A medication error is defined by the National Coordinating Council on Medication Error Reporting and Prevention (NCCMERP) 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.

The Medication Safety Section under the Quality Use of Medicine Branch, Pharmacy Practice and Development Division was first established in 2007. Its functions are to collect and collate medication error reports through the Medication Error Reporting System so that risk reduction strategies can be formulated as well as to disseminate information and sharing of knowledge to promote safe medication use.

Example 1: Doctor wrongly prescribed Tab. Valsartan 25mg OD. The availability of Valsartan tablet is in 80mg and 160mg tablet.

Example 2: Doctor wrongly prescribed Tab. Metronidazole 250mg BD. The strength of one tablet metronidazole is 200mg.
A medication error is 'a failure in the treatment process that leads to, or has the potential to lead to, harm to the patient'.

A medication is '[a product that] contains a compound with proven biological effects, plus excipients, or excipients only; it may also contain contaminants; the active compound is usually a drug or prodrug, but may be a cellular element'.

The Guideline on Medication Error Reporting System was launched on 17 August 2009. All healthcare providers namely doctors, pharmacists, dentists, nurses, medical assistants and pharmacist assistants from both the public and private sectors are encouraged to report medication errors and near misses to the Medication Safety Centre. This Centre will maintain confidentiality with regards to the identity of patients and the healthcare providers involved.

The primary objective of medication error reporting is to obtain information on the occurrence of medication errors, maintain a database of medication errors, analyze reports, propose remedial actions and monitor the situations in an effort to minimize the recurrence of such errors and, ultimately, to improve patient safety. All medication errors involving any medicine used both in public and private sectors should be reported.

Example 3: Doctor prescribed patient with Tab. Diclofenac 50mg BD for 1 week. However, the staff nurse wrongly administered patient with Tab. Diclofenac 50mg TDS.

References:
Paracetamol, or acetaminophen overdose is a common means of self-poisoning worldwide due to its wide availability and accessibility\(^2\). The common complication due to paracetamol overdose is hepatic damage ranging from mild to severe hepatotoxicity and may lead to acute liver failure and death\(^1\).

Demographic data of Malaysian population in 2012 had shown that the median age of adult overdosed or intoxicated with acetaminophen was 23 years old and majority was female (82.0%) compared to male. The causes of Paracetamol overdose resulted from deliberate self-harm was 885 (81.7%) cases, unintentional overdose in 198 (18.3%) cases and alcohol co-ingestion was uncommon with only 46 cases (4.2\%)\(^2\).

**Sampling time and nomogram**

Paracetamol concentration should be assessed in all patients who have ingested potentially dangerous dose (threshold dose) of paracetamol. The sampling time should be taken at least 4 hours after the last dose of ingestion because generally paracetamol is fully absorbed at that time.

- In addition, any sampling for paracetamol toxicity after 4 hours of ingestion and extrapolation of the nomogram line from 4 h to 0 h is not reliable in predicting toxicity\(^4\).
- Patients whose concentrations are substantially below the line when plotting in the nomogram, are unlikely to develop toxicity\(^4\).
Table 1: Thresholds: Potentially Hepatotoxic Paracetamol Overdoses

<table>
<thead>
<tr>
<th></th>
<th>Adult and children over 6 years old</th>
<th>Children below 6 years old</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute Single ingestion</strong></td>
<td>At least 10 gram OR 200 mg/kg over a period of less than 8 hours</td>
<td>200 mg/kg or more over a period or less than 8 hours</td>
</tr>
<tr>
<td><strong>Repeated Supratherapeutic Ingestion (RSTI)</strong></td>
<td>At least 10 gram OR 200 mg/kg, over a single 24 hours period</td>
<td>200 mg/kg or more over a single 24 hours period</td>
</tr>
<tr>
<td></td>
<td>At least 6 gram OR 150 mg/kg/day for the preceding 48 hours.</td>
<td>150 mg/kg or more per day for the preceding 48 hours</td>
</tr>
<tr>
<td></td>
<td>More than 4 gram/day OR 100 mg/kg in patient with pre-disposing factors*</td>
<td>100 mg/kg or more per day for the preceding 72 hours</td>
</tr>
</tbody>
</table>

Patients who are at risk of hepatotoxicity should receive IV N-Acetylcysteine (NAC). Ideally treatment should be commenced within 8 hours of ingestion as it is completely protective at that time.

Theoretical patient factors that may increase the risk of liver injury:
- Chronic alcohol abuse
- Patient taking microsomal-drug such as barbiturates, carbamazepine, rifampicin and isoniazid
- Glutathione depletion eg. prolonged fasting, acute illness with prolonged vomiting or dehydration, anorexia nervosa, malnutrition, malignancy and HIV-AIDS
- Viral hepatitis and alcohol hepatitis

**Antidote**

IV N-Acetylcysteine (NAC) is an effective antidote that prevents mortality if administered within 8 hours especially in acute overdose. For patient who took RSTI paracetamol should receive immediately:

- First dose: 150 mg/kg in 200ml 5% dextrose over 1 hour
- Second dose: 50 mg/kg in 500ml 5% dextrose over 4 hours
- Third dose: 100 mg/kg in 1000ml 5% dextrose over 16 hours

**References**

7. Drug info
ARE YOU COMFORTABLE?
( CREATING A CONDUCIVE WORK ENVIRONMENT)

By: Noraniza Bt Mohd Nor

An environment conducive to the conception and growth of enterprises on a sustainable platform encourages the legitimate quest for profit. The environment alters every form of nature’s perfection in mankind, and since humans are all created the same, their level of variation is dependent on the environment type. Environment creates behavioral patterns in human development; either positive or negative depending on the factors we are exposed to. The work environment has physical and psychological effects on any worker or staff of an organization.

An accommodating and conducive work environment is a key factor for any organization. This is because results are achieved by the input of humans; a work force. For productivity to be at its peak, an energizing environment must be maintained at all times. To create a conducive work environment, understanding what motivates employees is key and it could be premised on two factors, physical and behavioral. They are as follows:

**Equipment and facilities**

Equipment and facilities used by workers to perform tasks should be in good shape and maintained regularly. Invest in equipment that increase output by reducing the amount of time it takes for the worker to get fatigued, for example; ergonomic keyboards, computer anti-glare screens, high back seats, tools and furniture. These make work easier for employees and reduce workplace injuries. The provision of the listed items can reduce stress in the workplace, making it conducive.

**Work space and Atmosphere**

A healthy workplace atmosphere reduces stress. Plants are one way to add livability, hominess and improve the quality of air in your work environment. Lights, adequate windows, and air circulation are elements that add to the quality of a workplace environment. Décor, carpets, furniture, framed artworks, decent supplies and plenty of space also contribute to overall workplace comfort. Proper ambience and a less formal atmosphere instill a pleasant excitement. Music is a language we all relate to; playing soft background music can help reduce stress. Interesting wall paint or wall paper also affect personalities and output.
Conflict Resolution

Conflict resolution is a crucial skill entrepreneurs must acquire. Disagreements are common in the workplace due to different beliefs, lifestyles and culture. Conflict in the workplace affects productivity, and creates an unfriendly environment. Failure to properly resolve conflict worsens the initial conflict, because there is a possibility of a bigger outburst in future.

Open arms to creativity

Stereotypical jobs and working environments reduce passion and productivity; it works according to the law of diminishing returns. Diversity creates room for creativity; creativity breaks borders and gives employees the leverage to express themselves. Opening the arms to creativity is not just for productivity alone but will create a friendly workplace. Employees will have a more positive opinion about their job roles or titles, because they will see themselves as part of the team, not just as individuals. This can be done by building friendly working conditions. When the workers feel secure, they come out with new ideas.

Make the workplace fun

Everyone wants to be associated with a level of fun or happiness, so make your workplace a fun place to be. Don’t get it wrong, fun and play are two different things. Find reasons to celebrate together, such as birthdays, promotion, dedications, anniversaries and have small parties to mark such events. Break away from the regular daily routines and have fun, after all some moments of togetherness well help to rejuvenate the lost passion.

Creating a work friendly environment takes time, but in the end it pays off, because productivity is an aftermath of comfort.

“Quality is never an accident; it is always the result of high intention, sincere effort, and skillful execution and last but not least the availability of conducive working environment”

References:


