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Education-service integration in the context of Brazilian medical schools: an integrative review

Luís Fernando Boff Zarpelon [1]
Maria Leandra Terencio [1]
Nildo Alves Batista [2]

Abstract *This paper aimed to characterize the historical trajectory, including the advances and challenges, of the teaching-service integration in the medical training process. In this context, through scientific studies indexed in databases, a critical review of the literature was performed from the search for works of reference until the present moment. Most of the works consulted were reference material on the topic published in scientific journals and indexed in the databases of the Virtual Health Library. The search evidenced that the country underwent transformative experiences in the fields of health and education in the 1970's and, since then, the teaching-service integration has drawn universities and health institutions closer through the reorganization of education and healthcare. Despite the progress achieved mainly in the last decade, there are challenges to overcome in the integration of these different worlds, of one which is the creation and implementation of management tools such as the Organizing Contract for Public Health Education Action (COAPES), capable of withstanding the complexity of this process.*

Key words *Medical education, Public health policies, Health management*

[1] Instituto Latino-Americano de Ciências da Vida e da Natureza, Universidade Federal da Integração Latino-Americana. Loteamento Universitário das Américas. 85870-901 Foz do Iguaçu PR Brasil. luis.zarpelon@unila.edu.br
[2] Escola Paulista de Medicina, Universidade Federal de São Paulo. Santos SP Brasil.

Introduction

Education-service integration is understood as the collective, agreed and integrated work of students and teachers of health training courses with workers who are part of the health services teams, including managers, aiming at individual and collective healthcare quality, quality professional training and development / satisfaction of service workers[1].

From the Brazilian Health Reform movement to the birth of the Brazilian Unified Health System (SUS) in 1988, from the new Law on the National Education Guidelines and Bases (LDB) in 1996 to the National Curricular Guidelines for Health Graduation Courses (DCNs) in 2001, the creation of the Secretariat of Labor Management and Health Education (SGTES) in 2003 to the establishment of the *Mais Médicos* ("More Doctors") Program for Brazil (PMMB), several education-service integration experiences promoted advances in the rapprochement between universities and health institutions.

In the face of this historical context, challenges remain, especially concerning sharing objectives between these two worlds, since education-service integration is not built in isolation, but linked to political, social and economic processes.

Thus, this paper intends to characterize the historical path, including advances and challenges of the processes of education-service integration in the training of the Brazilian doctors to date, represented by the launching of the National Curricular Guidelines for Graduation in Medicine, promulgated in 2014, which by law become mandatory for all schools.

The education-service integration in Brazil as a strategy for reorienting medical education

Concerning the Brazilian medical education, the twentieth century was characterized by two major movements: the significantly expanded number of medical schools and the emergence of several experiences aimed at integrating education and service, which served as a basis for the current policies of reorientation of training.

From a pedagogical perspective, medical education in the first half of the 20th century reflects the ideas contained in the Flexner Report. In Brazil, the effective incorporation of the Flexnerian postulates occurred with the University Reform of 1968 and induced policies, programs and projects that articulated the relationship between education and health services throughout this period[2,3].

In this same period, other movements showed the need for new articulations between education and services, aiming to reform medical practice based on changes in training, and incorporating Preventive Medicine disciplines in the curricula is one of the main strategies proposed[4].

In 1971, the Brazilian Medical Education Association (ABEM) issued recommendations aimed at overcoming the current medical training model, including, among other things, the emphasis on Preventive and Social Medicine education and anticipation of the student's clinical experience. These reforms were still more related to the pedagogical project than to medical practices in services[5, 6].

In the 1970s, two major pro-change movements emerged in the training of physicians: Community Medicine, whose main strategy was to stimulate community participation, and that of Teacher-Healthcare Integration (IDA), a process of growing articulation between educational institutions and health services, adequate to the real needs of the population, the production of knowledge and the training of human resources[3,5].

These strategies did not change hospital-centered education and fragmented practice in many specialties, pointing to the fact that progress would only be achieved with comprehensive, more integrated and focused initiatives. At the end of the 1970s, efforts to stimulate multi-departmental and multi-professional participation in IDA projects were implemented with the support of the Kellogg Foundation[7,8].

Another major milestone in medical education was the International Primary Health Care Conference, held in Alma-Ata (USSR, 1978), which led several countries to reformulate their health policies and reorient medical education. Brazilian schools perceived the relevance of primary care and reinforced the experience of Preventive Medicine Departments and activities outside the school service[9].

In 1985 the UNI (A New Initiative) programs were developed, which proposed, among other things, multidisciplinary teamwork and the use of the service as a teaching and learning scenario. It was implemented in a few Brazilian medical schools, and although with some advances in curricular changes, the participation of faculty and health professionals was still scarce. As a result, these programs did not have sufficient strength to settle and cause permanent changes[7,10,11].

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In 1986, the VIII National Health Conference proposed the formulation of a new universal public health model, breaking the fundamental split between public health and individual curative medicine and the intense privatization in the Brazilian health system. That same year, in Edinburgh (Scotland), the First World Conference on Medical Education, promoted by the World Federation of Medical Education (WFME), the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) reaffirmed the need to redirect medical education to social reality and health promotion[3].

The establishment of the Unified Health System (SUS) in 1988, based on integrality, humanized care and health promotion raised the need to reorient the formation, qualification and commitment of professionals as something vital for their real consolidation. Concerning human resources policy, this system would be governed by the principle of continued training and refreshers of its workers and by the organization of human resources in health education[12-14].

In the early 1990s witnessed the national and international recognition of the need for change in the education of health professionals. In 1993, the II World Conference on Medical Education, also in Edinburgh, proposed a new integration agreement between training institutions, health services and society. The main curricular reforms of the medical courses in Brazil were initiated, driven and influenced by this conference[10,15-17].

In the XXVIII Brazilian Congress of Medical Education (1990), the National Interagency Committee for the Evaluation of Medical Education (CINAEM) was established to evaluate the training of human resources that meet the demands of the SUS and the commitment to respond to the crisis of legitimacy of medical professionals. This committee remained in operation for 10 years, supported a proposal guiding this new training model and was very relevant in the elaboration of the DCNs for undergraduate courses in Medicine in 2001[18].

On the other hand, the interest in a doctor other than the one that was operating in the market persisted, and a strategy of transforming medical practice was the establishment, in 1994, of the Family Health Program (PSF) as a proposal for the reorganization of primary care in the country and the whole care model[19]. Also, in 1996, a significant landmark for health education was the enactment of the new LDB with the proposal of the DCNs. This facilitated the achievement of a graduated profile more committed to the social demands[3,7,20].

After the launch of the DCNs for the medical course, the Program of Incentive to Curricular Changes in the Medicine Courses (PROMED) was launched, with the active participation of ABEM and the Rede UNIDA Network during all its stages. The selected medical schools developed their activities of change in poor articulation, but the Program evidenced significant advances in the field of public policies, even covering only medical education[7].

In 2003, the creation of the SGTES in the Ministry of Health (MS) was the onset of an essential movement of more effective approximation between the Ministries of Health and Education. In this context, the MS was co-responsible for health education, the organization of human resources and work management.

In 2004, the National Permanent Health Education Policy (SUS) was established as a SUS strategy for training and developing workers in the sector. The implementation of permanent education in health hubs began, changing the ways of planning and financing of the EPS policy[21].

At the end of 2005, the National Program for the Reorientation of Professional Training in Health (Pró-Saúde) emerges as a proposal for redirecting professional training through the education-service integration, with financial incentive also for the municipalities that house schools. These experiences were anchored in the guidelines of a new National Continuing Education in Health Policy (PNEPS) and pointed to a growing process of reorientation of professional training in health[3,20].

In this context, the SUS assumed a progressive leading role towards its constitutional attribution of organizing the education of human resources for the health sector. As a result of the accumulated experiences and the closer approximation between health and education, in 2005, the Interministerial Ordinance Nº 2.118 was established, between the MS and MEC for "technical cooperation in the education and development of human resources in health"[22].

As of 2007, the Interministerial Committee for Health Education Management was established and the PNEPS guidelines were redefined. Thus, the Permanent Committees for Education-Service Integration (CIES) were implemented, in which State and Municipal spheres became part of the management committees, the projects were signed jointly by the Municipal Manager and the Higher Education Institutes (IES) and were evaluated in the CIES and agreed upon in the Bipartite Interagency Committee (CIB) and the Municipal Health Councils (CMS)[24].

The Health Work Education Program (PET-Saúde) was implemented in 2008 and was a relevant driving policy. This movement promoted advances, but the great challenge of breaking with the continuous fragmentation, the inclusion of integrality and practice humanization, as early as during graduation, still persisted. However, most higher education institutions have consistently perpetuated conservative and fragmented training models, focused on specialized technologies and highly dependent on hard technology for diagnostic and therapeutic support[7,10,15].

Within this context, another element was beginning to emerge with great emphasis: the need to expand the number of trained physicians, as well as the need to fix these professionals in specific particular regions to meet the demands in the health services.

In order to further tackle this challenge, in 2013, the *Mais Médicos* ("More Doctors") Program for Brazil emerges with the aim of training human resources in the medical area for the SUS[24]. A series of measures were adopted based on the objectives established in the Program, among them worth noting is the rearrangement of the supply of medical courses and vacancies in medical residency, prioritizing health regions with a lower ratio of vacancies and physicians per inhabitant and with health services structure with the conditions to provide a sufficient quality field of practice for the students.

Another measure of great relevance adopted was the establishment of new parameters for medical training in the country. The Law established that the operation of medical courses was subject to the effective implementation of the national curricular guidelines defined by the National Education Council (CNE) and gave a deadline of 180 days for elaboration of a resolution that would suit the curricular matrix of the undergraduate medical courses to comply with the provisions of Law 12.871[25].

CNE's Resolution Nº 3/2014, through the adaptation of the DCNs, emphasizes further commitment to medical education with the consolidation of the SUS, connecting education, research and extension to the service and assumes the development of the graduate's training in three major training areas: Health Care, Health Management and Health Education[3,19]. By establishing specific guidelines for the curricular content and pedagogical design of the courses, the new DCNs preclude medical training centered only on the traditional training apparatus, definitively boosting medical schools towards integration with the service and the community.

The highlight in this new situation is the use of networks as a space for shaping new health professionals. One of the main supporting pillars[26] of the construction of education-service community integration is the interrelation between its underlying stakeholders.

Other important points of intervention concern the involvement of local SUS managers in the process of opening new medical schools, the expansion of residency places seeking equivalence with the number of former-year medical school graduates and residency in the General Family and Community Medicine as access to most medical residency programs.

Many of the proposed changes advocate actions for which the education-service community integration processes should dig deeper beyond what is observed in the experiences lived up to then, and the scenarios of practices must be expanded and qualified, which makes the task quite complex.

The growing integration between these two fields is justified by the concern to reorganize health practices from the formation of human resources aware of their role in the consolidation of SUS. Thus, it seems impossible to think about this without interfering, at the same time, with professional training and the world of work[2].

Although previous experiences of education-service community integration have brought few results in the reorientation of medical education, they have had a fundamental contribution to generate reflections in schools that, progressively, no longer see in these processes only the opportunity of internship for their students but as potential transformers of social reality and, thus, of the formative process[26,27].

Likewise, if most IES have been limited to isolated projects or programs so far, the enactment of new DCNs gives them the status of a permanent policy. The community-education-service integration proposed in this new moment of transformation of medical education requires more than the establishment of bilateral contracts or agreements between training and care apparatuses.

The scope of the expected reforms with the new measures requires the effective implementation of a community-education-service integration policy that involves all the schools of the health sector, as well as all the care services and their respective managers. The commitment of a policy that needs to be State rather than Government, with proper interministerial articulation, is necessary for the construction of new health education. However, this change must be

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profound and permanent, with those involved committed to the project as if it were their own, without waiting for the change to occur spontaneously or due to legal imperatives.

From this new milestone, community-education-service integration can no longer be seen as a simple strategy for reorienting health education but must be the central element, the main point of the formative process of the future worker.

Health education's curriculum design must be based on education-service integration, while it is no longer possible to conceive of health services that do not provide for the incorporation of the continuous educational process at all levels in the organization of their work. Recognizing that health and education are fields of knowledge and sectors of social and public organization and, regarding health professions, must construct a new and unique field in which the limits of teaching and providing care become imperceptible is a new challenge.

Among the challenges observed in this multiple and complex scenario, we can cite different goals between the training entity and the care entity and the unilateral movements in which there is no opening for the service to be integrated with the actions of the academia.

Integration must take on common meanings and the resulting experiences must produce a gain for both institutions. The necessary dialogue must be more stable, in an inducive space and with the participation of all. Thus, the managers of SUS and schools acquire the utmost relevance. The set of experiences that seek to integrate education-service, still on one-off basis, must be, in fact, integrated into school curricula and the routine of health systems.

Integrating health care services and educational institutions implies some conditioning factors, namely: horizontal relationships, joint work processes, common interests and alignment of needs and potentialities[28]. To this end, it is necessary to promote dialogue spaces between the educational institutions, the SUS and the community.

Improved management and planning instruments provide for collegiate bodies composed of the entities involved, whose consensual decisions are embodied in legal documents such as organizational and public action contracts. The level of integration required adds new challenges to the establishment of these management tools, which should enable the effective implementation of bold objectives[29].

Education-service integration is usually restricted to agreements between two institutions, one of health and the other of education, and is now gaining new and more complex contours. This new scenario can help overcome some of the commonly identified difficulties, such as political instability arising from frequent managerial changes, the limited infrastructure of health services, the isolation of IES vis-à-vis the service network and society, both actors' lack of understanding of the real objectives of the education-service integration, the difficulty in organizing, agreeing and absorbing the demand of the field of practices in municipalities with a more significant number of health schools, insufficient interprofessional articulation within the IES for the development of education-service integration activities, conflicts regarding the lack of definition regarding the commitments of educational institutions and health services concerning the preceptorship and sanitary responsibility.

However, intergovernmental management changes the form of relationship between the entities, showing possible conflicts of interest that must be resolved from a horizontal, non-hierarchical and polycentric relationship, where negotiation and consensus are the only forms of progress. New network management tools must be developed to support this new phenomenon[29]. That is why the Organizational Contract for Public Health Education Action (COAPES) is proposed.

The guidelines proposed for COAPES outlined in Interministerial Ordinance Nº 1.124 of August 4, 2015, establish guaranteed access to all healthcare establishments under the responsibility of health managers as practice scenarios for undergraduate and postgraduate training (residency).

COAPES commits SUS management to the development of educational activities and IES with regional development in addressing local health problems and active community participation. Thus, it defines that each health region will establish a single COAPES, gathering all IES, health residency programs and managers from all the SUS spheres involved. It assigns the coordination of the process to the manager of the host municipality of the IES, establishing the attributions of all those involved and ordering that the contract be approved in the deliberative spheres of the SUS[30].

The potential opened by the implementation of this new policy, with a high level of management complexity, clearly shows a new moment in the processes of education-service integration and the potential inadequacies of care services.

Final considerations

The historical path of the education-service integration in the medical training process characterized in this work shows that the MS participation in the management and financing of the new education-service integration processes characterized a new moment. It is clear that the first experiences were not effective in promoting the reorientation of professional health training, but were significant in generating reflections about its role as a powerful strategy to maintain and build the SUS.

The challenge to be overcome lies in the ability to agree on commitments from schools with care and the SUS with education to build a common field of shared practices, knowledge and power of the stakeholders involved. It remains to be seen whether COAPES will be an instrument capable of assuring these commitments and of supporting the management of the complex political relationships of this process.

The impacts of the implantation of the DCNs in the profile of medical school graduates and the *Mais Médicos* ("More Doctors") Program for Brazil in the professional reorientation and the policies of permanent education of the SUS, and why not, in the reorientation of care, are relevant objects of study.

Collaborations

LF Zarpelon and ML Terencio participated in the design and planning of the research, and other stages of the production of the paper. NA Batista participated in the planning of the research, the critical review of the manuscript and final review of the text. All authors approved the final version of the text.

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