



Hospital Formulary-An Educational Review

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Abstract

Hospital formulary is a revised compilation of pharmaceutical agents including supplemental particulars approved by the Pharmacy and Therapeutic Committee, which review the current clinical decision. Foremost objective of developing a Hospital formulary is to provide rationality and normalize the variation in the prescribing patterns of the physicians. Formulary acts as a source to health care professionals as it provides detailed knowledge about the drugs available in the present health care system. Clinical pharmacists with the help of members of the PTC put lot of efforts to create a hospital formulary which is having appropriate format, concise, easy to handle. Regular upgrading of the formulary with new drugs and latest scientific information are key aspects in the successful implementation of formulary activity.

Keywords

Hospital Formulary, Pharmacy and Therapeutic committee rationality, Physician, Healthcare professionals

INTRODUCTION

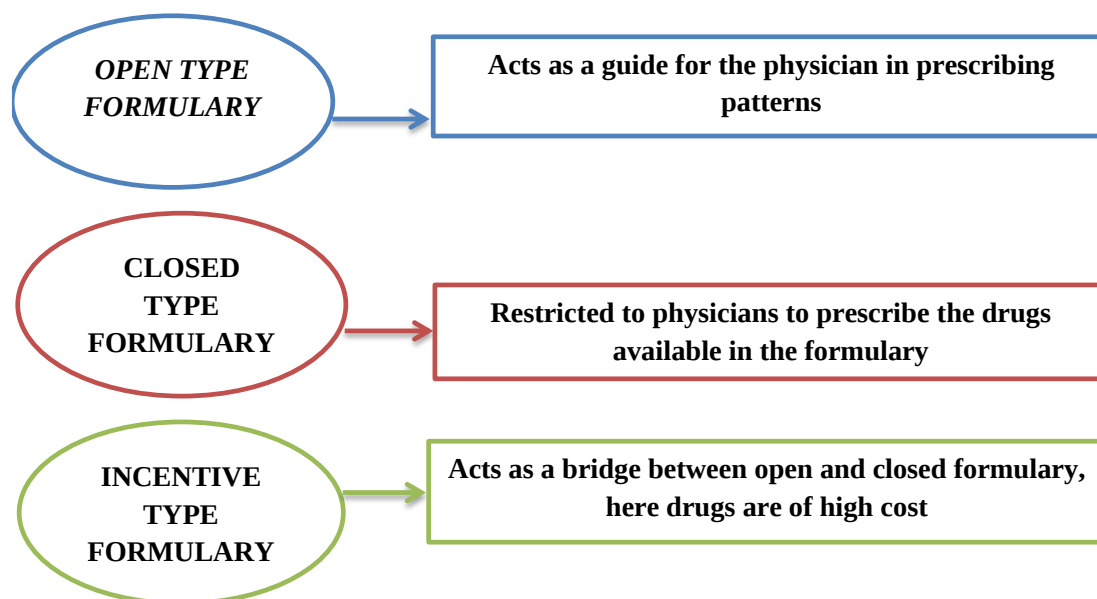
With ascending degree of prevalence and incidence of disease and with high number of availability of medications worldwide, the best care of patient in hospital level upon intended use of drugs in order to ensure care to the patient, a sound programme of medication usage must be developed in the organization institution. It should have program of objective evaluation, section of proper utilization. The main reason for developing hospital formulary is to set standards for best practice promoting high quality, evidence-based prescribing and to reduce the deflection in the level of treatment provided to the patient and controlling medication price¹.

Hospital formulary is a constantly perpetually revised assortment of pharmaceutical dosage agents and their forms which reflects the current clinical judgement of physicians, pharmacists and other experts in the diagnosis, prophylaxis (or) treatment of disease and promotion of health. A formulary includes but is not limited to a list of drugs but also contains organizational guidelines, medication use policies, medication accessory drug information under non-proprietary (or) proprietary names². Hospital formulary is defined as “continuously revised compilation of pharmaceuticals which reflect the current clinical judgement of medical staff”. Plausible advantage of formulary is triadic i.e., therapeutic, economic and educational. There are

mainly three types of hospital formulary namely open, closed and incentive type respectively.³ Figure

1 represents the different types of Hospital formulary and their important features.

Figure 1: Different types of Hospital Formulary



NEED FOR HOSPITAL FORMULARY⁴

- Higher adverse effects towards new drugs
- Ascending rate of new agents in the market
- Enlarged variation in the prescribing patterns

Formularies are comprehensive, disparate and yet often argumentative feature of both United States and international drug policy. Formularies constitute the elementary approach encompassed in the World Health Organization (WHO) model formulary 2004 and various countries essential medicine list. Committees that scrutinize them are present in some structure in nearly every single United States hospital and outpatient drug plan and are highly conspicuous components of public drug welfare in many countries. Hospital medical staffs in consultation with pharmacy and therapeutic committee estimate and adopt the drugs among the generous drugs obtainable in the market, which are most functional in the patient care, to be incorporate in the hospital formulary. Thus, decision made by the committee instantaneously influences every health care professional. Formulary should be of concise, easy hand, completed and continuously updated as it acts as a vehicle to health care professional.

BENEFITS OF HOSPITAL FORMULARY

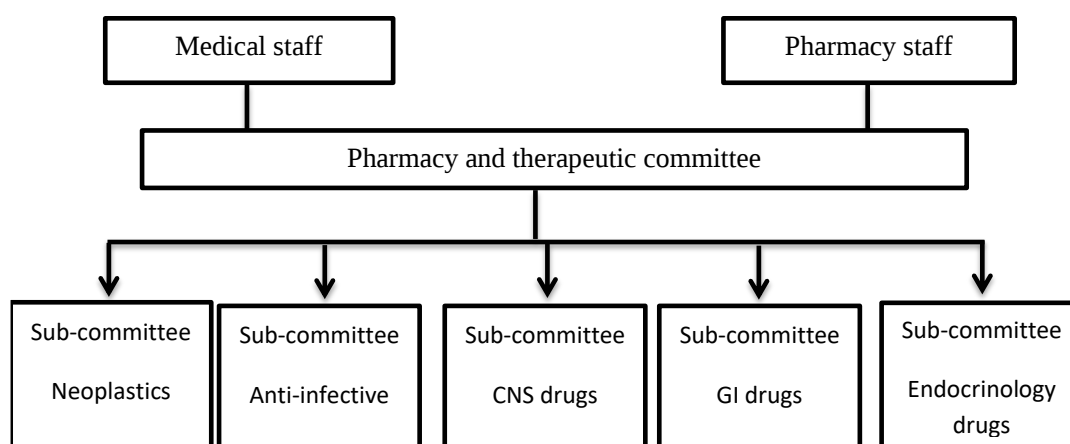
Restricted quantity of drugs makes easier in procurement, storage distribution and use of drugs

when all the necessary features controlled. Relevant selection of drugs can aim the following results

- Rationality in prescribing, procuring small number of drugs in bulk quantity
- Enhanced quality of patient care: patients are better treated by prescribing fewer drugs with rational use, where any adverse effects and interaction can be reduced and provide complete information about the drugs to the patient. Physicians procure greater knowledge of prescribing fewer drugs and selecting evidence-based treatment guidelines.
- It aims at providing updated information about the use of medicines⁵.

HOSPITAL FORMULARY SYSTEM:

It is an on-going process in consultation with pharmacy and therapeutics committee, to initiate policies on the usage of drug products and therapies that are medically contemplate and most useful in patients care among the numerous drugs obtained in the market. To carry out function of P&T committee a proper organisation is necessary, where the organisation consists of at least three physicians, a pharmacist, and a nurse. A chairman should be appointed from the physician representative, where the pharmacist acts as a secretary.



The formulary system encompasses:

- Proper drug utilization to enhance quality of care for patient to ensure appropriate drug therapy
- Sporadic evaluation and analysis of treatment procedure to assure that they are updated and compatible for best therapies
- Supervising, reporting and analysis of adverse results of drug therapies (e.g. adverse drug events, medication errors, major interactions) to continually enhance the quality care⁶.

Managing the formulary system⁷

Health system should develop and implement a formulary management process. Decision on the management of a formulary system should be based on evidence-based clinical, ethical, legal, philosophical, quality of life, safety and economic factors that results in optimal patient care. Management of formulary system is a significant component of a healthcare organizations medication use policy development process. The formulary system should include review and approval of policies related to the medication use process.

Specific medication use policy should address-

- How drugs are requested for inclusion or exclusion from the formulary
- The process for developing, implementing, and monitoring medication use guidelines
- Methods for ensuring the safe prescribing, distribution, administration, and monitoring of drugs
- The process for using non-formulary agents within the organization
- The process for managing drug product shortages
- The process for developing an organization specific Medication Use Evaluation plan

- The process for disseminating medication use policies and how users will be educated regarding the process
- Policies regarding specific medication use process

Formulary system policies:

- Hospital organisation should organise a P&T committee which is sole responsible in the proper selection of drugs to be included in the formulary
- P&T committee member, by signing a conflict of interest of statement, economic and other relationship with pharmaceutical entities that could influence committee decisions
- P&T committee will develop policies and procedure governing the HF and medical staff shall adopt policies and procedure, subject to administrative approval
- Drug to be included in the formulary should be in their non-proprietary names and should be prescribed by the same names
- Formulary should include educational program for practitioners and patients concerning their roles and responsibilities^{1, 7, 5}.
- Formulary system should inform health care professionals and patients about factors that effects formulary system decisions, cost-commitment measures, the procedure for obtaining non-formulary drugs, and the importance of formulary compliance for improving quality of care and rationality
- Proactively inform prescribers about variations in the formulary
- Provide patient education programs that will explain patient about their role and responsibilities, about their compliance to drug therapy
- Provide reasoning for specific formulary decision when appealed

- Formulary should include a well-defined process for the prescribers about the use of non-formulary drugs when clinically indicated
- Organise an efficient process for the timely management of non-formulary drug products and enforce minimal administrative burden
- Provide approach to a formal advise process if a request for a non-formulary drug is denied

Steps involved in preparation of Hospital formulary:

- Spot the habitual diseases being treated in the health organisation by interacting and documenting with the particular departments. Set up primary treatment guidelines for each disease by preferring standard treatment guidelines.
- List out the drugs and drafts of list should be circulated to each department to procure their opinion.
- The pharmacy and therapeutic committee should consider the opinions of each department and provide feedback; the decisions should be made in access with evidence-based reviews.
- After final list has prepared, monographs of each drugs should be prepared and should contain complete and updated information about the drugs, the information provided should be accurate and easy to understand by health care professionals

Contents of the formulary: Index, Abbreviations, introduction, general guidelines in special entity, monograph of each drug with brief description

Contents of the monograph: Monograph of each drug should be contained with name of the drug, brands available and strength, cost of the drug, mode of action, administration and dosing, pregnancy category, adverse effects of the drug, precautions and contraindications.

Addition and deletion of drugs from the list: New entity drugs to be added should be therapeutically safe and effective, and cost of newer and the listed drug should be compared.

Trimming the list: Any recently approved drug to be added in the formulary, which is of high efficacy, cost effective and proved benefits, and the drug which is already documented in the formulary which is used for the same indications should be cut off for two motives:

- Increase in the bulk of the formulary if no older drug is cut off from the list
- When a new approved drug with greater rationality, why do still follow older drug for the same indication¹.

MANAGING THE FORMULARY SYSTEM⁸

Health system should develop, maintain and implement a formulary management process. Decision on the management of a formulary system should be based on evidence-based clinical, ethical, legal, philosophical, quality of life, safety and economic factors that results in optimal patient care. Management of formulary system is a significant component of a healthcare organizations medication use policy development process. A well-maintained formulary that is tailored to the organizations patient care needs, policy framework and medication use system

- The formulary system should include review and approval of policies related to the medication use process specific medication use policy should address
- How drugs are requested for inclusion or deletion from the formulary
- The process for developing, implementing, and monitoring medication use guidelines
- Methods for ensuring the safe prescribing, distribution, administration and monitoring of drugs
- The process for using non-formulary agents within the organization
- The process for managing drug product shortages
- The process for developing an organization specific MUE plan
- The process for disseminating medication use policies and how users will be educated regarding the process
- Policies regarding specific medication use process

Maintaining a hospital formulary:

In the trending world, newer drugs and diseases are emerging continuously, if the formulary is not revised continuously and updated, the formulary will contain older drugs and of low efficacy, which directly effects the prescribing patterns. It is necessary to review every 2-3 years for updating new drugs for effective patient care. Drugs of all the class and of each department should be compared with the non-formulary drugs, by quantifying the benefits and thorns the drugs should be updated to the formulary. PTC should call the meeting every while and decision to be taken about the revision of formulary¹.

EVALUATING MEDICATIONS FOR INCLUSION IN THE FORMULARY:

The P&T committee should adopt an organised, evidence-based procedure in the assessment of drugs for formulary considerations. The P&T committee should be lended with information that reflects an accurate and unbiased review and analysis of the evidence available in the scientific literature. The evaluation process should uplift objective contemplation of therapeutic and care delivery information, safe and effective medication ordering, dispensing, administration and monitoring. Evidence-based Evaluation: - addition of drugs to the formulary should reflects that the evidence-based evaluation of the relative advantages and risk of the medication has been performed, and that the P&T committee, with input from appropriate experts, has identified that the medication is appropriate for the routine use in the management of the patient population at the organization.

Types of Drug Review: There are 4 major types of drug review: new drug monographs, re-evaluation of previous formulary decisions, therapeutic class review and expedited review of only newly approved medications.

Element of a Drug-Evaluation Document: The drug assessment document should present the evidence in a manner that is consistent from medication to medication and provides all necessary facts and analysis to the P&T committee to allow for the informed formulary decisions. Document organised may vary based on the needs of the specific health system and P&T committee, but the following elements are necessary for all such documents:

- Generic and brand name and synonyms
- FDA approved information, including date and FDA rating
- Pharmacology and mechanism of action
- FDA approved indications
- Potential non-FDA approved uses
- Dosage forms and storage
- Pharmacokinetic considerations
- Pregnancy category and use during breast feeding
- Financial assessment including pharmaco-economic assessment
- Medication safety assessment and recommendations
- Use in special populations

Formulary Exceptions: Regardless of health-system settings, the formulary system should include an exception process that provide prescribers and patients with timely access to drugs that are not on the formulary but are medically necessary for the

care of the patients. Criteria for the approval of the non-formulary drugs should be developed ^{2, 4, 9}

ROLE OF PHARMACIST IN PREPARING HOSPITAL FORMULARY:

- In PTC pharmacist are of key importance in developing and governing the policies and procedures of formulary
- Chief pharmacist is sole responsible in the preparation of hospital formulary
- Pharmacist has greater responsibility of managing quality and quantity of drug where there is no compromise in the quality level
- As per the guidance and advice of PTC pharmacist shall procure, store and distribute the drug¹

CONCLUSION

Hospital formulary containing a compilation of pharmaceutical agents, elevate rationality in prescribing patterns and enhanced patient care. PTC plays a major role in development and elevating formulary system. Formulary contains complete monograph and other particular guidelines which help health care professionals to upgrade their knowledge about the drugs and prescribing patterns. Pharmacist plays a key role in making policies and procedure and development of formulary. Continuous update and operating formulary in effective manner create milestone in enhancing rationality of prescribing patterns.

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