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But what information do I get?

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Descriptions of hospital pharmacy practice may give the impression that clinical pharmacy practice is the sole function of hospital pharmacists (Anderson 1995). Such descriptions overlook the crucial role of pharmaceutical skills in ensuring the safety of novel formulations invented by clinicians working in frontier areas of patient care. Involvement of pharmacist's in these areas demands the application of a wide range of pharmaceutical skills which includes knowledge of stability, potential for interactions, toxicology and formulation science. Such involvement is infrequent. The needs of most patients are met by the pharmaceutical industry which provides a comprehensive range of excellent ready to use products and many esoteric requests can be diverted to a proprietary products.

There is though a constant demand for unique products or combinations of products that are required for a specific patient or group of patients which cannot be met from commercial sources.

Typical examples of this type of product are medicines used in palliative care and medicines for patients on restricted fluid intake.

During the last year the Drug Information Centre at LGI received 450 requests for information about stability and for compatibility of intravenous products. This was 8% of the total number of queries. Many of these queries were resolved though the use of reference sources (Needle & Sizer 1997) or by literature search. Pharmaceutical Industry Medical Information Centres tend to be the last port of call in resolving such problems. The reasons for this include:- a typical response is 'we cannot recommend doing that because it is not in the data sheet', they will only release published information, medical information does not have access to stability and/or analytical data, none are very helpful. This is understandable in that we are wanting to use their product in an environment which is out of their control. However a company cannot ignore non licensed use. This can often be the way that novel uses are found for the products.

Case example: An elderly lady admitted for palliative care by the Chronic Pain Team from a nursing home. Patient receiving a mixture of diamorphine (220 mg) and clonidine (800 mg) in water via an intrathecal pump. Pharmacy requested to continue supply of infusion. Later pharmacy asked to include midazolam and baclofen on the infusion. The information available is limited, data is available on diamorphine alone (Mehta & Kay 1996) in the device. Other information about these ingredients at this concentration is limited. There is no information available in the literature about the interaction of these components or the toxicology of the degradation products nor do we have information about the interaction of this mixture with the administration device.

What should the pharmacist do? One approach is to refuse to supply the product but is this ethical knowing that the clinicians will probably assemble the infusion on the ward? An alternative approach is to gather all the information available and make a decision based on scientific training.

It is at this stage that we find difficulty in obtaining the relevant information. Information about pH in solution, buffering capacity, degradation rate constant at different pH and solubility profiles in dextrose 5% and saline would be invaluable in supporting the decision-making process.

Pharmacists do undertake stability studies on such products that have a regular use (Mehta & Kay 1997), however this cannot account for the infrequently used products. Hospital pharmacists need to know much more about the chemistry and pharmacy of products. Use outside of the product licence is infrequent, but it can point the way for an expanded use of a product.

Willing cooperation in regard to this information would ensure that products are used safely in patient care.

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