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Review Article

Pharmacists in Dental Care Services

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Abstract

Background

Health care continues to advance and improvements in quality of patient-centered care can be made through inter-professional association among different disciplines. The interrelationship of pharmacists and dentists has been underutilized worldwide; as team work the two professions can enhance patient care and safety.

Method

Keeping in view regarding the interrelationship of pharmacists and dental care professionals, literature was searched in Google Scholar and PubMed databases from the year 2010 to 2020.

Result

To enhance the practice of the respective professions for the betterment of patients in the community, the linkage gaps between the professions of pharmacy and dentistry should be identified and the scope of two professions be bridged to see an escalation in patient safety, satisfaction and general wellbeing.

Conclusion

In order to remove gaps in medical care, it is vital that partnerships be nurtured and established among health care professionals. This teamwork would deliver a complete care tactics to patients, thereby enhancing best patient care.

Introduction

The practice of pharmacy is segmented in various settings like community, industrial, hospital, clinical, government services, education, wholesale, retail, drug information, journalism, organizational management etc. Pharmacists have been performing as drug compounders and dispensers since long. They are also entrusted for involvement in drug selection, utilization, drug procurement, distribution and maintenance of proper records. Apart from this, the practice of pharmacy includes delivery of drug information regarding their therapeutic use and risks and patient counseling on use and misuse of drugs. Due to their involvement in assuring rational use of drugs, the need of pharmacists is greater than before as the population surges with more utilization of available health facilities [1].

Dentistry is related to the health of the mouth, head and neck. A dentist is responsible for the diagnosis, treatment, care and management of diseases affecting these anatomical parts; the scope of dentistry also includes malformations of oral and jaw structures, effects of chronic and genetic disorders and surgical procedures like correction of cleft lip and palate. Dental practice is a vast field and in many parts of the world the potential of pharmacists is yet to be realized that may contribute to more successful dental and oral health care [1].

There are limited instances in practice of inter-professional models between the disciplines of pharmacy and dentistry though the partnerships between dentists and pharmacists have the potential to improve patient care [2]. Although both disciplines have unique challenges yet there is room for improvement if both work in collaboration. This can be achieved if they want to work in partnerships, have mutual respect and have an understanding of each other's roles and responsibilities [3,4]. Limited physical interaction with other professionals is an important obstacle for both professions [5].

Literature Search

Literature was searched in Google Scholar and PubMed databases from the year 2010 to 2020 using the terms role of Pharmacists in dentistry.

Result

Dental professionals rarely consult a pharmacist on a professional basis; it only happens probably if it has to do with availability or cost of drugs. The hospital formularies usually do not contain preparations relevant to dental practice [1]. Dental patients usually have comorbidities and take many medicines, some of which could affect their dental treatment and health. A dental visit can be the first line of defense for early detection, treatment, and prevention of both oral and systemic diseases [2].

A pharmacist in dental settings can play an important role in the documentation and evaluation of a dental patient's medication history upon their dental visit and also towards general health. The medication therapy management services by the pharmacists can include identification of drug-related problems and dental inferences of medicines, disease state and medication counseling, medication reconciliation and recommendations for prescribed medicines. Such patients are often encountered by the dentists whose current medications may influence dental treatment, together with the choice of prescribed medications i.e. tooth loss and periodontal disease are common conditions amongst the elderly population that are often due to or worsened by, patients' medication regime [6]. A review of literature demonstrated lacking in partnership between the two professions despite of recognized benefits of pharmacist-dentist inter-professional relationship [2, 7-14].

Discussion

A common patient care approach is shared by both dentistry and pharmacy, as they focus on the physical body and are directed by evidence-based interventions [4]. Discussions between dentists and pharmacists focused on patient cases offer a tremendous prospect for mutual association. An important incongruity between these two professions lies in patients' accessibility to their services. Unlike pharmacists, dentists are generally available only by appointment. This is principally momentous for the patients who cannot access to oral health providers and hence look for community pharmacists for their oral health concerns [15,16]. Oral health preventive services like oral cancer prevention can be assisted by the pharmacists through counseling on tobacco termination and proposing therapeutic commendations to help quitting it [17].

Pharmacists chiefly focus on the use of medications for overall health and the main job of dentists is to focus on the health of the oral cavity; yet, both have responsibilities for the complete improvement of patients' health, diagnosis of disease/ disorders, disease prevention, treatment and monitoring of diseases/ disorders and safe use of medications [18,19]. The outcomes would be improved and more effective patient care regarding medical and medication histories, pain management, prevention and management of infections and management and referral of patients. Emergency medical situations can be tackled and may be more readily resolved if resources and capabilities are mutually utilized [5]. A dentist can, for example, request a pharmacist to make a formulation with particular ingredients, consistency and other physical features that is unavailable in the marketplace. Pharmacists can also play their part in matters relating to dental health of community i.e. provision of information to combat dental caries with dentifrices, oral hygienic methods in periodontal diseases and caries and dental inferences of halitosis. Pharmacists vend toothbrushes, water propellant mechanical devices, toothache drops and analgesics, dentifrices, etc. so they can properly advise

the users about these substances, and can also refer to a dentist if necessary. The diseases of the mouth and jaws are cured by several medications, some of which are in a dental/oral specific formulation, but those are mostly commonly used somewhere else [20,21].

The drugs most commonly used in dentistry are antibiotics, analgesics, hemostatic agents, anesthetics, antihistamines, mouthwashes etc. A dentist may prescribe medications that may have potentiating, antagonizing or synergizing effects with over-the-counter drugs or with the medications prescribed by another physician. Taking this in consideration, it is essential to have appropriate information on the rational choice and use of drugs, drug-interactions and adverse drug reactions. Therefore, the pharmacists, being drug experts have a big role to play in dental practice. Furthermore, the pharmacists can provide information regarding drug availability, cost, newer drug products and the best preparations available. There are many formulations used in dental practice that can be and are extemporaneously prepared in dental laboratories by dental technicians. Still, the services of pharmacists can be utilized to complement or assist in compounding and dispensing of less readily accessible formulations for dental use [1].

As best practice, the dentists should attain a comprehensive medication history and assess possibility for drug-drug or drug-disease interactions, adverse effects on the oral cavity and related structures, drug dependence, and antibiotic resistance [7]. Drug interactions usually faced by dental experts embrace non-steroidal anti-inflammatory drugs with antihypertensive agents, antibiotics with cytochrome P450 enzyme inducers or inhibitors, sedatives with central nervous system depressants, vasoconstrictors with nonselective β-adrenergic blocking drugs, antidepressants with sedatives, and antiplatelet, analgesic, and anticoagulant drugs with dental management [20-25]. Dental training normally does not embrace a thorough emphasis on pharmacology and/or pharmacotherapeutics that would permit dentists to generally detect and address such interactions. Nevertheless, pharmacists can support the dentists for such challenges [26].

Pharmacists and dentists can have a two way communication to update each other on new drugs and preparations. Community and hospital pharmacies can be part of dental public health groups where they may contribute in different public campaigns and education about dental and oral care. Pharmacists are easily available to patients than other health providers and require no consultation fee so they are closer to the patients [1]. To enhance patient care, different collaborative inter-professional models have been established with the aim of employing different roles and responsibilities of dentists and pharmacists. The main concerns in making these models are physical vicinity of the dental practice and the pharmacy, and nature of the patient groups attending these facilities. A durable collaboration between dental practice and pharmacy could be developed if they are in close vicinity and offer care to a sound number of the same patients. Several factors are considered in establishing such inter-professional combined practice models. The first would be the development of agreements/ documents pertaining to the roles and responsibilities of health providers along with the development of protocols for patient care and/or referral. The progress of these activities should be monitored, issues resolved and improvements made where necessary. Periodic meetings between the associates would be very valuable in monitoring and improving the collaborative strength. Input from patients 'side as feedback would also be useful [26].

An important challenge of such collaborative practice models exists in terms of monetary budgets for their development and recognizing the particular groups that will be covering the expenses. Although an ideal model would be to place dentists and pharmacists in the same physical setting, but this is not feasible for the majority of experts; also it is challenging to explain for the added costs that having a pharmacist in a general dentistry practice would ensue. Nevertheless, developing agreements between dental and pharmacy practice would be a feasible method to initiate dynamic inter-professional association between these specialists [26]. A study in 2015 reported that pharmacist-compiled medication histories recognized therapeutic duplications, medication omissions, and/or errors in dosages and directions in approximately 90% of dental medication records [27]. It is well-established that as compared to non-pharmacist healthcare professionals, the pharmacists get higher quality medication histories, more complete listing of all drugs used by patients and with less error [28-35]. Moreover, pharmacists in the dental clinic setting can provide medication therapy management services and update the dentists and staff on evidence-based strategies and suggest self-care products for promoting good oral well-being [7, 36].

Conclusion

In order to remove gaps in medical care, it is vital that partnerships be nurtured and established among health care providers. With the application of a seamless method that helps in the management of oral illnesses by dentists and pharmacists in a patient-centered approach, it would be likely to see an escalation in patient safety, satisfaction and general wellbeing. This teamwork would deliver a complete care tactics to patients, thereby enhancing best patient care.

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