Request for tests of diagnostic support by physicians in Primary Health Care

Solicitação de exames de apoio diagnóstico por médicos na Atenção Primária à Saúde

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ABSTRACT This is a qualitative study with family physicians from Montes Claros (MG), aimed at understanding the request for exams by physicians in Primary Health Care. Data were obtained by means of unstructured interviews and were examined through discourse analysis. The request for exams is influenced by professional education; by Family Health Strategy characteristics, the first contact on health issues; by carrying out integral and continued care, coordinated by the team; by the possibility of managing attendance duration; by multi-professional work; and by difficulties faced: demand for exams by the patients and pressure by managers for less requests.

KEYWORDS Diagnostic tests, routine. Primary Health Care. Family Health Strategy. Education, medical. Qualitative research.

RESUMO *Objetivou-se compreender a solicitação de exames por médicos na Atenção Primária à Saúde. Trata-se de estudo qualitativo, com médicos de família de Montes Claros (MG). Os dados foram obtidos por entrevista não estruturada e examinados via análise do discurso. A solicitação de exames é influenciada pela formação profissional, pelas características da Estratégia Saúde da Família – primeiro contato para as questões de saúde; realização do cuidado integral, continuado e coordenado pela equipe –, pela possibilidade de gerir o tempo de atendimento, pelo trabalho multiprofissional e pelas dificuldades enfrentadas – demanda dos pacientes por exames e pressão dos gestores por menos solicitações.*

PALAVRAS-CHAVE *Testes diagnósticos de rotina. Atenção Primária à Saúde. Estratégia Saúde da Família. Educação médica. Pesquisa qualitativa.*

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DOI: 10.1590/0103-1104201711405

Introduction

Primary Health Care (Atenção Primária à Saúde – APS), a proposal made at the International Conference on Primary Health Care, held in Alma-Ata (USSR), is the first element of a continued health care process aimed at promoting, maintaining and improving health conditions (OPAS, 1978), focusing on the individual rather than the disease (OLIVEIRA; PEREIRA, 2013). In Brazil, the Family Health Strategy (Estratégia Saúde da Família – ESF) is the main strategy for ESF accomplishment and organization (MENDES, 2012). This level of care is the front door to the health system, providing regular offer of care for the most frequent needs of the population, continually available attention in integrated and organized ways (OLIVEIRA; PEREIRA, 2013).

The implementation of a structure that is strongly biased towards APS leads to better and more equitable results, with increased efficiency and lower costs, besides affording the population greater pleasure. The diagnostic support system is extremely important for offering quality care and increasing the resolution potential at ESF realm (MENDES, 2012). However, promoting the reorganization and rationalization of the use of diagnostic resources remains a relevant challenge for APS (OPAS, 1978).

Since ESF is presented as a new paradigm for health care, basically aimed at developing actions on the health-disease process, yet favoring the co-responsibility of health care professionals and clients (MENDES, 2012; MOTTA; SIQUEIRA-BATISTA, 2015), it requires diagnostic resources to be consciously and properly prescribed. The adequate practice of exams requests is of utmost importance for minimizing risks related to iatrogenic effects (MENDES, 2012), to economic repercussions (SISTROM *ET AL.*, 2012) and to the health system's sustainability (MENDES, 2012).

Two historical issues have been hampering the implementation of that proposal: the education of medicine physicians and the reality of family health services.

The structure of the hegemonic medical education is based on recommendations by the Flexner Report, which assigns great importance to the biomedical model (PAGLIOSA; DA ROS, 2008). However, at the time the Flexner model was proposed, APS was not yet on the stage (BOELEN, 2002). Automatically imported, without properly taking into account the reality of family health services, of changes in the epidemiological profile of the population and of health needs of individuals and communities (PAGLIOSA; DA ROS, 2008), the Flexner Report increased the demand for exams, in the context of a disease-oriented medical assistance, provided to populations anxious to have their problems solved using propaedeutic resources (MELO; CECÍLIO; ANDREAZZA, 2017; YOU; LEVINSON; LAUPACIS, 2009). The situation is even more serious due to the decontextualized, fragmented and deficient teaching on adequate requests for exams during medical education, at both the college (BORÉM *ET AL.*, 2013; WILSON, 2010) and the university (WILSON, 2010).

Family physicians are now required to be reasonable when requesting complementary exams (ARENA *ET AL.*, 2014; MENDES, 2012). In 1998, ESF was implemented in Montes Claros, a municipality in the North Region of Minas Gerais state, with 400 thousand inhabitants and a further two million population in surrounding areas. Since 1999, the city counts on the Medical Residency Program on Family and Community Medicine (Medicina da Família e da Comunidade – MFC) and the Multi-Professional Residency on Family Health (SILVÉRIO, 2006). Since 2007, the city offers a Professional Master Program on Primary Health Care and three medical undergraduate courses.

It is, thus, a favorable context for a reflection on the theme presented here. Nonetheless, there is no evidence in this scenery to prove that a proper medical propaedeutic is now indicated by family physicians working in the region. A fundamental requirement is to understand the dynamics that leads medical professionals to request

exams and the factors involved (SISTROM *ET AL.*, 2012). This sort of knowledge is still scarce in both national and international literature, despite its importance for a better indication of diagnostic resources by medical professionals, and for managing them. Therefore, the present study is aimed at understanding the practice of medical physicians when requesting exams in APS procedures.

Methods

An exploratory, descriptive and qualitative research was carried out in Montes Claros (MG state) with ESF teams. The participants, randomly selected, were specialist physicians trained on MFC, who were working for at least six months in ESF procedures and agreed to participate. The number of participants was deemed sufficient when data reflected all the dimensions of the subject studied and became redundant. Data collection was carried out from January to September 2012, by two interviewers previously trained. A Free and Informed Consent Term was read and signed. The non-structured interviews were guided by the following themes: 'The practice of requesting exams by physicians in ESF; 'Factors influencing their practice of requesting exams'.

In order to warrant a trustful record of all information provided by the participants, the interviews were recorded and transcribed. Participants' names were codified to ensure anonymity.

The discourse analysis as proposed by Pêcheux (2002) was used for exploring data. Repeated reading and re-reading all the material made it possible to separate component elements, while trying to preserve the relationship between them. Subsequently, words and the construction of sentences were studied, followed by the analysis of the social production of the text as constitutive of its meaning. Meanings related to the discourse and to its effects were verified. Initial categories emerged, and later on were grouped in more comprehensive categories, as repeated reading and reflection on production conditions of discourses analyzed were dealt with more deeply. Empirical categories were confronted with analytical ones in the quest for relationship between them.

The research project was submitted and approved (Consubstantiated Report 2963/2011) by the Research Ethics Committee of the State University of Montes Claros.

Results and discussion

Thirteen specialist physicians with expertise on MFC (10 males and three females, 30 to 57 year old) were interviewed. Their professional training varied from four to 30 years; nine of them were graduates from State universities and all of them were professors in medicine courses.

The analysis of the discourses unveiled two empirical categories and their respective subcategories.

Professional education and request of exams

This category made it evident that, for family physicians, the practice of requesting exams is influenced by their professional education.

Undergraduate medical education

Interviewees reported that the teaching on requests for complementary exams is often incipient and fragmented, and this can reflect on how they deal with this diagnostic resource, with little awareness of the relevance of their rational usage, thus leading to inadequate prescriptions.

> *[...] as a rule, the matter of requesting exams [...] is superficially focused in medical schools. Thus, we do not fully understand its relevance.* (Int.8).

Teaching deficits have been observed in both national (BORÉM *ET AL.*, 2013) and international sceneries (CHORNEY; LEWIS, 2011; BORÉM *ET AL.*, 2013; WILSON, 2010), and can be partially explained by the lack of obligatory subjects and of guidance for its specific teaching in the curricular structure of a number of medical schools (WILSON, 2010).

The fragmented organization of teaching, based on different medical branches counteracts the reality of the APS generalist approach, which can hinder the adequate practice of family physicians when requesting exams, as pointed out in the following statements:

> *In graduate teaching, we only studied the technical aspect [...] I remember a professor [...] who used to say: if you think you should request, do it [...].* (Int.8).

> *[...] in graduate course, we are trained as specialists [...], but when we come to the generalist practice, to primary care, we face difficulties [...].* (Int.2).

This situation possibly results from the influence of the Flexner model on medical education (WILSON, 2010). One should keep in mind that the Flexner Report, introduced in 1910, was a strategy aimed at the improvement and systematization of medical education at that time, endorsing the consolidation of the scientific model in the medical practice (PAGLIOSA; DA ROS, 2008). Many benefits – such as reorganization and regulation of medical schools' functioning, scientific rational basis, standardization of school duration, minimum curricular structure, the need for basic labs and access to hospital for professional training – resulted from the adoption of its recommendations (BOELEN, 2002). However, distortions when using those suggestions (ALMEIDA-FILHO, 2010) resulted in appraisal for excessive technicality in the medical practice, and aspects related to health-disease process taking into account bio-psychosocial dimensions, the proper use and comprehension of the clinical method and effective results of medical practice started to be questioned (PAGLIOSA; DA ROS, 2008).

New contexts related to health, such as changes in the epidemiological profile of populations, the need for interdisciplinary knowledge, for multi-professional work and for collective health now influence the performance of health professionals. In this sense, curricular designs of the hegemonic medical education must be reconsidered, so that new professionals may take into account the multiple dimensions of individuals, of their reality and of health care (PAGLIOSA; DA ROS, 2008).

In order to enable changes in education and qualification of health professionals, the National Curricular Directives (Diretrizes Curriculares Nacionais – DCN) were proposed in 2014 for medical education, grounded on the following tripod: health care, health management and health education (BRASIL, 2014). Therefore, medicine graduates should be prepared to perform with professional quality, guided by critical thought, based on the best scientific evidences available, on actual conditions of and active attention to every person, every family and every community, and on currently valid public policies. Furthermore, decision-making must aim at rational and optimal use of knowledge, methodology, procedures, premises, equipment and supplies, in order to produce full health quality for the population. It is thus preconized here that requests for exams should be based on those assumptions (BRASIL, 2014).

In the course of their teaching activities, interviewees observed that medical students in apprenticeship programs on ESF have the opportunity to get better acquainted with the reality people are immersed in and to perform the practice of requesting exams taking into account bio-psychosocial questions and the prevalence of diseases in APS. Nonetheless, the effective insertion

of students in EFS programs occurs at the end of the medicine course, so that during the largest part of their academic education their perspective is driven by specialization, focused on disease and cure, disconnected from the patient's integral needs, and usually not targeted to other health assistance sceneries. Therefore, an adequate teaching of these themes should be provided since the early medical education, a thesis agreed on by international authors (CHORNEY; LEWIS, 2011) and not accepted by some medical professors (CHORNEY; LEWIS, 2011; WILSON, 2010).

> *When they arrive, these students in the 12th term [...] request many exams [...] as their training proceeds, these requests become less frequent [...].* (Int.11).

One must be aware that simply widening practices in the ESF scenery along the medical education is not enough: to guarantee that the above-mentioned purpose will be accomplished, practices should not be based on the biomedical model, a still prevalent reality at the national level (MELO; CECÍLIO; ANDREAZZA, 2017).

Professors have a vital role regarding the proper use of exams in the professional practice. For that purpose, they must urgently undergo sensitization and qualification processes in this specific area, to help them recognize that omissions and deficiencies in teaching these themes can create an important gap for their students' knowledge and competence (WILSON, 2010).

It must be emphasized that the professionals interviewed who have been reflecting on the need of improving academic procedures on this subject and the practice of requesting exams are medical teachers. In addition, the effectiveness of these changes in the professional education requires as well the sensitization of entities that supervise medical schools on the relevance of those changes (WILSON, 2010).

Professional qualification

Interviewees consider the process of professional qualification in post-graduation programs as a pathway to overcome gaps aiming at a proper practice of requesting exams. Qualification programs like medical residency on ESF are among the possibilities for improving medical education (MATOS *ET AL.*, 2014), as well as continued health education – a permanent process of learning and improvement for health professionals (TESSER *ET AL.*, 2011). The present study did verify that physicians who attend residency on ESF and continued health education programs are more exposed to discussion and reflection on the practice of requesting exams; and for some of them, this is the first opportunity to be sensitized on this question, as shown in the following reports:

> *[...] during my residency (on ESF) [...] I came to notice that requesting exams must take into account certain criteria, must be coherent with some situations [...].* (Int.2).

> *[...] In my (continued education) group, [...] we discuss: Why is an exam requested? When should it be requested? [...].* (Int.5).

Medical residency also contributes to the improvement of knowledge and practice of exams request in the international scenery (SISTROM *ET AL.*, 2012). The participation in continued education activities is considered by interviewees as extremely important for the improvement of the practice of requesting exams, considering how fast knowledge changes and how limited is the time physicians dispose of for updating. In another national study (ASSIS *ET AL.*, 2012), the authors remark that, being a continued activity carried out in convenient periods during working hours and in small discussion groups, where experiences are shared, continued education favors a collective

construction of knowledge. Furthermore, the reflection about praxis and the emotional satisfaction of the participants allow for a learning experience that enables behavior changes (FIGUEIREDO; RODRIGUES-NETO; LEITE, 2012).

> *[...] (with continued education) you are always searching for knowledge [...] Other person's report is part of the learning process [...] being a group activity it becomes more stimulating, more ludic [...].* (Int.11).

In a study carried out at the Primary Health Care (Atenção Primária à Saúde – APS) center of the state of Mato Grosso do Sul, the exchange of experiences was one of the actions of continued education most frequently quoted by participants (MACHADO *ET AL.*, 2015).

The relevance of investments on professional qualification processes for the improvement of exams requests is clearly noticeable – with emphasis on Family and Community Strategy (Medicina de Família e Comunidade – MFC), residency on ESF and continued education, which complement each other.

Strategy Family Health (Estratégia Saúde da Família – ESF) and request for exams

This category unveiled that ESF characteristics and working process are influencing family physicians when requesting exams.

ESF characteristics

In the ESF context, requests for exams by physicians are guided by the priority of reaching the central purpose of APS, which is to promote health and prevent diseases, taking into account the patients' clinical, socio-demographic and cultural characteristics, as pointed out in the following statement: *"Our routine of exams considers age, age group, gender and the pathology presented by the patient"* (Int.1).

The practice highlighted here considers the discussions on an enlarged concept of health, in its multiple dimensions, including the bio-psychosocial approach and the need to promote health, as required since the International Conference on Primary Health Care (OPAS, 1978). However, this is not a concern for many family physicians in other regions of the country (ASSIS *ET AL.*, 2012).

Interviewees also remark that the results of exams contribute to plan ahead and implement actions targeted at promoting health and preventing diseases, particularly health education activities. The use of results in educational activities help patients understand more clearly their condition, and to reflect on it, as illustrated in the following statement:

> *You find an altered result in the exam [...] will try to stop it [...] educating the patient, showing him that, if he/she does not take care [...] future health problems may occur [...].* (Int.12).

Educational activities are able to empower the clients and stimulate their autonomy, thus contributing to lesser demand for medical consultations and exams (FIGUEIREDO; RODRIGUES-NETO; LEITE, 2012), and consequently, to reduce unnecessary exam requests.

According to family physicians interviewed, because ESF is the front door to health issues for patients, making it easier to get in contact with them, unnecessary requests for exams are avoided, leading to increased efficiency in the use of resources that are available, as noticed in the following report: *"[...] accessibility leads to less requests for exams, since the patient will find it easier to return [...]"* (Int.11).

In the North American context, the access to a family physician contributes to requests for exams that are actually needed in order to track diseases (FERRANTE *ET AL.*, 2010; SISTROM *ET AL.*, 2012).

Interviewees reported that the regular offer of health care by the family health team and the consistent support provided by that team over time is leading to deeper knowledge about the patients and their needs; and the control over the care the team offers contributes to identify the real need for requesting exams, as shown in the following report: *"When the team [...] is well acquainted with the patient [...] they know who needs and who does not need (exams) at that particular moment [...]"* (Int.12).

A study carried out at an APS center in New Jersey (USA) revealed that when the patient is continuously assisted by the same physician the exams requested are more adequate (FERRANTE *ET AL.*, 2010). In the national scenery, the turnover of APS professionals affects the continuity of the health care process.

Strategies targeted at structuring a career plan at the Unified Health System (Sistema Único de Saúde – SUS) configure some possible solutions for the problem (GONÇALVES *ET AL.*, 2014). According to interviewees, offering a care modality that can answer to the more usual needs of a community, taking into account the bio-psychosocial aspects which lead to diseases, will favor the appropriate request of exams, since it considers the patients' actual needs, as pointed out in the following statement: *"[...] the patient in primary care [...] is cared for in their entirety, you really do know when the exam is actually needed [...]"* (Int.12). Deeper knowledge about the patient leads to lesser number of unnecessary exams requests by the physician (MENDES, 2012).

It became evident in previous discourses that, once ESF is supposed to warrant, in an integrated and organized way, the continued assistance for problems that require continued monitoring should avoid inadequate requests for exams. However, due to the inarticulateness of the reference/counter-reference system, repeated requests by professionals from different areas of the health care network are quite frequent, overburdening the health system (MENDES, 2012), and is a recurrent challenge faced in both national (ARENA *ET AL.*, 2014) and international (YOU; LEVINSON; LAUPACIS, 2009) sceneries:

> *[...] a certain risk for the patient, you have to direct him/her to a cardiologist [...] exams are requested there [...] once you don't receive a counter-reference [...] you request again [...].* (Int.12).

The difficulty to coordinate procedures carried out may be linked to the deficient relation between ESF physicians and those who work in referenced health services. Those professionals often lack mutual acquaintance, do not communicate with each other, have never shared clinical or educational activities and, even when there is information exchange, it is usually precarious. The background of this situation is the fragmented nature of the health care system (ARENA *ET AL.*, 2014; MENDES, 2012; YOU; LEVINSON; LAUPACIS, 2009). Thus, an integrated reorganization of the services through Health Attention Networks (Redes de Atenção à Saúde – RAS) is urgently needed to provide articulated work between all levels involved in health care (ARENA *ET AL.*, 2014). It is remarkable the relevant role of human resources in APS for a satisfactory performance in R*AS,* managing and directing resources to the benefit of the community (GONÇALVES *ET AL.*, 2014).

The principle of differentiated health care for individuals who present different needs is practiced by family physicians when requesting exams, as expressed in this discourse: *"[...] the patient who already has a diagnosis (of a pathology) is the patient to whom our resources are and must directed"* (Int.9).

A further aspect mentioned by participants was the physician's knowledge about the situational diagnosis in the area attended by his/her team, taking into account social, economic, cultural, environmental and epidemiological aspects. In this context, science exerts a guiding influence on appropriate

requests for exams by family physicians, as suggested in the following discourse: *"Requesting precisely, thinking over, reflecting on your team's data [...]"* (Int.7).

It was noticed in this study that, when requesting exams, family physicians are applying APS guiding principles: first contact, continuity over time, entirety and coordination (OLIVEIRA; PEREIRA, 2013). However, obstacles remain as to the coordination principle, due to functioning difficulties of the reference/counter-reference system in Brazilian Health system (MENDES, 2012).

Work process in ESF

Interviewees stated that, by performing a multi-professional work, the team makes it easier to manage the patient's care, thus avoiding unnecessary exams requests. Emphasis was placed on the role of community health agents who interchange information between the team and the users, as expressed in the statement below. Multi-professional work is considered a criterion for APS quality (MENDES, 2012).

> *[...] if you have doubts, you ask the agent (the community health agent) to visit the (patient's) house [...] it makes you [...] more confident, it reassures there is no need to extrapolate and request exams [...].* (Int.10).

A fact pointed out by interviewees as contributing to adequate requests for exams is the possibility to manage the duration of attendance, since it provides the physician with more time to carry out the anamnesis and the clinical exam, and diagnostic exams figure as a complement, as in the following statement: *"[...] you have the time you deem necessary with each patient [...] I think that makes a big difference (as to exams requests)"* (Int.10). However, in other health assistance sceneries the pressure on physicians to attend a larger number of patients restricts the attendance duration and, consequently, physicians depend more and more on results of complementary exams (WILSON, 2010; MORRISON, 2013).

Nonetheless, in ESF daily work there are also aspects that may hinder the appropriate practice of requests for exams. Among these, the pressure by the patient was pointed out in the reports. This is linked to the historical and cultural value assigned to exams by the patients, as a consequence of the biomedical conception shared by many of them (MENDES, 2012), often reinforced by the assistance model and by the media (MENDES, 2012). This kind of pressure is intensified by the idea that the patient may evaluate the quality of the attendance based on the exams requested.

> *[...] the worst is really that requests for exams are affected by the pressure of the community, with its already deep-rooted culture (on the need) of exams; and sometimes it is the media that enforces (it).* (Int.10).

> *[...] if he (the user) leaves with no exams requests [...] he feels disappointed [...].* (Int.4).

In Canada, family physicians also face this sort of difficulty in their practice of requesting exams (YOU; LEVINSON; LAUPACIS, 2009).

Some statements diverge as to how family physicians deal with the patients' quest for exams. Some interviewees think that accepting the patients' demand for exams can avoid stressful situations with that patient, mainly due to the easy access to the health service. Besides, requesting the exam can also have a 'therapeutic' effect, calming the patient down. Other interviewees recognize that the establishment of a confident doctor-patient relationship and the firmness transmitted by the professional will help to reduce the patients' pressure for exams.

> *[...] sometimes you can´t avoid it, you see that if you request that exam you will be OK [...].* (Int.13).

I often request exams [...] with that therapeutic purpose, to ease the patient's subconscious. (Int.6).

[...] (when) they (people) trust your work, you can undo the pressure. (Int.8).

It is worth considering that, in Brazilian scenery, the performance of health professionals is still very oriented to a kind of care based on technical-scientific tools, on exams and on medicine (MENDES, 2012). Professionals must change their procedures, focusing on warm reception and on the bond between them and their patients, in order for patients to have a different attitude regarding the excessive importance assigned to exams.

There is also the patient's demand for exams after a private consultation with specialists, who puts no limit to the number of exams, as pointed out below. The situation poses problems for the family physician who, while recognizing the restraints of public services when it comes to appointing an attendance with a specialist, also considers the overburden that the fact can engender for the health service, added by the ethical and legal conflict of refusing to subscribe exams requested by colleagues:

[...] he (the patient) manages to pay the private consultation, but cannot afford the exams [...], so he/she comes (to ask you to subscribe the exams). [...] he/she doesn't need all that, but as he/she was attended by a specialist, it is difficult to contradict... [...]. (Int.12).

This situation highlights the increasing value assigned to specialists, in both health services (SISTROM *ET AL.*, 2012; YOU; LEVINSON; LAUPACIS, 2009) and in the social idealization (MENDES, 2012). International authors stress the importance of a balanced view on ethic and legal concerns and the potential risks of unnecessarily complementary exams (SISTROM *ET AL.*, 2012; YOU; LEVINSON; LAUPACIS, 2009).

Physicians researched recognize that excessive demand for exams on the part of patients results from their lack of information on potential repercussions of unnecessary exams on health and on the health system, and feel responsible for clearing up the question with their patients, as stated in the following comment: *"[...] I think that leading the patient to understand the question of criteria is a medical task [...]"* (Int.9). However, it may be easier to request the exam than to explain why it is not necessary (YOU; LEVINSON; LAUPACIS, 2009).

On the other side, physicians are pressed by managers to reduce the requests due to the limited number of exams available in the state health system and the costs of the service for the system. Interviewees, by their turn, diverge regarding that influence. Some participants believe that, most times, the managers' influence does not interfere in the physicians' decision, since requesting exams is their responsibility, while the only managers' role is to warrant the execution of the exam. However, one of the interviewees reported submitting to the manager's demand for political reasons – fear of losing the job. This situation results from the frailty of employment bonds in the APS system, where, due to political influences in both recruitment and dismissal processes, employment contracts are usually deficient as to social assistance and job stability guaranties (GONÇALVES *ET AL.*, 2014; MENDES, 2012).

[...] if the manager tells me 'Do not request that exam'. this is the manager's problem [...] when the physician does not request a really necessary exam, he/she is guilty of negligence. (Int. 13).

[...] (managers) press you not to request an exam [...] you have to accept because sometimes you'd risk losing your job. (Int.8).

It is worth considering that the challenge of controlling the costs of medical services, yet preserving their quality, is a joint

responsibility of physicians, managers and health policy formulators (SISTROM *ET AL.*, 2012).

A further difficulty pointed out by interviewees is the unavailability of some exams in the state health system and/or the delay for booking, which can hinder the appropriate practice of requesting exams and incur in risks for the patient, as suggested in the following report: *"[...] we often avoid requesting exams exactly due to lack of availability [...] which interferes in our procedures [...]"* (Int.6).

The availability of exams in state health systems cannot be anchored on a model subsidized by parameters of historical series, based on a system of quotas that generates inefficiency. It must derive from clinical directives that establish population parameters for each type of exam (MENDES, 2012).

Emphasis is placed on the fact that difficulties faced by family physicians when requesting exams may contribute to weaken the effectiveness and solutions possibilities of ESF performance (ASSIS *ET AL.*, 2012).

Final remarks

Requests for complementary exams by physicians working in ESF programs are influenced by their education process and by the family health context. One of the foundations for changes and improvements in this practice is a systematized, contextualized teaching, based on an enlarged concept of health. Also essential are investments on professional education, reinforcing residency programs on family and community medicine that enlarge and ensure continued education programs. Education activities on health targeted at populations, including the discussion on complementary exams and the effect of their unsuitable usage are fundamental for decreasing the demand for exams in the community.

We hope this study may contribute to further reflection in the sphere of APS programs, and particularly of ESF, allowing health professionals – managers, physicians, nurses, users and the academic community – to consider the need of an appropriate use of propaedeutic methods in their performance.

Collaborators

MFS Figueiredo and LMA Borém participated in the design of the study, data collection and analysis, besides elaboration of the manuscript. MRM Vieira participated in data collection and analysis, besides elaboration of the manuscript. MTS Leite e JF Rodrigues Neto collaborated in the design of the study, supervision, data analysis and final revision of the manuscript. ■

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Received for publication: January, 2017
Final version: July, 2017
Conflict of interests: non-existent
Financial support: Fundação de Amparo à Pesquisa do Estado de Minas Gerais (Fapemig)