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Original article

Analysis of conditions for the diagnosis of rheumatic diseases in primary health care in the city of Sorocaba-SP

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A R T I C L E   I N F O

A B S T R A C T

Objectives: The study had as main goal to define the profile of the attending professional working at the primary healthcare sector in the city of Sorocaba, and to analyze the environment in which this professional is inserted, trying to identify if there are conditions for the care of low-complexity rheumatic diseases and possible reasons that would lead to a high degree of referral to specialists.

Methods: A quantitative study was performed in which physicians of primary health care were invited to answer a questionnaire that addressed personal aspects, besides the technical aspects of four rheumatic diseases: osteoarthritis, gout, fibromyalgia and osteoporosis, which served as the basis for evaluating the care for low-complexity diseases in UBSs.

Results: It was observed that the professional is part integral of an organizational system that hinders his/her performance; moreover, certain personal difficulty techniques were realized. Together, these conditions turned out to be the factors that determine a quality of care that falls short of that expected.

Conclusion: There must be a review of how medical education is offered, in order to seek a more qualified training, focused on the basic needs of the health system, as well as a restructuring of the entire health system in terms of its organization and management, in order to attain a suitable condition for the development of a good medical practice, and thus, for providing a good service to the community.

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Análise das condições para diagnóstico de doenças reumáticas na atenção básica de saúde na cidade de Sorocaba-SP

R E S U M O

Palavras-chave:
Doenças reumáticas
Atenção primária de saúde
Educação médica continuada

Objetivos: Definir o perfil do profissional que atende no setor primário de saúde na cidade de Sorocaba, analisar o meio em que está inserido e tentar identificar se há condições para o atendimento de doenças reumáticas de baixa complexidade e os possíveis motivos que levariam a um alto grau de encaminhamento aos especialistas.

Métodos: Fizemos um estudo quantitativo no qual médicos da atenção básica de saúde foram convidados a responder um questionário que abordava aspectos pessoais do profissional, além de técnicos de quatro doenças reumáticas: osteoartrite, gota, fibromialgia e osteoporose, as quais serviram de base para avaliar o atendimento a doenças de baixa complexidade nas unidades básicas de saúde (UBS).

Resultados: Observou-se que o profissional encontra-se inserido num sistema organizacional que dificulta sua atuação; além disso, perceberam-se certas dificuldades pessoais técnicas. Essas condições somadas acabam por ser fatores que determinam uma qualidade de atendimento aquém da esperada.

Conclusão: É necessário que haja uma revisão de como a educação médica se dá, a fim de buscar uma formação mais qualificada e voltada para as necessidades básicas do sistema de saúde, além de uma reestruturação de todo sistema de saúde do ponto de vista de organização e gestão, para que haja uma condição adequada para o desenvolvimento de uma boa prática médica e, consequentemente, uma boa prestação de serviço à população.

Introduction

The prioritization of health care services based on the complexity of the cases and procedures is a principle of the Unified Health System (Sistema Único de Saúde [SUS]) in Brazil, that stands out among the rest.[1,2]

The resolution capacity of the primary care sector, represented by the Basic Health Units (Unidades Básicas de Saúde [UBSs]) involves the use of secondary and tertiary sectors; furthermore, it can determine the presence of overloaded urgency and emergency units. Thus, it is expected that the solution in most cases be achieved in the UBSs by reducing referrals and stimulating the counter-referrals.[1,2]

Among the medical areas where this hierarchical scheme seems to be poor, it calls attention those areas caring for musculoskeletal diseases. A failure to resolve such cases by the general practitioner at the UBSs generates an expectation of attendance at other levels of assistance for the specialties of Rheumatology, Orthopedics and Physiatry.

Data collected by the Municipality of Sorocaba through its Department of Health in August and September 2011 showed an unmet demand for services with rheumatologists amounting to 300 medical appointments, while at that same time, an unmet demand for orthopedists of around 10,000 appointments was noted.

Based on data and observations of care practice provided, it was noted that the most prevalent diseases, responsible for the largest number of consultations and referrals to specialties, are also those of less complexity and that and require less technical and structural follow-up resources.

Among these diseases, there are four of them, which will serve to illustrate the idea that there is an overload in looking for these specialties: osteoarthritis (OA), popularly known as arthritis, primary osteoporosis (PO), fibromyalgia (FM) and gout (microcrystalline arthritis secondary to urate crystals).

A review of the international literature has shown that there are difficulties in monitoring these diseases by general practitioners. Studies show that there is inconsistency in referrals, as it relates to clinical suspicion and presentation complaint; in addition, it is noted in several descriptions the occurrence of low-quality referrals and mistaken treatments.[3–6]

The aim of this study is to determine the main factors that hinder the diagnosis of the most prevalent and low-complexity rheumatic diseases by physicians working at UBSs, and, thus, leading to low efficiency in solving these cases.

Materials and methods

Study sites

UBSs of the municipality of Sorocaba.

Inclusion criteria

1. Internist physicians working in UBSs.
2. Acceptance of participation by signing a free and informed consent form.

Exclusion criteria

1. Refusal to signing the free and informed consent form.
2. Do not deliver fully completed survey questionnaires.

Research tools

The questionnaire was divided into:

A. Socio-demographic and professional training issues.
B. Questions to assess the degree of technical knowledge regarding the four chosen diseases for the study: OA, PO, FM and Gout based on their clinical, radiological and laboratory aspects. These technical questions have been prepared based on clinical criteria and in a consensus established by the medical literature, and have been applied, prior to the distribution to the participants of this study, to six rheumatologists holding a specialist title granted by the Brazilian Society of Rheumatology, in order to validate the answers to be considered as correct. After the participants in the study completed the questionnaire, the results were compared between two groups: physicians with up to 15 years and over 15 years of graduation.
C. Level of perception with respect to personal ability for taking care of rheumatic diseases.

The questionnaires were sent through the Municipal Health Department, after due approval by the local Ethics Committee (CEP-PUC/SP), to all medical professionals belonging to the primary care network, with a total of 136 physicians.

Data were tabulated and analyzed using an Excel platform and then statistically analyzed using SPSS software version 13.0.

For descriptive analyses, mean, standard deviation, median, minimum and maximum were considered. For the analysis of the results of diseases' scores, an analysis of variance was used; and to check whether there was a relationship between the total points obtained in these diseases and training time, a Student's *t* test was used for obtaining the means.

Results

Of the 136 questionnaires sent, 49 returned fully answered and with an informed consent form signed, bringing the total rate of adhesion to 36.02%.

As for the professional profile, the mean age was 42.5 ± 11.8 years, and 24 (48.9%) were male and 25 (51.1%) female.

Twenty-two physicians (44.9%) were over 15 years of graduation. About 75% of all respondents completed or were attending residency or specialization programs, and only 36.7% of these programs were related to the clinical area and their specialties.

It was also observed that 55.1% of the professionals dedicated 3–6 periods per week for public service (each period should be understood as: morning, afternoon or evening). The working time in public service ranged from 3 months to 29 years, with a median of 5 years, and 75% had up to 13 years of public service.

About 90% of the respondents reported that they felt recognized by their patients, regarding the care provided by them as a general practitioner.

In relation to the updating process, 75.5% responded that they took part in 2–6 scientific events in the last two years.

Table 1 – Stratification by percentage of correct answers.

	Osteoarthritis	Osteoporosis	Fibromyalgia	Gout	Total
<50%	5	2	4	5	2
50–70%	24	26	27	14	30
70–90%	19	18	17	22	16
>90%	1	3	1	8	1
Total	49	49	49	49	49

44.9% of these professionals searched for weekly updates on the Internet, and 36.7% read professional journals monthly.

In assessing the profile of medical care, 89.8% saw between 3 and 5 patients per hour. According to 79.6% of respondents, this volume of consultation generated a shorter visit time than what would be necessary for an assessment related to musculoskeletal complaints. The pressure for productivity in UBSs was reported as the main factor for the short consultation time (75.5%).

The reasons for referral of these cases to the secondary units were: case complexity (55.1%) and lack of knowledge about the disease (57.1%). About 6.1% of the respondents justified the referral as a result of lack of interest in following these cases. Most of the respondents reported that not all cases should be treated by specialists (87.8%).

In the second part of the questionnaire, related to specific technical knowledge, we assigned the correct answers and divided them into percentiles, as shown in Table 1.

A higher number of correct responses between percentiles 50 and 70% was observed in all diseases, except for gout, which stayed between 70 and 90%.

Table 2 shows the distribution of correct answers according to the time of graduation of professionals. A statistically significant difference was observed only in relation to the knowledge about osteoarthritis.

In the questions about personal perception, it was asked about the preparation for caring rheumatic diseases (in the opinion of the interviewee), and which diseases would present greater ease or difficulty, in addition to those structural issues imposing limitations for the patient's care.

When the participants were asked about the perception of an adequate preparation to conduct such cases, only 10.2% thought they were unprepared to follow the cases with musculoskeletal complaints.

The diseases mentioned as of greater ease of care were gout, osteoarthritis and soft tissue rheumatism. Regarding the most difficult diseases, the respondents cited vasculitis, progressive systemic sclerosis, systemic lupus erythematosus and Sjögren's syndrome.

Table 2 – Percentage of correct answers by disease, according to time elapsed since graduation.

	Up to 15 years old, $n = 27$	≥ 16 years, $n = 22$	*p*
Osteoarthritis	66.92	58.11	0.024
Gout	66.29	70.45	0.184
Fibromyalgia	66.64	66.75	0.487
Osteoporosis	70.91	71.30	0.460

As for the difficulties imposed by the working structure for the diagnosis of these diseases, the following were mentioned:

1. Working overload.
2. Lack of access to imaging studies.
3. Lack of a multidisciplinary approach.

As to the item regarding the access to imaging studies, it has been mentioned that, for requesting bone densitometry (which is essential for the diagnosis of PO) the patient had to be referenced. On the other hand, regarding common radiological imaging, a delay in obtaining these studies was mentioned.

Discussion

The data stemming from this study show that the physician who works at UBSs is a relatively young professional, without gender predominance and mostly with a graduation time below 15 years (55.1%).

National guidelines for the teaching of medical courses recommend that the graduate must be able to solve most of the cases covered in the primary sector. Thus, the low specialization in clinical areas observed in this study should not influence the performance of these professionals (34%).[7]

It can be seen that, in most cases, the medical professional working at UBSs has a personal perception of the importance of his/her role as primary care clinician. This is evident because the vast majority felt recognized by the user, regarding their medical practice (87.9%). This perception is important, because the physician must be committed to the citizenship and as promoter of integral health practice, trying to analyze and solve the social problems that arise,[7] not being just a technical performer.

The physicians feel that they are immersed in a process of excessive workload; this was a recurring complaint. They also report that they do not have enough time for proper care, regarding this issue as a priority.

Another complaint frequently reported by the respondents refers to a deficiency in the structure of health care. In this aspect, the difficulty of access to ancillary tests stands out. This situation invariably generates a delay in their diagnosis and treatment. It is critical to rediscuss what tests should be available to clinicians in the UBSs. This discussion should consider the indication of each exam and its potential to expedite the service. In the case of PO, it is known that densitometry is an essential study to its diagnosis and that there are guidelines to determine its indication. Thus, an excess of orders can be avoided by the simple requirement that the established indications be followed by the clinician. The exclusion of the practitioner in the process of requesting such a test does not seem to be a good solution.

In the analysis of the perception of ease or difficulty in the consultation for specific diseases, there is a feeling of comfort on the part of the physicians studied, when examining patients with OA, gout, FM and PO. It should be emphasized that the existence of this perception of ease or difficulty, when the doctor is faced with a certain disease, not necessarily is a precondition for a good or bad clinical conduct. It only expresses the personal opinion of the doctor.

When comparing these views with the counting of correct answers in the questionnaire that assesses technical knowledge, this perception is confirmed, since these diseases have generated a rate of correct answers greater than 50%, with an emphasis to the correct answers to questions about gout (70–90%). A question arises: should we consider this hit rate as acceptable, when it comes to general practitioners? One limitation of this work is that it simply cannot be based on a definition of what would be an expected hit rate.

Regarding the graduation time, it was noted that there was no big difference in the pattern of responses; this occurred only in osteoarthritis, with better rates for the group up to 15 years. It may be possible to assign the balance to the experience and learning curve acquired by older physicians, counteracting the largest educational "freshness" of those less experienced.

One question that seems relevant is the fact that all research that aims to measure the knowledge collides with the opposition of surveyed subjects. This difficulty has been described in the literature.[8]

One can assume that only those who consider themselves better trained feel comfortable in participating in this study. This may have generated a bias that can influence the pattern of answers provided to something based on the opinion only of the best professionals, and not on the opinion of the absolute majority.

The issue of medical qualification is relevant, and this is probably one of the keys in the quality of provided care equation. More than the qualification, it is important to analyze the skills required for this professional. The educational trend in many countries, such as UK, Canada and the United States,[9] is based on this aspect, because it is understood that the definition of competences is a prerequisite for the occurrence of acquisition of knowledge in a more consistent and solid form.[10]

Kenedy[11] showed that there is a gap between knowledge and behavior, i.e., clinical practice, and there are numerous individual issues that define the attitude and decisions that professionals must take, when facing new problems.

The literature describing techniques successfully used for training and skills development is extensive.[12,13] Here, the important point is that each situation requires an individualized approach, and there is no lack of tools to develop education projects.

The focus of change should fall primarily on graduation. In this time of professional training lies the critical point of the main problems to be overcome. A study of 28 institutions of medical education in Brazil has shown that the main difficulty in developing new educational and curricular concepts lies in the acceptance, by teachers, of new methodologies. The faculty generally steers clear of new educational demands, thus perpetuating the gap between scholarship and practice.[14]

Therefore, this study demonstrates the need for the promotion of a qualified continuing education for these professionals. This education should focus not only in the knowledge, but also must develop skills that encompass individual abilities.[15]

This research, although it has been developed related to specific rheumatic conditions, brought relevant information with regard to organizational matters of the health system. A

vision of health care can be obtained from an amplified way, bringing the realization that the mere case-by-case analysis of the clinical service simplifies a much more complex problem.

This research, although developed with an emphasis on specific rheumatic problems, resulted in relevant information with regard to organizational matters of the health system. Based on that, a view of health care in an amplified manner, implying the perception that a mere case-by-case analysis of the clinical service simplifies a much more complex problem, is made possible.

The impression obtained in the study is that professionals are willing to perform their work in the most complete and accurate way. However, they run into structural issues that are related to the organization of the health system.

A revision in the way medical training is developed is also considered as something necessary. The effectiveness of traditional teaching approaches proves increasingly insufficient to effect change or to acquire skills.[16,17] In these areas, education policies must walk alongside health policies. One should think of the health professional as part of the system and its potential transforming agent from the start of his/her graduation, so he/she should be taken early to become familiar with clinical practice.[18] This professional must be formed and trained so that he/she is able to understand and question the existing failures; and thus be active in the development and improvement of the health system.

The advances are getting faster, and constant updating is necessary. But conditions should be created for this to happen. New ways of teaching and new curricula are being put into practice in order to meet these needs. There is still some resistance to accept new educational trends and forms of education, but the outlook is good.

In addition to this investment in the human part of the process, it seems clear that the managerial organization of the public health system should be revised. The public system is still lacking a better structure and needs to be able to offer adequate working conditions, so that all professionals can engage in it effectively and concretely.

We conclude that: 1 – the professionals evaluated feel comfortable in addressing the most prevalent and low complexity rheumatic diseases; 2 – The knowledge of clinical physicians working at UBSs is situated in the average level with respect to the basic issues on these diseases; 3 – there is no difference of knowledge regarding the time elapsed since graduation; 4 – the main difficulties for the diagnosis of these diseases are the short time with the patient and little access to ancillary exams.

Conflict of interests

The authors declare no conflicts of interest.

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