Preventing and reporting drug administration errors

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Registered nurses are accountable for their actions and omissions when administering any medicines. However, the increasing pressures and demands placed on nurses can render them more prone to making drug errors. Critical incidents must be turned into positive situations, from which lessons are learnt and progress made.

Any nurse who has made a drug error knows how stressful this situation can be. Registered nurses are accountable for their actions and omissions when administering any medicines and must take responsibility for any errors they make.

However, the increasing demands placed on nurses can render them more prone to drug errors. Overwork can affect concentration and competence and this can be exacerbated by erratic working hours and stress, while complacency can also lead to mistakes (Parish, 2003). While nurse fatigue is a commonly cited cause of drug errors, others include illegible physicians’ handwriting and distractions (Mayo and Duncan, 2004).

In its guidelines for the administration of medicines, the NMC (2004) outlines the information a prescription must contain for safe and correct drug administration and gives clear principles for prescribing medicines (Box 1). If the prescription is clear and accurate, errors are less likely to occur.

Health care providers have a responsibility to identify and minimise high-risk areas or conditions, which include those where paediatric medicines are calculated and administered, and clinical areas that use large quantities of controlled drugs (Smith, 2004).

Defining a drug error
There is a range of opinion about what constitutes a drug error (O’Shea, 1999) and nurses, pharmacists and doctors may not actually agree on what the precise definition is.

The National Patient Safety Agency uses the definition of the US National Coordinating Council for Medication Error Reporting and Prevention: ‘A medication error is any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of health professional, patient or consumer’ (Smith, 2004).

Drug errors can include miscalculation, overdosing and underdosing (Preston, 2004). However, drug-related incidents are rarely a result of isolated thoughtlessness. The underpinning causes are often complex and multifaceted, and nurses tend to view them as multiple-cause incidents (Preston, 2004).
Risk reduction
A number of steps can be taken to reduce the risk of drug errors. When administering drugs it is important to follow ‘the five Rs’ (Box 2) (Preston, 2004). Procedures should be in place and prescriptions clearly written in order to facilitate this. Verbal orders for drugs should not be accepted (NMC, 2004), nor should badly written prescriptions.

If prescriptions are illegible and instructions are vague the whole system is open to failure. Computer generated prescriptions can help to solve some of these problems but the system is not universal and has training implications for those using it.

All known areas should be clearly documented and staff should be made aware of them and educated regarding appropriate actions.

Known areas of higher risk include:
- Anaesthetics;
- Intensive care;
- Paediatrics;
- Chemotherapy;
- Intravenous therapy.

The main groups of serious-risk drugs are:
- Anticoagulants;
- Anaesthetics;
- Chemotherapy;
- IV infusions;
- Methotrexate;
- Opiates;
- Potassium chloride.

Injectors in any form come with their own set of potential risks (Smith, 2004).

Protocols should be carefully followed with high-risk drugs. These should include close monitoring of patients and staff, training of staff, and where appropriate, well-maintained infusion pumps.

The environment where drugs are prepared must be clean and with as few distractions as possible. Out-of-date medicines must be disposed of immediately. Where there is ambivalence about a prescription it must always be clarified and any confusion over calculations must be checked.

When patients move from one care setting to another all documentation must be complete and good communication is vital to facilitate continuity of care and ensure that supplies do not run out.

Nurses must be vigilant in checking calculations and in identifying any shortfall in their knowledge. If they are in any doubt it is essential to double-check with an appropriately qualified colleague. Nurses should also keep abreast of pharmaceutical developments and learn to calculate doses in different circumstances, regardless of external pressures.

Particular care must be taken with medications requiring a solution to be mixed or involving the use of decimal points. These can be confusing, especially if there is pressure to think quickly or if distractions or fatigue are factored into the scenario.

The human factor should also be considered. People make mistakes, and all health professionals are prone to moments of poor concentration and can miss something vital. Unfortunately, in health care the consequences of this can be fatal.

Patients also need to be well informed about any medications they are given and any likely side-effects. Capable patients should be involved in their treatment, while relatives or carers can take on this role if the patient is not able to do so.

Reporting of drug errors
It is generally believed that the number of reported drug errors is the ‘tip of the iceberg’ (Hackel et al, 1996) and that far more go unreported. Fear, chiefly of management reprisal and the reaction of colleagues, often deters nurses from reporting incidents (Pape, 2001). However, it is essential to be vigilant about reporting in order to identify and rectify defective systems (DoH, 2000). The NMC (2004) advocates thorough investigation of all errors and incidents at local level.

Near misses as well as actual errors need to be reported so the incident can be assessed and analysed and any necessary changes made to enhance patient safety. This is done under bodies such as the NPSA and the National Institute for Health and Clinical Excellence.

The wider picture
As treatments become more complex, tight control and minimisation of risk become increasingly important. Reducing drug errors, near misses and incidents does not only concern health professionals and patients – it is a matter of concern for governments globally, and sharing information may help countries to gain insight into patterns of drug error and enhance prevention (Smith, 2004). Health care providers also need robust systems to assist nurses in minimising the incidence of drug errors and in learning from those that do occur.

Facing up to a drug error
Professionals’ self-esteem can be badly affected by drug errors (Amdt, 1994) and a real fear of negative consequences can delay the reporting of...

**REFERENCES**


KNOWLEDGE

Guided reflection

Use the following points to write a reflection for your PREP portfolio:

- Write about why this article is relevant to you and your practice;
- Identify the main points the article makes about drug errors;
- Outline anything new you have learnt about dealing with drug errors;
- Consider how you can use this information in your practice;
- Explain how you will follow up what you have learnt.


errors (Wakefield et al, 1996). However, a delay in reporting can have far-reaching consequences.

The first consideration must be for the patient and whether any serious harm has been done and what remedial actions are required. However, when health professionals realise they have made an error they may panic and try to cover up the incident. It is important for them to realise they have not committed a crime – they have made a mistake. Even if it was born of complacency the reasons behind the error can usually be traced.

It is essential to be as accurate as possible when reporting an incident. Omitting information out of fear, real or perceived, does not help the long-term outcome. If systemic reasons led to the error and these are not identified the error will recur in the future. If any facts are omitted an incorrect picture of what happened may emerge (DoH, 2000).

It is essential for health professionals to obtain support if they have made a drug error. This may be from line managers, union representatives or occupational health workers. Talking through an error stops it from dwelling in the mind, while admitting to someone else that it happened helps to put the matter in perspective and can prevent the health professional concerned from blowing it out of proportion.

While it is important to complete statements and acknowledge the incident has happened, it must not be allowed to dominate the person’s life. It may be appropriate for the person to take a few days of sick leave if the incident has caused enough stress affect her or his ability to practise safely. However, except in the most extreme situations, being at work and putting the incident in the past is the best way to cope with the aftermath of a drug error.

**Moving on**

During the process of facing the consequences of a drug error, keeping a reflective journal can be a useful self-help tool (Wilkinson, 1999). Writing down details of the incident, the circumstances that contributed to it, personal reactions to the mistake and feelings arising from it, can be cathartic and will help put it into perspective. It can also be helpful as an aide memoire when reporting to any investigations. It can be helpful to reflect on a range of questions (Benjamin, 2003), such as:

- Could the error be attributed to a possible failure in the system?
- Could it have been prevented?
- Were all the appropriate actions taken?
- What changes need to be made?
- Is there a need for further education?
- Is the error likely to recur?

Dealing with the effects of a drug error quickly and efficiently limits damage and restores trust and confidence in the clinical area. It is important to keep the situation in perspective and not allow it to become blown out of proportion. If managed properly, it will be treated as an unfortunate incident and will not affect career opportunities.

**Conclusion**

Good communication, clarity and vigilance are vital whenever drugs are being administered. Medicine administration is a skilled but potentially dangerous procedure and it is essential to be alert to possible pitfalls and to follow guidelines in order to minimise the risks.

When undertaking the administration of medicines nurses must be willing to take responsibility for their actions and rectify any shortfalls in their knowledge. However, for this to happen there needs to be a culture in which nurses can report errors or near misses without fear of reprisal. Incidents should be turned into situations from which lessons are learnt and progress is made.