INTRODUCTION AND OBJECTIVE: Despite a great interface between palliative care (PC) and geriatrics, there are currently no curriculum proposals of palliative medicine (PM) competencies for geriatricians in Brazil. Thus, the aim was to develop a competency framework of palliative medicine for geriatricians (CFPMG), especially for those under training. METHOD: The first phase consisted of preparing a pilot framework. To reach a consensus, geriatricians with expertise in the field of PM from all Brazilian regions were invited to express their opinions on the competencies listed in the pilot framework. A modified Delphi method was used in the 2nd and 3rd phases to obtain a consensus (level of agreement greater than 50% and 80%, respectively). Finally, a public consultation phase was conducted in the 21st Brazilian Congress on Geriatrics and Gerontology, and via Brazilian National Academy of Palliative Care website. RESULTS: Nineteen experts in PM and geriatrics evaluated the CFPMG. The level of agreement in all thematic areas was greater than that required, except for palliative sedation (20% of disagreement). The CFPMG concluded with 13 thematic areas and 105 competencies, including 11 prerequisite, 52 core, 24 desirable, and 18 advanced competencies. CONCLUSION: The defined competency framework of PC may be integrated into medical education, specifically into geriatric medicine training. Our suggestion is that residency programs in geriatrics provide training at least in the core competencies from the proposed thematic areas, thereby strengthening PC education homogeneously across the country. KEYWORDS: competency-based education; palliative care; geriatrics.
INTRODUCTION

Non-communicable diseases constitute a health issue of growing magnitude in Brazil and affect especially the older population, which shows the largest increase in the country. Providing older adults with chronic conditions with appropriate care, involving long-term and continuous assistance, increasingly requires health professionals to undergo training in palliative care (PC).1

Palliative medicine (PM) and geriatrics share a great common area, including an emphasis on optimizing quality of life with effective control of symptoms, thus prioritizing and respecting patient’s autonomy and functional capacity. However, PC in older adults requires further skills, such as experience in diagnosis and treatment of geriatric syndromes, complex management of symptoms of prolonged-course diseases (including dementia, Parkinson’s disease, frailty syndrome) and multimorbidity, conditions that demand exclusive, thorough, and interdisciplinary support from health care teams.2-4

In Brazil, medical residency programs rarely adopt national competency-based curriculum guidelines or require evaluation processes for certification at the end of specialized training. Because PM was recognized as a field of expertise in this country only recently,5 few studies have addressed PC education, especially its intersection with geriatrics.

Competency is understood as a cluster of knowledge, skills, and attitudes which affects an important part of one’s role, which relates to job performance, which can be measured using well-accepted standards, and which can be improved through training and development.6,7

In 2013, the European Association for Palliative Care produced a consensus document of core competencies reflecting relevant domains for good professional practice. Additionally, they offer a framework for the development of PC education programs, which are still lacking in Brazil.7

The purpose of this manuscript is to present a competency framework of palliative medicine for geriatricians (CFPMG), especially those under training, to be used in geriatrics training centers across the country.

METHOD

Study design and data sources for developing the framework

The method for developing the CFPMG should allow a collective construction of a consensus based on existing frameworks7-11 and on reflection about the practical experience of those who work in PM and in geriatrics in Brazil. Thus, a modified Delphi method was used.12

This is a strategy to establish the content validity of instruments, allowing systematic collection and analysis of opinions from specialists with the purpose of obtaining consensus instruments or criteria. Questionnaires are applied using an interactive process known as rounds.12 In this study, two Delphi rounds (2nd and 3rd phases) were undertaken. The items that lacked consensus and the suggestions of criterion change were collected and analyzed in the next phase; a revised questionnaire based on the results of this analysis was then submitted to the same specialists, in order to achieve a consensus.

After the existing frameworks were reviewed,7-11 common competencies were grouped into thematic PM areas, including adequate assessment, indications, control of symptoms, communication, advance directives, management and education, among others. Specific competencies were listed for each thematic area in the framework and divided into prerequisite, core, desirable, and advanced competencies, which should be understood as follows:

- **Prerequisite**: competency acquired at college or clinical medicine residency, i.e., knowledge expected from a practitioner before entering a residency program in geriatrics;
- **Core**: PM competency expected from every geriatric resident at the end of training, which is the main focus of this study;
- **Desirable**: competency expected from a distinct resident physician, who goes beyond core knowledge;
- **Advanced**: competency based on more specific knowledge, which is often acquired in additional courses.

The framework was conceived as a box in which items were horizontally distributed above and competencies were described one by one; at the level corresponding to the competency columns there was a field to mark “I agree” or “I disagree” as well as to provide suggestions or comments.

Criteria for selecting and inviting specialists

Initially, a group of five geriatricians with expertise in PM, one from each Brazilian region, prepared a pilot framework based on literature review. For the next Delphi phases, 16 geriatricians with expertise in PM were invited via email to participate in the consensus framework. They were from different Brazilian regions and had clinical and academic experience in the field. During the cycles of questionnaire application, specialists had no access to the identification of their peers.
Content validation

The Delphi method was used in the 2nd and 3rd phases of the study, which were validated as follows:

- 2nd phase: consensus was reached when competencies had a level of agreement greater than 50%;
- 3rd phase: the framework was resubmitted to the respondents from the previous phase, with suggestions of inclusion or changes in the level of competencies. Thematic areas whose disagreement was greater than or equal to 20% were reviewed in the next phase for adjustments and/or exclusion.

After study coordinators reevaluated and made adjustments suggested in the two Delphi rounds (4th phase), there was a 5th phase consisting of a public consultation on the framework, which was conducted during the 21st Brazilian Congress on Geriatrics and Gerontology, in the city of Rio de Janeiro (RJ), Brazil. In a symposium on PC education in geriatrics, the competency framework was presented to the participants who were willing to contribute. The public consultation was also available from the Brazilian National Academy of Palliative Care (ANCP) website for 15 days in October 2018. ANCP members trained in geriatrics and PM could then express their opinions on the competencies proposed in the framework.

RESULTS

First phase

A group of five geriatricians with expertise in PM conducted a literature review for developing a pilot framework, which consisted of 13 thematic areas and 60 competencies, including 5 prerequisite, 27 core, 22 desirable, and 8 advanced competencies.

Second phase

The pilot framework was submitted to further 16 experts, and 13 of those responded (81.25%). One thematic area was suggested for inclusion — staff self-care — resulting in a total of 14 thematic areas and 120 competencies: 11 prerequisite, 57 core, 27 desirable, and 24 advanced.

All thematic areas and their competencies had a level of agreement greater than 50%. Suggestions and changes from this phase were incorporated into the pilot framework and then a structured framework was prepared.

Third phase

The structured framework was resubmitted to the 13 specialists who participated in the previous phase. Ten participants (76.9%) responded. In this phase, 20 inclusions, eight changes in level of competency, and seven exclusions were reviewed because competencies were attributed to a PM specialist and others because of redundancy. The phase concluded with 14 thematic areas and 115 competencies distributed as follows: 10 prerequisite, 54 core, 27 desirable, and 24 advanced.

Fourth phase

Suggestions of changes from 10 specialists who participated in the third phase were reviewed. One thematic area — palliative sedation — was removed because disagreement was 20% (two discordant responses). Its inclusion in the “control of symptoms” thematic area was suggested.

Three competencies were excluded in this phase because they were deemed specific to PC physicians, and not to geriatricians (e.g., “manages palliative extubation”).

Fifth phase

A public consultation was conducted at two moments:

- In the Brazilian Congress on Geriatrics and Gerontology, 28 practitioners completed the CFPMG questionnaire. Only four participants suggested changes in level of competencies, including two communication competencies, which were included after analysis from the committee in charge of the CFPMG;
- In the ANCP website, the CFPMG received suggestions from 12 members, including three changes.

Thus, the CFPMG concluded with 13 thematic areas and 105 competencies (11 prerequisite, 52 core, 24 desirable, and 18 advanced). Figure 1 presents the phases in the development of the competency framework. Tables 1 and 2 show expected competencies before and after geriatric residency training, respectively.

The areas with the greatest number of suggestions and changes were the following: assessment of PC patients and indications, control of symptoms, ethical aspects, communication, and care planning. Palliative sedation was included in the “control of symptoms” thematic area. Family meeting, advance directives, and use of subcutaneous route in PC were the thematic areas with fewest changes in the five study phases. Self-care was included as a thematic area during the study, after suggestions from specialists.

The rate of participation of specialists from different Brazilian regions in the study was 81.25% in the second phase and 76.9% in the third phase.
Figure 1. Phases in the development of the competency framework of palliative care for geriatricians.

Table 1. Expected competencies before entering a residency program in geriatrics.

<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>1. Gathers and synthesizes essential and precise information to define the clinical problem(s) of each patient.</td>
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<td>2. Knows the definition and principles of PC.</td>
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<td>3. Understands that PC should be provided to patients in different stages of a potentially irreversible severe disease: from diagnosis to end of life.</td>
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<td>4. Properly assesses prevalent physical symptoms, with knowledge of pharmacology for adequate use of medications, considering pharmacokinetics, pharmacodynamics, dosage, and drug interactions.</td>
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<td>5. Exhibits integrity and ethical behavior in professional conduct.</td>
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<td>7. Fully completes medical records, including detailed progression, care planning, and adopted management.</td>
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<td>8. Develops proper interpersonal communication competencies:</td>
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<td>Shows empathic and compassionate behavior;</td>
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<td>Uses proper verbal and non-verbal language.</td>
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<td>9. Understands the need for referral to a PC team and requests it when necessary.</td>
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<td>10. Recognizes bereavement as a process and as a possibility of illness.</td>
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<td>11. Knows the foundations of hypodermoclysis.</td>
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SBGG: Brazilian Society of Geriatrics and Gerontology; ANCP: National Academy of Palliative Care. PC: palliative care.
### Thematic areas

<table>
<thead>
<tr>
<th>1. Indications and patient assessment in palliative care</th>
<th>Core</th>
<th>Desirable</th>
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<tbody>
<tr>
<td>1.2.1 Knows prevalent chronic diseases in older adults: dementia, stroke, cancer, heart failure, chronic obstructive pulmonary disease, renal failure, frailty syndrome, etc.</td>
<td>1.3.1 Assists the patient with potentially severe disease and no chance of cure, indicating and establishing a PC plan and coordinating care with other medical specialties and a multidisciplinary team</td>
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<td>1.2.2 Recognizes frailty and multimorbidity as important prognostic factors</td>
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<td>1.2.3 Recognizes that decision-making should take into account life expectancy for older adults</td>
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<tr>
<td>1.2.4 Assesses functional capacity and uses comprehensive geriatric assessment, whenever possible, as an important tool for prioritizing care and providing prognosis</td>
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<td>1.2.5 Applies the evidence base and knowledge of disease trajectory to estimate prognosis in each patient</td>
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<tr>
<td>1.2.6 Integrates findings from clinical assessment, functional capacity assessment, and additional test results for prognostic evaluation</td>
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<td>1.2.7 Recognizes the usefulness of medical technology in appropriate conditions, being aware of the limitations of medical intervention and their duty of caring for older adults with chronic and/or end-stage diseases.</td>
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<tr>
<td>1.3.1 Assists the patient with potentially severe disease and no chance of cure, indicating and establishing a PC plan and coordinating care with other medical specialties and a multidisciplinary team</td>
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<th>2. Control of symptoms</th>
<th>Core</th>
<th>Desirable</th>
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<tr>
<td>2.2.1 Properly uses WHO analgesic ladder and scales for assessing pain and other symptoms</td>
<td>2.3.1 Assesses and manages refractory symptoms</td>
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<tr>
<td>2.2.2 Knows main indications and is capable of managing use of analgesics, from simple to opioid agents, in addition to adjuvant drugs</td>
<td>2.3.2 Manages overall pain in the patient as well as other overall symptoms (e.g., dyspnea)</td>
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<td>2.2.3 Defines and applies the principles of opioid prescription, including equianalgesic dosing and common adverse effects; understands that proper use of opioids rarely leads to respiratory depression or dependence when treating any cancer and/or non-cancer pain syndrome, such as degenerative osteoarticular diseases</td>
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<tr>
<td>2.2.4 Identifies and properly manages adverse effects of opioids and knows how to intervene in opioid intoxication</td>
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<tr>
<td>2.2.5 Manages prevalent symptoms besides pain (nausea, dyspnea, delirium/agitation, constipation, diarrhea, etc.)</td>
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<td>2.2.6 Identifies suffering and psychological, social, spiritual, and existential difficulties in patients and family members; provides appropriate support and referral</td>
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<td>2.2.7 Knows when to request referral to a PC team</td>
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<td>2.2.8 Recognizes the need for multidisciplinary approach</td>
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<tr>
<td>2.2.9 Recognizes refractory symptom and suffering as different from difficult symptom, and knows when to indicate palliative sedation in case of refractory and intolerable symptom</td>
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<tr>
<td>2.2.10 Manages sedation (medications indicated for each symptom, doses, types of sedation, sedation assessment, monitoring)</td>
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<td>2.2.11 Discusses indication of palliative sedation with an interdisciplinary team</td>
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<th>3. Ethical aspects</th>
<th>Core</th>
<th>Desirable</th>
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<tr>
<td>3.2.1 Knows the Brazilian legislation, the Brazilian Code of Medical Ethics, and the CFM Resolutions regarding terminal conditions and PC</td>
<td>3.3.1 Addresses ethical aspects such as non-progression and/or treatment discontinuation (artificial diet and hydration, dialysis, vasoactive drug, antibiotics, chemotherapy agents, ventilatory support, etc.) to patient, family members, and team</td>
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<tr>
<td>3.2.2 Applies PC-related principles of bioethics</td>
<td>3.3.2 Assists the team in discussing ethical dilemmas.</td>
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<th>4. Interdisciplinarity</th>
<th>Core</th>
<th>Desirable</th>
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<tr>
<td>4.2.1 Recognizes abilities from each area in PC (nursing, physical therapy, social work, speech therapy, occupational therapy, psychology, chaplaincy, pharmacy, nutrition, dentistry, physical education, music therapy, etc.) and common actions across the several areas of knowledge.</td>
<td>4.3.1 Recognizes team distress when caring for dying patients and their family members</td>
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<td>4.2.2 Develops interest in having multidisciplinary group discussions.</td>
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<td>4.2.3 Works effectively and assertively within an interdisciplinary team</td>
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<td>4.2.4 Properly integrates recommendations from other consultants.</td>
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<tr>
<th>Thematic areas</th>
<th>Core</th>
<th>Desirable</th>
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</table>
| 5. Communication | 5.2.1 Communicates with interdisciplinary team effectively  
5.2.2 Explores patient and family understanding of diseases, concerns, goals, and values, and plans treatment that fits these priorities  
5.2.3 Recognizes the establishment of a siege of silence  
5.2.4 Demonstrates an effective patient-centered communication when giving bad news or prognostic information, discussing preferences, beliefs, and values  
5.2.5 Describes and executes communication tasks effectively at the time of death, including pronouncement, family notification and support, and autopsy request  
5.2.6 Guides patients and family members on the process of dying  
5.2.7 Clarifies patient and family concerns about PC and end-of-life care | 5.3.1 Avoids and properly intervenes in the "conspiracy of silence"  
5.3.2 Intervenes in communication conflicts between family members, team, and other teams  
5.3.3 Has ability to interface with other medical specialties (e.g., intensivists, oncologists, hematoiologists, etc.) |
| 6. Care planning | 6.2.1 Develops and achieves a comprehensive management plan for each patient  
6.2.2 Knows how to initiate approach to PC indication  
6.2.3 Implements care to dying older adult  
6.2.4 Recognizes the principles of responsible discharge  
6.2.5 Plans care of dying older adults considering their values, beliefs, and desires, including decision of discontinuation or non-introduction of artificial life support | 6.3.1 Appropriately modifies care planning based on clinical course, patient preferences, and cost-benefit principles  
6.3.2 Establishes a care plan with realistic goals, whether in the hospital, home, or LTCF, also taking into account advance directives, if present  
6.3.3 Organizes care of dying older adult |
| 7. Family meeting | 7.2.1 Knows the importance of family meeting and when to hold it  
7.2.2 Responds to the needs of family caregivers regarding short-, medium-, and long-term care goals  
7.2.3 Recognizes and respects sociocultural, ethical, and religious aspects of patients and their family members regarding end-of-life care goals | 7.3.1 Conducts family meetings and properly documents them in medical record  
7.3.2 Recognizes situations of conflict with health care team and between family members  
7.3.3 Integrates sociocultural, ethical, and religious aspects of patients and their family members regarding end-of-life care goals |
| 8. Advance directives | 8.2.1 Properly communicates to the patient on how to prepare advance directives based on bioethical and legal principles, such as the Brazilian Code of Medical Ethics – CFM Resolution no. 1995/2012  
8.2.2 Knows strategies to conduct advance directives  
8.2.3 Encourages patients to prepare their advance directives  
8.2.4 Recognizes the need to indicate and define directives in critical admission situations | 8.3.1 Assists other medical teams in preparing and interpreting advance directives  
8.3.2 Prepares advance directives together with patient and/or representative  
8.3.3 Interprets and conducts advance directives, with proper documentation in medical record |
| 9. Care transition (ICU vs. ward vs. home care vs. LTCF) | 9.2.1 Recognizes need of patient care transition across different care levels — Recognizes the best care setting considering each patient’s needs. | 9.3.1 Conducts patient care transfer and monitors care follow-up across different care levels  
9.3.2 Guides family members on medications, patient care, and death at home — What should they do and who should they contact?  
9.3.3 Indicates available support services for patient and family members |

Table 2 Continuation.
### DISCUSSION

This study was based on a national survey of geriatricians with expertise in PM and established comprehensive and core competencies, specifically for geriatric residents. They can be used for standardizing content and assessment in PC curricula in geriatrics as well as for providing grounds for future studies validate new assessment tools.

The Delphi method was chosen for reaching a consensus on the defined competencies of PM in older adults, similarly to frameworks which have been developed for other specialties, such as family and community medicine and endocrinology.13,14

The initial framework consisted of thematic areas and competencies which emerged from the international literature,7–11 as there is no published work in Brazil addressing such competencies, and from the expertise of specialists who prepared the pilot framework and adapted existing competencies from other countries to our reality. Knowledge frameworks have been developed for the same purposes in Europe (European Association for Palliative Care, EAPC)7 and in the United States (American Academy of Hospice and Palliative Medicine, AAHPM).8 In Brazil, there was no national consensus on core competencies in PC yet.

To prepare practitioners academically, the EAPC advocated a three-tier framework to PC:7

- **PC approach:** intended as a way to integrate PC in general care settings, such as internal medicine, and included in the framework as prerequisite competency level;
- **General PC:** intended for practitioners frequently involved with PC patients, but for whom PC is not the main or sole focus of their clinical practice (e.g., oncologists, geriatricians, family and community physicians), and included in this framework as core or desirable competency level;
- **Specialist PC:** intended for practitioners working mostly or solely in the field of PC and whose main activity is dedicated to dealing with complex problems requiring skills and competencies acquired through training and education, included in the framework as advanced competency level.

In the first phase — development of the pilot framework — some thematic areas, such as assessment of PC patient, control of symptoms, communication, interdisciplinarity, care planning, bereavement, and management and education, were adapted from US frameworks, such as the *Hospice and Palliative Medicine Milestones: ACGME report*9 and the *Raising the Bar for the Care of Seriously Ill Patients*.10 The former was conducted by a task force.
involving several societies of PC-related medical specialties and aimed at resident physicians. The latter was prepared by 70 PC experts who established consensus competencies both for resident physicians and undergraduate students. Thus, the pilot framework comprised 13 thematic areas, namely patient assessment/indicators, control of symptoms, ethical aspects, \textsuperscript{15} interdisciplinarity, communication, family meeting, care planning, advance directives, \textsuperscript{16} care transition, management and education, bereavement, use of subcutaneous route, \textsuperscript{17} and palliative sedation.

The framework suggests a sequence of development for teaching and assessing PC competencies in a residency program in geriatrics, based on basic principles such as medical ethics and adequate communication. It also includes technical and scientific knowledge for proper management of prevalent chronic diseases in older adults, including control of physical or other symptoms, and care planning in multimorbidity, which often depends on interdisciplinarity.

Also, geriatricians are expected to be able to integrate their clinical experience and the meaning of such work into their identity as physicians. \textsuperscript{10,18}

Moreover, residents should examine carefully the knowledge, skills, and attitudes defined in the competencies. For instance, not only should they know how to explain the concept of PC but also to effectively control pain and other symptoms, indicating the most adequate setting for assistance (home, hospice, hospital); not only should they recognize psychosocial suffering but also properly assess and refer patients and family members with such distress; not only should they identify their own emotional reactions when caring for end-of-life patients but also be capable of stimulating staff self-reflection, sharing dilemmas and strengthening self-care. \textsuperscript{10}

Because the purpose of this study was to develop a CFPMG, only the final results for core and desirable competencies are presented in this article, while the remaining competencies will be discussed in future papers.

CONCLUSION

Based on a review of international consensus competency frameworks as well as a survey of specialists from all Brazilian regions, general and core PC competencies were defined as relevant in geriatrics and may be integrated into medical education, specifically into geriatric medicine training. All residency programs in geriatrics should review their curriculum content, making adjustments to offer training in at least core competencies and ideally in desirable competencies or even in the advanced ones from the 13 thematic areas proposed in this study. Early introduction of those competencies and an adjusted syllabus may improve geriatric training for treating older adults requiring PC.

Future studies addressing teaching and learning methodologies are required to improve assessment tools so that the competencies in the framework are measurable and practical. As prospects, the authors aim to submit this framework proposal to the Brazilian National Committee of Medical Residency, in order to provide grounds for teaching PM in all residency programs in geriatrics, thus stimulating and strengthening PC education homogeneously across the country.

ACKNOWLEDGMENTS

We thank all specialists who accepted the invitation to participate in this project, dedicating their time for analysis and sharing their knowledge and experiences for the development of the CFPMG: Ana Cláudia Quintana Arantes; Erika Satomi; Keite Priscila Paia; Leonardo de Oliveira Consolim; Luciana Louzada Farias; Manuela Vasconcelos de Castro Sales; Mayra de Almeida Frutig; Ricardo Borges da Silva; Tania Vannucci Vaz Guimaraes; Tiago Pugliese Branco; Toshio Chiba.

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

REFERENCES