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# Reflections and proposals for the establishment of Family and Community Medicine Master's Programs in Brazil

Leandro David Wenceslau (https://orcid.org/0000-0001-8622-9137) [1]
Thiago Dias Sarti (https://orcid.org/0000-0002-1545-6276) [2]
Thiago Gomes da Trindade (https://orcid.org/0000-0001-8178-0982) [3]

**Abstract** *While Primary Health Care (PHC) and Family and Community Medicine (FCM) have expanded their space and relevance in health care and undergraduate medical courses, Brazil has no* stricto sensu *FCM postgraduate programs. In this paper, we analyze some aspects of the Brazilian public health field and the national* stricto sensu *postgraduate system that can help to explain this scenario. As a contribution to the debate on this topic, we also gathered information from international postgraduate and research experiences in FCM and devised a curriculum proposal for future national FCM master's courses. In the end, we discussed some key strategies for the emergence of* stricto sensu *postgraduate courses in this discipline in Brazil, highlighting the potential of these programs for evaluation and qualification of primary care services, especially the Family Health Strategy, and the training of PHC specialists required for the consolidation of the Unified Health System (SUS) as an accessible, comprehensive and equitable health system for the Brazilian population.*

**Key words** *Family and community medicine, Postgraduate education, Research*

[1] Departamento de Medicina e Enfermagem, Universidade Federal de Viçosa. Av. P. H. Rolfs s/n, Campus Universitário. 36570-000 Viçosa MG Brasil. leandro.david@ufv.br
[2] Departamento de Medicina Social, Universidade Federal do Espírito Santo. Vitória ES Brasil.
[3] Departamento de Medicina Clínica, Universidade Federal do Rio Grande do Norte. Natal RN Brasil.

## Introduction

For decades, Brazil has considered Primary Health Care (PHC) as the organizing base of its public health system – the Unified Health System (SUS), and, more recently, this has also been the strategy adopted by the supplementary health care system[1,2]. July 2019 data from the Ministry of Health show that 74.2% and 63.8% of people are potentially covered by Primary Health Care in general and Family Health Strategy (ESF) teams, respectively, with more than 43,000 ESF teams today[3]. Among other things, these investments resulted in lower levels of infant mortality[4], cardiovascular diseases[5], and hospitalizations due to PHC-sensitive conditions (there is a conflict of evidence in the literature)[4] and in the reduction of health inequalities under an ethnic perspective[6]. Therefore, consolidating PHC in the country means investing in better health levels of the population, especially in the most vulnerable portion, ensuring constitutional rights[1].

The challenges for strengthening Brazilian PHC are known, namely, health underfunding, fragmented health care network, problems in the structure of basic health facilities, high turnover of team professionals, and others[1]. However, a severe problem with the qualification of professionals working in PHC, regardless of their professional category, but with emphasis on medical professionals[1] is highlighted. Data from 2017 show that there are approximately 5,500 FCM graduates in the country[7]. If everyone worked in the ESF, which is a far cry from reality, we would have only 12.8% of the teams with qualified FCM doctors, probably unfairly distributed across the national territory.

On the other hand, the recognition that has PHC, and especially FCM, as academic areas with a specific body of knowledge, is incipient worldwide[1,8]. Just as there is a lack of FCM specialists to work in the services, few FCM doctors are incorporated into graduate and postgraduate courses, few researchers build their careers around PHC and FCM, and FCM and PHC departments in universities are rare[1,9-11]. So far, the funding notices of Brazilian research promotion agencies have not explicitly addressed Family and Community Medicine, which leads to inconsistent investment in this area of knowledge in the country. A vicious circle is created in which research on FCM is hardly valued; thus, few researchers – doctors mainly – are interested, weakening the area in a university context of scarce resources and complex power relationships.

Based on this brief diagnosis, we aim to discuss in this paper the relevance of *stricto sensu* FCM postgraduate studies as one of the pillars of the consolidation of this area in the country as a core of scientifically sound, robust, and socially legitimate and necessary knowledge. PHC is, in essence, an interdisciplinary area. However, we will address the importance of an academic structure geared to the development of concepts, competencies, and scientific evidence that will guide clinical practice in teams in PHC. In this case, the strengthening of FCM as an area of knowledge and stricto sensu postgraduate training structure is an unavoidable path. We will also present some proposals for the structuring of FCM master's programs in Brazil from our context and issue, bringing to the debate information and experiences from the international scenario on this topic.

### Family and Community Medicine and *Stricto Sensu* Postgraduate Studies in Brazil

In Brazil, FCM has a history of more than 40 years as an institutional movement for the training of medical specialists[12]. However, the most significant impulse for medical FCM training occurs in the 2000s, starting from the concurrence of a series of factors involving inducive public policies and the restructuring of the medical labor market[1]. In this period, several movements are created to reorient medical training at the undergraduate level with a greater emphasis on PHC. Some robust policies for medical provision in PHC emerge, such as Provab and the Mais Médicos program, with policies inducing the training of FCM doctors that are coupled. Large municipalities reformulate their local health policies and create FCM MRPs with a significant number of vacancies, and supplementary health expands its population coverage and starts, at least in part, to incorporate PHC experiences with FCM centrality[1]. Such measures resulted in a significant growth of FCM in the country, as follows: second largest number of MR places among all medical specialties, with more than 10% of total vacancies; seventh-largest number of doctors attending a MRP in 2017 among all specialties; and a significant increase in specialists qualified to work in the last years[13]. Unfortunately, we still face challenges with one of the highest proportions of idle MR vacancies, the low demand for the specialty as the first option by newly graduated doctors, and a still-low number of specialists compared to the total number of qualified doctors (1.4%)[13].

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In the academic universe, the reality is also of many challenges for the FCM[1,10,11]. Despite the increasing number of FCM doctors linked to medical degrees, there are practically nonexistent departments in the area at universities, particularly public ones. FCM is not recognized as an area of knowledge by CAPES (Coordination for the Improvement of Higher Education Personnel), which hinders building its postgraduate structure and research. And there are no *stricto sensu* FCM postgraduate programs in Brazil. The result is that FCM doctors do their postgraduate studies and are incorporated as professors in departments in other areas, particularly in the medical and public health areas. By 2018, 747 FCM doctors had completed their master's degree (554 in an academic program, and 193 in a professional program), and 170 had completed their doctorates – 12 and 2.7% of the total Brazilian FCM doctors, respectively[9]. The lack of investments and lines of financing of specific research on FCM further hampers and significantly reduces scientific production in the area. FCM-trained researchers build their careers in lines of research linked to other areas and themes, such as health services research, which, while necessary to the SUS and eventually linking with FCM, do not develop further in its attributes, reducing the impact of the knowledge produced on strengthening PHC. The result is the still negligible incorporation of the FCM as a core scientific knowledge in health in Brazilian sciences, which is far from being a particularity of ours but places the country poorly in comparison with health systems in more developed countries[1].

The Brazilian postgraduate system is one of the most robust and successful in the world, with significant quantitative and qualitative growth in the number of programs and academic production over the decades[14-16]. CAPES data from 2018[17] show that Brazil has 4,291 active postgraduate programs, most offering master's and doctoral courses (n=2,186; 51%) at federal higher education institutions (n = 2,472; 57.6%). The medical assessment areas had 249 (5.8%) programs, and collective health had 89 programs (2.1%). However, countless challenges stress the national postgraduate policy, and it is important to mention here some more related to the object under analysis — the expansion of postgraduate courses concentrated in the Southeast and South regions, which affects regional social development. Linked to the historical underfunding of postgraduate courses and educational and social policies in general, these regional inequalities reinforce an unequal process in which universities that are better positioned in the country's major urban centers are better equipped to raise funds, attract qualified researchers, meet the local needs for professional training and technical and scientific knowledge and connect to international research networks[14,15,18,19].

It is essential to emphasize the enormous difficulty in evaluating graduate policy and programs[18,20]. In general, the evaluation model of postgraduate programs in force in Brazil requires from teachers a level of dedication to research that generates results in their academic production that prevents them from exercising other social functions, which can hinder attracting researchers in areas such as medicine, either due to the high demand for workload dedication or the financial impact concerning personal income. Possibly, this is one of the most significant challenges for the incorporation of family doctors in the university and postgraduate scenario.

Brazil has no tradition in postgraduate studies in PHC and FCM, and the academic production of these knowledge centers is widespread in other areas of knowledge, to a higher degree in Collective Health[9], which has been dedicated to the production of knowledge in the evaluation of policies directly or indirectly related to PHC, organization of work processes in PHC services and training policies for PHC, mainly at undergraduate level[1]. The strong historical link between Public Health and PHC creates an academic space relatively favorable to FCM demands on the scientific plane, something more complicated than in medical areas.

There is a history of PHC programs in some educational institutions, but they are not a massive investment in the area. Examples are the Professional Master's Program in PHC at the Federal University of Rio de Janeiro; the Family Health Master's Programs at the Federal Universities of Ceará and Mato Grosso do Sul, Fundação Oswaldo Cruz, and Estácio; and Health programs in the Community of São Paulo and Piauí[21] Federal Universities. On the other hand, two experiences of network Family Health Professional Master's stand out, with the inflow of a large number of professionals: the programs of the Family Health Training Northeast Network (RENASF), created in 2012, and the Family Health Professional Master's (ProfSaúde), created in 2015[22,23].

In other words, from timely postgraduate movements with more or less direct interfaces, we have a new process of massification of postgraduate PHC from public teaching and research

institutions. The increasing importance of PHC in the Brazilian assistance and healthcare scenario, initially with the expanded population coverage of health services, later with the emphasis at the undergraduate level in health, and more recently in academic production is evident. The country must now also have a Family and Community Medicine postgraduate system that dialogues with this movement and advances the area in its specificities.

**Family and community medicine master's: building an objective image**

From this brief contextualization on the scenario of FCM and *stricto sensu* postgraduate studies in Brazil, including recent experiences in Family Health and PHC, we have gathered some data and suggestions that can support the organization of national FCM Master's programs. We employed three strategies to develop this task: (1) to map and analyze international experiences of Master's in MFC already underway; (2) to search for recommendations from international institutions representing the specialty; and (3) to identify the requirements and recommendations of the Brazilian educational system for the creation of new *stricto sensu* postgraduate courses in Family and Community Medicine. We started by surveying and analyzing ongoing international experiences.

In several countries in Western Europe, North America, and Oceania, doctors, and family and community doctors are a significantly higher number of the total population of doctors in these countries when compared to Brazil. FCM doctors – with the equivalent designation in each country – account for 28% of doctors in the United Kingdom and Spain, 48% in Canada, and 45% in Australia and the Netherlands[24,25]. However, even in these countries, the number of master's or doctoral programs in FCM is small. Initially, the virtual portals of the World Association of Family Doctors (WONCA, an association that gathers the various FCM specialty societies in the world) and the World Federation of Medical Education (WFME, a global organization that gathers medical education institutions) were analyzed. However, no banks or international platforms with specific information on *stricto sensu* postgraduate programs were found on their virtual sites. Therefore, to arrive at this information, in October 2019, we searched governmental higher education portals from countries recognized for their strong tradition in FCM and PHC, namely, Australia, Canada, Spain, the Netherlands, and the United Kingdom. We expanded the scope of mapping by also searching on the Google® platform, refining the search to find only sites that contained, in their titles, the exact expressions *master of family medicine*, *master of science in family medicine*, or *maestría en medicina familiar*. Two master's programs were identified in Canada and one in the United Kingdom while searching on government platforms. No programs were found in Australia, Spain, or the Netherlands. A search on the Google® platform returned courses in Cyprus, Malta, and Peru, with one program each. Programs designated by the exact search expressions were excluded from the results, which, however, presented curricular organization similar to *lato sensu* clinical specializations, with an extensive mandatory workload in disciplines focused on care or management, often dispensing with any type of conclusion manuscript. These programs do not correspond to what is internationally designated as master of science (MSc), equivalent to the academic or professional master's degree in health in Brazil. Master programs with this format were found in South Africa (nine programs, present in all universities offering bachelor's degrees in medicine and surgery in this country[26]), Australia (1), Malaysia (1), Nicaragua (2), Paraguay (2), Singapore (1) and Sudan (1).

It is likely, however, that the number of Family Medicine Master's programs in the world will be more significant. The survey strategies adopted in this work have limitations, such as the exclusion of program sites presented in languages other than Spanish or English, and the lack of direct contact with international *stricto sensu* Medicine postgraduate education institutions. For example, in a survey conducted through questionnaires sent to representatives of 313 medical schools in the Asia Pacific region, with a response rate of 31%, Jenn et al.[27] identified 17 FCM Master's programs (with emphasis on four programs in Indonesia, four in Japan, three in South Korea and three in Malaysia), basically formatted for the elaboration of dissertations and theses. These data are partial considering the response rate and point to the need for a global register of information on *stricto sensu* FCM postgraduate programs that gives visibility to existing programs, enables the exchange of experiences and knowledge between them and supports the emergence of new programs. New surveys may adopt more comprehensive methods such as international surveys of global reach and consultations with key

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informants of relevance in the scientific scenario of family medicine in the world.

In the six programs mentioned above (from Canada, Cyprus, Malta, Peru, and the United Kingdom), the duration ranged from one year and a half to five years, depending on whether the student chooses full or partial dedication when this second possibility is accepted. All include a set of compulsory subjects, and three programs also require credits in optional subjects. Three courses require the elaboration of a thesis or dissertation to obtain a master's degree; two require the elaboration of a Family Medicine research project and, at Western University, the master's degree can be obtained by submitting a thesis, a research project or an essay, besides the completion of the subjects. It is worth mentioning that four programs grant specific degrees for those who complete the disciplines, but do not present a thesis or research project at the end. The courses in Malta, Peru, and a course in Canada are open to health professionals in general, while others require a medical degree as a prerequisite of the candidates.

Despite these more structural convergences, the subjects covered by the compulsory subjects varied significantly between courses. The only similarity among all was the requirement of at least one research method discipline. Three programs also had some compulsory subjects on the theoretical basis of Family Medicine, and three had a discipline focused on clinical communication and patient-centered care. Two programs incorporated disciplines focused on familiar themes of FCM clinical practice, and one McGill University program stood out for being composed of disciplines geared to different research methods. The data are systematized in the Chart 1.

The heterogeneity of the studied sample of programs and the lack of more accurate information about FCM master's programs in the world make the challenge of thinking about curriculum suggestions for future FCM master's programs in Brazil even more complicated. In 2013, the WONCA Working Party on Education published the document *WONCA Global Standards for Postgraduate Family Medicine Education*[28], which, however, is geared to guiding the training in clinical skills of family doctors in residency or medical specialization programs. A reference that partly supplies this lack of guiding examples and documents for *stricto sensu* postgraduate programs is the series of papers Research agenda for general practice/family medicine and primary health care in Europe[29-33]. In these papers, the results of literature reviews carried out on scientific production on topics related to each of the six essential skills of FCM defined by WONCA were published by members of the European General Practice Research Network, as follows: primary care management, comprehensive approach, patient-centered care, holistic approach, specific problem-solving skills, and community guidance. From these reviews, recommended topics, questions, and research methods that make up a proposed research agenda for family medicine in Europe, but that can serve as a starting point for other continents and are summarized in Chart 2. The identification of these family medicine-specific research demands is fundamental for the design of postgraduate curricula that offer adequate training to carry out studies in this discipline.

Returning to the specificities of the Brazilian context, CAPES[34,35] is assigned the role of discriminating the requirements for approval of new courses. In turn, it distributes assignments to the commissions of each of its 49 assessment areas. Therefore, the first step is to define an assessment area to which future FCM programs should be linked. Considering its mostly clinical nature, we suggest that FCM programs be linked to the Medicine I area of CAPES. While, as we have already pointed out, there is still no FCM sub-area within this area, this does not prevent the emergence of stricto sensu postgraduate courses focused on this discipline. As pointed out by the most recent document in the area of Medicine I[36], most of its 175 postgraduate courses for academic and professional master's and academic doctorates adopt broad denominations such as Medical Sciences and Health Sciences. Even when designated by a specific clinical discipline as cardiology or endocrinology, the dissertations, theses, and publications have been "of an interdisciplinary nature, of interest to different sub-areas of the medical specialty"[36]. Moreover, as per the requirements and guidelines of this area[37], the curricular structure of new programs "should be primarily methodological" and "multidisciplinary initiatives will be valued"[37].

Assuming this methodological and interdisciplinary emphasis, it is necessary to highlight the broad clinical scope of FCM. However, its unique feature is the definition of a reference population and the interaction between psychosocial and biomedical aspects, at the individual, family, and community level in both the production of illness and care devices[38]. Ian McWhinney[29] already pointed out in 1966 that Family Medicine research's main focus should be the epidemiology

**Chart 1.** Comparison between international Family and Community Medicine Master's programs.

| Items compared | International Family and Community Medicine Master's programs | | | | | |
|---|---|---|---|---|---|---|
| Final title issued | Master of Family Medicine and Primary Care | Master of Clinical Science in Family Medicine | Master of Science in Family Medicine | Master of Science in Family Medicine | Master of Family Medicine | Master of Science in Family Medicine |
| Educational Institution, city and country | Cayetano Heredia University, Lima, Peru | Western University, London, Canada | McGill University, Montreal, Canada | University of Nicosia, Nicosia, Cyprus | The University of Edinburgh, Edinburg, United Kingdom | L-Università ta' Malta, Msida, Malta |
| Duration | 2 years | 2 to 5 years | 2 years | 1 and a half years to 4 years | 3 years | 1 and a half years |
| Target Audience | PHC Professionals | Doctors | PHC Professionals | Doctors | Doctors | Health professionals |
| Manuscript required for master's degree | Thesis | Thesis, research project or essay | Thesis | Research project | Research project | Dissertation |
| Intermediate titles | Diploma | Not included | Not included | Diploma | Certificate and diploma | Not included |
| Number of compulsory/ optional subjects | 20/0 | 4/2 | 6 (subjects) / 8 (credits) | 11/2 | 7/0 | 3/0 |
| **Most recurrent subjects** | | | | | | |
| FCM theoretical bases | FCM Conceptual Bases | Theoretical Foundations of Family Medicine | - | - | Foundations of Family Medicine | - |
| Teaching-learning (TL) in FCM | TL methods and assessment for PHC | TL in Family Medicine | - | TL in health care (optional) | - | - |
| Clinical Communication and Patient-Centered Care | Communication and Clinical Interview | Advanced Patient-Centered Care | - | PHC Communication and Counseling | - | - |
| Research Methods | Research methods | FM research methods | 6 methods courses* | Research methods | Research methods | Research methods bases |

Source: Government platforms of higher education courses in Australia (www.studyinaustralia.gov.au), Canada (https://www.educanada.ca/programs-programmes/graduate-studies-etudes-superieures.aspx?lang = eng), Spain (www.educacion.gob.es/ruct/home), Netherlands (www.studyfinder.nl) and United Kingdom (www.gov.uk/higher-education-courses-find-and-apply), and GoogleTM. The titles of the courses originally in English or Spanish were translated by the authors. * McGill University Master's course methods: Foundations of Participatory Research; Applied Literature Reviews; Foundations of Research in Mixed Methods; Foundations of Epidemiology in Family Medicine; Health data Basic Analysis; Qualitative Health Research.

**Chart 2.** Summary adapted from the recommendations of the European General Practice Research Network's Family Medicine research agenda.

| Research category | Possible research topics | Research methods |
|---|---|---|
| Primary health care management | - Comparison between primary health care models, including workforce organization and financing models<br>- Development and analysis of cost-effectiveness and quality indicators<br>- Visit time, service accessibility, collaborative care, referrals between family doctors and other specialists<br>- The role and impact of electronic medical records<br>- PHC management training for doctors | -Research to develop primary care evaluation instruments<br>- Longitudinal epidemiological studies on family medicine.<br>- Comparative studies of interventions with different primary care models.<br>- Research using mixed methods. |
| Patient-centered care, comprehensive approach and holistic approach | -Improvement of the concepts and competencies that define centrality in the person, scope (integrality) and holistic approach<br>- Development of indicators and instruments for assessing these competencies and their components<br>- Understanding of social, cultural and environmental circumstances that can affect health, considering these aspects<br>- Perceptions, perspectives, and preferences of patients and doctors about communication, person's centrality, relationship, and shared decision-making<br>- Evaluation of person-centered approaches, comprehensive care models, holistic approaches using clinical outcomes and also satisfaction, understanding of patients and quality of life | - Qualitative research<br>- Research to develop indicators and instruments for measuring these competencies<br>- Prospective and retrospective longitudinal studies<br>- Studies of interventions geared to caring for these characteristics<br>- Research using mixed methods |
| Specific problem-solving skills | - Presentation and clinical development of diseases and conditions in the context of PHC, including a rational approach to symptoms, treatment efficacy, clinical decision-making and quality of care<br>- Research on rare hereditary/genetic conditions in primary care<br>- Medical education and continuing education aimed at solving health problems | - Longitudinal epidemiological studies in family medicine<br>- Pragmatic studies of clinical interventions in PHC<br>- Survey and analysis of approaches in primary care<br>- Research using mixed methods |
| Community orientation | - Analysis of the effect of different models and interventions in primary care in responding to individual health needs in the local context and community health needs, as well as possible conflicts between these two. | - Survey-type research<br>- Observational cohort studies.<br>- Research using mixed methods. |

Source: Adapted from the series of papers of the Research agenda for general practice/family medicine and primary health care in Europe.

of diseases in primary care, the study of clinical aspects of health problems – as an evaluation of symptoms, signs and diagnostic tests – and their psychosocial aspects.

Thus, FCM master's programs should allow the student to know the main methodological approaches available for clinical research (epidemiological, diagnostic-therapeutic and qualitative) and, then, subsidize it to identify which of these best applies to your study question, also offering modules and optional courses of further study considering the chosen method. The curriculum should leave out a space for learning mixed methods of investigation, considering that

the study population of an FCM doctor, especially one that intends to integrate its research into its care practice, is potentially small, however, rich in information and variables linked to the clinical and social context and which demand both quantitative and qualitative analysis. The analysis of the impacts of social determinants of health in the clinical setting of PHC and aspects related to epidemiology and health services – particularly the concept *From Evidence to Decision Making*[39] – should also be incorporated into the curricula of the programs.

The references we adopted to elaborate these suggestions also point to the importance of two core competencies/content that should be addressed in disciplines of FCM master's programs: clinical communication/patient-centered care and FCM teaching-learning. As highlighted by the Western University curriculum, an essential component of the FCM clinic is addressing the psychosocial aspects involved in the health, illness, and care processes, which are found in the person-centered clinical method. The skills for this approach should be developed through theoretical study and skills training in techniques and tools for patient-centered clinical communication, both in medical graduation and in FCM residency programs. The constant improvement of these competencies, their learning, and evaluation in clinical outcomes and patient-centeredness are fundamental research questions for the development of FCM as an academic discipline and as a health care resource. In the same direction, the expanded space for PHC training in the undergraduate medical curriculum, the significant growth in the offering of residency vacancies in FCM, and the emergence of other specialization strategies in FCM and PHC proposed to fill the shortage of these professionals in Brazil, also make the description and evaluation of these teaching-learning experiences underway at the national level relevant and necessary[1,7,13]. Such research should be driven by the regular presence of this theme in disciplines of FCM master's programs in Brazil.

In this sense, we point to the need for a 2-year FCM master's program (as required by CAPES) consisting mainly of subjects on the introduction to theory and research in Family Medicine, research in patient-centered care with an emphasis on clinical communication, research in FCM teaching-learning, as well as one or more disciplines of research methods, which must be concentrated in the first year of the course. Optional courses on particular topics can be offered in the second semester or, possibly, the third semester, and address specific excerpts by the research lines of each program and the expertise of its advisors. The curriculum proposal is shown in Chart 3. Given the possibility of professional master's courses in Brazil, we suggest that the first programs are fitted into this modality, allowing family doctors to reconcile their care and teaching practice with research training. Moreover, the professional modality demands from the postgraduate courses the development of final products that contribute to the management of problems and challenges of institutions and social actors in their area of knowledge, enhancing, in the case of FCM, the impact of FCM master's courses on the qualification of primary health care provided to the Brazilian population and in the training of competent and socially engaged professionals in this field.

### The challenges for building a *stricto sensu* postgraduate system in primary health care and family and community medicine in Brazil

As we tried to show in the previous sessions, the establishment of a *stricto sensu* postgraduate system in a specific area is not a simple task. While it is not strictly necessary to institutionalize a knowledge area with CAPES for programs to be created, such an initiative contributes to the social visibility of the area, which can be associated with higher investments. In this text, we suggest Medicine I as the area that probably best fits all the needs and particularities of FCM. However, the evaluation of postgraduate programs in the medical field has criteria that can hinder the establishment of an adequate FCM faculty, given that most FCM doctors' training at the doctoral level is in the area of public health.

The university scenario is essential for the creation of FCM master's programs, given its vocation by definition in the production of knowledge. The robust incorporation of FCM in the university is a gradual process of raising awareness on the importance of specialty for health practices and streamlining the resilient power relationships historically established within the scope of medicine and the university. Linked to this, the insufficiency of FCM teachers in these institutions, particularly in the public ones, aggravated by the still negligible proportion of FCM doctors with a doctorate and lack of departmental structures to support these initiatives, require medium and long term investments. However,

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**Chart 3.** Proposal for the curricular organization of a National Family and Community Medicine Master's course.

| Compulsory subjects | Syllabus principles |
|---|---|
| Theoretical Foundations of Family and Community | Epistemologia das ciências da saúde. Epistemologia de campos interdisciplinares, teoria dos sistemas e complexidade. História da MFC moderna. MFC como campo de conhecimento e disciplina acadêmica. |
| Introduction to Family and Community Medicine research: epistemic selections and research methods | Temas e métodos de pesquisa em MFC. Análise de pesquisas e publicações de alto impacto em MFC. Elaboração de um projeto de pesquisa em MFC. Ética em pesquisa. |
| Research on clinical communication and patient-centered care | Cuidados centrados no paciente: princípios e propostas de operacionalização. Comunicação clínica: teorias e técnicas. Métodos e instrumentos de pesquisa para avaliação da centralidade do paciente. |
| Research in teaching-learning in family and community medicine | Educação no ensino superior no Brasil. Métodos de ensino e avaliação na formação médica. Ensino da MFC no Brasil. Avaliação de métodos e experiências de ensino-aprendizagem. |
| Research methodologies in family and community medicine (organization in one or more subjects) | Pesquisa epidemiológica em cenários de atenção primária à saúde; pesquisa sobre intervenções diagnósticas e terapêuticas em medicina de família; pesquisa qualitativa em saúde; pesquisas com métodos mistos; avaliação de políticas e serviços em atenção primária à saúde. |
| **Optional subjects** | **Syllabus principles** |
| Family and community medicine special research topics | State-of-the-art in research according to thematic selections of the lines of research and works of supervisors of each program. |

Source: Authors.

no postgraduate program survives only with professionals in their respective fields. The integration of teachers from different areas is essential. Statisticians, social scientists, biomedical engineers, and health professionals from different categories with interest and lines of research in PHC must contribute to the training of master's, bringing methodological and interdisciplinary knowledge relevant to the research to be developed in postgraduate studies.

On the other hand, few universities in the country have a reasonable number of FCM doctors for the establishment of an FCM master's program with a robust faculty of the specialty. In most of them, uni-institutional movements will result in programs with very few FCM doctors on their permanent teaching staff. This reality tends to reinforce the described situation of concentration of postgraduate studies in large urban centers in the southeastern and southern regions of the country. The movement to incorporate teachers from different areas is healthy in this sense, but it must be performed in the sense of not obscuring the FCM. The FCM master must formulate research questions and undertake pedagogical practices that explore fundamental aspects of the specialty and PHC. Therefore, multiple knowledge – qualitative methods of research, biostatistics, epidemiology, ethics, and others – must enter the scene from a theoretical matrix and a field of possibilities of reflection well established from the reality of the FCM. Besides this interdisciplinary movement to establish the program's faculty, investment should be made in interinstitutional research networks, the incorporation of visiting professors and collaborators, and internationalization.

## Final considerations

Our work aimed to gather information and suggestions that can subsidize and boost the emergence of master's programs and, in the future, of Family and Community Medicine doctoral programs in Brazil. Higher education in Brazil is undergoing an awkward moment of debates and proposals that traverse measures that aim to reduce the participation of the State, especially in the *stricto sensu* postgraduate course[40], in which Brazilian public universities have historically played a leading role of internationally

recognized value. In the case of health sciences, we consider harmful and contrary to constitutional principles any tendency to decrease leadership and the presence of the State and public education in health professional training, both at undergraduate or postgraduate levels. Health is a social right guaranteed in the Brazilian constitution, mediated by the most extensive public health system, the SUS, which is also responsible for regulating the training of human resources in health. In primary health care, whose central pillar in Brazil is the Family Health Strategy, a broad and majority participation of the State in the financing and implementation of its care and training actions is indispensable. Therefore, the development of *stricto sensu* Family and Community Medicine postgraduate programs in Brazil must be a priority agenda for both the health and education sectors of the Brazilian State, through specific financing lines and notices.

The curricular suggestions presented here are only intended as a starting point for further analysis and development of institutions involved in Family Medicine teaching and learning in Brazil, among which we highlight the teaching-learning working group of the Brazilian Society of Family and Community Medicine (SBMFC), Family and Community Medicine departments and medical and Family and Community doctors of Brazilian higher education institutions, as well as from institutions and actors in medical education in general, other specialties and areas of knowledge related to Family and Community Medicine, besides the Brazilian Ministries of Health and Education.

Indeed, any *stricto sensu* postgraduate curriculum suggestion aimed at contributing to a universe as rich and heterogeneous as Brazilian primary care must be flexible to adapt to the needs and singularities of local contexts. Moreover, our initial exploration of the international scenario of stricto sensu FCM postgraduate courses also signals the need to collect and provide more precise information and guidance both to support new programs and to evaluate and improve existing ones. These subsidies must be collected and prepared at the regional level by the Ibero-American Confederation of Family Medicine (CIMF) and worldwide, by WONCA and WFME.

It is also worth reflecting on the necessary qualitative and quantitative expansion of the academic production of FCM doctors, in particular, the one focused on the specialty and PHC, which is not simple before a social scenario of weakened public policies, poor conditions of the public health system, budget cuts and devaluation of the university. It is also essential to establish research networks, both among health services and higher education institutions. The FCM is presented with the laborious task of having two complex scenarios to be strengthened at the same time: public or private PHC health service; and academia, either at the undergraduate or postgraduate level. Brazil's educational and health scenario is favorable and demands the emergence of Family and Community Medicine master's programs. Proposals and initiatives such as those listed here are required for their effectiveness.

## Collaborations

LD Wenceslau and TD Sarti also collaborated in the design and execution of the study, and in the writing of the initial version of the manuscript. TG Trindade carried out a critical review of the first version and contributed to the final version of the work.

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