Introduction Paediatric polypharmacy is defined as two or more medicines, which is lower than the definition in adults (>5 medicines). A recent scoping review of paediatric polypharmacy found a mean prevalence of 39.7% with a large range from 0.9% to 98.4%.

Methods Prescribing data from 85 active practices across Liverpool Clinical Commissioning Group (CCG), was extracted on the 6th January 2021 to include all patients below 18 years of age. Prescribing data was also obtained for Alder Hey Children's Hospital from the electronic prescribing system, Meditech on the 12th January 2021. Descriptive analysis was performed.

Results Of the 110,097 CYP registered in primary care, 17,271 (16%) were prescribed >2 medications, 3,507 (3·2%) >5, 715 (0·7%) ≥10, and 202 (0·2%) ≥15. The median number of CYP prescribed ≥10 and ≥15 medications per primary care practice was 7 (range 0–34) and 2 (range 0–11), respectively.

Within Alder Hey Children's Hospital, 139 inpatients were identified, with 126 patients (91%) prescribed two or more medicines. The most frequently prescribed medicine was paracetamol. When 'as required' and 'one off' medicines were removed, omeprazole was the most frequently prescribed medicine.

Conclusions Many children within Liverpool CCG meet the definition for paediatric polypharmacy. Further research is required to assess the consequences of paediatric polypharmacy and address its management which is under recognised and underrepresented in the literature to date.

26   INTRODUCTION OF THE PROJECT OF THE CZECH DRUG DATABASE IN NEONATOLOGY AND PEDIATRICS IN 2022

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Introduction Evidence-based (EB) data on various medicaments and safe drug dosing in pediatric population are already available across Europe. However, their systematic translation and clear processing are lacking in daily pediatric clinical practice in the Czech Republic. The purpose of our work is the development of a Czech drug database similar to some already existing internationally based formulary lists.

Methods A systematic approach to the processing of recommended dosages of drugs used in the Czech environment, all compiled in the Czech language. The active substances will be arranged according to the ATC classification system. The strategy of the initial focus on the most commonly used drugs is set (the statistical data will be obtained from SÚKL), more rarely used drugs will be approached subsequently. The server-side system will be based on PHP and MySQL technologies, enabling easy scalability and deployment to a wide range of servers, including the ability to deploy to scalable servers with a load balancer front-end server.

Results In 2022, the Czech team managed to obtain support for the creation of a database called Gama 2 project TP01010040, supported by The Centre for Knowledge and Technology Transfer of Charles University (EudraCT#). As expected, the database will be developed in the most appropriate data processing framework and validated throughout the year.

Conclusions The Gama 2 database project aims to extrapolate strictly EB data systematically processed according to ATC groups into the Czech environment, where it will become a unique reference for safe prescribing, dispensing and administration of drugs in pediatric population. When processed in the Czech language, this might be beneficial for healthcare providers in Czech medical facilities.

27   RISK FACTORS OF AUGMENTED RENAL CLEARANCE IN CRITICALLY ILL CHILDREN USING IOHEXOL CLEARANCE FOR RENAL FUNCTION ASSESSMENT

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Introduction Augmented renal clearance(ARC) of hydrophilic drugs is frequent in PICU patients and warrants adjustment of standard dosing regimens to prevent therapeutic failure. Knowledge of patient-, disease- and therapy-related factors associated with ARC, would allow to predict before the start of treatment, which patients would benefit from higher drug doses. We aimed to identify predictors of ARC in critically ill children with normal serum creatinine(Scr) using iohexol plasma clearance (CLiohexol) to quantify renal function.

Methods We performed a post hoc analysis of data collected from an interventional study conducted at our academic PICU, which measured glomerular filtration rate (GFR) by CLiohexol in patients with normal Scr. ARC was defined as GFR exceeding normal values for age plus 2 standard deviations. Multivariable logistic regression analysis was performed to identify predictors of ARC.

Results GFR was measured in 85 patients, median age was 16 [IQR 5;89] months, 59% had a surgical profile. Median CLiohexol was 122[IQR 75;152] ml/min/1.73m2. Fourthy patients out of 85 (47%) expressed ARC. Postoperative status was identified as independent predictor of ARC (p=0.014, OR 4.253, 95%CI 1.338–13.517). However, in patients after cardiac surgery the odds of developing ARC were significantly lower (p=0.010, OR 0.163, 95%CI 0.041 –0.644). There was a trend suggesting more ARC in male patients and in those without need for vaso-active drugs, however, this was not statistically significant.

Conclusion Our findings raise clinicians' awareness about ARC potentially being present in children after major surgery. This knowledge allows to anticipate on enhanced elimination of drugs by using empirically adjusted dosing regimens immediately from the start of treatment.

28   PAEDIATRIC MEDICATION ERROR PREVENTION (PMEP) A TRIPARTITE ALLIANCE WORKING TOGETHER

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