37.5%) were prescribed a weak opioid and seven (7.1%, CI 95%: 2.0% to 12.2%) were prescribed another non–opioid drug.
- Thirty–two patients (24.1%, CI 95%: 16.8% to 31.3%) were not prescribed any drug as a rescue.
- Eighty–five patients (63.9% CI 95%: 55.7% to 72.1%) reported moderate–severe pain within 24 hours after surgery. Only 30 of them (35.3%, CI 95%: 25.1% to 45.5%) were administered one or more rescues within the 24 hours after surgery.
- At discharge, 34 patients (25.6%, CI 95%: 18.2% to 33.0%) were prescribed one or more analgesics around–the–clock.
- Thirty–one patients (23.3%, CI 95%: 16.1% to 30.5%) reported moderate–severe pain within 30 days after discharge.
- Eight patients (6.0%, CI 95%: 2.0% to 10.1%) attended the primary care physician consultation due to postoperative pain during the first month after discharge, while two (1.5%, CI 95%: 0.6% to 3,6%) went to the ER and/or were readmitted for this reason.

Conclusion Most patients were prescribed a NSAID, acetaminophen or dipyrone around-the-clock and a strong opioid as a rescue if more pain was experienced.

Rescue medication was under-prescribed and under-administered, which may partially explain the insufficient pain control within the first month after surgery.

REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

4CPS-169 COMPARATIVE ANALYSIS OF EFFECTIVENESS BETWEEN A PATIENT-CONTROLLED ANALGESIA MORPHINE DEVICE AND A SUBLINGUAL SUFENTANIL TABLET SYSTEM

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Background The sublingual sufentanil tablet system (SSTS) (Zalviso) is a new device for the management of postoperative pain.

Purpose To determine patients who may benefit from the use of SSTS compared to the patient-controlled analgesia morphine device (PCA-M). Analyse the effectiveness of SSTS compared to PCA-M.

Material and methods Observational and prospective study carried out in a private 300-bed hospital. The present study consisted of two arms, on the one hand were selected patients with PCA-M and on the other, patients with SSTS. The study period was from September 2017 to March 2018. In the present study were collected the type of surgery and pain intensity with the analogous visual scale of pain (AVS:0: no pain; 10: maximum pain) in various situations: prior to the PCA-M/SSTS and on days 1, 2 and 3 after PCA-M/SSTS. The total AVS value (average of 3 days) of each patient was also determined. The AVS value was determined through a pharmaceutical interview. Study data were analysed with the SPSS program: the difference of means was calculated through the student *t*-test and the Mann–Whitney U test.

Results Fifty-one patients were collected in the PCA-M group and forty-four in the SSTS group. The average age in the PCA-M group was 55 years, while the average age in the SSTS group was 50 years, with no significant differences between groups. Patients differed significantly between groups in the type of surgery: SSTS has been used more frequently in gynaecological surgery but less in neurosurgery than PCA-M. Groups also differed significantly in gender: SSTS has been administered mostly in females (65%) versus PCA-M (37%). The intensity of the pain prior to the use of the device was AVS 7 for both groups. On the first day after the device was used, the average AVS value in the SSTS group was 5 and in the PCA-M group 6 (P0.24). On days 2 and 3 the intensity of pain was lower in the PCA-M group (AVS 3) compared with the SSTS group (AVS 4) (P0.58). Sum of the AVS average value was 15 in the PCA-M group and 14 in the SSTS group (P0.28).

Conclusion According to the present study, both devices have similar effects in the reduction and management of post-operative pain through the AVS scale. The SSTS group slightly decreases pain faster than the PCA-M group, without significant differences. SSTS has been administered mainly in gynaecology, while the PCA-M device has been administered mainly in neurosurgery.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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No conflict of interest.

4CPS-170 ESTIMATING THE ECONOMIC IMPACT OF PHARMACIST-LED PRESCRIPTION ORDER VALIDATION OF OPIOID PRESCRIPTIONS IN A TERTIARY UNIVERSITY HOSPITAL

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Background Opioids easily cause adverse drug events (ADEs) or therapeutic failure in cases of prescribing errors, resulting in increased costs for the hospital, patient and healthcare system. The clinical pharmacist can detect and resolve these errors by performing prescription order validation (POV). Little data is available on the economic impact of this service.

Purpose To evaluate the cost-outcome of pharmacist-initiated interventions on opioid prescriptions during POV, in terms of cost savings and cost avoidance (CA) for the institution.

Material and methods Pharmacist interventions in prescriptions of fentanyl, hydromorphone, methadone, morphine, oxycodone and piritramide in a Belgian tertiary university hospital of 721 beds, UZ Brussel, were analysed (period 1 February 2017–31 January 2018). The potential drug cost without intervention was compared to the cost with intervention. An expert panel assessed the probability of ADE occurrence by assigning a probability estimate (PE) to every patient (0–no effect; 0.01–very low; 0.1–low; 0.4–medium; 0.6–high). The ADE-CA was calculated by multiplying the hospital's cost of an ADE (calculated according to a method proposed by the Belgian Healthcare Knowledge Centre) by

the PE. The total benefit was calculated as the sum of the drug cost difference and the ADE-CA. Personnel costs were estimated and subtracted from the estimated benefit to assess the final cost-benefit. A sensitivity analysis was added to determine the impact of assumptions on PEs, CA and employer's expenses.

Results In 3040 prescriptions, 94 interventions were registered. Posology-related DRPs were the most common (59%). Sixty-two per cent of the errors were assigned a PE of medium (30%) or high (32%) level. Total drug cost savings amounted to € 395.30 (median € 1.47/intervention, range -€ 21.01 to € 67.23). After adding ADE-CA, we found a total benefit of € 8,559.92 (cost-benefit ratio: 2.32). Mostly variations in the ADE-CA affected the outcome. A lower and upper limit of respectively -€ 1,386.56 and € 27,307.49 were calculated.

Conclusion This is the first Belgian study to evaluate the POV of opioids as a profitable service for the hospital. Because of some limitations in the method, further refinements are required for more accurate results. These findings demonstrate that hospital management should also take into account the potential savings induced by clinical pharmacists and cannot only rely on limited government funding.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

No conflict of interest.

4CPS-171 THE CHOICE OF ANTIEPILEPTIC DRUG TREATMENT AFTER STATUS EPILEPTICUS

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Background Status epilepticus (SE) is a life-threatening situation, which urges prompt antiepileptic treatment and intensive care. In the past few years, newer types of antiepileptic drugs (AEDs) have become available for SE treatment as second- or third-line drugs. AEDs should be prescribed for patients surviving SE as maintenance therapy in order to prevent further seizures.

Purpose To assess the prescription pattern of older and newer types of AEDs and their probable influence on the outcome of treatment (mortality and seizure freedom) after SE.

Material and methods Patients' data were retrieved from patients' files covering the period 1 January 2013 to 31 December 2017 in a retrospective study of patients who were treated and coded with SE diagnoses in accordance with the International Classification of Diseases by the WHO at the neurointensive unit of a tertiary teaching hospital. The end of follow-up was 30 June 2018.

Results In total 135 episodes (male: 68, 50.4%) were evaluated. The mean age was 64.1±13.9 years. The mean follow-up time was 39.9±14.2 months. Patients who survived SE (101 patients) took one (48.5%), two (36.6%) and three or more (14.9%) AEDs (49, 37 and 15 patients, respectively) at discharge to maintain freedom from seizures. The most common prescribed older type AEDs were carbamazepine and valproate. The prescriptions of newer type AEDs (60.3%; e.g. levetiracetam, oxcarbazepine, lamotrigine and lacosamide) were significantly higher at discharge than at admission ($p<0.005$). The mean seizure-free period was 6.8±6.9 months (the shortest seizure-free time was 1 day and the longest one was 5 years). In the case of patients taking carbamazepine (20.9%; OR: 0.37, 95% CI: 0.16 to 0.82; $p=0.018$), levetiracetam (27.5%; OR: 0.51, 95% CI: 0.27 to 0.97; $p=0.041$) or valproate (11.1%; OR: 0.18, 95% CI: 0.05 to 0.61; $p=0.0043$) had the highest probability of achieving seizure freedom among our patients. The choice of AED at discharge had no significant effect on mortality. Twenty-five patients had no seizure until the end of this study. Thirty-one patients (30.7%) died after the discharge period primarily due to co-morbidities.

Conclusion The administration of newer type AEDs *in SE* treatment may have an impact on the prescription pattern after discharge, however older type AEDs (carbamazepine, valproate) are a reasonable choice in achieving seizure freedom after SE.

REFERENCES AND/OR ACKNOWLEDGEMENTS

N/A.

No conflict of interest.

4CPS-172 IMPACT OF MEDICATION RECONCILIATION IN PATIENTS ON ADMISSION TO AN EXPERT CENTRE FOR PARKINSON'S DISEASE

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Background Parkinson's disease (PD) is a long-term neurodegenerative disorder, whose onset appears usually after 60 years' old. Patients often suffer from co-morbidities and have a complex medication regimen. Thus, iatrogenic risk is very high in these patients. In France, there are 25 expert tertiary centres for PD but no data about medication reconciliation (MR) for the patients hospitalised in these centres are currently available.

Purpose To implement the MR process at admission to an expert centre for PD and to assess its impact.

Material and methods The study was conducted prospectively from January 2017 to June 2018. We included all patients over 65 years' old, admitted in an expert centre for PD in southern France. At admission, we obtained a complete and accurate list of each patient's current home medications (name, dosage, frequency, route) i.e. the best possible medication history (BPMH). Then we compared the BPMH to the patient's admission order, identified discrepancies, qualified them as intentional or unintentional with the prescriber, and suggested changes in the prescription, if appropriate. The primary endpoint was to determine the number of patients with at least one unintentional medication discrepancy (UMD). Secondary objectives were to characterise and estimate the severity of potential consequences of UMDs according to Dufay *et al*[1] and assess the rate of acceptance of suggested modifications.

Results We included 266 patients. Two-hundred and eighty-two UMDs were identified and 114 patients (43%) had at least one UMD. The most frequent UMD was omission of medication (68%). Interestingly, 34% of UMDs affected neurology drugs, including 8% for anti-Parkinson's drugs. The severity of potential consequences was estimated 'serious' in 10% of UMDs. Seventy-six per cent of the modifications suggested were accepted by prescribers.