

Conceptual aspects, impact, and state of the art of dependent prescription in Brazil: narrative review

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Abstract

Background: Nonmedical prescription is recognized in several countries as an excellent strategy in facing emerging demands that put a strain on the health system. It is a practice carried out by professionals who are not doctors and who, after obtaining specific qualifications and legal authorization, can prescribe medication and curatives. In Brazil, although there is already a legal subsidy for prescription in some professions, it is still an underdeveloped activity with few studies.

Objective: This study aimed to describe the conceptual aspects and state of the art of this type of prescription in Brazil.

Methods: It is a narrative review of the literature that included national and international regulations related to the subject, as well as available articles, published in electronic journals in different databases. Key terms used were nonmedical prescription, nursing prescription, and pharmaceutical prescription.

Results: It was evidenced that nonmedical prescription has ample potential for improving the quality of care and the health conditions of patients. One can highlight as positive results the improvement of work satisfaction and self-confidence of those who have developed this practice; improvement of teamwork reported by other professionals due to the reduction of work overload; greater patient satisfaction in relation to access; and care provided by prescribers.

Conclusions: It is understood that there are many challenges for the consolidation of this activity in Brazil and that its success depends on a joint effort of health and educational institutions, health professionals, and patients.

Keywords: nonmedical prescription, nursing prescription, pharmaceutical prescription, prescription dependent

Introduction

The global prevalence of chronic noncommunicable diseases, population aging, and the need for medication to treat infectious and parasitic diseases in less developed countries¹ have called for a range of workforce strategies in an attempt to address these issues.² These conditions require health care that includes knowledge of the patient's conditions, financial conditions, family support, and the modality of treatment adopted for each case,³ among other aspects that aim at the integrality of care.

However, this care logic has been influenced by the pressure of the pharmaceutical market, the process of social medicalization,

and the irrationality of medication prescriptions. These influences are due to the cultural aspects of the "healing power" of medication, to the lack of strategies to regulate the relations of production, commercialization, and prescription, and especially to the negativity presented by the medical profession on the rational use of medication (RUM), sometimes justified as limiting the freedom of those who prescribe.^{4,5}

Prescription is embedded in the patient-centered care process, and it should occur at a time after careful clinical evaluation. On the contrary, it is considered the starting point of the medication use process and it is a multidisciplinary communication process, involving physicians, pharmacists, nutritionists, and nursing staff, requiring knowledge of adverse effects, doses, optimal routes, medication and food interactions, pharmacokinetics, pharmacodynamics, and effects monitoring.⁶ However, in many places it has been assumed only by the medical professional, whether for legal or cultural reasons, leading to an overload of work and consequently to the compromise of quality of care and patient safety.^{7,8}

Faced with this problem, several countries have adopted nonmedical prescription as a way to improve the integrality of care, providing a more holistic care to the patient. Studies demonstrate that this practice, by making better use of the knowledge and skills of other professionals, contributes to the expansion of access to health care, improves the patient's health conditions, as well as their level of satisfaction with the service, and generates savings in several health specialities.^{2,9,10}

Nonmedical prescription is a practice performed by professionals who are not doctors who, after obtaining specific

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qualifications and legal authorization, can prescribe medicines and curatives. The term “nonmedical prescription” appeared in the United Kingdom in 1992, and in 2015 it was estimated that there were 58,000 nonmedical prescribers such as nurses, pharmacists, physiotherapists, among others. The data from the health service show that it is a fast-growing activity, forming a large work force to improve the quality of health care.¹¹

Although nonmedical prescription activity is present in many countries, studies that report this practice, its benefits, and challenges in Brazil, are still scarce. Thus, this study aimed to describe the conceptual aspects and state of the art of this type of prescription in Brazil.

Methods

This is a study of a narrative review of the literature. This type of study, being broader, is appropriate to describe and discuss the development or “state of the art” of a given subject from a theoretical or contextual point of view. This basically constitutes a critical analysis of the author, from literature published in books, and articles of printed and electronic magazines.¹²

To guide the research, the following questions were defined: “What are the conceptual aspects related to nonmedical prescription?” and “What is the state of the art of non-medical prescription in Brazil?”

In order to compose the analysis material, national and international regulations related to the subject were considered as well as articles available, published in electronic journals in different databases. Key terms used were: non-medical prescription, nursing prescription, and pharmaceutical prescription. The coverage period was not restricted.

The publications were read in full and compiled according to the study objectives.

Results

The literature found in this review was quite diverse. As there was no restriction on publication time, guidelines and laws dated from the 1980s were found to articles in high impact magazines in 2019, from different countries, such as England, United States of America, Brazil, and Australia. Most publications were about the advantages and applications of nonmedical prescription for professionals and patients. Some have, however, clearly addressed the problems and challenges surrounding this practice.

Conceptual aspects

Independent prescription. This is a prescription model in which the prescribing professional is solely responsible for the evaluation, diagnosis, and clinical management of the patient. It requires legally defined levels of knowledge and skill that are generally monitored through a licensing process.⁸ In general, in Brazil, the physician is the only independent prescriber, whereas in the UK and other Western European countries such as Sweden and Ireland, professionals such as nurses, pharmacists, and podiatrists may become independent prescribers after taking preparatory courses, but with restrictions in relation to the therapeutic classes.^{13,14}

Dependent prescription. The dependent prescription is a voluntary partnership, or not, among health professionals, for clinical management of patients and for medication therapy. In this case, responsibility is shared for clinical decisions and patient

outcomes. Prescription activities by nonmedical professionals are restricted to protocols and agreements.⁸ This type of prescription is subdivided into the following categories:

Protocol prescription. This is the most common form of dependent prescription and is directed by an independent prescriber, usually a physician, through a formal agreement (protocol). The protocol is a written directive, an explicit and detailed document that describes the activities that professionals can perform in their prescriptive authority. The level of authority is determined by the assessments of the physician in relation to the professional, the professional in relation to themselves, and the conformity of their competencies. Both assume responsibility for results.⁸

In the United States, this model of prescription has been approved in 25 states. Health service pharmacists supporting indigenous populations may prescribe medications for diseases such as urinary tract infections, sexually transmitted diseases, systemic arterial hypertension, bacterial and fungal infections, and rheumatoid arthritis.⁸

Form prescription. The form is a predetermined list of medications, including treatable symptoms, treatment time, criteria for referrals, and limitations on prescription. Prescription medications are generally exempt from this type of medical prescription. Forms should be agreed based on the medical practices where they will be implemented. In the United Kingdom, more than 20,000 nurses are allowed to prescribe by forms. In Scotland, prescription by pharmacists from this model includes 11 therapeutic areas, such as diarrhea, constipation, colds, and lice infestation.⁸

Renewal prescription. This is aimed at patients who had their stock of medicines exhausted before the next medical appointment. The professional responsible for the renewal should evaluate the patient and the therapy, and then consult the physician if there are problems of effectiveness, safety, or adherence to the treatment. The prescription should be renewed with a sufficient amount until the next consultation with the doctor. This model, like the form, needs to be agreed upon based on the medical practices in which it will be implemented,⁸ since it is a complex activity that requires communication and collaboration among professionals. Otherwise prescription errors may occur, and also encourage unnecessary polypharmacy. While presenting these risks, this is a model that brings greater convenience to the patient and reduces the workload of the professional. In the United Kingdom it is estimated that in the last 20 years, the number of items that can be renewed by prescription increased from 5.8 to 13.3 items per patient per year.¹⁵ In the province of Alberta, Canada, all pharmacists are authorized to renew the prescription.¹⁶

Supplementary prescription. Established through protocols or agreements between a physician and an additional prescriber (nurse, pharmacist, or other professional) to implement a specific patient management plan directed to the patient, in accordance therewith. The doctor makes the initial diagnosis and then both prescribers prepare and implement the care plan. Nonmedical prescribers can prescribe within the parameters established in the plan, remaining responsible for their prescribing decisions.¹⁷ In the United Kingdom, pharmacists have used this model to solve problems of access of patients with mental illness to specific medication.¹⁸

Collaborative prescription. This is the collaborative practice agreement between one or more doctors and qualified clinical pharmacists working within the context of a defined protocol that allows the pharmacist to take responsibility for performing patient evaluations, requesting laboratory tests related to medication therapy, medication administration, and to select, initiate, monitor, continue, and adjust medication therapy regimens.¹⁹

In New Zealand, pharmacists have performed collaborative prescribing in several areas, with emphasis on mental health, where there is significant recognition by patients.²⁰

Successful nonmedical prescription experiences

In many countries the adoption of different models of nonmedical prescription is already a reality described in several studies.^{10,13,16,21,22} In Brazil, these models have been adopted independently and sporadically by some institutions and municipalities.^{23,24}

The United Kingdom is a pioneer in studies and encouragement of nonmedical prescription practices. Since the 1980s, government measures have been adopted to make greater use of the skills and experiences of nonmedical health professionals in relation to the prescription, supply, and administration of medication.²⁵ From 1992, nurses have been authorized to perform prescriptions, and gradually, through the improvement of legislation, in the early 2000s, pharmacists were also authorized, resulting over the years in a jump in the quality of health care and the introduction of new professional categories in the scope of prescribers, such as physiotherapists, dentists, and nutritionists.^{22,26,27}

In the United States since the 1990s, the independent prescription model is authorized for nurses and pharmacists in 21 states, whereas the remaining states²⁸ still adopt dependent prescription. Despite the differences in regulation, nonmedical prescription is an upward trend due to advances in science and social needs, especially in relation to patient safety, which has provided better quality of care.²⁵

Countries such as Canada, Sweden, Finland, Ireland, The Netherlands, Spain, New Zealand, and Australia already have legislation for prescription by pharmacists and nurses. In general, there are some restrictions on certain practices and medications, and most of these countries adopt the independent prescription model and require advanced qualification of the professional who

wishes to be a prescriber.²⁵ France approved in July 2019 a bill for health system organization and transformation. Among these modifications are the prescription pharmaceutical protocol and the renewal of prescription.²⁸

In general, the impact of nonmedical prescription has been evaluated positively, having seen the existing evidence and the reports of professionals and patients. Nonmedical prescribers have highlighted as results of this practice job satisfaction and self-confidence, making them more independent and allowing better use of their skills.²⁵ The improvement in teamwork was also highlighted, especially by physicians, as the reduction in workload gave more time to dedicate to more complex patient cases. The latter reported greater access and flexibility to the consultations, more careful style of care, and principally, improvements in their health conditions.^{27,29}

Nonmedical prescription in Brazil

In Brazil, nonmedical professionals, through legislation that regulates the practice of professions, are authorized to prescribe over-the-counter medication and prescription medication through protocols. Nurses have been allowed to prescribe since 1986³⁰ and this practice was outlined by the National Policy of Basic Care (*Política Nacional de Atenção Básica*)³¹ and by public and private institutions. Since 2013 through resolution 586 of the Federal Council of Pharmacy,³² pharmacists have been allowed to prescribe. Dental surgeons have been able to prescribe independently for dental purposes since 1966,³³ whereas nutritionists have been allowed to prescribe nutritional supplements since 2017.³⁴

The Brazilian initiatives that made the practice by nonmedical prescribers possible started mainly from municipalities, through ordinances and protocols with the intention of optimizing care, and assisting medical professionals in the health care of the population. Table 1 describes some of these initiatives.

International evidence shows that despite the benefits, there are innumerable challenges to the consolidation of this activity.¹⁴ In this context it is important to emphasize that performing a medication prescription requires, in addition to theoretical knowledge, training and clinical practice. The lack of these skills, besides jeopardizing the care process, can arouse distrust of other professionals and also of users receiving a prescription from a professional other than the physician.^{35,36}

Table 1
Description of nonmedical prescription types authorized by Brazilian institutions according to year of creation

Institution	Document	Professional	Prescription type
Municipal government of Salto Grande-SP	Ordinance 318/2017	Nurse	Prescription renewal
City Office of Salto Grande-SP	Ordinance 205/2017	Pharmacist	Form prescription Supplementary prescription
Municipal government of Florianópolis-SC	Nursing protocol V1/2017	Nurse	Prescription renewal
Municipal government of Divinópolis-MG	Ordinance 72/2017	Nurse Pharmacist Dentist Nutritionist	Protocol prescription Form prescription Independent OTC prescription
Municipal government of São José dos Pinhais-PR	Guidelines for prescription and dispensing of medication 02/2016	Nurse Dentist	Protocol prescription Independent prescription
Municipal government of Alfenas-MG	Decree n. 2373, of August 1, 2019	Pharmacist	Independent OTC prescription
Municipal government of Ponta Grossa - PR		Pharmacist	Protocol prescription
Municipal government of Aracoiaba - CE	Law 1230/2017	Pharmacist	Protocol prescription

OTC = over-the-counter.

Another issue that has caused a growing and continuing concern is that having more prescribers may result in unnecessary polypharmacy and duplicative therapy. Therefore, the RUM is an important initiative aimed towards reducing the problem of polypharmacy; RUM also encourages improvements in medication regulation and commercialization as well as reducing unnecessary prescribing habits.^{5,37}

The requirement of specific courses for professionals wishing to become prescribers is already a reality in some countries and may be an alternative³⁸ to solve some of these problems, as well as the inclusion of this theme in graduate programs. The Ministry of Education has defined new national curricular guidelines for graduate courses in health and postgraduate courses, seeking among others, to train and qualify professionals with the competencies to assume demands such as dependent prescription.^{39,40,41} Preparing academics to perform this role can fill knowledge gaps and give them the skills they need for the exercise of the profession.²⁵

In addition, promoting changes in the work process of nonmedical health professionals is necessary so that they can more actively exercise their clinical duties and can effectively insert themselves into the multiprofessional team of patient care. Pharmacists and nurses, for example, spend a significant portion of their work hours on managerial activities, which makes it impossible to dedicate themselves to activities and services to promote RUM, including patient care and the prescription as a strategy in the care plan.⁴²⁻⁴⁶

The articles found in this review clearly demonstrate the benefits generated by nonmedical prescription, when adopted responsibly. The consolidation of this activity requires investment by health institutions with regard to its implementation and acceptance by other professionals and patients.

Educational institutions can promote changes in professional training from undergraduate courses, preparing future professionals to fill the knowledge and skills gaps currently needed to become qualified prescribers.

Likewise, it must be considered that prescriptions need registration and formalization and nonmedical prescribers need to be better valued and remunerated, due to the responsibilities and the increased workload that the prescription brings.

Conclusions

The realization of this study made it possible to perceive that the activities of nonmedical professionals are expanding around the world. Despite the difficulties and barriers, it is noted that this practice has ample potential for improving the quality of care and the health conditions of patients.

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Conflicts of interest

Declarations of interest: none.

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