

Polypharmacy is a challenge for our generation, and the knowledge of deprescribing is a needed skill of our health care professionals

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Received: 17 March 2022; Revised: 13 April 2022; Accepted: 22 April 2022

Abstract

Life expectancy has risen dramatically in accordance with human society's progress and our access to new treatments and therapies. As a result, the old population has grown significantly. "Polypharmacy" is defined as taking five or more medications regularly, and "Hyper-polypharmacy" is defined as using more than ten medications on a regular basis. Elderly persons and others with chronic illnesses need to see multiple doctors and take various medications. As a result, polypharmacy in this society is a severe concern, ranging from 10% to 90% in various populations and, unfortunately, on the rise. Polypharmacy is frequently linked to adverse drug reactions (ADR), drug interactions, falls, prescribing cascades, patient non-adherence to medications, and even more severe outcomes such as hospitalisation and death. To deal with polypharmacy, we must analyse our patients and their medications to develop and implement a strategy for discontinuing or lowering medications that are no longer helpful or may be harmful. This procedure is known as "Deprescribing". Our health care professionals, particularly physicians and pharmacists, must become familiar with it and have sufficient knowledge of its set protocols to participate in it and reduce patient damage. The issue of polypharmacy and its numerous consequences for society (especially elderly patients) and the deprescribing process are covered in this article.

Keywords: polypharmacy, deprescribing, health care professionals, pharmacist, physician

Introduction

The discovery of antibiotics was a breakthrough moment in human history. After the widespread discovery of antibiotics, life expectancy and quality of life grew dramatically. The elderly population grew markedly as life expectancy increased, increasing the number and variety of chronic ailments such as hypertension, diabetes, osteoarthritis, etc. Patients with chronic diseases are frequently affected for the rest of their lives. Patients with chronic conditions should see several doctors (mainly specialists) and take many prescription and over-the-counter medications [1]. Due to a large number of physicians and medications available, as well as a lack of communication between physicians and pharmacists, doctors may engage in potentially inappropriate prescribing (PIP), which can result in increased side effects, serious drug-drug interactions, a prescribing cascade, and more, potentially leading to hospitalization and death [2].

Experts classified consuming more than five medications per day as "Polypharmacy," and taking more than ten medications per day as "Hyper-polypharmacy" [3]. Additionally, taking herbals or complementary medicines is categorized as either polypharmacy or hyper-polypharmacy, and it is common among the elderly population [4]. Polypharmacy prevalence varies between 10% and 90% in different communities and age groups [5]. However, this issue is more widespread among the elderly and chronically ill [6], and it is rapidly spreading [7].

If we delve deeper into the causes of polypharmacy in our patients, we'll uncover traces of multiple factors, most of which are cultural and social factors in nature. As a result, while this problem exists in all global societies, regional statistics should be determined locally to build a better approach to address this issue.

Factors affecting polypharmacy

- Polypharmacy is more common among the elderly population, and it varies between 10% to 96% [8].
- Chronic diseases require medication to control for the rest of a patient's life [9].
- The majority of our guidelines are disease-specific, and while they all provide the appropriate time and condition for starting a medicine, many do not specify when it should be stopped [10,11].
- The cascade of prescriptions.
- There is a lack of good communication and interaction between physicians and pharmacists [13,14].
- Patients' inappropriate expectations from medication are frequently due to a lack of or inadequate communication between the physician and the patient [15].
- A physician's disease-oriented perspective and prescribing are based on signs and symptoms rather than an exact final diagnosis [16].
- Advertising in the Pharmaceutical Industry [17].
- Not informing the patient about drug replacement; thus the patient is unaware of the change and treats the new medication as an add-on therapy rather than a replacement therapy [18].

Polypharmacy's Risks and Challenges

Although polypharmacy and even hyper-polypharmacy may be appropriate and even necessary in some people, particularly the elderly, it is harmful in most cases and can cause injury and difficulties to the patient.

The risks of polypharmacy include

- There has been a significant increase in drug-drug and food-drug interactions [19].
- Improve the probability and severity of side effects and, as a result, the prescription cascade for side effect control [20].
- The patient's chance of discontinuing treatment or misusing medicine increases [21].
- There is an increased risk of cognitive impairment, falls, and pelvic bone fractures [22].
- Increasing treatment costs and the usage of over-the-counter (OTC) medications [23].

The concerns mentioned above and changes in pharmacokinetics (absorption, metabolism, and excretion disorders) in elderly patients increase the risk of polypharmacy and, as a result, the risk of adverse drug reactions in this population, highlighting the importance of managing polypharmacy in our patients.

Deprescribing

To control and modify polypharmacy, a review of the patient's diseases, as well as prescribed and over-the-counter medications, is required to develop a strategy for stopping or reducing one or more medications [24] to reduce the risk of adverse drug reactions, drug interactions, and other polypharmacy-related consequences are known as deprescribing. It will help patients lower their pill burden to some extent.

One of the following purposes, which are of higher relevance, is frequently considered while deprescribing.

- Discontinuing the patient's medication
- Reducing the dose of the medication
- Changing the medication to a safer alternative
- Not increasing medication dose in the treatment process

The following are some reasonable and helpful steps in the Deprescribing process

- Make a list of the patient's medications and diseases and keep it updated. During this time, the patient should be educated on the significance of drug monitoring and the advantages of deprescribing. In addition, the patient must bring all of their current prescription and over-the-counter medications [25].
- Using a team approach with a doctor, pharmacist, and nurse, and assessing medications of patients with chronic diseases such as diabetes, hypertension, and others regularly.
- Review and record all of the patient's medicine doses and administration methods.

Conclusion

As previously stated, polypharmacy and hyper-polypharmacy can cause or aggravate a variety of adverse medication reactions, as well as drug interactions and a variety of other dangers for the patient. As a result, the patient's treatment regimen should be assessed regularly using recognized procedures such as Beers and STOPP criteria, and if possible, unneeded medications should be withdrawn, or medication doses should be adjusted.

Funding

This work has not received any funds from national and international agencies.

Conflict of interest

The author declare no conflict of interest.

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How to cite this article:

Sarahroodi S. Polypharmacy is a challenge for our generation, and the knowledge of deprescribing is a needed skill of our health care professionals. *German J Pharm Biomaterials.* 2022;1(1):2-5.