

- To determine the number of patients prescribed the correct volume and percentage of Ethanol line lock as per policy
- To identify any reported side effects and reasons for discontinuation
- To identify if consent has been granted and documented

**Method** Retrospective review of 46 paediatric ELT prescriptions over 4 years (2017 – 2021). These were identified using EPMA reports and dispensing records. A data collection tool was created; clinical notes and prescribing/administration records used to audit compliance to guideline.

**Results** Out of 46 central line associated bloodstream infections, 36 (78%) were eradicated by ELT and 40 (87%) did not result in catheter removal. 98% of prescriptions were accurately prescribed as per guideline, only 28% had a documented indication, review and duration. 0 patients had consent to therapy documented. 1 patient experienced an adverse side effect following a prescribing error (alcohol taste in mouth).

**Conclusion** Improvements in documentation required, notably for parental consent, treatment indication and duration. A change to the electronic prescribing order has been suggested to aid documentation in line with trust guidance. Although more research is required to assess the success rate of ethanol lock therapy, this retrospective study suggests that when used in conjunction with systemic antibiotics this technique has been effective in eradicating paediatric central line infections. Following this study, further research should be centred on the recurrence of central line associated bloodstream infections after initial eradication by ELT.

## REFERENCES

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## IMPROVING STOCK ACCOUNTABILITY OF LIQUID CONTROLLED DRUGS USING RULERS IN A CHILDREN'S HOSPITAL

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**Context** The Controlled Drugs (CD) (Supervision of Management and Use) Regulations 2013 lays out the legislation for monitoring of the management and use of CDs.<sup>1</sup> Inaccurate counting and poor record keeping of CDs can reduce staff time for patient facing activities.<sup>2</sup> It is a national recommendation that visual inspections of stock balance should happen in various time points: periodic volume checks and checks to confirm the balance on completion of a bottle.<sup>3</sup> Due to the patient population, a large proportion of the CDs stocked in the Trust are liquid preparations designed for multiple small volume administration. CD discrepancies contribute to over 100 Datix incident reports annually. This is largely due to volume lost during manual manipulation of bottle for dosing and weekly physical measurements undertaken by staff as per the Trust policy. It is estimated that approximately one hour of nursing time per ward/Theatre per week were taken away from clinical care for CD checks. It also introduces

contamination risk due to decanting, as well as generating plastic waste associated with volume checking. To mitigate the risk, the Trust's Medicines Safety Committee (MSC) benchmarked liquid preparations volume checks against other paediatric centres. It was found that most did not undertake routine or physical measurements. Following a Care Quality Commission's CD National Group recommendation to consider using a calibrated bottle to aid visual inspection and accurate management<sup>3</sup>, liquid CD rulers with volume increments were explored. CD rulers allow for a volume measurement to be approximated without the need of decanting the bottle. Following MSC's approval, the implementation of the liquid CD rulers was introduced. Ward stock lists were reviewed, and the manufacturers and brands of each liquid CD preparation was compiled into a database. Training sessions (both virtual and face-to-face) for pharmacy and nursing staff were delivered and facilitated over a period of three months, prior to implementation. The Trust CD policy was updated, and a local guidance developed, with all eventualities covered. This change in practice was communicated via email, nurse practice educators' network, and the Trust's medicine safety newsletter. The guidance was updated and uploaded onto the Pharmacy intranet webpage and put up in the clinical areas as a visual aid.

**Lessons Learned** The successful introduction of CD rulers have been well received across the Trust. The implementation required extensive support from the Trust's educational and pharmacy team. Feedback sessions were carried out post implementation and suggestions were used to update the guideline. Although there are financial implications, there has been a reduction in the number of CD discrepancies-related incidents. They have simplified and sped up CD checks and prevent the risks of spillage, contamination, and wastages. However, they cannot be used for opaque bottles and are tailored specifically to that drug, strength, manufacturer, and pack size, giving less flexibility in response to drug contract changes/shortages. A 6-month surveillance will be conducted to fully assess and review this change in practice.

## REFERENCES

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## SWITCHING FROM UNLICENSED ORAL MIDAZOLAM LIQUID TO A LICENSED PRODUCT FOR PREOPERATIVE SEDATION

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**Background** This specialist children's hospital used unlicensed midazolam 2.5 mg/ml oral solution for preoperative sedative. This product had various problems such as a bitter taste which often led to poor patient acceptability and a short expiry once opened. In this Trust midazolam oral solution is stored and recorded in CD registers and discrepancies in the running balance are often reported as clinical incidents and