**The Role of the Nurse in Quality and Patient Safety**

**Introduction**

This paper highlights the dangers of allergies according to Nation Patient Safety Goal (NPSG) standards. Allergies are chronic conditions which are indiscriminately dispersed worldwide. The associated symptoms range from mild to life-threatening.  Allergic reactions begin in the immune system, when the immune system overreacts to an allergen, causing the production of immunoglobulin E (IgE) antibodies, which travel to histamine-releasing cells causing the release of histamine among other chemicals which instigate an allergic reaction (Dhaini et al., 2016). The occurrence of hypersensitivity responses to foods which have some specific proteins has borne significant clinical challenges. These allergens are conserved in plant and animal species. Molecular biology studies have elucidated the characteristics of these allergens, whereas clinical studies have been left behind. This document determines the risk of allergic reactions to a variety of plant-derived foods which might share proteins with latex and pollens (Canonica et al., 2014). The goal is the provision of background for improved risk assessment and a framework through which the clinical issues raised by allergies can be approached.

**Clinical Problems Caused by Allergies**

Allergies occur when the immune system reacts to a harmless substance. Atopy is a condition which leaves individuals prone to allergic reactions. The condition is genetic. Allergies leave inflammations from immune system reactions, which then causes allergic rhinitis, conjunctivitis, eczema, hives or asthma. Of note is that an allergen does not cause allergic reactions to everyone.

In healthcare centers, the dangers of causing allergic reactions are high. This is so because of the use of Latex based gloves in performing procedures, as a safety measure for both the patient and the healthcare professional. Worthy of note is the nature of latex gloves. The material used to design the glove is a plant-based rubber, which contains some proteins which might trigger potential allergic reactions. Some medications as mentioned also cause allergic reactions because of the ingredients in the medicine (Canonica et al., 2014).

**2018 National Patient Safety Goal**

NPSG.01.01.01 indicates the methodology of proper tagging. Under this goal, patients are required to be tagged using their names, and dates of birth, to ensure the correct medication and treatment is given to them (Fenner, 2018). Hazard to patient safety is prevalent in case of a mismatch between a patient and the medication intended for their care. Medication errors, wrong site procedures, transfusion errors, or diagnostic errors may occur when tagging is done incorrectly. The commission has standardized the process of identifying patients, to enhance safety and allow healthcare professionals to proceed to deliver clinical care to patients avoiding mistakes which at times are deadly (Fenner, 2018).

**Process Improvement Tool**

*Figure 1.*

The process improvement tool is used to evaluate the quality of healthcare given at each point in the cycle. The proper identification of patients is core to the appropriate evaluation of each step in the improvement tool. NPSGs outline the importance of identification and indicate it as the first step. Throughout the process, there is identification and monitoring of other factors regarding a patient’s health, which require updating to the patients’ health record. Improper identification could lead to improper diagnosis, treatment, return checkup and premature discharge, or improper admission of patients (Dhaini et al., 2016). The Joint Commission allows for nurses to modify their identification practices to allow better identification for improved diagnosis. Following the identification of a patient prone to certain allergens present, nurses should identify the patient specifically to allow treatment without complicating the patients’ health condition further.

In summary, proper identification assists with the appropriate diagnosis. Adequate diagnosis improves treatment and reduces chances of follow up treatment procedures. Fair treatment and follow-up increase chances of successful recovery and discharge of a patient. All these factors are dependent on the accuracy of identification.

**Literature Review**

Allergic reactions trigger various symptoms in the nose, throat, lining of the stomach, sinuses, lungs, or the skin. In some cases, these reactions trigger asthmatic responses (Regezi, Sciubba, & Jordan, 2016). Anaphylaxis is a deadly situation caused by allergic reactions. Common allergens include; food, dust, pollen, insect stings, animal dander, mold, medication, and latex. This assessment indicates the clinical implications of this situation, and the role of nursing in the prevention of hypersensitivity. Non IgE induced allergies are also present in food protein allergies, increasing the difficulty of identifying potential allergens to susceptible patients. Enterocolitis (FPIES) is among the most severe food protein allergens which could pose a potentially deadly allergic reaction to a victim. Clinical outcomes are insufficient to mitigate affliction (Nowak-Węgrzyn et al. 2017)

A health research revealed latex to be a prevalent cause allergic reactions to susceptible patients, and the public. The findings revealed that high a number of latex products were not approved by regulated government agencies, and only a handful were labelled as containing latex. These findings reveal the increased risk of exposure to latex based allergens. The development of alternative materials for use which were free from latex was the recommendation from this research. Additionally, the development of better process improvement tools which would suffice in mitigating contact with latex be implemented in health care systems (Wu, McIntosh, & Liu, 2016).

Additionally, the shortcoming of preclinical toxicology to forecast idiosyncratic reactions, and the possible mitigations to this phenomenon. Hepatotoxicity presents an unprecedented challenge in clinical drug development of drugs, which causes the failure of drugs in development, their withdrawal from markets, and change in labeling or limited usage. Idiosyncratic reactions occur as allergic or non-allergic in small clusters of individuals, with the culmination of conditions such as fever, eosinophilia or development of a rash.

The Joint Commission advocates for healthcare institutions to modify their practices in line with the laid down regulations on the provision of quality and safety to patients, to enhance accountability and improve the care given to patients. This provision encompasses the proper identification of patients, to ensure that they receive the medication which they were intended to receive (Fenner, 2018). As identified earlier, latex is a trigger for allergic reactions for some patients. As a result, proper identification enables procedures over such patients using non-allergic alternatives, thereby improving the quality of service and promoting safety. As well, the appropriation of food within the hospital wards to admitted patients will be keen on avoiding allergen exposure to such patients (Dhaini et al., 2016). All these points to the importance of the NPSG 01.01.01, which was placed first in the safety goals. In cases of patients with allergic reactions, proper identification becomes paramount. Failure to adhere to the standards set by the NPSG could expose a patient to a potentially life-threatening situation. This is so due to the severity of allergic reactions, and the rapid nature of the hypersensitive responses.

The process improvement tool is intended to address the imperfections of human error. By continually improving the administrative procedures as described by the Joint Commission, health care centers will be able to achieve high levels of client satisfaction. In the process, nurses can identify errors in identification, through continuous monitoring of the patient throughout the treatment process. The process tool necessitates the repeated use of a patients details throughout each process, to ensure consistency with the patient whether conscious or unconscious at the time of admission. In the diagnosis phase, patients are examined for potential allergies, known and unknown to them, before preparation for treatment.

**Conclusion**

A better understanding of the clinical indicators of idiosyncratic drug reactions could assist determine hepatotoxicity where there is the absence of an experimental specimen. The extent to which the mechanisms of toxicity are dug specifically is hindered by a lack of knowledge, due to the rarity of the situation, and the isolation of cases under which they occur. On the other hand, the mechanism of hepatotoxicity of paracetamol in animal models could be used as a base to establish idiosyncratic toxicity in humans. The NPSG goal to improve the monitoring of high-risk patients prone to allergic reactions should include the provision of allergy indicators on the patient tags, to highlight the danger a patient face in the presence of certain elements. The incorporation of technological solutions to enhance indication of allergy-prone individuals should be done, with the use of RFID or other biometric machines. Such measures will effectively eliminate patient identification errors and mitigate unintended allergic reactions.

**References**

Canonica, G. W., Cox, L., Pawankar, R., Baena-Cagnani, C. E., Blaiss, M., Bonini, S., & van Wijk, R. G. (2014). Sublingual immunotherapy: World Allergy Organization position paper 2013 update. *World Allergy Organization Journal*, *7*(1), 1.

Dhaini, S. R., Zúñiga, F., Ausserhofer, D., Simon, M., Kunz, R., De Geest, S., & Schwendimann, R. (2016). Care workers health in Swiss nursing homes and its association with psychosocial work environment: a cross-sectional study. *International journal of nursing studies*, *53*, 105-115.

Fenner, K. (2018). The Joint Commission’s Hospital National Patient Safety Goals for 2018.  *The Joint Commission*. [online] Available at: https://www.compass-clinical.com/the-joint-commission-national-patient-safety-goals-for-2018/ [Accessed 31 Aug. 2018].

Nowak-Węgrzyn, A., Chehade, M., Groetch, M. E., Spergel, J. M., Wood, R. A., Allen, K., ... & Whitehorn, T. B. (2017). International consensus guidelines for the diagnosis and management of food protein–induced enterocolitis syndrome: Executive summary—Workgroup Report of the Adverse Reactions to Foods Committee, American Academy of Allergy, Asthma & Immunology. *Journal of allergy and clinical immunology*, *139*(4), 1111-1126.

Regezi, J. A., Sciubba, J. J., & Jordan, R. C. (2016). *Oral pathology: clinical pathologic correlations*. Elsevier Health Sciences.

Wu, M., McIntosh, J., & Liu, J. (2016). Current prevalence rate of latex allergy: Why it remains a problem? *Journal of occupational health*, *58*(2), 138-144.