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Academic detailing program for rheumatoid arthritis: a contribution to Brazilian public health system sustainability

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Abstract

Objectives In Brazil, specialty medicines for rheumatoid arthritis (RA) treatment are provided by the national health system (NHS) according to mandatory protocols. Knowing the rules for prescription of these biological agents is crucial to ensuring patient access to treatment. This study aims to evaluate the feasibility of an academic detailing strategy to promote the quality use of the medicines available in NHS among prescribers.

Methods Forty-three specialists and general practitioners were visited by researchers to perform an academic detailing of the Clinical Protocols and Therapeutic Guidelines (PCDT) for RA adopted by NHS. After the visits, a survey was performed with prescribers to measure their perception in terms of satisfaction and information reliability with the academic visits. At the end, we perform a cost analysis to permit comparisons of this strategy with other educational activities.

Key findings From 43 physicians that were visited, 28 responded to the telephone survey. Of these, 68% were very satisfied with the visit, 50% rated the content of the visit relevant to their practice, 64.3% agreed the duration of the visit did not affect their work, 60.7% agreed the distributed material would be useful for their professional practice, and 57.1% agreed that the visits added to their knowledge. A total of USDPPP 162.96 per prescriber (USDPPP 7,007.20, BRL14,185.00) were spent on the program.

Conclusion The prescribers visited represent a large number of deferrals for the Specialized Component of Pharmaceutical Care (CEAF) drug applications. Therefore, the total amount spent on the implementation of this program and its potential for improving access to these medicines has the possibility to have a positive impact on the targeting of public expenditures and avoiding litigation against NHS. Academic detailing has the capability to become an effective strategy for PCDT dissemination and implementation.

Keywords academic detailing; clinical protocols and therapeutic guidelines; rheumatoid arthritis

Introduction

Academic detailing is an evidence-based educational outreach methodology aimed at health professionals, intending to modify their clinical practice. A trained professional visits health professionals at their place of work, such as in the clinic or hospital.^[1] The basis for academic detailing is that the academic detailer is able to assess what is important to the health professional and then adjust the conversation as needed to convey the program goals. This ‘tailored’ approach makes the health professional feel heard and, in turn, creates an environment where they are more receptive to the information. Most academic detailing has been conducted with general practitioners, but may also occur with specialists, nurses and pharmacists.^[2]

To optimize practice, prescribers need up-to-date, reliable, objective, clear and easy to access information. In lower- and middle-income countries where there is limited continuous professional development, representatives of the pharmaceutical industry present themselves as a convenient alternative.^[3–5] The pharmaceutical industry spends up to a third of its revenue on promoting its products. In 2018, at least US\$58 billion were spent

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worldwide on pharmaceuticals sales force and marketing channel activities, representing an increase of 2.4% on a like-for-like constant currency basis compared with 2017.^[6–8]

Representatives of the pharmaceutical industry who carry out these visits are well-trained agents and provide detailed information about their products and work with specific marketing materials in order to strengthen their relationship with prescribers. They are known as ‘drug detailors’, and convey product information in a summarized and interactive way in the doctor’s office with the goal of increasing prescribing and sales.^[9]

As an alternative, the practise of academic detailing began in the 1980s at Harvard University in order to improve prescribing decisions and minimize errors.^[10]

In Brazil, a guideline for academic detailing was developed in cooperation between the Pan American Health Organization, the Collaborating Center for Technology Assessment and Health Excellence (CCATES) and the Department of Management and Development of Technologies in Health (DGITS). It has been drawn from extensive research in the scientific literature and from the experience of international organizations that perform academic detailing such as the National Prescribing Service, the National Resource Center for Academic Detailing, in the United States, and the Canadian Academic Detailing Collaboration. In Brazil, a pilot project was conducted visiting physicians with the objective of disseminating the Clinical Protocols and Therapeutic Guidelines (PCDT) for Alzheimer’s Disease.^[11]

Some studies have demonstrated the efficacy and cost-effectiveness of academic detailing, such as the systematic review with meta-analysis that included 69 studies involving more than 15 000 health professionals,^[1] which concluded that educational visits alone or in combination with other interventions have consistently beneficial effects on prescribing. Regarding its cost-effectiveness, a randomized study that evaluated the economic effects of face-to-face visits to reduce inappropriate prescription of drugs involving 435 prescribers and showed that educational sessions reduced inappropriately prescribed drug expenditure by 13%.^[12]

In Brazil, access to high-cost drugs, such as anti-TNF and other biological agents, involves complex administrative procedure, and there is a difficulty for prescribers to follow protocol criteria, which causes a high prevalence of non-deferred processes. This increases the barrier for patients to access treatment, as well as causing unnecessary expenses through litigation.^[13] In 2016, spending on health litigation consumed R\$1.3 billion, with the ten most expensive drugs being responsible for 90% of that value. These expenses are coming out of other health programs and other segments of the Brazilian federal budget.^[14]

Since the main reason to not provide the drug is the lack of knowledge of the protocol by the prescribers, there is a need for further dissemination of clinical protocols strategies in SUS.^[13]

The aim of the present study was to evaluate the feasibility of educational visiting for physicians employing the academic detailing technique for drugs available in the SUS for rheumatoid arthritis. The feasibility was based on an

evaluation of the satisfaction of the visited professionals in relation to their perception of the acceptability, relevance and quality of the academic detailing, and the costs of the academic detailing program executed.

Methods

The methodology of the intervention for this study was based on the Methodological Guideline for Academic Detailing, which presents an overview of the service and aims to guarantee quality by presenting its main foundations, processes, expected results and the necessary materials and forms for documentation and evaluation of the performance of visits.^[15]

From the database of the Integrated Pharmacy Assistance Management System (SIGAF), 255 prescribers who requested medicines for the treatment of rheumatoid arthritis through the Specialized Component of Pharmaceutical Care (CEAF) in the state of Minas Gerais were identified by March 2017. Fifty prescribers were then selected, for convenience, according to availability for visits and success in initial contact.

The prescribers included were rheumatologists and general practitioners. Prescribers, who practised outside Belo Horizonte, those who were not found, and those of other specialties or who did not accept the invitation to receive the visit, were excluded. The reasons for not accepting the visit were not being able to receive the visit by health institution policy, lack of time, and being on vacation or maternity leave.

Information bulletins containing relevant and evidence-based information on rheumatoid arthritis and PCDT were developed, as well as a patient informative folder (Figure 1). Three volumes of bulletins were created, aiming to be attractive, objective and simple. The art and layout of these materials were undertaken by a designer to enhance their professional look. In addition to the bulletins, two volumes of the PCDTs book of the Ministry of Health and a flash drive containing complementary material were made available to physicians.

The academic detailing guideline stresses the importance of case studies, with the objective of transmitting real and complex clinical scenarios to the prescriber who is receiving the visit. With this, a clinical case folder was distributed to the doctors during the visits to help guide them in answering the questions according to their previous knowledge of the subject. The clinical case was intended to indicate best practise according to the Clinical Protocol and Rheumatoid Arthritis Therapeutic Guidelines. After reading the clinical case, the prescriber’s level of agreement with the practise followed in the case was assessed with three options: totally disagree, partially agree or fully agree.

The academic detailors should have good communication skills and knowledge about the disease and SUS processes. Searching for this profile, the facilitators were selected from a specific course for training of medical academic detailors.

The intention was to have three visits in subsequent weeks. The visits had their agenda based on each of the three bulletins for rheumatoid arthritis. According to the



Figure 1 Information bulletins and patient folder.

availability of the prescriber, the academic detailer could condense the contents of more than one bulletin on a visit.

After the visits, telephone contact was made to conduct a satisfaction survey. The questions are standardized on a form and were applied by CCATES staff. The telephone contact was made after the last visit by a different person than the doctor visitor. This method ensures that the interviewee does not feel pressured to positively evaluate the visit by the academic detailer presence. The survey was conducted within seven days after the last visit to each prescriber.

Questions were answered using a scale of 1–5 for responses: where 1 is very dissatisfied and 5 very satisfied, as to the degree of general satisfaction with visits received; or where 1 you disagree completely and 5 you fully agree with seven statements related to the visit. In addition, six more questions and a space for additional comments were presented.

A cost analysis was carried out of the expenses for technical staff items (specialists, researchers and trainees), outsourced services (graphic designer, among others), academic detailers, graphic services (printing bulletins, folders and business cards) and purchase of materials (flash drive).

Results

Among 255 prescribers, 43 were visited, with a total of 79 visits. Of the physicians visited, 67.4% were female, with a mean age of 46.1 years and with an average time practising in rheumatology of 19.5 years.

Using a standard form for data collection and perceptions of the visit, the detailers reported that in 52.0% of the times it was very difficult to schedule the visits and difficult in 32.9%. The detailers took an average of 1.4 attempts to schedule the visit. They also reported an average time in the waiting room of 36 and 12.2 min duration of the visit with the doctor.

The detailers reported that the physicians were very receptive (31.5%) or receptive (52.0%) in the visits and showed themselves interested (25.7%) or very interested (51.3%) in the presented content. They reported that it was possible to present all the planned information in 91.7% of visits.

Telephone surveys were performed, with data collected using the questionnaire standardized in the methodological guideline for academic detailing. Among the 43 doctors visited, it was possible to conduct the questionnaire with 28.

Table 1 Replies to the telephone interview regarding the satisfaction of the visit

		Total	%
Satisfaction with the visit	Very unsatisfied	–	–
	Dissatisfied	–	–
	Neutral	2	7.4
	Satisfied	6	22.2
	Very satisfied	19	70.4
	Not applicable	–	–
	Did not know how to report	–	–
The content of the visits was relevant	Very unsatisfied	1	3.6
	Dissatisfied	–	–
	Neutral	3	10.7
	Satisfied	10	35.7
	Very satisfied	14	50.0
	Not applicable	–	–
	Did not know how to report	–	–
My doubts on the subject have been solved	Very unsatisfied	1	3.6
	Dissatisfied	1	3.6
	Neutral	8	28.6
	Satisfied	8	28.6
	Very satisfied	9	32.1
	Not applicable	1	3.6
	Did not know how to report	–	–
The duration of the visit did not affect my work	Very unsatisfied	1	3.6
	Dissatisfied	1	3.6
	Neutral	3	10.7
	Satisfied	4	14.3
	Very satisfied	18	64.3
	Not applicable	–	–
	Did not know how to report	–	–
The bibliography used in the material is reliable	Very unsatisfied	–	–
	Dissatisfied	2	7.1
	Neutral	–	–
	Satisfied	–	–
	Very satisfied	21	75.0
	Not applicable	–	–
	Did not know how to report	4	14.3
The distributed material will be useful for my professional practice	Very unsatisfied	3	10.7
	Dissatisfied	–	–
	Neutral	3	10.7
	Satisfied	3	10.7
	Very satisfied	17	60.7
	Not applicable	1	3.6
	Did not know how to report	1	3.6
The visits contributed to improve my understanding of the request for medicines in the SUS	Very unsatisfied	4	14.3
	Dissatisfied	2	7.1
	Neutral	3	10.7
	Satisfied	6	21.4

Table Table 1 (Continued).

		Total	%
The visits increased my understanding of which patients are eligible for the treatment of rheumatoid arthritis	Very satisfied	12	42.9
	Not applicable	–	–
	Did not know how to report	1	3.6
	Very unsatisfied	6	21.4
	Dissatisfied	1	3.6
	Neutral	5	17.9
	Satisfied	4	14.3
	Very satisfied	11	39.3
	Not applicable	–	–
	Did not know how to report	1	3.6

The lack of time was the main justification for not accepting to participate in the telephone survey. Of the 28 physicians questioned, 70.4% reported being very satisfied with the visit, agreeing with the relevance of the content presented in 85.7% of the time ('I agree' 35.7%, 'completely agree' 50.0%; Table 1).

Of the physicians visited, 57.1% understood that the visits added some knowledge about the request of rheumatoid arthritis drugs and that there was nothing that they did not like in 82.0%. They also considered that academic detailing is equally effective in deepening knowledge compared with participation in events, such as conferences in 44.0% of contacts (Table 2).

The costs of the academic detailing program are presented in Table 3 and were divided into support materials (printed and flash drive), remuneration for advice on the content of the bulletins, a designer for the materials, creation and execution of the academic detailers training course and the remuneration of the academic detailers.

For the creation of the content of the bulletins and other printed material, the Graduate Program in Medicines and Pharmaceutical Care (PPGMAF) students with experience on PCDT of rheumatoid arthritis were invited. The total cost of the advisory was USDPPP2.901,04. A designer was hired to layout the content in a way that was visually attractive and didactic for the accomplishment of the visits. The cost of the service provided was USDPPP1.813,15.

The training of the academic detailers was conceived and executed by PPGMAF students with previous experience in the execution of programs of academic detailing and medical visitation. Total spending was USDPPP1.450,52.

Regarding materials, 40 flash drive was purchased for delivery during visits, totalling USDPPP447,47; 50 units from each of the three volumes of the bulletins were printed (USDPPP842,49), 50 folders containing the clinical case (USDPPP112,58), 50 folders with the medicine frame (USDPPP157,11), 500 business cards (USDPPP290,10) and 2000 folders with information for the patients (USDPPP1.429,34). The academic detailers were paid for each visit, generating a total cost of USD1,641.50 (USD20.77 per visit). The total cost of the academic detailing program for rheumatoid arthritis was USD3,666.80.

Table 2 Perception of the physician regarding the visit

		Total	%
Did the visit add any insight into the requests for rheumatoid arthritis drugs?	Yes	16	57.1
	No	12	42.9
Was there something you did not like about the visit?	Yes	5	17.9
	No	23	82.1
In what intensity was the academic detailing, made by the visits, effective in deepening knowledge compared to participation in events, such as congresses?	Much more effective	1	3.7
	More effective	3	11.1
	Equally effective	12	44.4
	Less effective	5	18.5
	Much less effective	6	22.2
Could this activity be improved?	Yes	15	55.6
	No	12	44.4

Table 3 Academic detailing program costs

	Service	Cost
Printed material	Clinical Case folder	USDPPP 112,58
	Medicines frame	USDPPP 157,11
	Business Card	USDPPP 290,10
	Bulletins – 3 models	USDPPP 842,49
	Folder for patient	USDPPP 1.426,34
Material	Flash drive	USDPPP 447,47
Academic detailors	Remuneration for the visit	USDPPP 7.675,80
Material conception	Content	USDPPP 2.901,04
	Design	USDPPP 1.813,15
Training course	Conception and execution	USDPPP 1.450,52
	Total	USDPPP 17.004,02

Discussion

This study was undertaken to determine the feasibility of educational visiting in an important area of practise in Brazil. We believe this is one of the few publications in Brazil assessing the feasibility, interest and cost implications of undertaking academic detailing in Brazil. Traditional continuing medical education is the most commonly used strategy for the implementation of clinical guidelines but has shown to have only a weak influence on practise change. More active educational measures are generally needed to overcome barriers in using knowledge in clinical guidelines and changing practice.^[15,16]

The strategy of implementing clinical guidelines through the intervention of educational visits made by an academic detailor has a well-established theoretical basis for changing medical behaviour and has been proven to be consistently effective.^[1,17,18] Through persuasive communication and altering cognition through personalized feedback and reinforcements the academic consultant has been shown to change attitudes and confidence and improve evidence-based practice.

In this study, physicians, who were mostly specialists, were already familiar with the PCDT and CEAF prescription practices, although they showed interest and understood

that the visits added some knowledge. In addition, they also believed that academic detailing is equally effective in deepening knowledge compared with participation in events, such as congresses.

According to a review of interventions that change the behaviour of physicians by the Health Research and Quality Agency, the factors that most discourage the use of academic detailors are the time spent in the office to make continued medical education, having to schedule office hours to receive the consultant and the consultation being performed by a non-physician.^[17, 18, 19]

In our study, of the doctors questioned, 70.4% reported very satisfied with the visit, agreeing with the relevance of the content presented in 85.7% of the time, showing acceptance by the prescribers.

As for the costs for the accomplishment of the program of academic detailing, the overall costs for conducting the visits were low in comparison to the costs associated with drugs for rheumatoid arthritis. If the program was implemented more widely there would be greater efficiencies.

An economic study by Silva et al. analysed the profile of 11 573 patients in relation to the costs of SUS treatment in the State of Minas Gerais, Brazil, with data from 2008 to 2013. In this study, costs with biological agents alone ranged from BRL12,206.64 (USD3,155.40) to BRL65,801.76 (USD17009.80)/patient/ year.^[20]

Costa et al., analysing data from 2003 to 2006, found amounts paid by the SUS with high-cost drugs of BRL99,663,754.30 (USD 25,763,080.00) in which 68.72% of the expenditure was with RA treatment [Correction added on 3 July 2020, after first online publication: In the preceding sentence, the percentage value has been corrected in this version.]. Other studies show that RA treatment costs have been higher, and in 2007 they reached BRL147,232,846.74 (USD38,059,691.00), in 2008 it was BRL238,047,931.00 (USD61,535,390.00) and in 2009, BRL351,872,288.00 (USD 90,958,986.00).^[21]

Costa et al. data from 2003 to 2006 verified that BRL52,324,140.03 (USD 13,525,790.00) was spent with Infliximabe, which accounted for 58.7% in the first year of follow-up and which is around 70.0% of the total value for the RA treatment, in the 3 years following. The main item on the cost of RA treatment is biological agents. It is important to point out that the physical structure for the training was provided by the PPGMAF of UFMG. For an academic detailing program, costs with physical structure must be considered. Another important point is geographical limitation. As the study was carried out only in the city of Belo Horizonte – MG, transportation expenses were not considered. For a statewide or national outreach program, the cost of academic detailor travel may be limiting. Despite the geographical limitation of the study, the 43 prescribers visited represent a large number of deferrals for CEAF drug applications.^[21]

A complete cost-benefit analysis and cost-effectiveness analysis related to academic detailing interventions were beyond the scope of this study, however, the total amount spent on implementing this program of academic detailing and its potential for improved access to these drugs may represent a positive impact in the direction of public

spending avoiding the judicial process. Information released by the Minas Gerais State Health Department (SES-MG) shows expenses with lawsuits for drugs in 2008 of BRL42 million (USD10 million).^[22]

Conclusion

The model of academic detailing undertaken in this study was determined to be acceptable and relevant, and an alternative form of academic update. Academic detailing has the potential to be an effective strategy for the implementation of therapeutic national protocols in Brazil, and thereby improving access to treatment, outcomes for patients and appropriate use of health resources.

Declarations

Conflict of interest

The Author(s) declare(s) that they have no conflicts of interest to disclose.

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Authors' contributions

M. Carvalho Borin contributed to the project design, collection, analysis and interpretation of data, article writing and final approval of the submitted article. J. Dartnel and A.M. Kakehasi critiqued the content and approved the final version. F.A. Acúrcio, J. Alvares-Teodoro and A. Guerra Jr. contributed in project design, article writing, critiqued the content and approved the final version. All Authors state that they had complete access to the study data that support the publication.

Authors' statement

We confirm that the manuscript has been read and approved by all named authors.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

- Figure S1.** Information bulletin 1
- Figure S2.** Information bulletin 2
- Figure S3.** Information bulletin 3
- Figure S4.** Patient folder