

Establishment and Achievements of Drug and Therapeutic Committee at the Oncology-Based Hospital of Nepal

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ABSTRACT

Background: Drug and Therapeutics Committees (DTCs) serve as an assembly place to join and bond with diverse stakeholders of hospitals to improve the utilization of the medicinal fortes. DTCs are a key inclusion to promote the rational use of medications. DTCs are, however, operative in only a limited number of hospitals in Nepal. DTC was begun at the oncology specialized hospital, Nepal Cancer Hospital and Research Center (NCHRC), a new cancer Hospital in Lalitpur district, Nepal to promote the rational use of medicines in July, 2016. The DTC has representatives from various departments of the hospital and the complete support from the hospital administration. The main objective of this study is to highlight the activities done and ongoing work of the DTCs of the hospital. The DTC has been engaged with preparing the hospital formulary. Pharmacovigilance and pre- and post-chemotherapy counseling practices have been occurring. Educational programs and training for different dimensions of staffs are frequently carried out and drug use in the hospital is sporadically observed. Fundamental encounters with respect to the working of DTC is empowering, however, there are still bunches of activities for the judicious utilization of the medication.

Key words: Rational use of medicines, Drug and Therapeutic Committee, Pharmacist, Hospital Pharmacy, Medicines, Nepal.

INTRODUCTION

Drug and Therapeutics Committees (DTCs), also known as the Pharmacy and Therapeutic Committee (PTC) and Medicines and Therapeutic Committee (MTC). DTC has a well-known place in hospitals and many contemplate them fundamental to the rational use of medicines.¹ The American Society of Hospital Pharmacist (ASHP) defines DTC as “the committee that evaluates the clinical use of drugs, develop policies for managing drug use and administration and manages the formulary system”.² There are diverse activities of DTCs which can be contrastingly assembled into the approach, policy regulation, educational and training activities, with the best mix dependent to the issues challenged and the hierarchical structure in which the committee works.¹

DTCs in Nepal

The Hospital Pharmacy directives 2072 mandated that every hospital in the country must have its own independent and powerful DTC to regulate medication related issues such as drug related policy formulation and implementation within the hospital which also described the members of DTC, functions, duties and responsibilities of DTC, provision of the meeting.³ In Nepal, All the hospitals are starting a DTC with the objectives of safe, effective and cost-effective medicines to the patients. Manipal Teaching Hospital is a pioneer in starting a DTC in the hospital which was established in 2001.⁴ In a developed country, DTC is common, but in the context of hospitals of Nepal, DTC is limited in number which includes Tribhuvan University Teaching Hospital, Patan Hospital,⁵ Manipal Teaching Hospital⁴ and KIST Medical College Hospital.⁶ DTCs

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plays a significant protagonist in confirming appropriate usage of medicines.

Drug and Therapeutics Committee at the Nepal Cancer Hospital and Research Center

In Nepal Cancer Hospital and Research Center (NCHRC), DTC was initially founded in July 2016. The committee consists of the Chairman, a member secretary and members of the different departments and units of the hospital. The committee members gather once in a duration of three months. The Member Secretary is responsible for preparation and circulation of the in charge for the arrangement and dissemination of agenda to all the DTCs members well in advance to DTC Meeting. The prepared agenda is discussed in the confluence and the conclusions reached during the meeting are recommended for the carrying out. Meetings include a review of the drug list, management of shortage medicines, drug safety issues and medication prevention strategies.

Achievements and ongoing works of DTC at NCHRC

Development of Hospital Pharmacy Management Guidelines

DTC has developed a Pharmacy Management Guidelines for the NCHRC to run the hospital pharmacy smoothly. The guidelines are a sort of “Standard operating procedures” for pharmacy operations, which include all sorts of pharmacy-related policies-procedures such as billing, purchase, issue, expiry management, pricing of pharmaceuticals etc.

Hospital Formulary

In many hospitals, hospital drug formularies are steered by the DTC, which exists to provide the directions for rational medication prescribing by physicians and dispensing by pharmacists, which will eventually reduce risks to the patients and decrease cost burden to the patients. This will enhance patient outcomes.⁷ The hospital has a list of items to use in patients and in a process of developing a hospital drug formulary with the objective of implementing rational pharmacotherapy in the hospital. Drugs are included in the list based on the safety, efficacy, availability and economic parameters. To be approved for the hospital formulary, drugs should have been registered in national drug authority i.e. Department of Drug Administration (DDA), possession of Good Manufacturing Practice (GMP) certification and the cost.

The Addition of New Cytotoxic Agents and Medicines in the Hospital Medicine List

The DTC has worked out a procedure for adding or cancellations of medications to the hospital medicine list. A form (Annex I) requesting for the consideration of the medicine has been designed and for the requester has to provide objective evidence for the inclusion. Conditions include safety, efficacy, availability and cost of the medication.

Medicines Quality and Expired Items Disposal Policy and Procedures

Counterfeit and substandard medicines are the major areas of concerns in underdeveloped countries compared to the developed ones. This indicates the weak regulation in the former compared to the latter.⁸ DTC has approved the policy on quality of medications to ensure the supply of good quality medicines, they are procured only from authorized distributors who are pre-qualified using defined criteria. All products are purchased from the reliable sources (authorized suppliers and some even from the manufacturers directly). Physical qualities are inspected before being used in the patients, whereas the efficacy of the products is evaluated by clinicians. Any products with poor quality signs are recalled with a documentation. At the same time, near expiry and expired products are segregated for a proper return to suppliers. The DTC has approved the disposal policy which defines that if any products if not possible to return to suppliers are disposed of as per waste disposal guidelines (falls under the responsibility of the Waste Management Committee).

Pricing, Discount Policy and Credit Billing

Pricing of items is based on Maximum Retail Price (MRP). However, some products (surgical items) with no MRP are priced by discussing in DTC. Chemotherapy products oral products (tablets, capsules, syrups) are given at discounted prices. The admitted patients can get medicines/surgical in credit with a limit of maximum 50,000 Nepalese Currency (approximately 435 USD)

Recommendations for not Registered or Available Medicines in the Nepalese Market

There are numerous drugs which are approved by US-FDA but not approved by the DDA. Numerous lifesaving and chemotherapy products (some newly launched products) are a shortage every once in a while. To manage this condition, recommendation letter (after a discussion in DTC meeting) is sent to DDA for import authorization from respective authorized

suppliers. Managing the stock of life-saving medicines are challenging for hospital pharmacists especially in our context.

Antibiotics Stewardship Program

Other severe complications that many hospitals face is the overuse of antibiotics, growing antimicrobial resistance. The primary objectives of antibiotics stewardship program are to work with healthcare professionals to enable every patient to get the most suitable antimicrobial with the right dose and right duration, to avert antimicrobial abuse, misuse and overuse and to limit the improvement of resistance.⁹ With these goals, DTC works with antibiotic stewardship committee (which is under the Infection Prevention and Control Unit) of the hospital.

Clinical Pharmacy Services

DTC is a policy-making body which highlighted the clinical pharmaceutical services for the cancer patients in the hospital. The DTC has also approved the counseling sheets for the patients by a team of experts. Counseling is done to the cancer patients before starting chemotherapy regarding the treatment plans and possible adverse drug reactions. In the treatment of cancer, good communication with the patients is important factor. It supports cancer patients to adapt to their diseases and related consideration, particularly when this information is customized to one's needs.¹⁰ The collaborative approach with a clinical pharmacist in ward rounds and greater involvement in patient care activities are being started and being discussed for more improvisation.

Pharmacovigilance Center and Adverse Drug Reaction (ADR) Reporting Form

DTC plays an energetic protagonist for the preferment of medication safety and stressed the significance of pharmacovigilance center in the hospital. Oncology based regional pharmacovigilance center was started with the approval of the national drug authority (DDA) in January 2018.¹¹ The adverse drug reactions (ADRs) reporting form was developed (Annex II). On receiving the completed ADRs reporting forms which are being placed in all the nursing stations, wards, pharmacy and outpatient departments of NCHRC, the pharmacovigilance unit personnel provide drug and related information to the concerned medical oncologist, physicians, nurses and healthcare expert and also to patients concerning the managing of the ADRs. For the detected ADRs, stickers are placed in the medical file and OPD file of the patients for the future remembrance.¹¹ The DTC works hand-

in-hand with pharmacovigilance unit of the hospital which is mainly focused in spontaneous reporting of ADRs.

Separation of Outpatients and Inpatients Pharmacy

DTC working together with the hospital management decided and implemented to separate the outpatients and inpatients pharmacy services, which is a strategy to provide specialized care to cancer patients. Pharmacists in outpatient pharmacy can devote more time for counseling regarding the use of medications especially oral chemotherapy. There is a separate store pharmacy in the hospital.

Discussion on Medication Error Reporting

Different medications errors are captured by an active supervision and operative reporting system, so they could be detached before they can spread or cause damage to patients. Reported errors are discussed at DTC meetings.

Continuing Pharmacy Education

Though the pharmacy of the hospital has initiated a few continuing education programs for the pharmacist, the DTC has mandatorily recommended a continuing pharmacy education (CPE) program with the support of hospital management. The main objective of the program is to train hospital and clinical pharmacists of the hospitals so that they can provide better patient counseling before and after chemotherapy and can improve their dispensing, counseling and overall pharmacy practices. In addition, The DTC has also planned for continuing education for prescribers and nurses.

CONCLUSION

The DTC of NCHRC which is an oncology-based hospital of Nepal has made a number of essential advances in ensuring the rational use of medicines especially anti-neoplastic agents within the hospital. Nepal is a low-income nation which has numerous issues of use of medication and also issues of counterfeit, substandard medicines and contaminated medicines. In these scenarios, the role of DTC is worth mentioning. Our more than 2 years' experience distinctly signifies that a DTC in a hospital can assume an essential role in promoting rational use of medicines in emerging countries like Nepal. Notwithstanding, yet far to go and it ought to be recollected the rational use of medicines is a voyage and not a goal.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORS' CONTRIBUTIONS

SS (a) contributed in writing initial version of the manuscript and approval of final manuscript. BG did a search of the literature, contributed towards the manuscript and final approval of the manuscript. BA assisted in initial idea and approval of final manuscript. SS (b) contributed in the writing of the manuscript and approval of final manuscript.

ABBREVIATIONS

ADRs: Adverse Drug Reactions; **CPE:** Continuing pharmacy education; **DDA:** Department of Drug Administration; **DTCs:** Drug and Therapeutics Committees; **GMP:** Good Manufacturing Practice;

MTC: Medicines and Therapeutic Committee; **NCHRC:** Nepal Cancer Hospital and Research Center; **OPD:** Outpatients Department; **PTC:** Pharmacy and Therapeutic Committee.

SUMMARY

Globally, the medication related issues are commonly shared issues. The least developed country, Nepal isn't an exceptional nation in medication related issues. Drug and therapeutic committees (DTCs) in any hospital settings are one of the reasonable vehicles for the improvement and usage of approaches with respect to medicines. DTC of Nepal Cancer Hospital and Research Center of Nepal have demonstrated a significance of it, in an oncology based hospital and assuming an imperative job in the advancement of balanced utilization of medicines in the hospital.

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