P42 AN AUDIT TO ASSESS PRESCRIBING OF PAEDIATRIC CD TTOS

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Aim To establish the root cause leading to an increased amount of time spent for a pharmacist to triage a paediatric controlled drug (CD) to take out (TTO) prescription.

Method Mixed methods were used to collect data. Initially, raw data was collected over a period of three weeks to identify any CD TTO's that required intervention from the pharmacist. We recorded if the correct CD TTO prescription template was being used, number of CD TTO prescriptions, clinically and legally correct and how long it took to complete the triage by the pharmacist (ward or dispensary based). The amount of raw data collected was not sufficient to establish an accurate picture of the problem. For this reason, we also collected data from the paediatric prescribing tests. The open book prescribing tests are completed by all new doctors coming in to the paediatric rotation. This is a scenarios-based test and question 10 of the test asks them to write out a CD TTO prescription using the CD TTO template. The answers to question 10 of the test were then audited.

Results The data that was collected shows that two thirds (67%) of prescribers failed to answer question 10 of the test (CD TTO question). This indicates an issue with CD TTO prescribing and the reasons why they failed to pass the question (i.e. legally and/or clinically incorrect). One of the reasons that may be a factor is the lack of CD TTO prescribing in paediatrics compared to adults (i.e. lack of practice/unfamiliarity). This may reduce their knowledge regarding CD TTO prescription requirements and thus confidence and competence in prescribing practice. It was also established that errors in relation to the dose and frequency were found to be the most frequent, which also suggests a lack of clinical knowledge and/or use of available resources. The causes of this can range from a lack of appropriate training to lack of self-checks and referring to the BNF and/or other prescribing guidelines. Furthermore, the live data (two CD TTOs audited) also showed that 50% of prescriptions written were not written on the CD TTO template, prompting the pharmacist to spend additional time triaging it. On average, it took 40 minutes to triage one CD TTO prescription.

Conclusions Changes are needed to address the issues that were found in this audit. Recommended immediate actions include making prescribers aware of where CD TTO templates can be found and implementing teaching sessions to improve clinical and legal knowledge of prescription writing. In the long term, it is recommended to add the CD TTO template to the back of the Child Health medication chart (like we have for the adult charts at our Trust). We are also considering creating a pocket guide on the correct prescribing of CD TTOs in consultation with doctors, nurses and pharmacists.

P43 KETOGENIC DIETS – HOW CAN PHARMACY HELP?

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Situation Ketogenic dietary treatments are established, effective, non-pharmacologic treatments for drug resistant childhood epilepsy. They generally consist of a high fat and low carbohydrate diet. Medications, particularly in a liquid formulation, often contain potentially significant amounts of carbohydrate, and upon ingestion, can rapidly reverse ketosis leading to seizure activity.

Methods Prior to initiation or during the early stages of the diet, the ketogenic diet team seek pharmacy advice on the appropriateness of individual patient's medications with the overall aim to reduce carbohydrate content as much as possible. The assessment process consists of identifying current brands of medications and their indications, and further investigating quantities of 'problem' excipients either by reviewing the product information or liaising directly with the manufacturer. Liquid formulations of medications, even when marked sugar-free, often contain large quantities of other sweetening agents that can be sources of carbohydrate – although there are an increasing number of recently launched brands using sweetening agents with no calorific value, and thus are not a concern.

Tablets/capsules are often used as they contain minimal carbohydrate; however, manipulation is often required as a large quantity of our patients require administration of their medicines via an enteral feeding tube. There are many factors to consider when switching between formulations, of which the clinicians should be made aware, and this may influence choice of formulation/therapy. For example: Is the medication brand specific? Are the formulations bioequivalent? Will feed/food interactions differ between formulations? Exposure to new excipients. Change in licensing status. Are the doses achievable using the new formulation?

Similarly, use of a new formulation via an enteral feeding tube may pose more issues for consideration. For example, can the formulation be manipulated and administered successfully via the enteral feeding tube? Will manipulation change the pharmacokinetics of the drug? Will the absorption be affected? Relevant COSHH assessment/risks. The majority of information provided to the clinicians will be considered off-label or unlicensed, thus it is important to review literature carefully.

Outcome Over the previous years, as the ketogenic diet patient cohort has expanded, pharmacy involvement and expertise has increased. We have been able to play a more prominent role in direct patient care, offering suitable advice and alternatives regarding medication. The vast number of enquiries received has enabled us to document and build a comprehensive internal database (at present we have information on >70 drugs), which can significantly reduce the time taken to investigate and provide advice for future patients. In 2021 alone we received 49 enquiries, involving at least 16 patients and we provided advice on over 50 different drugs.

Lessons Learned Communication is key to help with decision making – clinicians and dieticians can often adapt medication doses/diet to allow for more appropriate or ketogenic diet friendly formulations. Product SmPC and the PIL are useful resources for identifying carbohydrate content, although not all excipient quantities are listed. Bench tests are useful in identifying whether a medication can practically be manipulated and flushed via an enteral feeding tube.