Medication Therapy Management Service; Why We Need it?

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Improved public health conditions in our country has caused population aging and as a secondary effect, major increase in the number of elderly patients and subsequently incidence of chronic diseases. People with chronic diseases usually take several medications for long term; a phenomenon called polypharmacy. Patients on polypharmacy are generally at a higher risk for drug-related problems.

Today, 68% of the population receive a prescription from at least one drug group, 52% from two or more groups, and 21% from five or more groups (1). Aging and polypharmacy are two risk factors for development of drug-related problems.

Drug-related problems are *"an event or circumstance involving drug therapy that actually or potentially interferes with desired health outcomes"*. Adverse drug reactions are among the top ten causes of mortality. Annually, more than 1.5 million preventable drug-related problems occur in the United States, accounting for an excess of $177 billion in terms of *medication-related morbidity and mortality* (2). Drug-related problem is one of the most important cause of illness, hospitalization, mortality and an estimated 3-9% of hospital admissions; however, nearly more than 50% of DRPs have been judged as preventable (3). Today in the US, annually

125000 deaths occur due to not taking the drugs properly, and 69% of the reasons of hospitalization are owing to poor patient adherence to their drug regimen. Further, 50% of new statin patients will discontinue medication after 6 months (4).

Regarding the high incidence of drug-related problems in outpatient settings and incurring a great deal of cost to the healthcare system, medication therapy management service (MTMS) with the concept of pharmaceutical care and as part of 'Medicare Part D' was introduced in July 2004 by 11 American pharmaceutical science organizations.

Medication therapy management has been designed to reduce the overall drug therapy costs and improve treatment outcomes in chronic disease patients and patients on polypharmacy through reviewing medication therapy during a face-to-face visit and by focusing on prescribed drugs, supplements, OTCs or herbal remedies. This process ultimately reduces DRPs and improves patient clinical outcome.

A study of the cost-effectiveness of medication therapy management in Patients with type 2 diabetes in community pharmacy indicated that the increasing costs of MTM appeared to be offset by large cost savings ($20,000 per patient) due to reduction in diabetes-related morbidity and mortality (additional 0.44 per quality-adjusted life year) (5).In a randomized controlled trial in Taiwan, the clinical pharmacist-physician MTM program for elderly on polypharmacy had significant cost savings and improvement in the goal of treatment (6). Regarding

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the high prevalence of DRPs in the outpatient setting in the world, the poor compliance of patients with their medication, and the high costs imposed to the health system, focus on the development of the medication therapy management clinics seems be necessary.

References

1. Zhong W, Maradit-Kremers H, Sauver JLS, et al., editors. Age and sex patterns of drug prescribing in a defined American population. Mayo Clinic Proceedings; 2013: Elsevier.
2. Ernst FR, Grizzle AJ. Drug-related morbidity and mortality: updating the cost-of-illness model. J Am Pharm Assoc (Wash) 2001;41(2):192-9.
3. Johnson JA, Bootman JL. Drug-related morbidity and mortality: a cost-of-illness model. Arch Intern Med 1995;155(18):1949-56.
4. Institute NEHC. Thinking Outside the Pillbox: A System-wide Approach to Improving Patient Medication Adherence for Chronic Disease: New England Health Care Institute; 2009.
5. Hussein M, Brown L. PDB59 cost-effectiveness analysis of medication therapy management in patients with type 2 diabetes in community Pharmacy/Ambulatory care settings: Results from a decision-analytic markov model. Value in Health 2012;15(4):A181.
6. Lin H-W, Lin C-H, Chang C-K, et al. Economic outcomes of pharmacist-physician medication therapy management for polypharmacy elderly: A prospective, randomized, controlled trial. J Formos Med Assoc 2018;117(3):235-243.