Common Causes for Medicine Errors and Their Potential Solutions

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In the medical community, medicinal errors have the most severe consequences and the simplest solutions. Medicine errors "occur when prescription decision(s) or…writing results in a reduction of treatment effectiveness or increases the risk of harm compared to the accepted practice" (Weldemariam et al., 2020).

Identifying Common Medication Errors

Medication errors can be broken down into two categories: human error and orginizational error. Human errors are considered managable but ultimately unavoidable. When a medication is first prescribed, the biggest problem is illegible and incomplete prescriptions from the provider. "A study done by Winslow et al. concluded that 20.2% of prescription orders were illegible or readable with effort" (Weldemariam et al., 2020). Illegible prescriptions are one of the most common and avoidable causes for medication errors. Another form of human error comes when the wrong patient is given the wrong medication. Although simple, this mistake can be massively destructive to the human body. Along the same context, patients can cause a medication error in themselves when they are uneducated about their prescriptions. Organizational errors are physical attributes a prescription has that could cause confusion. One example of this is packaging and medication name similarities otherwise known as look-alike, sound-alike errors or LASA errors. Medication name similarities is a problem that crosses linguistic, cultural, and international borders. A few examples of conflicting drug names were recorded and listed as follows: "cefuroxime-cefotaxime-ceftazidime, doxorubicin-daunorubicin-idarubicin and carbamazepine-oxcarbazepine-carbimazole, as nonproprietary names and Adderall®-Inderal®, PD-Mox®-PD-Rox®, Clomine®-Clozine ®,

Bioclox®-Biodoxi® and Zyrof®-Zyrop®, as brand names" (Lizano-Diez et al., 2020). Another simple yet dangerous organizational error is the storage of similar medications in close proximity to each other. These medications could be easily confused and therefore have a higher risk for error. Packaging similarities can also cause organizational errors—especially when compounded with name similarities and close storage proximity. It is important for medications to be communicated correctly from provider to pharmacist to patient as well as clearly named, labeled, and stored to minimize the risk for medicine errors and maximize patient safety.

Identifying Possible Solutions to Common Medication Errors

Many interventions have been proposed and implemented in an effort to reduce medicine errors. Prescription illegibility can be helped with the use of electronic prescriptions and also by increasing the penmanship standards in order for prescriptions to be filled. Giving the wrong medication to the wrong patient is a concerned that has been addressed by many professional institutions around the globe. The use of two-factor identification paired with an advanced bar code system helps ensure that the right medications are being administered to the right patient. Another human error intervention that has been studied and published in the Journal of Public Health Research proposed that "an appealing education alternative, such as video, is needed to improve patient's knowledge and attitudes" (Ratri et al., 2020). With an audiovisual educational intervention, patients have been found to be more receptive, understanding, and successful with and about their medications. When considering organizational errors, medications referred to by both their generic and brand names tend to be confused less often. There have also been international efforts to monitor medicine naming such as the "the European Medicines Agency (EMA)…(which) ensure(s) that the names of these innovative medicines do not generate

conflicts in any countries." (Lizano-Diez et al., 2020). Similar efforts have been made to ensure medicine packaging is not too similar. Storage of medications that resemble each other should be carefully considered by every professional institution. Physically separating LASA medications into different drawers or shelfs as well as implementing a bar code verification system helps ensure that the right drug is going to the right person, at the right time, in the right way, and in the right amount.

The Healthcare Team and Their Responsibility in Preventing Medication Errors

When considering medication errors, nurses are the frontlines for patient care and safety. Because of their unique position, nurses function as a bridge between the provider and the patient. Each member of the healthcare team has a vital "role…in the identification, prevention and reduction of medication errors (ME)" (Lizano-Diez et al., 2020). The first line of defense for medication errors is to practice a read-back technique when communicating with the prescriber. Reading-back the prescription order is an effective tool to ensure the order was received as intended. Another effective intervention to prevent medication errors is to question orders that seem abnormal. If an order needs to be called into question, it is the responsibility of everyone on the healthcare team to ensure that order gets addressed to avoid the potential for human error and patient harm. The final and last resort in preventing medicine errors is to report any errors that almost or did occur so that the appropriate measures can be made to prevent the same mistakes from happening in the future. Patient safety is an ever-evolving practice. New ideas, interventions, and policies are constantly coming into fruition as the healthcare industry makes strides to recognize and prevent hazards from happening. With the implementation of safer

identification, communication, organization, and education, medicine errors can be greatly reduced in the healthcare industry.

References

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