

## LETTER TO EDITOR

**Deprescribing: The Prescription for Polypharmacy***Geetha Mani*

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Dear Editor,

Advances in medical care, and resultant increase in life expectancy, has reshaped the global disease burden profile, with surge in chronic diseases such as diabetes mellitus, cardiovascular diseases, osteoarthritis and psychiatric issues, in addition to communicable diseases as prime causes of morbidity. With longer lifespan, elderly experience physical, mental and cognitive impairments along with complex health issues such as frailty, falls and urinary incontinence. The co-existence of multiple health conditions gives rise to the challenge of polypharmacy. It is reported that at least one-third of people above 75 years of age consume a minimum of 6 medications daily and more than a million people consume eight or more medications per day [1]. Considering the immense danger it poses to healthcare, #MedSafety week (25<sup>th</sup> to 29<sup>th</sup> November) 2019, the international social media campaign focused on the theme, Polypharmacy [1].

**The Problem of Polypharmacy:**

Polypharmacy contributes to poor medication adherence owing to factors such as financial constraints, difficulty in keeping track of prescription instructions and psychological detachment associated with the load of medicines [1-2]. The end result may be persistence or deterioration of disease. Furthermore, drug-drug interactions, drug-disease interactions and adverse effects

aggravate the problem [1-2]. Together it places an undue financial burden on health care system.

There is enough evidence that the problem of polypharmacy is pronounced among elderly, patients with chronic diseases who experience acute illnesses, those with co-existing psychiatric conditions and those under the care of multiple healthcare providers [1]. In recent times, the practice of polypharmacy has also permeated into paediatric prescriptions. Although the medication patterns among in-patients are largely influenced by nature of illness and associated procedures, polypharmacy is increasing among outpatients due to overzealous prescription of antibiotics, drugs for symptomatic relief and micronutrient supplements.

Rashed *et al.* in their study from selected paediatric general wards across five countries, found that a median of 3 drugs were prescribed per patient, with systemic antibacterials being the commonest, followed by analgesics; 25.2% of patients received 5 to 10 drugs and 7.6% received more than 10 drugs [3]. In India, Pradeepkumar *et al.* reported an average of 3.53 drugs per in-patient with 50.05% receiving antibiotics from a study in Andhra Pradesh, and Dutta *et al.* reported an average 5.14 total drugs per in-patient in a study from Manipur [4-5]. A study on prescription patterns of an outpatient paediatric facility by Thomas *et al.*

identified an average of  $3.74 \pm 1.02$  drugs per prescription [6].

**The Process of Deprescribing:**

Deprescribing, the process of withdrawal of an inappropriate medication supervised by a health care professional with the goal of managing polypharmacy and improving outcomes, assumes importance in this scenario [2]. The term “deprescribing” was first quoted in an Australian Pharmacy Journal in an article titled “Deprescribing: achieving better health outcomes for older people through reducing medications” in 2003 [2].

Reeve *et al.* have proposed the following five-step continuous, on-going approach to a patient-centred deprescribing process-obtain comprehensive medication history; identify potentially inappropriate medications; determine if medication can be ceased and prioritization; plan and initiate withdrawal, and monitoring, support and documentation [2]. While patient's trust towards general practitioners and dislike towards medications might simplify and encourage the practice of deprescribing in certain situations, the process is not without its challenges. The barriers in implementation of deprescribing may be broadly classified as patient-, practitioner- and system-related (Table 1).

**Table 1: Identified Barriers in Implementation of Deprescribing**

Patient-related	Practitioner-related	System-related
Difference of opinion or non-concurrence with the appropriateness of cessation	Lack of medication knowledge and indications for initiation [8]	Absence of organised process for cessation
Fear of cessation	Lack of confidence and self-motivation to query and modify medications [8]	Inadequate system of record maintenance and record linkage [8]
Fear of return of medical condition	Lack of skilled personnel among support healthcare staff [8]	Limited trained personnel [8]
Disagreement especially when a primary care provider broaches cessation of a specialist-prescribed medication [7]	Tendency to choose the path of least resistance [8]	Lack of adequate communication among general practitioners and specialists [8]
	Fear of return of medical condition or adverse withdrawal events [9]	Limited coordination between departments [8]
	Possible reversal of drug-drug interactions [9]	Lack of interaction between prescribers and pharmacists [8]
	Fear of damage to doctor-patient relationship [9]	Time constraints [8]

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**The Way Forward:**

Patient-centred deprescribing process with focus on shared and holistic decision-making and positive doctor-patient relationship is imperative to reduce patient-dependent barriers [2]. Patient education should be accorded priority. Educating and encouraging people taking multiple medicines to report Adverse Drug Reactions (ADRs) and any difficulty in remembering medications would be a feasible first step towards deprescribing [1].

In-patient and out-patient records should be designed to include detailed medication history format which gives a snapshot of all past and current medications with dose, frequency, duration, indications for initiation and history of adverse drug reactions. Health care providers should be sensitised to the significance of medication history and trained to collect the complete drug profile of patients. This record needs to be periodically updated. Documentation of indications for starting a medication should be an inherent part of prescription process to enable rational deprescribing.

Healthcare providers should be motivated to periodically review medications. Wherever it is feasible, medication regimens should be simplified using sustained release formulations and rational combinations. Vigilant monitoring of medications, identification and reporting of ADRs should be adopted at all health care levels [1]. Periodic practical guidance for prescribers on medication optimization and dose modification without reducing the benefits could be imparted through refresher courses [2].

Health care of elderly people, the main focus group for deprescribing should be integrated at

primary care level, concentrating on individual's unique needs, abilities, preferences and their broader role in family and community with the ultimate goal of improving their quality of life. *Kakaritsuke* physicians, the Japanese model of community physicians trained to integrate social care and medical needs and provide patient-centred, life-course based, coordinated health care services catering to the rapidly ageing society could be modified and adapted after appropriate community needs assessment [10].

Use of available explicit and implicit tools such as STOPP/START (Ireland), Beers criteria update 2019, PRISCUS, Anticholinergic burden risk scales, Medication Appropriateness Index, The Good Palliative-Geriatric Practice Algorithm, should be encouraged to improve prescribing practices [9].

Apart from these tools, [deprescribing.org](http://deprescribing.org) provides salient guidelines on the process and various national and regional networks such as Canadian Deprescribing Network (CaDeN), Australian Deprescribing Network (ADeN), Northern European Deprescribing Network (NERD) are pioneering policy formulations for deprescribing [9].

**Conclusion:**

With a net reduction in number of drugs, deprescribing minimizes financial costs and adverse drug reactions, in addition to improving treatment adherence. Besides, deprescribing as a process serves to increase medication knowledge among patients and their active engagement in medication management. Despite the many benefits, deprescribing can cause adverse drug

withdrawal reactions, and relapse or exacerbation of pre-existing medical condition, which calls for proper planning while tapering or withdrawing, vigilant monitoring and follow-up for re-initiation

if health status deteriorates. For successful and appropriate implementation, deprescribing should be considered as an ongoing process integrated with the prescribing process.

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