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Short Communication

Medicines shortage in Nepal: Problems and possible solutions

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ABSTRACT

Medicines shortage is a global problem more pertinent to developing countries. In this article the authors mention the factors associated with medicine shortages, the outcomes of shortages, and probable solutions to address medicine shortages in Nepal. In a scenario of medicine shortage, the intended therapy might be replaced with alternative medicines that could be of inferior quality or higher cost or even both. This may lead to irrational use of medicines, poor patient compliance, poor outcome of therapy, increased toxicity and reduced treatment satisfaction. Timely identification of the reasons for shortage of medicines and rectifying them would help to reduce the frequency of medicines shortage and ensure a continuous supply of medicines.

Keywords: Consequences, Healthcare, Medicine, Nepal, Shortage

INTRODUCTION

Medicines are chemical moieties used for treating diseases and maintaining health. The nature of diseases in a tertiary care hospital is wide ranging, and thus their pharmacotherapy requires a variety of medicines. Availability and affordability of medicines are global problems, and people of developing countries like Nepal (a developing country in South Asia located in between China and India) are often more affected. In this modern era, along with the rapid advancements in technologies, there is emergence of various diseases and complications. Medicines have become an integral part of every life. Thus, access, availability and affordability of medicines are vital to save lives and reduce morbidity. The objective of this article is to mention the factors related to medicines shortages in Nepal and explore strategies to overcome the problem.

Health Care Facilities in Nepal

Although allopathic system is the preferred mode of healthcare, alternative medicine therapies like Ayurveda, Tibetan medicine and Homeopathic systems also exist in Nepal [1]. Apart from the government sector, people access healthcare through private hospitals (i.e. teaching or non-teaching hospitals), nursing homes, community hospitals and private clinics. Currently 20 teaching hospitals are registered with the Nepal Medical Council to train medical students [2]. In the year 2007, the Ministry of Health and Population (MoHP) formulated a three-year health plan with the theme of 'Basic Health as Human Right'. The plan was set up with 10 objectives, one of them being the availability of good quality essential drugs (EDs) to all at affordable price through pharmacy services [3]. Availability of medicines in an adequate amount is an integral part of healthcare administration. But, non-availability of medicines is a global problem and Nepal is not an exception [4-6]. Supply of the medicines to the government healthcare facilities is governed by the Logistic Management Division (LMD) and involves planning, calling for tenders, quality assurance and supply and distribution [3].

Developed countries like the United States of America (USA), Canada and many countries in Europe are also under the grip of medicine shortages which had doubled in 2013 compared to 2010. In Europe, 98.3% of hospitals had faced shortage of medicines during the past 12 months

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and the International Pharmaceutical Federation (FIP) and the Canadian Pharmacists Association (CPhA) had organised a first ever 'International Summit on Medicine Shortages' in Toronto, Canada in 2013 to discuss the responsible factors, impact and possible solutions. The summit had put forward six recommendations to reduce medicine shortages which emphasized (i) establishing a publicly accessible means of providing information about shortages, (ii) determining the list of critical or vulnerable products, (iii) active procurement processes, (iv) removing unnecessary variability of regulatory practices within and between countries, (v) investigating the potential to establish a national body charged with gathering and sharing information about demand for and supply of medicines within their jurisdiction, (vi) developing evidence-based risk mitigation strategies which might include strategic buffer stocks and stock piles, contingency planning, pandemic planning and capacity redundancy, appropriate to their national needs [4].

Shortage of Medicines in Nepal: contributing factors

Government sector: In the Government sector, medicine procurement is based on quotation and tendering process. The persons involved in medicine procurement and supply may not always have adequate management and procurement training. Furthermore, there is a lack of a specific unit within the LMD focusing on pharmaceuticals procurement and insufficient budget to purchase pharmaceuticals. Unlike the private sector, medicine procurement and distribution do not go hand in hand in the government sector; and medicines remain on hold or in storage for a considerable period of time further contributing to the shortage of medicines. Poor transportation facilities from district offices to the primary healthcare facilities (i.e. health posts, sub-health posts, and primary healthcare centres) are another problem. In addition, shortages may occur at different levels ranging from the manufacturing level to dispensing of the final pharmaceutical products [1]. The process, can be affected by the availability of raw materials, natural disaster, voluntary recall, regulatory issue, imbalance between supply and demand; problems that arise in the supply chain and healthcare system practice, and limited or single manufacturer of medicines. Thus, there is delay in medicine procurement and supply of pharmaceuticals within the Government sectors of healthcare system.

Private sector: In the private sector, delay in payment plays a major role in shortage of medicines in the hospital pharmacy and other factors are mostly similar to that operating in the government sectors. Failure to import medicines in adequate amount due to financial issues is another important reason for medicine shortage. Time lag between the clearances of medicines imported from the Indo-Nepal boarder and availability of medicines to the hospital pharmacies also lead to the shortage. Regular stock counting and analysis will help in ordering medicines in a timely fashion. Pharmaceutical manufacturers are less interested in manufacturing medicines with lower profit margins such as Digoxin, Phenobarbitone, and Atropine which leads to their shortage. Due to high competition on the same generics, the companies manufacture the medicines in limited quantities to prevent the extra dumping of the products but this may leads to shortage of that particular medicine when the same medicines is in more demand in hospitals and healthcare facilities. Generally, hospitals and community pharmacies cannot stock medicines in an adequate amount to supply medicines round the clock. In a developing country like Nepal there are few manufacturers for certain products and limited numbers of indigenous pharmaceutical manufacturers can lead to shortage of medicines.

Outcomes associated with medicine shortage in Nepal: As seen in previous studies, switching the patient to alternative medicines like ayurvedic or homeopathic system is a common practice towards dealing with shortages that leads to irrational therapy. The alternative medicines used may be of inferior quality as they lack sophisticated quality control. Sometimes, the patients may be the victim of higher cost toward the alternative therapy. This reduces the patient's faith in the healthcare system [7]. In Nepal, majority of the population reside in rural and remote areas where healthcare facilities, road transport and other resources are scarce. Moreover, people have to travel long distances to obtain medicines and sometimes medicines are insufficient in quantity. The consequences of this can be life threatening in certain conditions such as Tuberculosis, Malaria and Acquired Immunodeficiency Syndrome (AIDS). Furthermore, such cases are more prevalent in the villages of districts of the mid-western hilly region like Mugu, Dolpa and Jumla. Sometimes the providers stock more medicines to prevent shortage but this may lead to greater acquisition cost to the providers and increase the risk of expired medicines.

Management of medicine shortage: The World Health Organisation (WHO) envisioned the concept of essential medicine list (EML) in the year 1975 with the focus toward better healthcare especially for poor countries and the first EML was prepared in 1977 [8]. Nepal has followed the

concept of EML from the late 1980s and had published the first EML in the year 1986 and the current list was updated in 2009 [9]. The biggest challenge to the providers is the shortage of the medicines due to lack of systematic medicine supply and procurement system and this problem is more or less throughout the globe.

Even though Nepal had followed the concept of EML, shortage of medicines does exist, due to various reasons as mentioned earlier. To overcome such problems, Kaski district in Western Nepal introduced the concept of community medicine financing in the year 1984. The concept worked based on the minimal charges for the medicines being prescribed [10]. During the initial months, the program seemed to have a negative impact as the patient flow to the health post drastically declined but when the programme was fully implemented in the year 1988, funds collected from prescription fee from the patients was equal to the money given by the government to the health post. This initiative has shown a positive effect on the medicine budgeting in health posts.

Availability of medicines in an adequate amount at all times is important in health facilities. Knowing the reasons for medicines shortage and managing it is the ultimate solution. In the government sector, from the fiscal year 2010/11 the LMD has introduced multi annual contracts or multi layer contract with the suppliers. The advantage is LMD does not need the further approval of annual budget for last two years of contract period, generally the contract period being three years. Introduction of multi annual contracts concept increases timely arrival of medicines in the district health offices [11]. The concern about the management of medicines shortage is a global problem; therefore, the adaptation of different strategies and methods to address the situation is required. A questionnaire based management protocol was developed by Purdue University in 2012 [12] adhering to the protocol developed by American Society of Hospital Pharmacist (ASHP) for identifying reasons for medicine shortage and managing it [7]. If a country develops a system of disseminating information on medicine shortage in a timely manner, this may create awareness among the physicians before prescribing the particular medicines. Additionally, such type of timely awareness of medicines shortage helps pharmacists to stock medicines in adequate amount for future. Recently, United States Food and Drug Administration (US FDA) and European agency had adopted the concept of maintaining a web site for medicine shortage.

Conclusion

None of the stakeholders in healthcare system (from manufacturer to providers) wants the shortage of medicines. However, timely identification of contributing factors, working toward it in a timely manner to rule out the problem and being prepared for the proper alternative during shortage would be the major steps to overcome the negative impact on healthcare due to the shortage of medicines.

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