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EDITORIAL

From Medication Errors to Safe Medication Practice

Many patients will expect that their medicines have some predictable side effects other than the main therapeutic effect. Some will be aware that more serious and unpredictable adverse effects may occur. But few will expect that the professionals caring for them will make mistakes when prescribing, dispensing or administering their medicines. Many practitioners will be involved in a medication error at some time in their careers and some will have to live with the consequences of very serious outcomes. In recent years charges of manslaughter have been brought (and often dropped before trial) when patients have died and, inevitably, these cases have attracted much publicity.

It has been difficult to get information on the incidence of serious medication errors and an article in this issue of PPDT has used unusual methodology to examine the number of serious medication errors in the paediatric population. David Cousins and colleagues have scanned newspaper headlines to obtain their information. Do all medication errors with a serious outcome make the headlines? I doubt it, so what is the true incidence of fatal or serious medication errors in this group? Do all highly publicised medication errors result in significant change to reduce the likelihood of them happening again? The inadvertent intrathecal administration of vinca alkaloids has brought mandatory UK Department of Health 'guidance' and the bolus administration of potassium chloride has resulted in the first alert from the new UK National Patient Safety Agency (www.npsa.nhs.uk). But how should we deal with other serious errors such as the inadvertent intravenous administration of bupivacaine or the inaccurate preparation of extemporaneous medicines such as peppermint water? To prevent the former requires epidural administration apparatus that cannot be connected to an IV line (the same mechanical solution could help with the vinca problem) and extemporaneous dispensing deserves at least nationally agreed standards.

How are we learning from all of the other medication errors with less serious consequences? Are they all reported, investigated and the lessons learnt in our institutions? Do we have a 'no blame' culture to encourage reporting and is this the same as 'fair and just' (that seems to be the phrase in current 'management speak')? Do we really learn the lessons and apply effective remedial action? Do we fundamentally change the organisation or paper over the cracks until the next time? How do we best educate student health practitioners to ensure that they do not make the same mistakes as us and so that medication practice becomes safer in the future?

The Institute for Safe Medication Practices in the USA has been working on the prevention of medication errors for many years. It now has branches in Canada and Spain and its website (www.ismp.org) contains valuable information and alerts and encourages international reporting of errors. Together with the Pediatric Pharmacy Advocacy Group of the USA, the Institute has published guidelines for preventing medication errors in paediatric practice[1]. Are there cultural or organisational differences between Europe and the USA that would suggest a need for modification to the guidelines for use in Europe? Indeed, within Europe would one set of guidelines be appropriate or should they be specific to a country? The European

Foundation for the Advancement of Healthcare Practitioners (www.efahp.org) is engaging all European countries in medication error prevention and encouraging Europe-wide error reporting.

We hope that David Cousins will address many of these questions in his new role as Head of Safe Medication Practices for the UK National Patient Safety Agency and through his contact with similar organisations worldwide. He has a distinguished record in this area and has taken a particular interest in the problems of children.

One of the major problems for children is the continuing need to use unlicensed and off-label medicines. They have not been submitted to the 'gold standard' peer review process that constitutes licensing so information on their use may not be easy to obtain. Initiatives such as the publication of a peer-reviewed, national formulary 'Medicines for Children' [2] and availability of a dedicated national paediatric Medicines Information facility (www.dial.org.uk) in the UK can help. But the dosage form used for children has probably been designed for adults and may contain many times the dose required for a child. If a large overdose is inadvertently calculated it may be administered from just one ampoule of an injection without the warning that should be given by the need to open several ampoules. We know that 10 times calculation errors are common. Manipulating solid oral dose forms and producing extemporaneous oral liquids carries greater risk than manufacturing 'specials' where some additional quality assurance measures are introduced. Importing an appropriate licensed medicine from another country may be even safer but can also introduce error potential if labelling and information are in a foreign language – suitable translated information should be a condition of import.

The 'root cause' of many of these problems is the lack of suitable, licensed medicines for children. We hope that this will be addressed by Orphan Drugs legislation, by the FDA 'carrot and stick' approach to paediatric drug development and by the much-awaited European legislation following the 'Better Medicines for Children' consultation[3]. All should give pharmaceutical industry the incentives to produce and licence suitable formulations for children.

These processes of change take time. We must continue to identify the causes of medication errors, to share this information with colleagues, to encourage the pharmaceutical industry to supply safer medicines and to look at how we educate future practitioners in safe medication practice. We look forward to working with Professor Cousins and the UK National Patient Safety Agency to achieve these aims. This Journal will encourage papers that address the subject.

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References

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