, Diercks MS, Barreiros BC, Fajardo AP. Metodologias Ativas de Aprendizagem: Desafios dos Docentes de Duas Faculdades de Medicina do Rio Grande do Sul, Brasil. *Rev Bras Educ Méd. (Online)*. 2020 oct 12;44.
7. Machado CDB, Wuo A, Heinzle M. Educação Médica no Brasil: uma Análise Histórica sobre a Formação Acadêmica e Pedagógica. *Rev Bras Educ Méd. (Online)*. 2018 dec;42(4):66-73.
8. Conceição CV, Moraes MAA. Aprendizagem Cooperativa e a Formação do Médico Inserido em Metodologias Ativas: um Olhar de Estudantes e Docentes. *Rev Bras Educ Méd*. 2018 dec;42(4):115-22.
9. Custódio JB, Peixoto MGB, Arruda CAM, Vieira DVF, de Sousa MS, Ávila MMM. Desafios Associados à Formação do Médico em Saúde Coletiva no Curso de Medicina de uma Universidade Pública do Ceará. *Rev Bras Educ Méd. (Online)*. 2019;43:114-21.
10. Rezende VLM, Rocha BS, Naghettini A, Fernandes MR, Pereira ERS. Percepção discente e docente sobre o desenvolvimento curricular na atenção primária após Diretrizes Curriculares de 2014. *Rev Bras Educ Méd*. 2019 jul;43(3):91-9.
11. Ferreira JMP, Paiva KCM. Competências gerenciais dos coordenadores de cursos de instituições privadas de ensino superior na cidade de Fortaleza, CE. *RACE [Internet]*. 2017;16(2):681-702.
12. Barbosa MAC, de Mendonça JRC, Cassundé FRSA. Competências Gerenciais (esperadas versus percebidas) de Professores-gestores de Instituições Federais de Ensino Superior: percepções dos professores de uma Universidade Federal. *RAEP [Internet]*. 2016;17(3):439-73.
13. Kalogirou MR, Chauvet C, Yonge O. Including Administrators in Curriculum Re-Design: How the Academic-Practice Relationship can Bridge the Practice-Theory Gap. *J Nurs Manag*. 2020;29(4):635-41.
14. Meireles MAC, Fernandes CCP, e Silva LS. Novas Diretrizes Curriculares Nacionais e a Formação Médica: Expectativas dos Discentes do Primeiro Ano do Curso de Medicina de uma Instituição de Ensino Superior. *Rev Bras Educ Méd*. 2019 Jun;43(2):67-78.
15. Costa DAS, da Silva RF, Lima VV, Ribeiro ECO. Diretrizes curriculares nacionais das profissões da Saúde 2001-2004: análise à luz das teorias de desenvolvimento curricular. *Interface (Botucatu)*. 2018 dec;22(67):1183-95.



16. Almeida SMV, Barbosa LMV. Curricularização da Extensão Universitária no Ensino Médico: o Encontro das Gerações para Humanização da Formação. *Rev Bras Educ Méd.* (Online). 2020 Jan 13; 43: 672-80.
17. Oliveira FP, Santos LMP, Shimizu HE. Programa mais médicos e diretrizes curriculares nacionais: avanços e fortalecimento do sistema de saúde. *Trab Educ Saúde* (Online). 2019 feb;17(1):e0018415.
18. Torres V, Sampaio CA, Caldeira AP. Ingressantes de cursos médicos e a percepção sobre a transição para uma aprendizagem ativa. *Interface* (Botucatu). 2019;23.
19. Oliveira APC. Competências gerenciais de professores-gestores do ensino superior: um estudo comparativo entre coordenadores de instituições públicas e privadas de Belo Horizonte. [dissertação] [internet]. Belo Horizonte: Universidade Federal de Minas Gerais. 2018. 146f.
20. Castro Júnior DFL, Deluca MAM, Barp AD, Souza IM, de Abreu JC. Competências gerenciais: estudo de caso das funções da coordenação de curso superior em administração. *RECC – Revista Eletrônica Científica do CRA-PR.* 2020 may;6(2):16-29.
21. Saboya PGR, Palácios FAC, Moreira MA, Ferreira NS. Competitividade e estratégia: novos desafios para coordenadores de cursos de IES privadas no Brasil. *Revista GUAL.* 2020 may;13(2):252-73.
22. Quintanilha LF, Farias CS da S, Andrade BB. Formação e envolvimento pedagógico entre docentes do ensino superior em saúde. *Rev Inter Educ Sup.* 2020 jul;7:e021026.
23. Menezes P, Martins H, Oliveira R. Os critérios de excelência Baldrige na efetividade da gestão de instituições de ensino superior. *Braz Bus Rev.* 2018 jan;15(1):47-67.
24. Eliney S, Duarte J, Imanobu H, Lima R, Lima G. Software de comunicação institucional: Uma solução para comunicação entre órgãos gestores e equipe de apoio In *Anais do XVIII Escola Regional de Computação Bahia, Alagoas e Sergipe.* SBC. 2018:54-9.
25. Breda F, Cruz CML, Hermes LCR, Medeiros JF. Plano de Desenvolvimento Institucional em Instituições de Ensino Superior Brasileiras e a Gestão da Comunicação Integrada de Marketing no Ambiente On-Line. *Desenvolvimento em Questão* [Internet]. 2020 Apr 24;18(51):331–54.
26. Torelli T. Comunicação estratégica entre universidade e aluno: estudo de caso Anhanguera Niterói. [tese]. Porto: Universidade Fernando Pessoa; 2019. 102f.
27. Glória V, Silva CS, Redondo L, Nunes M. A comunicação estratégica como fator de aproximação entre instituições de ensino superior e a sociedade: a experiência do Gabinete de Comunicação e Imagem do Politécnico de Lisboa. In: *9ª Conferência FORGES (Fórum da Gestão do Ensino Superior nos Países e Regiões de Língua Portuguesa), Brasília (Brasil), 2019.*



28. Silva S, Ruão T, Gonçalves G. O desafio da comunicação estratégica nas instituições de ensino superior: estudo do papel da comunicação na promoção da sua missão social. *Revista Comunicando [Internet]*. 2016;218–42.
29. Nascimento JRS. Metodologia ativa no curso de medicina da Universidade Federal do Maranhão, em Imperatriz: contribuições à formação acadêmica e ao desenvolvimento regional . [dissertação] [internet]. Taubaté: Universidade de Taubaté – Departamento de Gestão e Negócios 2020. 253f.
30. Ronn AP, De Medeiros DSS, Mota WP, Porto VCH, Barroso MG. Evidências da efetividade da aprendizagem baseada em problemas na educação médica: uma revisão de literatura. *Rev Ciênc Estud Acad Med*. 2019;(11):23-42.
31. Borges MC, Chachá SGF, Quintana SM, Freitas LCC, Rodrigues MLV. Aprendizado baseado em problemas. *Medicina (Ribeirão Preto)* 2014;47(3):301-7.
32. Belfor JA, Sena IS, Silva DKB, Lopes BRS, Koga Júnior M, Santos BÉF. Competências pedagógicas docentes sob a percepção de alunos de medicina de universidade da Amazônia brasileira. *Ciêns Saúde Colet [Internet]*. 2018 jan 1; 23:73-82.
33. Savassi LCM, Dias EC, Gontijo ED. Formação médica, Atenção Primária e interdisciplinaridade: relato de experiência sobre articulações necessárias. *Rev Docência Ens Sup (Online)*. 2018 jul;8(1):189-204.
34. Kaluf IO, Sousa SGO, Luz S, Cesario RR. Sentimentos do Estudante de Medicina quando em Contato com a Prática. *Rev Bras Educ Méd (Online)*. 2019 mar;43(1):13-22.
35. BRASIL. Ministério da Educação. Resolução n.3, de 20 de junho de 2014. Institui Diretrizes Curriculares Nacionais do Curso de Graduação em Medicina e dá outras providencias. *Diário Oficial da União, Brasília, DF*, 2014.
36. Coelho RD, De Sousa AF, Cordeiro BM, De Oliveira IAT, Barros YC, Sugita DM. Relação estudante-paciente como objeto educacional: sentimentos dos estudantes nesse contato / Student-patient relationship as an educational object: student feelings in this contact. *Braz J Hea*. 2022 may;5(3):8380-98.
37. Cunha SLR, Lagemann B, Silva RCS, Mello DRB, Vitarelli AM, Vargas AFM, *et al.* Relação médico-paciente: processo de aprendizagem e questões bioéticas. *Rev Inter Pens Cient*. 2018;4(1):124-32.
38. Benedetto MACD, Gallian DMC. Narrativas de estudantes de Medicina e Enfermagem: currículo oculto e desumanização em saúde. *Interface (Botucatu)*. 2018 dec;22(67):1197-207.
39. Montanari PM. Formação para o trabalho no ensino das graduações em saúde. *Saúde Soc*. 2018 oct;27(4):980-6.

Nunes BR, Lelis EL, Campolina MCSB, Fonseca MKS, Silva RG, Almeida RM, *et al.*

40. Santos Júnior CJ, Misael JR, Silva MR, Gomes VM. Educação Médica e Formação na Perspectiva Ampliada e Multidimensional: Considerações acerca de uma Experiência de Ensino-Aprendizagem. *Rev Bras Educ Méd.* 2019 mar;43(1):72-9.