



## CHALLENGES IN PHARMACEUTICAL CARE

Subramani Parasuraman

Faculty of Pharmacy, AIMST University, Bedong, Malaysia

In recent decades, the need of pharmaceutical care is increasing among all the age groups of the patients because tremendous changes in life style and food habits. For example, the number of people with diabetes has increase from 108 million in 1980 to 422 million in 2014.[1] The metabolic and infective disorders are top killers during the past decade. In 2012, ischemic heart disease, stroke, COPD, respiratory infections, HIV infection, diarrheal diseases, diabetes and hypertensive heart disease are major causes of death, which are mainly because of unhealthy/ poor life style.[2] Most of the time, cardiovascular and metabolic diseases were managed by the medication and they need pharmaceutical care to minimize the drug induced events. In Europe region, 850,000 adverse events and 95,000 fewer deaths per year were reported due to medical errors.[3] Apart from that, 10-20% cases are misdiagnosed, which exceeds drug errors and surgical errors and its causing life threatening problems or permanent disability or death.[4] Makary and Daniel also reported that, medical error is one of the leading cause of death in United States which is ranked third place followed by heart disease and cancer.[5] This indicate clearly that, disease prevalence rate has been rising more rapidly and other hand drug related problems also increasing. In North America approximately 44,000 people died every year from drug overdose and globally approximately 187,000 people die every year from drug overdose. Which clearly indicating that, health care professionals especially pharmacists have to involve actively to spread the pros and cons of the drug usage to the general public.[6]

In recent decades, concept of pharmacy transform from a commodity-based into a clinical profession to provide better pharmaceutical care to the patients to achieve defined outcomes that improve a patient's quality of life.[7] While going through history, pharmacy beginning with fossils from natural source with medicinal properties around 50,000 BC by The Neanderthals and the prescription based pharmacy service is begin in 3700 BC. In current era, pharmacist responsibility has been shifted and they become one of 'drug therapy manager' along with the other health care professionals.[8] In March 2014, World Health Organization (WHO) introduced

concept "Seven-stat Pharmacist", detailing the roles each pharmacist must perform: are-giver, decision-maker, communicator, manager, life-long-learner, teacher and leader. The concept of 'Seven-star Pharmacist' briefly explains the role of pharmacists in healthcare system.

Hepler and Strand coined the term "pharmaceutical care" in the year 1990. Over the next few decades, it gained significance in health care system. Pharmaceutical care embodies a patient-centered, outcomes-oriented practice of pharmacy. This practice model promoted the pharmacist as a key member of the healthcare team, with responsibility for the outcomes of medication therapy.[9] Pharmaceutical care is an outcome-oriented process required the pharmacist to acquire skills and capacity to be overcome the challenges. The objective of pharmaceutical care is to optimize the patient's health-related quality of life and achieve positive clinical outcomes within realistic economic expenditures. To achieve this, pharmacist must involve in (i) establishment of professional relationship with the patients; (ii) collection of the patient specific medical information (iii) development of drug therapy plan, and (iv) monitoring of therapeutic plan and outcome.[10] The measurable outcome in pharmaceutical care is cure of a patient's disease, reduction/ elimination of a patient's disease symptoms and alterations in disease progression rate.[11]

Globally, the rate of drug related event and drug related death is increasing day by day. Healthcare professional including pharmacists have to pay much attention on it to prevent the drug related events and improve the treatment outcome.

## REFERENCES

- [1] Diabetes fact sheet\_2016. Available in <http://www.who.int/mediacentre/factsheets/fs312/en/> [Last accessed on 04/07/2016].
- [2] The top 10 causes of death. Available in <http://www.who.int/mediacentre/factsheets/fs310/en/> [Last accessed on 04/07/2016].
- [3] Data and statistics. Available in <http://www.euro.who.int/en/health->

- topics/Health-systems/patient-safety/data-and-statistics [Last accessed on 04/07/2016].
- [4] Physicians misdiagnose at an alarming rate. Available in <http://www.ncpa.org/sub/dpd/index.php?ArticleID=23148> [Last accessed on 04/07/2016].
- [5] Makary MA, Daniel M. Medical error-the third leading cause of death in the US. *BMJ*. 2016; 353:i2139.
- [6] Overdose stats. Available in <http://www.overdoseday.com/resources/facts-stats/> [Last accessed on 04/07/2016].
- [7] Storpirtis S. Perspectives and challenges in pharmaceutical care. *Braz J Pharm Sci*. 2012;48 (4).
- [8] Thamby SA, Subramani P. Seven-star pharmacist concept by World Health Organization. *J Young Pharm*. 2014;6(2):1-3.
- [9] Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm* 1990; 47:533-43.
- [10] Principles of Practice for Pharmaceutical Care. Available in <http://www.pharmacist.com/principles-practice-pharmaceutical-care> [Last accessed on 05/07/2016].
- [11] ASHP statement on pharmaceutical care. Available in <http://www.ashp.org/doclibrary/bestpractices/orgstpharmcare.aspx> [Last accessed on 05/07/2016].