

detecting the symptoms and signs of toxicity for avoid unwanted effects, it is possible by frequent visits to the hospital pharmacy.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of Interest** No conflict of interest

### 4CPS-241 FINAL VALIDITY OF A TOOL FOR RATING SIGNIFICANCE OF PHARMACISTS' CLINICAL CONTRIBUTIONS IN HOSPITAL

<sup>1</sup>PG Wright, <sup>2</sup>M Reena, <sup>1</sup>R Sloss, <sup>3</sup>R Onatade\*. <sup>1</sup>Barts Health NHS Trust, Pharmacy, London, United Kingdom; <sup>2</sup>Kings College Hospital, Pharmacy, London, United Kingdom; <sup>3</sup>Barts Health NHS Trust, Pharmacy, London, United Kingdom

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**Background and Importance** To date there is no gold standard for rating clinical significance of pharmacy contributions to care.

IMPACCTS (InstruMENT for PhARmacy Clinical Contributions To care Significance) is based on the Hatoum scale<sup>1</sup> and consists of five ordered categories or levels, each underpinned by descriptive statements (total of 45 statements).

A robust process to ensure simplicity and clarity of the instrument has been previously reported.<sup>2</sup>

**Aim and Objectives** **Aim:** To complete the validation of IMPACCTS.

**Objectives** were to:

- demonstrate comprehensiveness of IMPACCTS
- quantify interrater reliability of IMPACCTS

**Material and Methods** This study was completed February 2022. The study did not require ethics approval.

To assess comprehensiveness, 20 senior pharmacists with prior experience of using IMPACCTS were paired to review 45 scenarios (450 different scenarios in total) and asked to find a corresponding statement, or failing that, a suitable significance level.

For interrater reliability, all 20 pharmacists were given the same 15 detailed scenarios to rate clinical significance. Intra-class correlation statistics (two-way, random effects, absolute agreement, individual) were calculated using Stata v14.

All data were collected via a web survey platform.

**Results** Comprehensiveness – for all scenarios, at least one person found a statement. For 441/450 (98%) scenarios, both respondents in a pair found a corresponding statement. Out of the nine scenarios where one person from the pair did not find a statement, a level could be assigned for eight of these. Therefore, a statement and/or level could be assigned for 449/450 (99.8%) of the scenarios by all respondent pairs.

Intraclass correlation was 0.71 (95% CI = 0.55, 0.86) which demonstrates moderate to good pharmacist interrater agreement.

**Conclusion and Relevance** This study demonstrates excellent comprehensiveness and moderate to good interrater reliability of IMPACCTS. These data support readiness of the tool for use in research and practice to assess clinical severity of pharmacy contributions in hospital.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

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### 4CPS-242 ISAVUCONAZOLE TREATMENT IN TWO PAEDIATRIC PATIENTS DURING EXTRACORPOREAL MEMBRANE OXYGENATION SUPPORT: THE ROLE OF THERAPEUTIC DRUG MONITORING

<sup>1</sup>A Pau Parra\*, <sup>2</sup>M Pujol Jover, <sup>3</sup>S Melendo Pérez, <sup>1</sup>A Fernández-Polo, <sup>1</sup>M Miarons, <sup>2</sup>J Izquierdo Blasco, <sup>1</sup>S García-García, <sup>3</sup>B Fernández Ledesma, <sup>1</sup>MJ Cabañas-Poy, <sup>2</sup>J Balcells, <sup>1</sup>S Clemente-Baustista. <sup>1</sup>Vall D'hebron University Hospital, Pharmacy Department, Barcelona, Spain; <sup>2</sup>Vall D'hebron University Hospital, Paediatric Critical Care Department, Barcelona, Spain; <sup>3</sup>Vall D'hebron University Hospital, Paediatric Infectious Diseases and Immunodeficiencies Unit, Barcelona, Spain

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**Background and Importance** Extracorporeal membrane oxygenation (ECMO) may lead to pharmacokinetic alterations of antimicrobials. Isavuconazole is not approved in paediatric patients (PedP) (off-label use) and data on paediatric ECMO are non-existent.

**Aim and Objectives** To describe two case reports using therapeutic drug monitoring (TDM) to optimise isavuconazole dosage in PedP during ECMO.

**Material and Methods** Prospective study in critically ill PedP treated with intravenous isavuconazole receiving ECMO (January 2021 to August 2022). Biodemographic, clinical and pharmacokinetic data were collected. Initial proposed dose of isavuconazole base was 5.4 mg/kg (first 48h q8h, followed by q24h; maximum 200 mg/dose). Isavuconazole trough serum concentration (IsaCmin) of 2.5-5 µg/mL was considered as therapeutic range (internal protocol). Continuous variables were expressed as median (range).

**Results** 1) A 2-year-old boy (11.5kg, 90cm) lung transplant recipient (pulmonary capillary hemangiomatosis) diagnosed with tracheobronchitis caused by *Aspergillus flavus* (9 months after transplant). Isavuconazole was started at a proposed dose and IsaCmin remained in therapeutic range: 5.1(2.5-5.5) µg/mL. Secondary prophylaxis with isavuconazole was maintained (same dose), requiring ECMO due to severe acute respiratory failure (multifactorial). During ECMO (165 days), it was necessary to increase the dose to 16.5 (8.7-19.1) mg/kg/24h to achieve target concentration of median IsaCmin 2.82 (1.3-6.5) µg/mL (24 blood samples). No new fungal infections were observed but sadly the patient died due to intracranial haemorrhage.

2) A 11-year-old girl (70kg, 158cm) admitted for influenza A infection and necrotising pneumonia (*Staphylococcus aureus*), requiring ECMO. Invasive fungal infection was probable (EORTC criteria; positive galactomannan and tracheal aspirate for *Aspergillus niger*) and isavuconazole was started: loading dose of 300mg/6h (suspected interaction with pentobarbital during first 48h) and TDM-guided maintenance therapy. During ECMO (30 days) median maintenance dose was 900mg (12.9mg/kg)/24h (varied widely ranging from 200mg/12h to 250mg/4h) and median IsaCmin remained in the therapeutic range: 4.0 (1.1-8.4) µg/mL (9 blood samples). After ECMO decannulation, isavuconazole dose was reduced to 200mg/12-24h and median IsaCmin remained in range: 3.9 (2.8-11.4)