Term paper on medication errors

Health & Medicine, Drugs

Abstract

Medication errors is a more common situation that imagined. With 1. 5 million American sickened, injured or killed annually, due to medication errors, it is essential that we move forward with a solution that could save people’s lives and the nation’s extra $3. 5 billion in medical costs. Medication errors occur for various reasons, mainly due to dose mix-ups, harmful drug interactions and unclear prescriptions, during the prescribing medication process and during patient transitions. Good news is that all medication errors can be prevented with proper measures and education for both health care providers and patients alike. A win-win, two-way sided partnership between health care providers and health care could become an effective means to help eliminate medication errors. However, it takes more than good will. Governments need to provide the necessary IT infrastructure, among others, that prescribers can utilize and decide on proper medication.

Almost everybody living in our times has taken medication at some point of their life. According to estimates, about four in five Americans will be prescribed with medication, either it includes over-the-counter drugs or any other drugs, in any given week (Institute of Medicine, 2006). Even though the majority of the medication prescribed is beneficial, there are times when they cause injury to the people taking them (Institute of Medicine, 2006). Injuries caused by medication are generally called “ Adverse Drug Events” (ADE) and are usually contributed to harmful side effects of the drug used; in these cases injuries are inevitable (Institute of Medicine, 2006). However, there are cases when injuries occur due to medication error, whether a drug is prescribed wrong or because medication is taken incorrectly (Institute of

Medicine, 2006). Of course, in these cases damages are nothing but inevitable; they can definitely be prevented.

According to the National Coordinating Council for Medication Error Reporting and Prevention, medication error is defined as “ any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer” (nccmerp. org). Some of the aforementioned events could be related to health care products, professional practice and systems and procedures that include prescribing, product labeling, dispensing, order communication, packaging, administration, education and nomenclature, among others (nccmerp. org). In other words, medication error is a failure of breakdown in the medication use process, at any point. For example, problems arise when a patient does not follow their doctor’s instruction as per the prescribed drug, or when one needs to choose which drug to prescribe, order, dispense, administer and monitor after its prescription and use. Medication errors may seem uncommon; yet, statistics and facts surprise.

Wondering why medication errors occur, the National Priorities Partnership, a partnership of 52 major organization in the U. S, opting in for a value-driven healthcare system and better health for everybody, comes forward with answers. It is estimated that about 37 percent of ADEs are a direct result of errors is dosage (NPP, n. d). Another 11 percent of medication errors occur due to undesirable drug-drug interactions and drug allergies, while during admissions ADEs take place by 22 percent (NPP, n. d). During transitions rates rise dramatically to 66 percent and when a patient is discharged they

run the risk of experiencing hazardous health conditions because of medication error, by 12 percent (NPP, n. d). Unfortunately, the volume of medications dispenses per day is enormous, which makes it difficult to monitor all medication errors, so it is estimated that about 100 of them remain undetected each day (NPP, n. d).

The Institute of Medicine has posted a report in 2006, according to which, medication errors occur in approximately 1. 5 million people living in the U. S annually, which in turns increases the medical care costs to an extra $3. 5 billion (Mansur, n. d). More analytically, each patient that is hospitalized, runs the risk to be subjected to medication errors, at least one per day, which is a shocking statistic that reveals the severity of a problem that could be easily prevented if taken the right measures. Medication errors in hospitals can occur in any phase of the medication process, but the most usual errors take place when a doctor prescribes a drug, or during administration process. Medication errors cost to a wide array of people, from hospitals and health-care providers to patients, their families and insurance companies (Institute of Medicine, 2006). A study estimated that each preventable ADE that occurs in a hospital, adds up hospital stay cost by about $9, 000 (Institute of Medicine, 2006). Doing simple math and assuming that there are about 400, 000 ADEs per year will bring us to the aforementioned estimate of the extra $3. 4 billion of the total annual medical care cost (Institute of Medicine, 2006). In case of preventable ADEs in older aged patients, Medicare costs due to medication error climb up to $887 million per year, although the estimate is partial and has left other important costs, like lost earnings and compensation for patients’ suffering, aside

(Institute of Medicine, 2006).

It is also interesting to note that estimates for the annual deaths of people due to medication errors overcome the annual deaths of people involved in work-related injuries by 16 percent (Graban, 2009). Indicatively, approximately 7, 000 people are estimated to die because of medication errors per year in the United States alone (Graban, 2009). An article published by the Washington Post in 2006, mentioned that " At least 1. 5 million Americans are sickened, injured or killed each year by errors in prescribing, dispensing and taking medications" (Graban, 2009). Although adverse drug events (ADE) are considered preventable, the exact frequency and number of ADEs is difficult to measure. Studies estimate preventable ADEs in hospitals to range somewhere between 380, 000 and 450, 000 per year (Institute of Medicine, 2006). In other setting, studies also confuse. For example, the annual preventable ADEs in long-term facilities also range, from 530, 000 to 800, 000, while the evidence suggests that those estimates are most likely to be underestimates (Institute of Medicine, 2006). That being said, numbers do not include errors of omission, meaning failing to prescribe proper medication, which will raise the preventable ADEs to 1. 5 million per year, in the United States alone; even though numbers are likely to be higher (Institute of Medicine, 2006).

One of the most recent drugs that are found closely related to medication errors nowadays are ninopidine capsules that are meant to treat ruptured blood vessels in the brain and should be given either by mouth or via a nasogastric tube, but never by intravenous administration (FDA, 2010). However, there have been 31 cases of medication error that associate with

ninopidine, as reported in numerous databases, including the FDA's Adverse Event Reporting System and the Council for International Organizations of Medical Sciences, and published medical literature, ever since ninopidine was first marketed in 1989 until 2009 (FDA, 2010). From the 31 cases of medication error, four ended in the patient’s death, five had near-death experiences and one experienced permanent harm, since ninopidine was given intravenously (FDA, 2010).

Another issue that was raised in 2011 regarded the similar-sounding drugs called Durezol and Durasal that both entered the market at about the same time period (FDA, 2011). However, not both are approved by the U. S Food and Drug Administration, and of course, they were meant to treat two completely different health conditions (FDA, 2011). Durezol is the FDA-approved drug prescribed for eye conditions, while Durasal is non-approved by the FDA and is a topical wart remover (FDA, 2011). There have been reports about serious injuries due to confusion between the two pre-mentioned drugs, from patients that had eye surgeries and were prescribed Durazol; yet, they were treated with Durasal by mistake.

Attempting to prevent medication errors the Institute for Safe Medication Practices and the U. S. Food and Drug Administration have joined forces and launched a campaign in June 14, 2006, aiming to promote safe practices and educate the health professionals in order to reduce mistakes that occur due to unclear medical abbreviations or other medication errors, thus prevent injuries and fatalities (FDA, 2006). By wiping off the possibility of a medical error because of confusing medical abbreviations, a big first step has been taken that combined with other precaution measures could make the

difference in health care.

Of course, healthcare professionals are not the only ones that should considered in the huge attempt to minimize medication errors. Regardless of the fact that the health care system in the past was mainly provider-centric, hence patients had no saying in their medical care (Institute of Medicine, 2006), patients should have their share of responsibility too. So, they are encouraged to take more affirmative action in regards their personal medical care (Institute of Medicine, 2006). The most effective way to fight medication errors is to have a joint partnership between health care providers and patients. If patients are more involved in understanding their medications it is highly likely that they will be more aware and have their minds set and monitor medication. Health care providers on the other hand, can draw important facts and information from their patients, considering the prescribed medication (Institute of Medicine, 2006) and educate their patients at the same time, which will eventually bring complete awareness of medication.

However, in order to fully bring awareness and eliminate medication error, it is vital that health care providers, like pharmacists, nurses and doctors, have a sincere and informative conversation with patients and encourage patients to engage into a mutual communicational pattern, where patients interact with the health care providers and vice versa (Institute of Medication, 2006). If a patient is fully informed of the potential risks and side effects of their medication, they are more drawn into monitoring their health and medication, keeping a fully updated medical record and reporting possible malaise to their doctor.

Medication errors can be reduced with the help of information technologies that can better the prescription and dispensing phase of the medication process. Health care professionals, prescribers in particular, can utilize point-of-care reference information that can be easily accessed over the internet and get valuable information about a drug they are about to prescribe, and decide whether it fits with their patient's case or not (Institute of Medicine, 2006). E-Prescriptions and electronic prescriptions, are the next great step towards preventing medication errors. By using this method, providers avoid the risk of making a mistake due to unclear hand-written prescriptions (Institute of Medicine, 2006). What is more, e-prescriptions are double checked via a software that runs the medical history of the particular patient and be alerted in cases of allergies and other interactions among drugs the patient takes (Institute of Medicine, 2006). The unfortunate is that IT infrastructure is reported to be rather scarce, which makes healthcare providers more prone to medication errors. Only a mere 4 percent of physicians can actually benefit from the prescribing options mentioned before, since their EMR systems were hardly fully functional (NPP, n. d), while less than half of the ambulatory-care physicians are provided with setting that allow electronic prescribing (NPP, n. d.).

Even though medication errors represent a large percentage of errors occurring in healthcare, prevention is simple. Patients need to take on their role in their own medic care and ask for more information regarding their medication, make sure they keep their medical record updated and monitor their health condition, as related to the prescribed medication, to report any problems, should they occur. More patient-focused healthcare system, more

attention when prescribing drugs and a proper, updated medical record could save a patient from unnecessary hazards and unwanted medical conditions, and also allow professionals abide by the Hippocratic Oath at the fullest.

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