

Week 9 Assignment: Improvement tool kit (Google Sites)

I. Preventing medication errors:

Mutair, A. A., Alhumaid, S., Shamsan, A., Zaidi, A. R. Z., Mohaini, M. A., Al Mutairi, A., Rabaan, A. A., Awad, M., & Al-Omari, A. (2021). The Effective Strategies to Avoid Medication Errors and Improving Reporting Systems. *Medicines (Basel, Switzerland)*, 8(9), 46. <https://doi.org/10.3390/medicines8090046>

This article describes different effective strategies that help in avoiding errors and further improving the reporting systems of the organization. This article is mainly based on improving the reporting systems of the organizations. Many nurses could not report any errors or incidents due to fear of judgment and punishment. This paper discusses different ways through which nurses should report, like the introduction of communication channels. Most importantly, the environment of the departments is a crucial element in this aspect; the authorities and nurse leaders should emphasize a growing environment where the nurses will feel comfortable reporting any errors. This resource will help nurses prevent medication errors, which are a potential patient safety risk, and implement effective patient care. Nurses, as the role group, can use these resources when they observe that the organization in which they work is not a comfortable zone for reporting errors, and there is always an existing fear of punishment.

Hamad, M. M. E., & Bah, S. (2022). Impact of Implementing Electronic Health Records on Medication Safety at an HIMSS Stage 6 Hospital: The Pharmacist's Perspective. *The Canadian journal of hospital pharmacy*, 75(4), 267–275.

<https://doi.org/10.4212/cjhp.3223>

This article contains an experimental case study based on Royal Commission Hospital, Saudi Arabia, where researchers observed the impact of introducing Electronic Health Records (EHR) in preventing medical errors. This study proves that the use of electronic health records (EHR) has reduced the rate of medication errors per patient and also increases the rate of error detection. Through this study, nurses can understand the impact of EHR in preventing medication errors, which is a potential patient safety risk. Nurses can use this data when they need to implement a change in their system by introducing the use of electronic health records, which will further improve the safety and the quality of care delivered. Electronic health records have various benefits other than the prevention of medication errors. Nurses can use these benefits and improve patient care. When the organization does not have EHR access, in these situations, they can use this resource to implement change.

Tu, H. N., Shan, T. H., Wu, Y. C., Shen, P. H., Wu, T. Y., Lin, W. L., Yang-Kao, Y. H., & Cheng, C. L. (2023). Reducing Medication Errors by Adopting Automatic Dispensing Cabinets in Critical Care Units. *Journal of medical systems*, 47(1), 52.

<https://doi.org/10.1007/s10916-023-01953-0>

This study contains an experimental case study conducted at the ICU of the National Cheng Kung University Hospital, Taiwan, which compares the rate of medication errors before and after the implementation of automated dispensing systems. This study proves

that medication errors were reduced after the introduction of automated dispensing systems because the filling of the prescription, dispensing medications were all done by this cabinet, and thus manual work was not necessary. Nurses can understand how the automated dispensing system helped in reducing medication errors, and they can implement this strategy in their organization to prevent medication errors after reviewing and reporting to the higher authorities. This study can help nurses emphasize policy changes in the organization.

Alamer, F., & Alanazi, A. T. (2023). The Impact of Smart Pump Technology in the Healthcare System: A Scope Review. *Cureus*, 15(3), e36007. <https://doi.org/10.7759/cureus.36007>

This article is a review article from various resources that presents the negative and the positive impacts of the smart pump use to prevent medication errors. Even though it has been proven that smart pump use can help in preventing Medication errors but without any proper training of the nurses with the smart pump, significant negative effects may arise. Nurses should be properly trained before working with smart pumps, or it can cause potential errors in the system. Nurses can use this source to understand the use of smart pumps in preventing medication errors. They can use this source to properly train the nurses about smart pumps and implement this strategy in the prevention of medication errors.

II. Team safety and personal improvement:

Deswal, H., Mittal, N., Kaushal, J., Kumar, S., & Kaushik, P. (2024). Empowering Nursing Students to Prevent Medication Error-Related Harms: A Step Toward Improving Patient Safety. *Hospital pharmacy*, 59(3), 310–317. <https://doi.org/10.1177/00185787231213806>

This article contains an experimental case study that suggests proper training of nurses to prevent medication errors. It suggests that lifelong learning and involvement in training programs can help nurses implement strategies through which medication errors can be prevented. Even though this study is based on student trainees, it shows the importance of proper training. A proper training in aspects of concentration, professionalism, and knowledge about medicines is important for nurses to administer the proper dosage of medications in the assigned time. Nurses can use this information to understand the importance of training and should participate in training programs organized by their organizations. They can use this resource in the organization where training programs do not take place and take advantage of it to introduce training programs, which will not only improve their professional skills for personal development but also increase their communication skills.

Tsegaye, D., Alem, G., Tessema, Z., & Alebachew, W. (2020). Medication Administration Errors and Associated Factors Among Nurses. *International journal of general medicine*, 13, 1621–1632. <https://doi.org/10.2147/IJGM.S289452>

This is an experimental case study based on an organization in Ethiopia, which represents the role of nurses in causing medication errors. This study provides evidence-based data which shows how lack of training, lack of professionalism, poor communication, lack of

medication guidelines, and interruption during medication administration can lead to medication errors. Nurses can use this article to understand about different factors that contribute to medication errors and understand the importance of changes in a nurse's behaviour. This article can be used when they observe that lack of training is causing medication errors to properly train the nurses and make them understand the guidelines for safe medication administration practice.

Sharma, L., Prakash, A., & Medhi, B. (2024). Ensuring medication and patient safety for better quality healthcare. *Indian journal of pharmacology*, 56(6), 375–378.

https://doi.org/10.4103/ijp.ijp_109_25

This study is based on how Indian healthcare systems handle medication errors. This study is based on how nurses can learn from medication errors, which they can use for personal development. Medication errors are really common nowadays, and this study contains approaches through which medication errors can be prevented and nurses can learn from them so that it is not repeated. Nurses need to recognize their impact on medication errors, and through this study, they will recognize and learn from their impact on how their lack of training contributes to medication errors. Nurses would be able to understand the impact of their behaviours, which contribute to medication errors, and through which they will be able to reflect on their behaviours and improve them to reduce medication errors, which is a potential patient safety risk.

Gemmete J. J. (2024). Learning from medical errors. *CVIR endovascular*, 7(1), 8.

<https://doi.org/10.1186/s42155-023-00406-6>.

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III. Factors leading to medication errors

Al Shamsi, H., Almutairi, A. G., Al Mashrafi, S., & Al Kalbani, T. (2020). Implications of Language Barriers for Healthcare: A Systematic Review. *Oman medical journal*, 35(2), e122. <https://doi.org/10.5001/omj.2020.40>

This article is based on evidence-based studies that prove how language barriers have an impact on healthcare. This article suggests that language barriers can cause potential patient safety risks due to miscommunication. Miscommunication between the medical professionals and the patient is common due to language barriers and gives rise to medication errors. It mentions that many organizations have interpreters through which this miscommunication can be solved. Nurses can use this data to learn how language barriers impact medication errors and how they should be resolved. Nurses can use this resource when they observe that there is a potential language barrier among the patients or the staff and implement strategies through which this can be resolved.

Rasool, M. F., Rehman, A. U., Imran, I., Abbas, S., Shah, S., Abbas, G., Khan, I., Shakeel, S., Ahmad Hassali, M. A., & Hayat, K. (2020). Risk Factors Associated With Medication Errors Among Patients Suffering From Chronic Disorders. *Frontiers in public health*, 8, 531038. <https://doi.org/10.3389/fpubh.2020.531038>

This article is based on patients suffering from chronic disorders and the effect of medication errors in their health. The main objective of this article is based on the risk factors which are associated with patients suffering from chronic disorders and the effect of medicine errors in their health. Nurses can use this resource to understand how they should take care of patients who have chronic disorders and always be careful with

administering medications. Medication errors will cause severe side effects and health disparities in people with chronic disorders. Nurses can use this resource when they are caring for patients who have chronic disorders and also implement ways through these patients should be cared to prevent medication errors.

Hawkins, S. F., & Morse, J. M. (2022). Untenable Expectations: Nurses' Work in the Context of Medication Administration, Error, and the Organization. *Global qualitative nursing research*, 9, 23333936221131779. <https://doi.org/10.1177/23333936221131779>

This study contains different factors through which medication errors occur in an organization, and the importance of nurses to identify these factors is also mentioned. Through this study, nurses can understand different factors and behaviours that cause medication errors. This study also contains different strategies through which nurses can identify medication errors and implement changes according to their needs. Nurses can use this resource when they want to identify how their behaviours are causing medication errors and use the to implement changes through which medication errors can be prevented.

Alandajani, A., Khalid, B., Ng, Y. G., & Banakhar, M. (2022). Knowledge and Attitudes Regarding Medication Errors among Nurses: A Cross-Sectional Study in Major Jeddah Hospitals. *Nursing reports (Pavia, Italy)*, 12(4), 1023–1039. <https://doi.org/10.3390/nursrep12040098>

This study focuses on the contribution of medication errors to the global mortality rate. This study mentions that people die from medication errors more than from any other accidents. Nurses can use this data to understand the global burden of medication errors

and implement changes as required for safety and quality improvements. They can use this data in organizational meetings to show how medication errors are affecting the global mortality rate and the importance of changes in their organization.