

**Purpose** To report the introduction of a gravimetric process of weighing to encourage its future implementation and increase the quality and safety in the preparation of parenteral nutrition (PN).

**Materials and Methods** In order to standardise the gravimetric control of PN, a protocol was developed by the nutrition unit. The quality of the PN preparation was established by calculating the accuracy (the mean of the error in the gravimetric analyses (EGA)) and precision (square root of the mean square of the EGA) and the alert limits were set at  $\pm 5\%$ .

The first step was to determinate the densities of the components of the PN and update the parenteral nutrition programme. The PN labels were modified to show the theoretical weight of the PN and the maximum and minimum limits allowed.

**Results** One strategy established for the quality control of the final product was to compare the final weight of the product with the volume and the density calculated for each component.

In the first 67 days 150 parenteral nutrition mixtures were made in the neonatology department. The average theoretical weight was 323.68 g ( $\pm 236.04$ ) and the average measured weight was 323.45 g ( $\pm 239.94$ ).

The mean difference of the actual weight versus the theoretical was 2.8% ( $\pm 0.04$ ).

**Conclusions** Gravimetric analysis is a strategy to cheque the accuracy and precision in PN and complements the quality assurance processes normally used to regulate the preparation.

No conflict of interest.

#### GRP-091 IMPLEMENTATION OF KEY PERFORMANCE INDICATORS IN CYTOTOXIC COMPOUNDING UNITS

doi:10.1136/ejhp-2013-000276.091

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**Background** The Capital Region Hospital pharmacy prepares more than 90,000 bags of cytotoxic treatments a year. There has been no tradition in the pharmacy of systematically monitoring essential parameters in the productions units. Because of an increasing need for treatments on the wards, the delivery time for cytotoxics went up to 5 hours, resulting in complaints from patients. The number of products that were rejected was very high. In 2010, the cost of rejected products was more than €200,000. Analysing and addressing root causes when nonconformities arose could take up to one year.

**Purpose** To reduce production time and make it more stable while improving quality and reducing costs.

**Materials and Methods** Three Key Performance Indicators (KPIs) were introduced: Delivery, Rejects and GMP non-conformities, in order to ensure a stable, short production time and a constant focus on cost and product quality. The three KPIs are continuously monitored and posted on boards in the production area. The KPIs are discussed with the staff in weekly meetings.

**Results** Overall delivery time has been reduced. 75% of patients are now waiting less than 1½ hours and 90% of the pre-ordered treatments are delivered on time.

1. The number and types of rejects are now known. The goal is to reduce the value of rejects by 15% in 2012.
2. Processing time for non-conformities is now a maximum of 21 days.

**Conclusions** By defining the relevant KPIs, and having an ongoing dialogue with employees about the KPIs, it has been possible to significantly increase awareness among the employees of the overall performance of the production process. The increased awareness has resulted in a significantly improved performance that provides value for our patients.

No conflict of interest.

#### GRP-092 IMPLEMENTATION OF RECOMMENDATIONS ARISING FROM THERAPEUTIC MONITORING OF VANCOMYCIN TROUGH LEVELS IN A TERTIARY HOSPITAL

doi:10.1136/ejhp-2013-000276.092

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**Background** In 2009 we established a consensus review of therapeutic monitoring of vancomycin by several societies including the American Society of Health-System Pharmacists (ASHP), the Infectious Diseases Society of America (IDSA) and the Society of Infectious Diseases Pharmacists (SIDP).

**Purpose** To study the use of plasma concentrations (PCs) as a tool for monitoring the effectiveness and safety of vancomycin treatment; follow-up of the changes made in response to the recommendations made.

**Materials and Methods** Retrospective descriptive study in a tertiary hospital during the first four months of 2012. Vancomycin trough plasma concentrations (PCs) were collected. The laboratory service requested and identified patients treated with vancomycin in the unit dose dispensing system. An automatic system recorded the doses, days of treatment indicated, glomerular filtration rate (GF) prior to and during treatment with vancomycin (calculated by the MDRD formula, considering renal function impairment (RFI) lower GFR 80 ml/min) and concomitant treatment. The recommendations contained in the consensus document on vancomycin therapeutic monitoring of the Infectious Diseases Society of America (IDSA) and the American Society of Health-System Pharmacists (ASHP) were used as the standard criteria for vancomycin PC monitoring: RFI, treatment for more than five days or concomitant nephrotoxic drug administered.

**Results** 30 patients were enrolled, median age 66, 21 men, median treatment duration of 7 (1–46) days. The PC was checked in 10% (3) of the patients, two had PCs within the recommended values. In the third patient a single plasma level was requested, which revealed less than the recommended values but the same dose and schedule was maintained throughout the 29 days of treatment. In none was the area under the curve divided by the minimum inhibitory concentration (AUC/MIC) reported, the pharmacokinetic parameter best related to the effectiveness of vancomycin. Plasma levels were not requested in 27 patients, 90% of the total treated with vancomycin. 63% met one or more criteria for monitoring; treatment for longer than five days was the most common criterion (20). In one patient the recommendations made were acted on.

**Conclusions** The established recommendations on therapeutic monitoring of vancomycin are not being applied in our hospital.

A high number of patients treated with vancomycin did not use the PC as a parameter with which to monitor the efficacy and safety of antibiotic treatment.

One possible cause could be a lack of training of medical staff on the usefulness and benefits of vancomycin monitoring, particularly during prolonged treatment and in patients with RFI.

No conflict of interest.

#### GRP-093 IMPLEMENTING AND IMPROVING MEDICINES RECONCILIATION ON ADMISSION AT NORTH BRISTOL NHS TRUST (NBT)

doi:10.1136/ejhp-2013-000276.093

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**Background** Medicines Reconciliation ensures that medicines prescribed on patient admission correspond to those taken before