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Letter To Editor

A Cursory Look at the Pharmacy Practice and Pharmaceutical Care in the Public Hospital(s) of Bangladesh: A Case Study

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ABSTRACT: Pharmaceutical care of a country depends on overall Health system of that particular country. This sector of Bangladesh is one of the much neglected one. Objective of the study is to ascertain the status of the Pharmaceutical care provided by the Public hospital of Bangladesh. To conduct this study, we've interviewed and discussed with five pharmacy staff(s) (n=8), four nurses (n=10) ten patients (n=50), resident medical officer (RMO) (n=2) and director (n=1) of the Sirajganj Sadar Hospital along with extensive literature review. All the services and the activities of the hospital staffs was observed with great attention. Time period of the study was March 2016 to May 2016. Hospital pharmacy staff team lacks A-grade graduate pharmacist. Storage condition doesn't maintain any standard guidelines. Lack of adequate facilities, staffing, equipment's and management were observed. English Language competency of the B-grade Pharmacist wasn't satisfactory.

Key words: Good Pharmacy Practice (GPP); Pharmaceutical Care; Hospital Pharmacy; Clinical Pharmacy; Public health

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BACKGROUND

Good Pharmacy Practice (GPP) and Pharmaceutical care are intended to meet the required need in the health care system that has arisen due to the increased complexity of drug therapy and the significant level of the medicine-related morbidity and mortality associated with drug use [1]. Therefore, the introduction of GPP and pharmaceutical care is required in developing countries to aid in the resolution of medication-related problems.

Patient-centered care which provides the counseling, drug information and monitoring of the drug therapy could be the part of the GPP and pharmaceutical care. Moreover, any technical aspects of the services (i.e. supply management) could also be a part of GPP and pharmaceutical care [2]. The key role of clinical pharmacist is to provide information and usage of the medicines, promote the concept of the pharmaceutical care, and participate actively in illness prevention and health promotion, which is recognized by WHO Revised Drug Strategy resolution (1994). During the reviewing of the literatures on the evaluation of pharmaceutical care services, we identified numerous articles noting the significant positive impact that pharmaceutical care services have on health care management and health care costs in the long-term [3-8]. The services and involvements of the pharmacists in patient-centered care greatly affect health and economic outcomes, adverse effects of the medicine, quality of life, and morbidity and mortality [9, 10]. Hospital pharmacists ensure these services with proper management of medicines appropriate for

different age, sex, body weight and clinical status of the patient [11].

Due to easy accessibility and recognition as expert in public health sector, pharmacist can offer public health interventions more conveniently than other groups working in public health sector. Nonetheless, the potential for pharmacists to effect dramatic improvements in public health remains largely untapped in Bangladesh. Irrational as well as inappropriate prescribing and dispensing practices were found in several developing countries including Bangladesh. Some of the practices include wrong doses, no indication, drug-drug interactions, and polypharmacy.

Moreover, short dispensing and consultation time, and inappropriate self-medication were also reported [12-21]. Compensation for these problems is difficult due to scant research and evidence in healthcare system of Bangladesh. However, GPP and pharmaceutical care can ensure the right treatment by reducing prescription error, transcription error and adverse drug reaction [22]. World Health Organization supported the roles of pharmacist as 'seven-star pharmacist' in 1988. According to World Health Organization, pharmacist a care giver, decision maker, communicator, leader, manager, lifelong learner and a teacher [23]. These roles are often overlooked in some countries.

Objectives:

This paper contains the present scenario of Pharmacy practice and Pharmaceutical Care in a Public Hospital of Bangladesh, which is almost identical in other public and private hospitals except few. In this study, we have described current pharmacy practice in a public hospital of Bangladesh based on initial assessment, self-reported practice by pharmacists and other health professionals in the hospital, observation of hospital pharmacy practice activities and extensive review of articles and publications. We have also explored the awareness of the hospital personnel to the concept of pharmaceutical care, their willingness to implement pharmaceutical care practice, and the barriers that may limit its implementation.

Methodology

We had visited Sirajganj Sadar Hospital, Bangladesh (SSH,B), which was randomly selected, between March 2016 and May 2016. We had conducted an initial assessment of pharmacy practice activities at Sirajganj Sadar Hospital, Sirajganj, Bangladesh. This manuscript is based on that initial assessment, informal interview (and discussions), observation of hospital pharmacy practice activities in that hospital and extensive review of articles and publications.

A questionnaire was made before the observation of the hospital pharmacy practice. Queries were made in related to hospital pharmacy practice to the doctors, pharmacists, nurses and to the patients during the evaluation of the hospital pharmacy services. All the services and the activities of the hospital staffs were well scrutinized. We've interviewed and discussed five pharmacy staffs, four nurses, ten patients, one resident medical officer, and one director of the hospital. Qualitative data was collected through informal one-to-one interview and facilitated discussions, which allowed pharmacy personnel to articulate their needs and expectations. These discussions provided a structured forum for information and idea-sharing among the pharmacy staff, who were encouraged to openly communicate their experiences and opinions in their native languages.

RESULT

Pharmacy practice settings

Sirajganj Sadar Hospital is a public hospital, located in Sirajganj district, is a 200 beds secondary hospital in rural are of Bangladesh. There are nearly 250 employees including physicians, nurses, pharmacists, officers and other support staff in the hospital. Hospital pharmacy staff team lacks A-grade graduate pharmacist but two B grade diploma (3 years) pharmacists supervise two pharmacy technicians (2 years diploma) and a C-grade (certificate from BPC-Bangladesh Pharmacy Council) pharmacist responsible for maintaining the apothecary. Prior work experience ranged from one to twenty years. There wasn't any clinical pharmacist or pharmacologist either.

Hospital pharmacy of Sirajganj Sadar Hospital consists of Out-patient Pharmacy Department (OPD), In-patient Pharmacy Department (IPD), and Central Pharmacy Department (CPD), also called drug store. The CPD deals with procurement of the medicine from the vendors and distribute them to the IPD, OPD and floor stocks to the different nursing stations according to their needs and specialty. The IPD is a 24 hours service, deals with the distribution of drug to the in-patient of different floor of the hospital through floor stock system, providing pharmacy service to the patient according to the prescription written by the physician. The ward in charge (Nurse) can collect

drugs from the in charge (C- Grade Pharmacist) of CPD at any time of a day on the basis of their demand. Nurses dispense drugs to the patients according to the prescription from the floor stock. Physicians instead of hospital pharmacist maintain inventory control system and Storekeeper of the drugs is a C-grade pharmacist without having any formal pharmacy degree. Therefore, medicine distributional error may occur, as they might be unable to recognize the drugs and medicines. They even don't have any idea about "FIFO" (First In First Out) model. Other than the central drug store, sub-stores of medicine also present in the outdoor dispensary but the storage condition either in drug store or in sub-store doesn't maintain any standard guidelines. Lack of adequate facilities, staffing and equipment's were observed.

The initial pharmacy assessment revealed the need to define the daily responsibilities of pharmacy staff in maintaining a clean, clutter-free pharmacy environment, proper storage of medicines and safe dispensing of medicines, hand hygiene and pharmacy waste management. Prior to the project, no formal procedures were in place or followed within the pharmacy. Creation and implementation of SOPs (Standard operating procedure), such as pharmacy housekeeping, hand hygiene and pharmacy waste management were below standard level. Therefore, a general manual governing all pharmacy activities could have been prepared.

Washbasin was unclean with the unavailability of any towel. Using of regular shoe instead of a dedicated shoe was one of the many reasons for environmental infections in the hospital. There was no proper outfit of pharmacy staff. They mentioned that patient load is one of many reasons they cannot maintain some standards like use of surgical clothes (i.e. apron, Mask, sterile gloves etc.). Opening or crack in partition walls, window frame, tables were seen which may lead to infection. Cellular phones widely used in the pharmacy, which is another major source of infection especially when handling and dispensing medicines without washing hands. People/outsider were getting in or out from pharmacy any time. But according to standard, pharmacy should be a restricted entry of all including patients and outsider. Zone A, Zone B should have there. Along with this, traffic and/or patient flow manual should instruct where to go to get the service.

No concrete waste management system was found in the hospital pharmacy. Pharmaceutical waste such as bottles and boxes were all over the pharmacy. There was no lavatory specifically assigned for pharmacy staffs. No antiseptic cleaning provision was found.

However, positivity was reflected in the discussion that participants expressed – noting that they appreciate the opportunity to professionalize their role, even if the can work under the supervision of A-class pharmacist.

The initial assessment showed that staff knowledge and awareness of good pharmacy practice and pharmaceutical care was relatively low in the hospital personnel. According to our observation, hospital personnel use the term "dispensary" more frequently, personnel are commonly known as "dispenser or compounder" rather than pharmacist. Therefore, their job title doesn't reflect their duties at all. However, an important fact to consider is that these outlets are working mainly as medicine distribution channel and not as healthcare providers/facilities. We posit that the better the physical appearance (tangibility) of the pharmacy care service facility and the pharmacy service providers, the greater will be the patients' satisfaction.

Traditional role in Pharmacy practice

Dispensing:

The process of prescription handling is poor. The drugs dispensing is supervised by C-grade Pharmacist. During dispensing to the IPD and OPD, pharmacists only give information about how the drugs need to be administered, time to intake.

Medicines were kept in the jar or can- known as "loose medicines" could be cause of infection. On top of that, loose medicines were dispensed without labelling and proper packaging. In the past days, there was provision for strip or sachet packaging for loose medicines but over time this provision has been disappeared.

It was also found that, through unofficial channel, nurses and outsiders are collecting drugs from dispensary.

Counselling:

Ideally, A-grade pharmacist should appoint in the hospitals as principal pharmacist to receive the physician's order and perform judgmental task as well as counselling. B-grade pharmacist should available as supportive personnel to perform non-judgmental task.

It has been observed that the B/C-grade pharmacists who have passed a diploma/certificate course conducted by Bangladesh Pharmacy Council (BPC) without formal pharmacy

education have a negative attitude to dispense medicines to the patients with proper consultation here in Bangladesh. Their level of education and the understanding about medicines is not enough as an A-grade pharmacist. In a region where antibiotic resistance is a notable problem, physicians seems don't care to address the situation but what is worst that no A-grade pharmacist was available to consult the patient.

Extemporaneous preparation:

There is no facility for extemporaneous preparation in the hospital. Physicians and B-grade pharmacist is not familiar with this term. There are no qualified personnel for extemporaneous preparation in case of special case like younger, renal and/or hepatic patients.

New dimensions of pharmacy practice

Pharmaceutical care:

During the baseline assessment, which was done in close collaboration with pharmacy staff and the pharmacy technicians, both groups indicated that though they receive and fill prescriptions, they were not fully familiar with their role in good pharmacy practice in terms of drug dispensing or patient care. They had lacking in pharmacological knowledge of medication and strengthening their communication skills for effective patient education and counseling. Pharmacy staffs at public hospital were not formally integrated into clinical processes and patient-centered pharmacy practice. In the public hospitals, pharmacy staffs recognize patients as "just customers "rather than "people in their care". Even with the degree of diploma in pharmacy revealed that they've very lack in knowledge in terms of medicine dispensing and consulting patients. Limited resources and supply of medicines made pharmaceutical care more challenging.

Evidence-based pharmacy:

Hospital formulary system for Sirajganj Sadar Hospital was not well established to make right choice of medicine for a particular disease and also there is no Pharmacy and therapeutic committee (PTC). We may have different manufacturing brands around but hospital formulary will ensure only the quality brands will be available in that hospital through quality assessment. Instead of hospital formulary, B-grade pharmacists inform physicians about what medicines are available for prescribing. Drug Labeling for Medications used was inadequately done.

Meeting patients' needs

Mismatch in professional qualification between physicians and B-grade pharmacist often end up with disappointing outcomes. Improper engagement of health professionals is mainly responsible for this fragmented health interventions.

Pharmacovigilance:

Pharmacovigilance wasn't a commonly understand term to B-grade and C-grade pharmacist though there is a governmental provision of the submission of pharmacovigilance report of hospital to respective authority. Therefore, there is better opportunity to introduce A-grade pharmacist and also opportunity to improve patient care system in hospital by providing information about drug safety, adverse drugs reaction (ADR) and rational use of drugs (RUD) to all the stakeholders.

Inter-professional collaboration:

Doctors in foreign countries are well acquainted pharmacy profession and pharmacist's job in the hospital pharmacy setting, local doctors are not well aware about the capacities of pharmacist in the drug use management. However, integrating pharmacist into clinical practice, as it was unrealistic to expect pharmacists to be respected by clinicians without first equipping them with basic knowledge and resources. Therefore, hospital pharmacists do not communicate with doctors for any complication related to prescription. Inter-professional (i.e. doctor-pharmacist, nurse-pharmacist) communication gap is so high.

Continuing professional development

No framework and processes for Continuing Professional Development of pharmacists and pharmacy technicians to help pharmacy staff stay current with most effective pharmaceutical therapies and good pharmacy practices was found in the hospital pharmacy. Pharmacy staffs don't have any access to reference materials so they can sustain their ongoing learning of best practices, treatment guidelines and new pharmaceutical research. Neither pharmacy personnel nor doctors were able to tell us anything related to BDNF (Bangladesh National Formulary), though it was introduced by Government to present essential medicine list and rational prescribing guideline.

Pharmacy staffs were also introduced to reference websites such as www.bdnf.org.bd, an online version of Bangladesh National Formulary (BDNF) to use as a quick reference for questions

pertaining to the safety and use of medications. They don't know how to find information from the internet, which is a major information source now-a-days.

Observations revealed that, English Language competency of the B-grade Pharmacist wasn't satisfactory. They were unable to understand the training manual and assessment questionnaire, which reveals their incompetency in English as well as raises the question on their ability to evaluate any literature and/or document related to Pharmacy.

The patient's (n=50) viewpoint:

Patients at Sirajganj Sadar Hospital responded that their experience at the hospital pharmacy is not "very good". Initial assessment showed that before the training program pharmacy personnel would spend an average of 0.47 minutes per patient.

In addition, the patient exit surveys also showed that only few patients were satisfied and/or understood what they were suggested. The patient surveys also revealed that the vast majority didn't know anything about the duration of their treatment. Before training, almost all of patients stated that they were not aware of any potentially serious side effects of their medication(s) and drug-drug and/or drug-food interaction.

Patients were suffering from lack of information. Patients didn't understand their prescribed drug therapies which together with insufficient labelling may help patients to forget about the dose and dosing interval.

The present study identified infrequent contact of the patients with physicians and pharmacist in relation to information about drugs; this may be due to their lack of confidence in the B-grade pharmacists' abilities or doctors are too busy to give them information prescription related to medicine.

Physician's viewpoint:

Doctors should engage with diagnosis of a disease but unfortunately, they had to spend more time for prescription writing rather diagnosing the disease. Patients are dissatisfied over doctors due to less information on prescription. Though patient load explains the reason but performing almost all the jobs in the hospital, they're administrator, they do diagnosis, prescribing, purchasing, procurement, consultation and what not keep them busy. As a result, neither of them are satisfactory. Some of the health professionals confirmed that the critical factor for success depends on having hospital management's strong support and agreement of top level administration.

Instead of pharmacists, pharmaceutical company representatives often subject doctors to promotional pressures. In addition to that, commercial information often emphasizes only the positive aspects of the products and doctors may not be informed about the negative sides.

Nurses' viewpoint:

This observation revealed that the nurses were not aware of the right way of reconstitutions and dilutions technique of powder for injections which may cause serious adverse drug reactions (ADR's) along with burning, phlebitis sensation to the patients due to presence of undissolved medicines. Pharmacist can provide proper guideline on how to dilute a powder for injection before administration to the patient. As most of the nurses of the country do not have a clear idea about unit dose system, pharmacist can educate them about the system.

CONCLUSION

Hospital pharmacy is still in its early stage of development in the Bangladesh. Therefore, it requires greater attention to achieve the objective of pharmaceutical care. Pharmaceutical care is regarded as an important component of hospital pharmacy practices but it has been ignored by the stakeholders and researchers in Bangladesh. They fit well within the context of health-system strengthening. An opportunity exists to advance patient care and raise the level of performance in hospital pharmacy practice. Hospitals pharmacists are still serving as compounders rather than a counselor [25]. This field of pharmacy practice in Bangladesh focuses on product-oriented rather than patient-oriented service, production oriented rather than consumption oriented, industry oriented rather than hospital oriented. In terms of pharmaceutical care, certainly we have to go a long way towards fulfilling the right to health in Bangladesh.

The nation is still deprived from the services of qualified hospital pharmacist. The country has to consider, plan and open gateways to utilize its most skill manpower of the pharmacy discipline, to ensure quality pharmaceutical services toward the patients. Bangladesh should adopt policies and strategies to utilize A-grade pharmacists in the Health Care and public health interventions by following the guidelines adopted by International Pharmaceutical Federation (FIP) and World

Health Organization (WHO) [26-28] for developing countries.

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