
ESICM 2014: Crucial Role for Clinical Pharmacists



The clinical pharmacist in the critical care department is the critical link between the right choice and safe treatment, said Robert Shulman, clinical pharmacist at University College London Hospital in the UK speaking at the European Society of Intensive Care Medicine congress in Barcelona last week. While European countries differ in practice, he made a strong case for the input the clinical pharmacist can bring to the critical care team.

The role of the clinical pharmacist in critical care has been well developed over the last 15 years in the UK, the USA and Canada. Analysis of the Protected ICU-UK study, funded by the UK Clinical Pharmacy Association, which collected data over two weeks in November 2012 from 21 intensive care units showed how useful their role is. The study aimed to record the quantity and assess the clinical impact of ward-based ICU pharmacy teams on patient care, including the rates of pharmacist intervention, prescribing errors, medication optimisation, consultation, and severity stratification and acceptance rates of recommendations.

There were 3,390 pharmacy interventions for 925 patients, giving an average of 3.7 interventions per patient. 1 in 6 (16.1%) of drug orders had an intervention. Of these 6.8% had an error, 8.3% involved optimisation and 1% a consultation with the pharmacist. 19% of the interventions were high impact. The complexity of the pharmacist's role is illustrated by the fact that typically patients are on 22 prescribed drugs at any one time.

Medicines reconciliation is very important. [Campbell et al.](#) (2006), in their observational study, found 57% of drugs were stopped on ICU admission. Of the discontinued drugs, 88% were not restarted on discharge. Shulman noted that it is common for inappropriate medication to continue after ICU discharge, such as antipsychotics.

Clinical pharmacists in the ICU have a role in promoting safety, in preventing iatrogenic harm from adverse effects, keeping allergy documentation, discontinuing prescribed drugs no longer needed and keeping up-to-date on IV compatibilities. They should be in charge of smart pumps, drug libraries and IV guides. For example, at his hospital, an [injectable medicines administration guide](#) is available to all. Within the organisation, clinical pharmacists should have input into procurement and purchasing for safety reasons, for example standardisation of syringes, pre-filled syringes, sourcing when there are drug shortages, in audit and research.

The pharmacist working in critical care needs good general clinical knowledge and specific critical care knowledge. The suggested staffing ratio is 1 whole time equivalent (wte) per ICU beds or 1 per 20 High Dependency Unit (HDU) beds. More will be needed if there is a weekend service. In the UK [national standards for ICUs](#) from the Faculty of Intensive Care Medicine and Intensive Care Society state that there must be a critical care pharmacist for every critical care unit, and sufficient pharmacy technician staff to provide support.

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