

# Pharmacist's recommendation and dispense of medication for gastrointestinal pathology according to national legislation

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## ABSTRACT

Pharmacist's role in community pharmacy is to provide counselling for patients with disorders accompanied by mild symptoms that do not require medical consultation, but also is to recommend a referral to a physician when the severity of the situation requires it. The pharmacist also performs counselling regarding posology of the prescribed medicines, and informs patients about potential side effects that may occur. Gastrointestinal disorders are widespread among the population and pharmacists have the role and the responsibility to use their knowledge to dispense appropriate medicines according to every patient's needs, in compliance with the legislation and recommendations of ANMDM.

**Keywords:** pharmacist, medication, gastrointestinal pathology, legislation, ANMDM

## INTRODUCTION

In Romania, pharmacists working in community pharmacies offer pharmaceutical advice on prescription medication and self-medication advise with OTC (over the counter) drugs. The danger of abuse increases considerably in relation to two phenomena currently manifested by: continuous increase of OTC drugs consumption (including OTC for young children and infants), reimbursed drugs, and the sale of OTC drugs outside pharmacies (as in US) [1]. OTC drugs, although helpful for treating minor health issues, aren't without toxicity if they are not used properly [1]. Therefore, when pharmacists are dispensing medicines, they should follow ANMDM's (Agenția Națională a Medicamentului și a Dispozitivelor Medicale, ANMDM) guidelines along with the existent legislation in the pharmaceutical sector. The aim of this article is to underline the legislative aspects of pharmaceutical care in Romania, as well as to indicate the main categories of drugs prescribed and dispensed in gastrointestinal pathologies.

## LAWS AND GUIDELINES

When pharmacists dispense medicinal products subject to medical prescription, they must follow Good Pharmacy Practice (GPP) guidelines and the Romanian Code of Phar-

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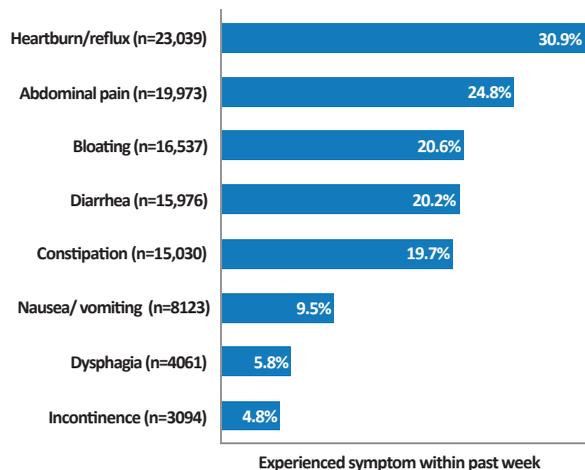
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**Figure 1. Prevalence of individual GI symptoms reported within the past week**

maceutical Deontology, which states that pharmacists' activity must be patient-oriented, providing pharmaceutical services (counselling, advice, recommendations) of the highest quality, as medical prescriptions must be accompanied by appropriate health-, lifestyle- or prescription-related advice and information, each information and advice being suited for every patient's needs, as well as monitoring them during their treatment [6,7,8].

Pharmacists must encourage rational prescribing, dispensing and proper use of medicines, according to ANMDM's Nomenclature of Medicinal Products for Human Use [6,9]. ANMDM elaborates and updates the Nomenclature of Medicinal Products for Human Use, which specifies for each medicine the commercial name, INN (International Non-Proprietary Name), pharmaceutical form, medicine identification number in ANMDM's database and the company which manufactures the product. It also includes the therapeutic category to which the medicine belongs, depending on the type of dispensing, with or without a prescription [5].

In a study led by Faranak et al. (2015), the most used medicines for self-medication where drugs that ameliorate gastrointestinal issues, with a percentage of 54% [4].

Almario et al. (2018) performed a population-based survey in the United States of America that aimed to determine the prevalence and distribution of GI symptoms in community-dwelling Americans [3]. The surveyed 71.812 responders (n=71.812) and discovered that the most common symptom was heartburn/

acid reflux, with nearly one-third (n=23.039) of participants having experienced it in the past seven days. They found that nearly a quarter (n=19.973) of Americans had recent abdominal pain. Bloating, diarrhea, and constipation were also common, as one-fifth of survey respondents experienced these symptoms within the past week. Conversely, nausea/vomiting, dysphagia, and bowel incontinence were less common. Figure 1 depicts the prevalence of the individual symptoms found by Almario et al. [3].

## COMMON MEDICINES AND RECOMMENDATIONS IN GI ISSUES

*Pyrosis* (colloquially known as heartburn) is characterized as a burning sensation that usually moves upward towards the neck and throat. Most patients presenting with pyrosis usually have gastro-esophageal reflux disease (GERD), according to Rome III consensus [11]. The main therapeutic solutions for GERD treatment are proton pump inhibitors (PPIs) and histamine type 2 receptor antagonists (H2RAs). The effect of both classes of drugs is mediated through gastric acid suppression, albeit with different potency. However, as is the case of heartburn, pharmacists should check for any contributing medications such as NSAIDs, iron, potassium, quinidine, biphosphonates, benzodiazepines, calcium channel blockers, tricyclic antidepressants (TCAs), chemotherapy, among others and include in their recommendations antacids agents for neutralizing gastric acidity, that create a foamy raft in the stomach that prevents gastric acid reflux, such as alginate-based formulations, and improving esophageal clearance and gastric emptying (pro-kinetics) [2].

Legally, there are a number of criteria for including drugs on the OTC list, such as certain efficacy, low toxicity, minor side effects, etc. Lately, however, there is a tendency to introduce in the OTC category some drugs that do not meet these criteria in the interest of drug companies such as: omeprazole (Sweden), simvastatin (UK). Some of the drugs used in gastric hyperacidity are excluded from the OTC list: receptor blockers (antagonists) that lead to up-regulation of physiological receptors, leading to a rebound effect, with a significant increase of acid production which could lead to ulcerations in gastric mucosa or, in a worst-case scenario, leads to perforations. This category of drug includes H2RA (cimetidine, ranitidine, famotidine) and PPIs (esomeprazole, rabeprazole, lansoprazole, pantoprazole). PPIs are also incrimina-

ted in the development of gastric hyperplasia and tumours [1, 10].

The second most common gastrointestinal symptom is abdominal pain. In this case, the pharmacist may recommend and dispense personalized OTC products with antispasmodic activity containing drotaverine or papaverine (although less recommended due to its unwanted cardiovascular effects) in a reduced dose of 50 mg, and spasmolytic analgesics such as metamizole or in combination (metamizole, drotaverine, caffeine). Antispasmodics with a parasympatholytic mechanism are not recommended as they are not categorized as OTC [1].

Pharmacist should advise patients suffering from constipation to include different lifestyle and diet changes, such as additional fiber intake or probiotics in the long run to alleviate symptoms, shifting towards an active lifestyle rather than a sedentary one, quitting smoke and alcohol consumption. He may also recommend short-term therapies with laxatives or purgatives, OTC products for oral or intrarectal administration, such as glycerine suppositories [1].

In mild clinical forms of diarrhea, the pharmacist should advise towards increasing fluid intake (e.g. water), electrolyte consumption (e.g. salt), eating tannin-rich foods which act as a mild astringent (e.g. blueberries, mint tea) and may additionally recommend: oral formulations that contain electrolytes for rehydration, antidiarrheals (loperamide), as well as medication for associated symptoms, such as antiemetics, spasmolytic, antipyretic OTC products for oral or intrarectal administration. In case of an infectious form of diarrhea, the pharmacist may recommend an

OTC medicine with an intestinal antibiotic-like activity such as: furazolidone (100 mg, four times a day for adults and 50 mg, four times a day, for children over 5 years). In emergency cases, vomiting that accompanies diarrhea, is treated with antiemetics that do not have a gastrointestinal propulsive effect: prochlorperazine, prometazine. It should be noted that the mentioned phenothiazines are not categorized as OTCs and they require a prescription [1].

## CONCLUSIONS

Currently, self-medication is a rising global issue and is a cause of drug abuse. Providing adequate pharmaceutical counselling, the pharmacist plays a pivotal role in educating the population towards responsible medicine consumption, thus reducing the occurrence of unwanted side effects and over-consumption. As stated, patients tend to self-medicate frequently when encountering digestive issues, making digestive medicines one of the most used category of drugs. For the most common gastrointestinal symptoms, pharmacists can recommend and dispense personalized OTC products such as antacids, antispasmodic, laxatives etc. and, in emergency, are allowed to dispense several doses of non-OTC products.

The pharmacist being the last link in the doctor-patient-pharmacist chain, he/she plays a critical role in optimizing pharmacotherapy especially by improving compliance and adherence. Gastro-intestinal disorders are common among the population and pharmacists have the role to use their knowledge and dispense appropriate medication according to every patient's needs, respecting the legislation and recommendations of ANMDM.

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