Medical education in Primary Healthcare: a multiple-approach experience to teaching, service and community integration practices

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The Brazilian National Health System (SUS) is a public universal system and adopts primary healthcare as the main coordinator of care. SUS requires that Brazilian universities offer a new professional education model. This article aims at discussing the medical education provided in an institution in a city in the Brazilian state of Bahia, taking primary healthcare and the National Curricular Guidelines as guidance for the Medicine courses. The experience with teaching, service and community integration practices (Piesc) brings together students, teachers, health professionals and SUS users, integrating different perspectives on the health-disease-care process under the Family Health Strategy context. Piesc includes Collective Health and General Family and Community Medicine knowledge, covering different territories and social agents in the process of care, helping to change medical education for SUS.

Keywords: Primary healthcare. Medical education. Family health. Brazilian National Health System.
Introduction

As a public universal system, the Brazilian National Health System (SUS) requires that Brazilian universities educate professionals to be increasingly committed to a human and quality perspective based on the principles of equality and comprehensive care. According to SUS, professionals need to coadunate with the health needs of the population and of the services in different contexts and with different roles played by the professional education’s agents in this field. These professionals need to follow guidelines that are consistent with the current demands for work and education in health regulation, as well as with how to manage people in the public scenario.

This ideology was consolidated based on the Brazilian Healthcare Reform and its constitutive movements. It is shaped as a legacy of discussions related to the needs of health professional education, which was contradictorily built in the last century, particularly based on Flexner’s model. Flexner’s model privileged the hospital setting and the specialized education.

The traditional medical education is inserted into this perspective of the importance given to speciality and super-specialty that are incorporated by the job market “in different modalities, resulting in a technical and social stratification of the medical work” (p. 124). Therefore, different medical work modalities are observed: “wage earners, self-employed, organization into cooperatives of different types and entrepreneur doctors who work with service provision both in SUS and in the private sector” (p. 124).

The medical work is expressed in the daily routine of health services as part of the relationships among different knowledge and practices, involving other health professionals and users in the conception of the health-disease process and in the way services are organized in order to meet the population’s demands/needs. Additionally, “health practice will always be related to the conditions of life and its multiple dimensions: social, biological, ethical-political” (p. 444).

Primary healthcare, in turn, is a privileged space of education for health professionals, according to the guiding prerequisites of SUS. It is considered a preferential gateway of the healthcare network, welcoming users and families in order to create bonds and accountability for individual and collective care. This level of care and management model aims at coordinating care in the network in a longitudinal, comprehensive and interdisciplinary way, focusing on the individual’s importance and respecting their social, cultural and historical context.

Primary healthcare education and qualification are associated with the attempt to achieve a comprehensive and universal care in SUS. This attempt is justified by the fact that SUS is an astringed territory based on a family and community approach where several agents are involved in different ways of providing healthcare.

Studies on international experiences conducted in different countries have shown that primary healthcare produces positive results when addressing people’s needs, also impacting on the professional qualification processes. In Brazil, some studies that assessed the quality of services considering their attributes and using the Primary Care Assessment Tool (PCATool) revealed that the most important factor that indicated the quality of the services is related to a better education and qualification of professionals. In this sense, managers should give preference to hiring professionals with proper education to work in this level of care. However, even after
significant epidemiological changes and advances in primary healthcare policies and practices in Brazil in the last few years, there are sociopolitical and structural obstacles to its consolidation, such as the ones related to the way work is organized.\textsuperscript{15,16}

Besides Medicine, other professions have also tried to diversify their fields of activity, particularly those related to primary healthcare. However, this diversification requires further discussion. Besides the social demand, there is a real need for readapting the curricula of undergraduate health courses. This broad academic and social process resulted in a series of proposals of changes in the medical education curricula. These proposals influenced the premises of the new National Curricular Guidelines\textsuperscript{18} instituted in 2014. They have also guided the implementation of new Medicine courses by changing the Political-Pedagogical Projects of institutions that are already established in the Brazilian scenario.

This article aims at discussing the medical education of an institution in a city in the Brazilian state of Bahia. This discussion is based on primary healthcare and the National Curricular Guidelines of Medicine courses. The experience of Teaching, Service and Community Integration Practices (PIESC) is contextualized, explicating the dynamics of the relationships among students, teachers, health professionals and SUS users involved in the mutual learning process in a conceptual map.

Contextualizing the Medicine course of Universidade Estadual de Feira de Santana and the new challenges for medical education: a methodological analysis

Analyzing a Medicine course in the semi-arid climate of the Brazilian state of Bahia as a case study means integrating articulate critical analyses into theoretical and practical extracts of a medical education proposal in the timeline, ensuring significant opportunities to learn about topics and issues of interest. This experience is focused on active and critical learning, in which Medicine students play a central role. From the very beginning of their education, students are encouraged to think, reflect, discuss, analyze and act upon themes and content related to the local public health and social reality into which they are inserted. This is the necessary starting point to build comprehensive care practices that are consistent with SUS.

The initial challenges of a group of 12 doctor-teachers, nurses and dental surgeons, with a Master’s and Doctoral degree in Public Health and Medicine, mediators in the teaching and learning process, who worked as learning facilitators in a mutual and integrated way when planning teaching activities. Therefore, the Medicine course of Universidade Estadual de Feira de Santana (UEFS) was implemented in 2003 offering 30 annual spots (this number is kept until today, 2018). The course is guided by the National Curricular Guidelines adopted by the Brazilian Ministry of Education (MEC) in 2001.\textsuperscript{20} It was based on active methodologies in the teaching-learning-reflecting-caring process, particularly on the issue-based learning and questioning methodology.

Therefore, the Political-Pedagogical Project glimpses the education of future doctors engaged in social territories, where local SUS problems and needs emerge. This education has a humanist view and adheres to health policies in the local, state and
federal context. The course is structured into two moments. The first one is the basic cycle, which is experienced in the first four years and is organized into three axes: 1) tutorial group activity, 2) clinical skills and attitudes, and 3) PIESC. The second one is the vocational cycle, in the last two years of the course. During this period, students work in the medical residency performing clinical activities as a supervised internship.

PIESC’s learning is based on an active teaching methodology that positively influences the educator’s understanding and point of view. Consequently, educators prepare students for the social context based on a problem-based education as part of the significant experiences involving interdisciplinary knowledge. The combination of different points of view indicates a critical perspective and an openness for dialog. Creative and innovative practices aimed at making intertwined connections among men, the world, the society and education guide this combination of different points of view21.

A problematizing education is based on Maguerrez Arc22, on the idea of theorization/creation of answers, in order to understand the reality and the analyzed problems as conducting wires of the learning process. This type of education articulates the arrangement of the themes to be discussed in a participative and dialogical way, focused on the importance of different knowledge and practice nuclei based on teamwork, with continuous reflection upon each professional role, adopting the idea of an interprofessional work23.

PIESC’s compass originates from the process of collective education of health professionals in the region of the city of Feira de Santana. They developed local planning projects, creating efficient and feasible intervention tools in the social territories that surround the university. The accumulation of experiences of the undergraduate Nursing and Dentistry courses provided a measurement and guiding tool for the newly-created Medicine course by adopting primary healthcare as one of the limiting axes of the education process.

In summary, the Medicine course education at UEFS aims at encompassing the health-disease-care process based on social, historical, biological, behavioral, psychological, ecological and ethical determinants. It aims at paying attention to the entire lifecycle, from pregnancy to the old age, always trying to achieve a comprehensive healthcare, with actions of promotion, prevention, diagnosis, treatment and rehab. It also aims at understanding primary healthcare as a guiding axis of care in its relational dynamics: students, teachers, health team and the people who need care24.

Results and discussion

PIESC is the main curricular component of the Medicine course at UEFS, contextualized under the social intervention space of primary healthcare. Students’ practice is mediated by teachers and integrated into Family Health Strategy (ESF) and NASF professionals, and members of the local community. Knowledge, skills, attitudes and values are discussed, articulating different points of view about the problems/needs of different agents (people, family and community) and their relationship with the professionals who try to provide care in different aspects and complexities of the daily routine.
The difference in the context of this reality can be understood by the idea of an articulate group, not in the sense of a group of people, but in the sense of an inventive movement of the importance given to singularities, without losing the idea of the group as a whole. It is a continuous process of deterritorialization where each person, in their complexity and multiplicity, aims at co-managing the production of subjectivities.

PIESC aims at contributing to a medical education in primary healthcare, uncovering the complexity of the health-disease-care process throughout the lifecycle. The objective is to prepare doctors to understand the expanded concept of health and know how to welcome and establish accountability bonds when coordinating the necessary actions to improve the quality of life of people/families/communities.

PIESC’s ideology regarding medical education in primary healthcare is aligned with the conceptions of the European Academy of Teachers in General Practice (EURACT). EURACT suggests six categories of core competencies for the Family Medicine education: primary care management, person-centered care, specific problem solving skills, comprehensive approach, community orientation and holistic approach.

When the course was created, in 2003, PIESC’s teaching and learning activities were planned based on the National Curricular Guidelines (published in 2001). According to these guidelines, medical education should cover, as an essential content, the health-disease process of the patient, family and community in an articulate way with the epidemiological and professional reality, providing a comprehensive care. Therefore, the course fosters an active interaction between students, users and health professionals from its very beginning. This active interaction enables students to deal with real problems and take responsibilities as an agent who provides care and assistance.

In the path of new cycles incorporated in the development of PIESC, teachers adopted a forefront attitude and a critical view of the health problems faced by people/families in the studied territories. They matured the teaching, learning and education activities based on the changes made in the health guidelines, protocols and policies implemented by the Brazilian Ministry of Health in the primary healthcare scope and taking into consideration the epidemiological and social needs of the local communities. Therefore, it was possible to incorporate new knowledge and practice implemented and/or updated by SUS. This possibility enabled to expand the solution of actions developed by PIESC in ESF in a continuous process of curricular reorganization, with more dialog.

PIESC is developed in 16 Family Health Units (USF) during the first four years of the course with a workload of 150 hours/year (4 hours/week). The class of 30 students is split into 4 groups. Each group is designated a USF. Therefore, it is possible to build bonds and take responsibility with the Family Health team, NASF professionals and people/families/communities.

In the first two years, in PIESC I and II, the main focus is on building knowledge based on the community’s dynamics related to Collective Health’s theoretical and conceptual guidance. This path is confused with the construction of SUS, constituting a field of knowledge and social, multiprofessional and interdisciplinary practices. Therefore, the object of intervention is health, under the scope of groups and social
classes, and of their practice aimed at the analysis of the population’s health situation. This intervention incorporates the knowledge produced related to social and biological determinants of health-disease, the creation of policies and the management of processes aimed at controlling problems.

In the third and fourth years, in PIESC III and IV, learning is focused on people/families, based on General Family and Community Medicine. This type of medical specialization privileges primary healthcare and is considered a strategy in the conformation of health systems. Family doctors are responsible for the first contact, i.e., for a comprehensive, longitudinal and coordinated healthcare that takes the patient’s family and community context into account.

The process of learning by doing, reflecting and providing a new meaning enabled to draw a conceptual map (Figure 1) featuring objectives, theoretical and practical activities, and final products.

In the theoretical activities, debates are problematized based on a guiding issue and aligned to SUS policies, protocols and guidelines. Qualifications and workshops are developed by teachers with different educational backgrounds (Medicine, Dentistry, Nursing, Sociology) and SUS professionals with expertise on generating themes.

Practical activities are mediated by teachers and followed up by ESF and NASF professionals, providing interlocution and integration with the territories’ people/families/communities. All individual and collective activities are discussed and agreed upon among all agents involved in the care process.

At the end of each school year, teachers revise the conceptual map’s components and/or the activities. They take into account the assessment forms filled out by students, the health services needs and the people/family/community’s health problems/aggravations/risks. PIESC’s pedagogical planning and assessment tool is thus transformed into a dynamic and contextualized process.

Therefore, the systems of the episteme forms evoked in the conceptual map’s diagrams are postulated in the theoretical/practical fields and in the rationalities of the social and political dimensions of the way health is organized, in SUS and in the Brazilian medical education. The episteme forms constitute a learning mosaic before and during the experience process. This mosaic is present in the society, in the promotion of health and in the care provided to people/families in social territories of exchange among the historical, social and dialectical realities postulated and supported by Santos (2004)

An issue that deserves being discussed is the creation of the More Doctors Program, in 2013. The More Doctors Program aims at strengthening and expanding the education of doctors to SUS. The program’s objectives are: to reduce the lack of doctors in the country, to strengthen primary healthcare, to improve medical education, to increase the insertion of undergraduate students in SUS health units and to strengthen the permanent education policy through teaching-service integration.

The More Doctors Program’s actions in the undergraduate Medicine course are focused on increasing the offer of 30 spots by establishing criteria for opening new courses. Furthermore, they provide for new parameters for the National Curricular Guidelines, redefining the profile of graduate doctors, strengthening SUS as the main scenario for professional education, with emphasis on primary healthcare and urgency/emergency.
Consequently, the new 2014 National Curricular Guidelines establish the need for articulation among knowledge, skills and attitudes in three specific areas: care, management and education in health. Future doctors should consider “the dimensions of the biological, subjective, ethnic-racial, gender, sexual orientation, socioeconomic,
political, environmental, cultural, ethical diversity”18 (p. 2) in healthcare. Health management intends to “understand the health system’s principles, guidelines and policies and participate in management and administration actions”18 (p. 3). Education in health, in turn, is focused on an “initial, continued and in-service education with intellectual autonomy and social commitment”18 (p. 4).

PIESC’s conceptual map shows the theoretical and practical pedagogical activities contemplate MEC’s guidelines18,27 and are in line with the health policies adopted by the Brazilian Ministry of Health. By inserting students in the USF’s daily routine from the very first year of the course, dialoging with health professionals, community leaders and health system users, a new form of protagonism is established in the process of learning, caring and producing knowledge6.

In the first year of the course, in PIESC I, we tried to develop competencies related to: the social commitment of doctors; the education of ethical-humanistic values; the knowledge of USF territory’s reality, identifying existing problems/aggravations/risks and health practices; and the creation of intervention plans that are discussed and agreed upon with the family health team and community members. Therefore, these competencies converge with Article 14 of the National Curricular Guidelines. According to this article, the investigation of Collective Health problems “includes the analysis performance of the health needs of groups of people and the life and health conditions of communities, considering dimensions of risk, vulnerability, incidence and prevalence of health conditions18 (p. 9).

In PIESC II, students develop competencies related to local planning with the community and USF/NASF team. This local planning includes the operationalization of intervention actions and tools that are appropriate and feasible to the reality. The strategies used are: community meetings/workshops and conversation circles, spaces of conflict and interprofessional consensus. These activities contemplate Article 15 of the National Curricular Guidelines. This article addresses the participation of students in the discussion and creation of intervention projects in social groups, always taking cultural aspects and autonomy into consideration and fostering the insertion of actions of promotion and education in health in all care levels, with emphasis to primary care18.

PIESC I and II experiences settle knowledge in the field of Collective Health based on strategic planning actions. Based on the situational diagnosis, different social agents (students, teachers, health team, users and communities) build several explanations for the social territory’s reality and negotiate feasible solutions to be applied, monitored and assessed33.

PIESC III and IV activities are focused on families/people, based on the creation, discussion, agreement and execution of Family Therapy Projects (FTP). FTP conducts comprehensive (individual and collective) actions to promote health; identify risks and vulnerabilities; prevent diseases and aggravations; diagnose, treat and maintain health in USF (doctor appointments), at home (educational activities) and in referral services (follow-up of clinical, social and imaging procedures) in an articulate way with the healthcare network.

Using FTP reinforces the practice elicited in Article 5 of the National Curricular Guidelines. According to this article, this practice “aims at a person, family and community-centered care, emphasizing interprofessional work with the development
of a horizontal and shared relationship, respecting the needs and desires of the person under care, the family and the community, their understanding of what being sick means, the identification of common objectives and responsibilities between health professionals and users in healthcare”18 (p. 3).

FTP is a tool that operationalizes care management. It aims at providing health technologies according to individual needs in different moments of the person’s life34. FTP is a movement of co-production and co-management of the therapeutic process of people/families. It works as an integration and organization tool of health teams35. The use of this tool in PIESC’s daily routine helps achieve a shared knowledge among students, teachers, health team and people/families. It enables to build competencies and skills required from doctors to work in primary healthcare and ESF.

Besides being in line with the National Curricular Guidelines and the Public Health Policies, PIESC’s conceptual map is also in compliance with the guidelines for primary healthcare education in undergraduate Medicine courses. These guidelines were determined by the Brazilian Association of Medical Education (ABEM) and the Brazilian Society of Family and Community Medicine (SBMFC)29.

The guidelines establish three dimensions of knowledge for education in primary healthcare. In the individual approach, students should “know and use the person-centered, comprehensive, complex, interdisciplinary, longitudinal and problem-solving clinical approach based on scientific evidence, but individualizing the care process”29 (p. 144-5). In the family approach, students deal with different phases of the lifecycle, acknowledge the family structure and dynamics, use tools of family diagnosis and identify the influence intrafamily relationships have in the health-disease-care process29. In the community approach, students learn and work with the community’s health diagnosis tools, identify the society/community’s organization and their social determinants in the health/disease process, identify and respect cultural diversity, understand the territory is dynamic, develop health surveillance actions and participate in popular health education activities29.

PIESC experience over the last 15 years was based on dialogical and articulate participation in the needs of the community and of the medical education process. However, there were difficulties and tensions, particularly in the students’ understanding of the importance of SUS and primary healthcare to their education; in the articulation of the work process among PIESC, ESF and NASF; in the agreement and operationalization of FTP activities combining different points of view on the prioritized issues; and in the people/families’ adoption of a new care process based on a co-management model.

These hindrances required that different agents kept ongoing negotiations and assessments that were only possible due to PIESC’s longitudinal and interprofessional work23. This work, in turn, enabled the construction of bonds through care management and accountability, necessary elements to medical education in primary healthcare and in accordance with the learning by doing precept21.
Final remarks

The Teaching, Service and Community Integration Practices aim at contributing to a medical education focused on SUS needs. Therefore, as pointed out by Almeida Filho, understanding the meaning of interdisciplinarity in teaching, in the theoretical and practical fields, and in the production of knowledge related to a concrete and complex problem is essential.

Medical practice in PIESC includes Collective Health and General Family and Community Medicine. It is based on the conceptual map (Figure 1) and follows the premises of the National Curricular Guidelines (2001 and 2014) and SUS orientations. It is, therefore, an experience report. It includes the development of medical education and delineates practices with communities, families and people based on their vulnerabilities and care. PIESC is conducted in partnership with the Family Health Strategy and the local healthcare networks.

The connection made between the teaching and learning activities and the healthcare reality and teamwork practices, characterized by the reflection upon what to do and how to do it together, points towards care accountability, which is an important assumption of education in health, particularly of doctors, in primary healthcare. In these scenarios, the articulation of universities with health services when faced by the needs and problems of the community/family/people is a great challenge.

PIESC’s work presents new perspectives and potentialities based on strengthening the bond with ESF/NASF professionals and on expanding the interdisciplinary work. As observed, FTP demands require continuity, as part of the health services network, in order to ensure resolubility of the actions that were thought, planned and executed. The development of shared therapeutic projects somehow depends on the level of accountability of those involved in care management and practice. It means educating health professionals, particularly doctors, to incorporate new ways of providing healthcare, opening up for possibilities of creative encounters to problematize and continuously reflect upon the processes of thinking and providing healthcare.

The curricular guidelines of the 2014 Medicine courses expanded the politico-pedagogical discussion on medical education. This discussion was spread throughout the national territory, compelling all undergraduate Medicine courses to re-discuss their curricular bases. This reach shows the importance of primary healthcare as coordinator of care in SUS. This is due to the fact that primary healthcare requires new institutional arrangements and further strategies of education of health professionals to become committed to comprehensive, problem-solving and quality practices.
Authors’ contributions

All authors participated actively in all the stages of the preparation of the manuscript.

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