

## Prescription medication by physiotherapists: a Brazilian view of the United Kingdom, Canada, Australia and New Zealand

Prescrição de medicamentos por fisioterapeutas: um olhar brasileiro sobre o Reino Unido, Canadá, Austrália e Nova Zelândia

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**Abstract** Many health systems (HS) have adopted novel models of care which have included non-medical prescription (NMP) by physiotherapists. The aim of this study was to verify in the literature the existence of this practice and its possible benefits. A literature review was carried out through search on Science Direct, PubMed, SciELO, Lilacs and Google Scholar, and in the World Confederation for Physical Therapy and Chartered Society of Physiotherapy websites. In recent decades the United Kingdom adopted the NMP for health professionals, followed by Canada. In Australia and New Zealand physiotherapists have acted in the prescription and administration of medications under medical orders, which is the first step into independent prescription. Brazilian physiotherapists cannot prescribe any medication, despite of high demands from patients in the Brazilian HS, shortage of physicians in many regions and bureaucracy in accessing health services. The adoption of NMP by physiotherapists may play an important role in the HS, and it seems to be an inevitable achievement in the next years in Australia and New Zealand. The main benefits include decreasing bureaucracy for assistance, population demands for medication as well as major professional refinement.

**Key words** Health systems, Physical therapists, Professional practice, Drug prescriptions

**Resumo** Alguns sistemas de saúde (SS) têm adotado modelos inovadores de assistência que incluem a prescrição não médica (PNM) por fisioterapeutas. Este estudo objetivou verificar na literatura a existência dessa prática e seus possíveis benefícios. Foi realizada revisão da literatura, com buscas na Science Direct, PubMed, SciELO, Lilacs e Google Scholar, e nos sites da World Confederation for Physical Therapy e da Chartered Society of Physiotherapy, entre 2014 e 2015. O Reino Unido adotou a PNM por fisioterapeutas em décadas recentes, exemplo seguido pelo Canadá. Na Austrália e Nova Zelândia, fisioterapeutas têm atuado na prescrição e administração de medicamentos, sob ordens médicas, sendo este o primeiro passo para a prescrição independente. Fisioterapeutas brasileiros não podem prescrever medicamentos, apesar das altas demandas de pacientes, carência de médicos em muitas regiões e burocracia no acesso aos serviços de saúde. A prática da PNM por fisioterapeutas pode preencher um importante papel nos SS, e parece ser uma inevitável realização na Austrália e Nova Zelândia nos próximos anos. Os principais benefícios são a diminuição da burocracia no acesso a medicamentos e demandas populacionais, bem como maior refinamento profissional.

**Palavras-chave** Sistemas de saúde, Fisioterapeutas, Prática profissional, Prescrições de medicamentos

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## Introduction

In most part of the contemporary world physiotherapy plays a paramount role in the health systems of both developed and developing countries. In those countries physiotherapists are able to autonomously assess, diagnose, treat and discharge their own patients as part of their professional practice<sup>1</sup>. In that context, a variety of therapeutic approaches have been utilized to address a number of problems of functioning and movement. Indeed, in its historic context physiotherapy usually has used drug-free physical therapeutic agents such as photoelectric, thermal and mechanic energies, water, manipulation, physical exercises, and so on. However, health systems have required supplementaries competencies from different healthcare professionals as the incidence of chronic-degenerative diseases and population demands for additional care increase<sup>2,3</sup>. Thus health systems around the world have adopted novel models of care and required professional competencies which are centred on consume needs<sup>4,5</sup>.

One of these models has drawn attention on prescription medication by non-medical professionals including physiotherapists. For the purposes of this paper prescription medication is defined as the act of indicating, recommending or advising on the initiation, continuation or cessation of a medication or remedy for therapeutic objectives. In this context, concerns respect to pharmacological education and legal status of practice have been taken into consideration by healthcare managers, consumers and the health professionals themselves<sup>4</sup>. Nevertheless, increasing evidence has indicated that physiotherapists may play an important role on prescription and administration of some types of drugs<sup>2,5</sup>.

Therefore, the aim of this paper was to verify on the literature the existence of prescription medication by physiotherapists and the likely benefits of this practice for the health systems, consumers, and the professionals themselves, and to additionally check out possible solutions for the concerns related to this extension of scope of practice in those countries where it already exists or probably will be adopted.

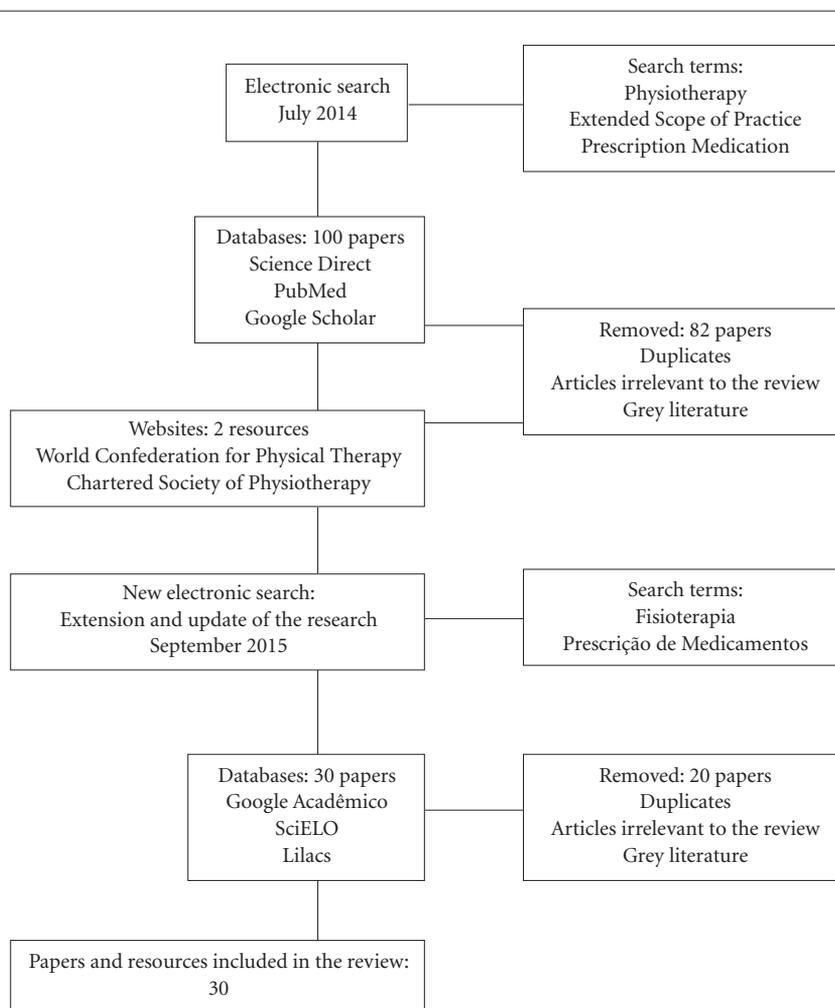
## Methods

This study is a literature review with descriptive analysis of the collected data. An electronic search was performed in July 2014, in the following databases: ScienceDirect, PubMed, Google Scholar and the websites of organizations related to the topic of this research, namely, the World Confederation for Physical Therapy and the Chartered Society of Physiotherapy. The following English search-terms were used: Physiotherapy, Extended Scope of Practice and Prescription Medication. The resulting data were assembled and analysed so that relevant information could be identified; those data which duplicated, did not meet the topic of the research or represented grey literature (non-academic or non-official sources) were excluded. The results were first presented in a simple brief review in English language as an academic requirement for completion of the preparatory English course for master's degree of La Trobe University, Australia. In September 2015, the research was updated and amplified in order to include wider information from the Brazilian context. The same search procedures and inclusion and exclusion criteria were applied, extending it to Portuguese language and data from the Brazilian version of Google Scholar and the databases Scielo (Scientific Electronic Library Online) and Lilacs (Literatura Latino-Americana e do Caribe em Ciências da Saúde). A general view of the procedures of the electronic search can be seen in Figure 1. The results were then assembled in one up-to-date literature review and presented in the form of subtopics.

## Results and Discussion

### Health systems, legal status of prescription and availability of medications

Health systems can benefit from adopting models of care that allow physiotherapists and other professionals to prescribe and administrate some types of drugs, hence fulfilling a gap in the increasing demand for assistance and delivery of medication<sup>5</sup>. In Australia, New Zealand and Brazil, only physicians, dentists and pharmacists are expected to legally prescribe and delivery drugs. That legal status is regulated by state-by-state or even by unified federal laws and acts<sup>6,7</sup>. However, changes in availability and sale of medication have been in recent years a tendency



**Figure 1.** Flow chart of the procedures of the electronic search.

in countries such as Australia and New Zealand, where other health professionals are now able to prescribe under different circumstances, e.g. nurse practitioners, midwives, podiatrists and optometrists<sup>4</sup>. In these countries many medications are over-the-counter drugs sold freely in pharmacies and markets. As a result, some oral and topical anti-inflammatory and analgesic drugs are sold without needing medical prescription or recommendation from a health professional<sup>1</sup>. This phenomenon has also been happening in Brazil in recent years, even in a small scale<sup>8,9</sup>.

#### **Patient demands for responsiveness and advice on medication usage**

Physiotherapists are often asked by clients about the use of certain medications. It seems as they seek advice and recommendation because they see the physiotherapy setting as a relaxing space for expressing their concerns on health<sup>6</sup>. Hence even with no legal allowance many professionals end up advising on or recommending anti-inflammatory, muscle-relaxing and analgesic drugs in response to those demands. Thus, the advices are mainly

related to drugs which are already in use by the patient, are being used inadequately, needless or even are potential complements to physiotherapy management<sup>10</sup>. This situation does seem to indicate there is some shortage in the assistance of patient needs for medications that are of widespread use in some health systems. Therefore, it can be argued that such demand could be suitably met by the adoption of innovative models of care and more advanced practice of multidisciplinary teams as well as by augmenting the number of professionals enabled to prescribe medications<sup>4,11,12</sup>.

#### **Adoption of novel models of care: the example of the United Kingdom and Canada**

The benefits of adopting novel models of non-medical prescription can be observed from the legal changes adopted by the National Health Service, the United Kingdom healthcare system, in recent decades. In the United Kingdom, physiotherapists have been acting in prescription medication under medical approval since 1990 (medications) and 1995 (injections), and increased their scope of practice to supplementary prescribing in 2005<sup>4,13</sup>. As a result, consumers and the health system itself experienced significant improvements in terms of availability and delivery of medications without compromising patient safety as well as introducing a more flexible design of professional team and other professional achievements that came from changes in more extended professional practice<sup>4,14</sup>. In 20 August 2013, the United Kingdom physiotherapists who worked as advanced extended-scope professionals were first recognized as independent prescribers, decreasing the health system's bureaucracy and alleviating extra burden on doctors<sup>13,15</sup>. Thus, the list of medicines that can be prescribed has been expanded to any licensed medicine from the British National Formulary, for any condition within the practitioner's area of expertise and competence. Under that new legal status they may prescribe even from a restricted list of controlled drugs according to regional regulations, benefiting different groups of patients<sup>16</sup>.

These positive effects were also seen in some Canadian states where the scope of physiotherapy practice were extended, especially in Quebec, where these professionals have demonstrated good practice on safe prescription of anti-inflammatory and analgesic drugs with high degree of popular acceptance from patients

and also medical professionals<sup>5</sup>. This acceptance and engagement of medical professionals and other prescribers is an important framework to underpin the adoption of that practice. Furthermore, it seems to be a trend in countries where more advanced practice in physiotherapy is being implemented<sup>17,18</sup>.

#### **Australia and New Zealand: a trend into adoption of non-medical prescription by physiotherapists**

In Australia, a number of physiotherapists work in the treatment of neuromusculoskeletal dysfunctions whose management is generally a combination of physical and pharmacological therapy such as steroid and non-steroid anti-inflammatory drugs, muscle-relaxing and similar medications<sup>19,20</sup>. Furthermore, some drugs have been used as adjuncts in more complex physiotherapeutic procedures, such as iontophoresis and phonophoresis (which maximize the power of absorption of some topic drugs), or as massage creams, manipulations and nebulisations, hence enhancing the physical management of a variety of musculoskeletal and rheumatologic conditions<sup>20,21</sup>. Additionally, pain and inflammation are very common symptoms of chronic and degenerative diseases. Thus, the drugs which are in the centre of discussion are those used as adjunct to physiotherapy practice and that are related to musculoskeletal or respiratory symptoms, such as oral, topic, nebulising or injective drugs<sup>6,22</sup>. Therefore, prescribing drugs that are aimed to alleviating symptoms relevant to the physiotherapy management could result in a faster and more efficient treatment, with larger gains in mobility and functional recovery, within a suitable time for resolution of the condition, with no need for waiting a medical prescription<sup>14,15,23</sup>.

#### **Benefits of adopting non-medical prescription for physiotherapists**

Extending the physiotherapy scope of practice may lead to a major professional refinement, responsibility and recognition. In Australia, New Zealand, Canada, as well as in Brazil, physiotherapists are first-contact professionals<sup>5,6,24</sup>, what means that individuals may seek directly a physiotherapist without needing a referral from a doctor. However, if patients need medication – as simple as anti-inflammatory drugs or painkillers, and though

some are widely available in pharmacies and markets – physiotherapists cannot recommend them but just refer those patients to a physician or pharmacist in order to provide the medication<sup>1</sup>. Medications can have a deleterious or a positive impact on physiotherapeutic interventions<sup>22</sup>. From this point of view, prescribing medication relevant to physiotherapist practice could meet an important gap in the professional autonomy. Indeed, as stressed by the study of Anderson<sup>25</sup>, Australian physiotherapists can administer some drugs under “permanent orders”, where a physician may approve the administration of certain drugs, especially in the absence of doctors. In Brazil, despite the autonomy and advanced practice of the profession in the subareas of specialization and in different levels of assistance (including the request of complementary exams), the discussion about non-medical prescription has not received enough attention<sup>24</sup>. Consequently, the benefits of that practice to the Brazilian health system, which is widely known to suffer huge demands of patients, shortage of health professionals in many geographic areas, bureaucracy in assistance and burden of referral and unnecessary work from some professionals, still are to be discussed<sup>26-28</sup>. Therefore, this paper has the potential to initiate an important discussion about non-medical prescription medication in the Brazilian physiotherapy scenario and also stimulate thinking of alternatives to meet some of the problems the Brazilian health system has faced.

In Australia and New Zealand, permanent orders of drug prescription are common in some areas of specialization, especially in sports medicine, where many sport teams prefer hiring a physiotherapist as their only healthcare provider<sup>25</sup>, or in regions where there is not enough doctors<sup>19</sup>. In these circumstances physiotherapists generally carry and administer anti-inflammatory and similar drugs. It is noteworthy that these situations seem to happen, yet to a lesser extent, to Brazilian physiotherapists working in sports medicine<sup>29</sup>. Additionally to the legal autonomy and first-contact professional status of Australian and New Zealand physiotherapists, relevant prescription medication as an extended scope is likely to result in greater professional development and responsibility, similar to those of the United Kingdom extended-scope physiotherapists.

### **Concerns and solutions relative to the adoption of non-medical prescription medication by physiotherapists**

The main concern of extending the physiotherapy scope of practice to include Supplementary or independent prescription is related to insufficient pharmacological education of these professionals<sup>4</sup>. Indeed, undergraduate and postgraduate curricula have drawn little attention on pharmacological education<sup>6,22</sup>. However, it probably happens because of the legal status of these professionals in the majority of countries, where by law they are not allowed to prescribe any type of medication<sup>24</sup>.

Insufficient knowledge on the effects, indications and contraindication of relevant drugs for physiotherapy could be met through advanced training programs and closer attention on pharmacology in the undergraduate and postgraduate physiotherapy course programs<sup>30</sup>. This could only occur through legislative changes on country's law and the professional organizations which could coordinate the implementation of the practice for some professionals and the necessary training, evaluation and fiscalization<sup>4,14</sup>. Furthermore, there are possible problems that maybe arise from different health professionals prescribing such as disconnected care, drug interactions, drug duplication, and even issues related to financial interests, pharmaceutical promotion and marketing which may introduce a negative perspective to prescribing rather than patient needs. Yet, strangely, these questions do not appear in the available literature. Moreover, any issue related to these questions could be at least partially met by building sound and efficient communication between the healthcare providers and surveillance from the organizations responsible for the profession.

Following the changes in the United Kingdom health system, it could be noticed that any deficiency in pharmacological knowledge could be met by means of educational programs thought to enable some professionals to prescribe certain types of drugs, first as supplementary and later as independent prescribers<sup>4,13,20</sup>. A research carried out in New Zealand showed that physiotherapists who recommended non-steroid anti-inflammatory drugs were also more likely to know a major number of risks and side effects of recommended drugs than those who did not<sup>31</sup>. Similar results were found by Coelho and co-workers<sup>10</sup>. Thus, advanced education

programs on prescription medication seem to minimize possible risks to patient safety. In fact, of 60.000 drugs accidents between 2005 and 2006 in the United Kingdom no one was related to physiotherapists<sup>4</sup>. In the United Kingdom, physiotherapists willing to extend their professional practice to independent prescription should undergo a six-month training program and demonstrate a high-level of professional competency<sup>15</sup>. Brazilian physiotherapists, other healthcare professionals and managers should

consider the possibility of adopting novel models of prescription medication, which might result in benefits for the health system and better patient-centered care. However, deep and long transcultural adaptations, besides advanced education programs and legislative changes, would probably be necessary should that model be implemented toward successful non-medical prescription by Brazilian physiotherapists and other professionals, following the United Kingdom pathway.

## Conclusion

Non-medical prescription medication represents a dilemma for physiotherapists and health managers in terms of legal status, patient safety and pharmacological education. Despite that, non-medical prescription seems to be an inevitable achievement in Australia and New Zealand in the next decades, following the successful examples of the United Kingdom and some Canadian states, in response to the increasing demand for resolution from patients what can be partially met by this measure.

Therefore, adopting a new model of care which allows physiotherapists suitably trained to prescribe relevant medications for their practice may result in important benefits. It may diminish the bureaucracy of drugs delivery and the demands of the health system, fulfill safely patient therapeutic needs without any loss of time, and may result in major professional refinement. Implementation of non-medical prescription by physiotherapists in Brazil should follow the steps led by the United Kingdom, from supplementary to independent prescribing, and similarly it could base on advanced educational programmes for safe practice.

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