carboplatin doses with therapeutic drug monitoring.\textsuperscript{1} This audit will focus on age at administration and, whether pharmacokinetic (PK) levels, audiometry and creatinine clearance were conducted prior to administration of carboplatin as per the protocol.

Method Data was collected retrospectively from December 2018 till January 2019 of patients treated from 2017-present using the PK monitoring carboplatin in any protocol. Data collected included -patient demographics, age at time of carboplatin administration, date of administration, course of treatment, target AUC, dose (actual, protocol and dose difference), whether audiometry was completed, AUC levels and creatinine levels.\textsuperscript{2,1,4} The data was compared against set standards to determine percentage of compliance.

Results A total of 7 patients were identified as fitting the inclusion criteria – 3 males and 4 females – between them there were 26 courses of carboplatin. The patients had a variety of diseases – neuroblastoma (n=1), low grade glioma (n=1), astrocytoma (n=1) and retinoblastoma (n=4). 85.7\% of patients (n=6) had audiometry tests conducted, however only 28.6\% (n=2) had them at baseline pre-treatment as per the protocol. All patients apart from two (71.4\%) has their creatinine levels investigated prior to the first course of chemotherapy as per protocol. Of the 26 courses of carboplatin, 20 courses accurately received PK monitoring as per protocol where doses were modified as per the levels (76.9\%). Furthermore, those following JOE chemotherapy protocol for retinoblastoma were all <3 months at the start of treatment and hence were within the age criteria to receive PK monitoring. The other disease states had a range of ages at the start of treatment from 2 months to 6 months, but still underwent PK monitoring for most of their treatment, i.e. only 2 (29\%) patients did not meet the age criteria for PK monitoring.

Conclusion The findings showed that the correct age criteria were selected to receive PK monitoring, however typically they would monitor throughout their treatment even over 3 months. They also showed that the critical drug monitoring requirements before and whilst undergoing treatment with carboplatin were not consistently met for all patients as per protocols. To improve compliance to protocols, all practitioners should receive information on what monitoring requirements are necessary, when they need to be done and the importance of them for patient care, an SOP should be produced to include this information.

REFERENCES

P49 AN AUDIT OF BASELINE VITAMIN D LEVEL TESTS FOR NEWLY DIAGNOSED PAEDIATRIC HAEMATOLOGY/ONCOLOGY PATIENTS AGAINST TRUST GUIDELINES
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Aim
1. 100% of patients should have their vitamin D levels checked at diagnosis as stated in the current trust guideline for the management of vitamin D deficiency Treatment and Prevention.
2. 100% of patients who had a baseline vitamin D level had these acted upon if necessary following the recommendations in the trust guideline.
3. All of the patients who were given treatment had been prescribed were given an appropriate dose as stated in the trust guideline.

These standards are supported by the recommendations in 2016 by Public Health England (PHE) that everyone (regardless of age and ethnicity) needs vitamin D equivalent to an average daily intake of 10 micrograms via supplementation.\textsuperscript{2,3} Method This retrospective audit was conducted using internal clinical and prescribing programmes to access patient records and medical histories to retrieve data. The inclusion criteria for patients included in this audit were all new diagnoses of malignant haematological and oncological disease over a 6 month period, from April 2018–October 2018. The data collected for these patients were: if they had been tested for Vitamin D, the date of the test and their level of total vitamin D level Serum total 25-hydroxyvitamin D concentration. Patient data from the electronic prescribing system was utilised to check if patients had been prescribed vitamin D. Once data completed, patients with vitamin D levels, assessed against trust guidelines to determine if appropriately treated.

Results A total of 78 patients met the inclusion criteria, where 56\% of patients were tested for vitamin D during admission. Of the 78 patient, 43 were oncology patients and 35 haematology patients. In the oncology cohort (n=15) only 35\% were tested whereas 83\% of haematology patients (n=28) were tested. Of the haematology cohort of patients who were tested (83\%): 69\% had sufficient levels of vitamin D (serum total 25-hydroxyvitamin D concentration >50 nmol/L); 11\% had insufficient levels (25–50 nmol/L) and 3\% were deficient (< 25 nmol/L). Of the oncology cohort who were tested (35\%): 28\% had sufficient levels of vitamin D; 5\% of patients had insufficient levels; 2\% were deficient. 6\% of haematology patients and 5\% of oncology patients with sufficient levels of vitamin D received treatment that was not indicated. Furthermore, the 5\% of oncology patients with insufficient levels of vitamin D did not receive any treatment.

Conclusion The standards set for this audit were not met. It is concerning that those with low levels were not treated effectively and are at risk of complications. Although the findings of this audit may not be a true reflection of the entire patient population due to the small cohort size; the insight into at risk patients suggests there is a need to improve practice and reach 100\% for all the aims of this audit.

To improve smart and efficient prescribing of medication, clinicians should adhere to the revised trust ‘Guideline for the Management of vitamin D deficiency’ to guide their decisions on initiating therapy. Pharmacists should check vitamin D levels for all new admissions and follow up as appropriate for any pending tests. Having a default test built into the current new prescribing system will also support in improving the results.
REFERENCES

4. Great Ormond Street Hospital Trust guideline for the management of Vitamin D deficiency Treatment and Prevention.

TIME AND MOTION STUDY TO ASSESS WORKLOAD VERSUS STAFFING AT IN PAEDIATRIC HOSPITAL CHEMOTHERAPY MANUFACTURING UNIT

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Objectives In order to improve efficiency of the staff workload in the Paediatric Hospital Chemotherapy Manufacturing Unit, tasks conducted by the pharmacy staff were evaluated with their expected roles. The aims of this study were to establish an understanding of the workload at this unit and to develop a proposal for the unit to become technician-led.

Methods The time taken to perform a pre-determined list of tasks by the senior pharmacy technician was recorded, collated, and compared to tasks performed by the pharmacist. This established the key activities that could be delegated from the pharmacist and the senior pharmacy technician to other members of staff. The findings were discussed with a focus group to establish the efficiency of the manufacturing unit and enable a proposal to be formed.

Key findings A substantial part of the pharmacist’s and senior pharmacy technician’s time was spent on activities which could be delegated to other members of staff of a lower pay band. The financial implication of this estimated that there would be a reduction of around £8,696.70 with the correct utilisation of the staff members. The pharmacists leading this manufacturing unit were spending most of their time on computing and training, therefore reducing the time available for them to focus on patient-facing clinical activities.

Conclusions The current skill mix was highlighted as being inefficient, due to a lack of delegation from the pharmacists and senior pharmacy technician. A technician-led manufacturing unit can improve the focus of pharmacists on clinical tasks while reducing the cost of activities.

REFERENCES

5. Great Ormond Street Hospital Trust guideline for the management of Vitamin D deficiency Treatment and Prevention.