

SPSSV.23 software was used for data analysis with centralisation and frequency measurements for descriptive data and the  $\chi^2$  test for inference.

**Results** A total of 192 AT were administered to a total of 168 patients (52% men), mean age 65 (SD 20) years and 68.5% had a Charlson index  $\geq 2$ . The three main site of infection were respiratory (53%), urinary (19%) and intra-abdominal (12%). 39.6% of the antibiotic prescriptions were assessed as inappropriate. Inappropriateness was classified and distributed as:

- Unnecessary, no signs of infection: 3.3% of AT prescriptions
- Not active for the expected aetiology: 9.8%
- Appropriate, but wrongly dosed: 4%
- Appropriate, but not recommended according to the CIG: 22.8%.

The indication with the highest degree of inappropriateness was urinary infections, with 19 of 31 AT prescriptions being inappropriate. Inappropriate prescription was not found to be a factor related to an increase in hospital stay (OR 1.39; 95% CI 0.77 to 2.50;  $p=0.269$ ), readmissions (OR 0.751; 95% CI 0.35 to 1.59;  $p=0.455$ ) or mortality (OR 1.40; 95% CI 0.87 to 22.86;  $p=0.809$ ).

**Conclusion and relevance** In general, CIG were followed because almost two-thirds of AT were appropriate. Furthermore, inappropriate AT prescriptions did not lead to an increase in hospital stays, or readmissions or mortality. The inappropriateness of the AT results may be considered for the development of antibiotic optimisation strategies.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

**Conflict of interest** No conflict of interest

#### 4CPS-242 ACUTE RESPIRATORY INFECTIONS: AN ANALYSIS OF HOSPITAL ANTIBIOTHERAPY PRESCRIPTION QUALITY FOR THE PAEDIATRIC POPULATION

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**Background and importance** In the paediatric population, a potentially high use of antibiotics has been verified. The inappropriate use of these drugs leads to a progressive increase in resistance rates, which is a major public health problem worldwide.

**Aim and objectives** The objective of the study was to analyse the rationale for antibiotic prescriptions in acute respiratory infections in the paediatric hospital area.

**Material and methods** A 1 year retrospective observational study was conducted (from November 2016 to October 2017) of episodes of hospital admission for acute respiratory infection in paediatric patients. An expert committee was set up to analyse the rationale for antimicrobial therapy, according to five criteria: indication, choice of drug, dosage, frequency of administration and duration of treatment.

**Results** 319 children were included in the study, aged (median, range) 2.3 years (1 month–14 years); 178 (55.8%) were male.

72% were diagnosed with acute bronchitis and the rest had community acquired pneumonia. Antibiotics were prescribed in 41% of bronchitis and 92% of pneumonia cases. 408 antibiotic prescriptions were evaluated, the most being broad spectrum antibiotics (27% azithromycin and 26% amoxicillin). 44.3% of patients had a correct antibiotic prescription. Rationality of antibiotic prescription was: 80.6% indication, 81.1% choice of drug, 76.2% dosage, 99.7% frequency of administration and 55.1% duration of treatment. The worst criterion was duration of treatment in patients with community acquired pneumonia, which was incorrect in 62.5% (75.8% for excess of days).

**Conclusion and relevance** The study data showed a wide margin of improvement in the hospital prescription of antibiotics in paediatric patients. The duration of treatment was the criterion with the least degree of adequacy, being incorrect in almost half of the prescriptions. There is a clear need for urgent action, such as implementing optimisation programmes for the use of antimicrobials in paediatric services, to put a stop to the indiscriminate use of these drugs and improve clinical outcomes of patients with infections, minimise adverse effects associated with the use of antimicrobials as well as microbial resistance, and guarantee the use of cost effective treatments.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

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#### 4CPS-243 HEALTHCARE ASSOCIATED CLOSTRIDIODES DIFFICILE INFECTION IN SURGICAL AND MEDICAL PATIENTS

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**Background and importance** *Clostridioides difficile* (*C. difficile*) infection (CDI) is one of the most common healthcare associated (HA) infections in contemporary medicine. The risk factors (RFs) for HA CDI in medical and surgical patients are poorly investigated in countries with a limited resource healthcare system.

**Aim and objectives** To investigate differences in patient characteristics and RFs associated with HA CDI in surgical and medical patients.

**Material and methods** A prospective cohort study was conducted including adult patients diagnosed with an initial episode of HA CDI from 2011 to 2017 in a 1200 bed teaching hospital. Patients hospitalised for any non-surgical illness, who developed initial HA CDI, were assigned to the medical group, whereas those who developed initial HA CDI after surgical procedures were in the surgical group. Data on the use of proton pump inhibitors (PPIs), chemotherapy and antibiotic usage were gathered by hospital pharmacists.

**Results** From 553 patients diagnosed with HA CDI, 268 (48.5%) and 285 (51.5%) were surgical and medical patients, respectively. Medical patients were significantly older than surgical patients ( $68.59 \pm 15.46$  vs  $64.91 \pm 14.86$  years,  $p=0.005$ ), and were treated significantly more frequently with PPIs (38.9% vs 19%,  $p<0.001$ ), fluoroquinolones (28.6% vs 9.9%,