



INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH



A REVIEW ON IMPORTANCE OF CLINICAL PHARMACY SERVICES IN ONCOLOGY CARE CENTRE

Muchukota Sushma, Dr.E.Bhavya

School of Pharmaceutical Sciences, VISTAS, Pallavaram, Chennai, Tamilnadu, India.

ARTICLE INFO

Article history

Received 21/12/2020

Available online
31/12/2020

Keywords

Clinical Pharmacy,
Therapeutic Outcomes,
Adverse Drug Reaction,
Oncology Unit.

ABSTRACT

Clinical pharmacy is a pharmacy division with the science and practice of rational medication use. The study aim at implementing clinical pharmacy services by clinical pharmacists in oncology department to get desired therapeutic outcomes. The objectives of study includes Prescription analysis, preventing the medication related problems, over dose, performing drug use evaluation, providing drug information, patient counseling, drug interactions identification and Adverse drug reaction, improving the patient safety initiatives and health related outcomes, reducing work burden of physicians, providing improved therapy to the large amount of patients suffering with most prevalent cancers in the oncology unit. This study concludes that critical need and implementation of clinical pharmacy services in hospitals to improve the patient care and safety. Clinical pharmacist along with oncology as a team has wider scope of providing various patient care services in oncology care to inform safe and effective use of anti-cancer medicines so as to provide good quality of life and better outcomes.

Corresponding author

Muchukota Sushma

Pharm.D (Ph.D),
Research Scholar,
School of Pharmaceutical Sciences,
VISTAS, Pallavaram,
Chennai, Tamilnadu, India- 600117.
sushma.banathi@gmail.com,
bhavya.sps@velsuniv.ac.in

Please cite this article in press as **Muchukota Sushma et al.** A Review on Importance of Clinical Pharmacy Services in Oncology Care Centre. *Indo American Journal of Pharmaceutical Research*.2020:10(12).

Copy right © 2020 This is an Open Access article distributed under the terms of the Indo American journal of Pharmaceutical Research, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Clinical pharmacy is a splitting part of pharmaceutical sciences concerned with the practice of safe medication use. Clinical pharmacists are the one who provide patient care that optimizes the use of effective medication and promote health, wellness, and disease prevention.^[1] They are a primary source of scientifically valid information and counsel regarding the safe, effective, appropriate and cost-effective use of medications.^[2] They provide overall health care for patients by practicing rational medication use and clinical pharmacy skills. Clinical pharmacy services resembling Medicine and therapeutic information services (MTI), Drug related Problems, Adverse drug reaction (ADRs) monitoring and reporting, radiation related adverse event (RRAEs) monitoring and reporting, Medication therapy management (MTM) by adherence, Patient medication counselling and comparative study on efficacy of the prescribed drugs will be studied with appropriate interventions. Implementation of this services to minimize/prevent treatment related toxicities and medication related problems (MRPs) & efficacy of prescribed drugs will be evaluated. Dimension and level of interventions with specific outcome will be analyzed. In general purpose of clinical Pharmacist activities is to promote the correct and appropriate use of therapy in oncology settings among most prevalent cancers. These activities aim at providing effective treatment to patients, reducing the drug related problems, achieving the patient compliance, decreasing the expenditure on treatment and providing best health care treatments. Within the health care system, clinical pharmacists are experts in the therapeutic usage of medications. They regularly give medication therapy evaluation, recommendations to patients and other health care professionals. Pharmaceutical interventions done by clinical pharmacists with a team work always help in a decisive role in educating and updating knowledge on chemotherapy, improving the patient's positive emotions in dealing with responses to treatment, and improving the quality of life. They participate in clinical ward rounds in association with medical services specialists i.e, physicians and conduct patient interviews, drug reconciliation, and patient guidance and follow-up, which results in enhanced outcomes in oncology settings.^[4]

Objectives:

The main objectives are to implement and evaluate clinical pharmacy services in oncology care setting.

To implement and evaluate medicine & therapeutic information service and medication therapy management service. Improving Patient health related outcomes.

To understand the nature and extent of adverse drug reactions and drug interactions to anti-cancer agents

To provide patient medication counselling service.

Performing drug utilization evaluation, Identifying and reducing medication related problems.

Role of clinical pharmacist in Oncology settings:

In general they promote the correct and appropriate use of therapy in oncology settings among most prevalent cancers, providing patient care as a part of multidisciplinary team is rising in developing countries. These activities aim at providing effective treatment to patients, reducing the drug related problems, achieving the patient compliance, decreasing the expenditure on treatment and providing best health care treatments. They are expertise in the therapeutic use of medications. They usually provide medication therapy evaluations and recommendations to patients and other health care professionals. Medication counselling provided by clinical pharmacists can improve the knowledge related to chemotherapy, positivity towards treatment and quality of life of cancer patients.^[5] Clinical pharmacist is the key person to educate and monitor the patient regularly. Clinical pharmacists can also involve in the patient, system centered and regulation centered research and communicate the findings to the health care professionals with ultimate aim of improving quality use of medicines. This increase in number of cases is further added due to advanced age, abuse of traditional tobacco preparations, alcohol consumptions, limited awareness programs promoting vaccinations for human papilloma virus (HPV) (risk for cervical cancer) and Hepatitis B (risk for liver cancer) and lower socioeconomic life style. The majority cancers in Indian men are head & neck and lung and are related to tobacco use. The most common cancers in women are breast and cervical. The International Agency for Research on Cancer's (IARC) GLOBOCAN project has predicted that India's cancer burden will almost double in the next 20 years, from slightly over a million new cases in 2012 to more than 1.7 million by 2035. Most of the population in India do not have access to a well-organized and well regulated cancer care system. Indian health care face many problems pertaining to medication usage also. Many factors like patient illiteracy, physician overload, lack of systematic researched information system for prescribers, aggressive pharmaceutical marketing, lack of medical insurance and insurance with limited coverage contribute to problems related to medication use. In the existing health care system of India, scope of specialty pharmacy practice like oncology, cardiology, psychiatry is evolving and clinical pharmacists are either not assigned with services like medicine information, medication counselling and MTM, or they are expected to deliver such services with limited cooperation from clinicians.^[6] Also, oncologists in India usually provide consultations to relatively higher number of patients compared to other clinicians in the developed countries.^[7] In such a scenario, clinical pharmacists with specialization in oncology pharmacy can contribute for patient care by being part of cancer care team with provision of various clinical pharmacy services like medicine information, MTM, patient medication counselling. In this back drop, it is essential to implement clinical pharmacy services and research in an Indian oncology care settings.

The main purpose of the study is Quality cancer care remains a challenge in developing countries due to financial limitations, shortage of skills, limited research, lack of appropriate treatment policies and diverse regulations for patient care. Cancer care needs involvement and cooperation of various health care professionals like clinicians, pharmacists, nurses, social worker and dietician.^[8,9] India is one of the budding countries where prevalence of cancer and cancer related mortality is increasing.^[10] Indian health care system faces many problems pertaining to medication use. Many factors like patient illiteracy, physician overload, lack of systematic researched information system for prescribers contribute for these problems which are related to medication use.

In the existing health care system of India, scope of specialty pharmacy practice like oncology, cardiology, psychiatry is evolving and clinical pharmacists are either not assigned with services like medication therapy management, medicine information and medication counselling or they are expected to deliver such services with limited cooperation from clinicians.^[6]

In general, regardless of practice settings, cancer care requires comprehensive analysis of treatment schedules, recommendations for cost effective treatments, routine monitoring of medication safety, and periodic patient education on safe use of anti-cancer agents. In order to achieve these needs, multidisciplinary treatment approach is always followed in all oncology care settings.

Clinical pharmacist plays a crucial role in oncology care. Due to abundant amount of research, we have ample of chemotherapeutic agents and targeted therapies for the treatment of cancer in the market. Availability of high number of drugs against cancer in the market creates demand for the most latest, critically evaluated and patient specific information about anti-cancer drugs to the clinicians and patients.^[11] Clinical pharmacist can satisfy this demand by being a part of health care team and by working as drug information provider. A study conducted by Gamboa N have highlighted the role of clinical pharmacists in monitoring and preventing adverse drug reactions like hypersensitivity reactions, vomiting by recommending better pre-medications and supportive care.^[12]

Outcomes: Expected result

- a. To Improve Patient safety by increasing adherence with regular follow ups
- b. To improve safety and quality use of medicines in oncology practice
- c. Identify, prevent and manage Drug related problems
- d. Improving the Quality of life and provide individual patient counselling about treatment including directions of use, side effects management.

CONCLUSION

The current study concludes that, in India there is amplified work load on physicians, clinical pharmacists explore their clinical pharmacy services this can decrease the work load over physicians and also make clinical pharmacist as bridge between physician and patients which can improve the overall health care of society. So, there is an critical need of clinical pharmacy services to hospitals as soon as possible to improve the medical care in India. Clinical pharmacist has wider scope of providing various patient care services in oncology care to inform safe and responsible use of anti-cancer medicines. Further studies are required in future for the better outcomes in this aspect.

ACKNOWLEDGMENTS

This work was supported by ESI hospital, Indiranagar, Bengaluru. The authors are grateful to the dean of the hospital and doctors, nurses and others for their co-operation and support.

Abbreviations

Medicine And Therapeutic Information Services	(MTI),
Drug Related Problems	(DRP),
Adverse Drug Reaction	(ADRs),
Radiation Related Adverse Event	(RRAEs),
Medication Therapy Management	(MTM),
Medication Related Problems	(MRPs)
Human Papilloma Virus	(HPV)
The International Agency for Research on Cancer's	(IARC)

Funding:

No funding source

Conflict of interest:

None declared

REFERENCES

1. American College of Clinical Pharmacy (June 2008). "The definition of clinical pharmacy" (PDF). *Pharmacotherapy*. **28** (6): 816–7.
2. Economic Evaluations of Clinical Pharmacy Services: 2001–2005" (PDF). *Pharmacotherapy*. ACCP. Retrieved 28 April 2016.
3. Wang Y, Wu H, Xu F: Impact of clinical pharmacy services on KAP and QOL in cancer patients: A single-center experience. *BioMed Res Int* 2015;502431, 2015
4. Kaboli PJ, Hoth AB, McClimon BJ, et al: Clinical pharmacists and inpatient medical care: A systematic review. *Arch Intern Med* 166:955-964, 2006
5. Wang Y, Wu H, Xu F. Impact of clinical pharmacy services on KAP and QOL in cancer patients: a single-center experience. *BioMed research international*. 2015 Nov 30;2015.
6. Suhag V, Sunita BS, Singh AK, Dashottar S, Semwal M. The Oncology Scenario in India: Lots of Gaps Need to be Bridged. *Global Journal of Medical Research*. 2015 May 29;15(2).
7. Mazhar M, Ansari A, Rajput SK. Clinical Pharmacy in India: Recent Advances and Perspective. *PharmaTutor*. 2015 Mar 1; 3(3):31-6.
8. Silbermann M, Pitsillides B, Al-Alfi N, Omran S, Al-Jabri K, Elshamy K, Ghayeb I, Livneh J, Daher M, Charalambous H, Jafferri A. Multidisciplinary care team for cancer patients and its implementation in several Middle Eastern countries. *Annals of oncology*. 2013 Oct 1;24(suppl_7):vii41-7.
9. Taplin SH, Weaver S, Salas E, Chollette V, Edwards HM, Bruinooge SS, Kosty MP. Reviewing cancer care team effectiveness. *Journal of oncology practice*. 2015 Apr 14;11(3):239-46.
10. Ventafridda V, Tamburini M, Caraceni AU, De Conno F, Naldi F. A validation study of the WHO method for cancer pain relief. *Cancer*. 1987 Feb 15; 59(4):850- 6.
11. Singhal PK, Raisch DW, Gupchup GV. The impact of pharmaceutical services in community and ambulatory care settings: evidence and recommendations for future research. *Ann Pharmacother*. 1999; 33:1336-55.
12. Patel H, Adepur R, Saphthagiri R, Gurumurthy P. Drugs and therapeutic information service provided by clinical pharmacists for an improved patient care: An experience from a tertiary care teaching hospital. *Asian J Pharm Clin Res*. 2015; 8:175-8



54878478451201209



Submit your next manuscript to **IAJPR** and take advantage of:

Convenient online manuscript submission

Access Online first

Double blind peer review policy

International recognition

No space constraints or color figure charges

Immediate publication on acceptance

Inclusion in **ScopeMed** and other full-text repositories

Redistributing your research freely

Submit your manuscript at: editorinchief@iajpr.com

