pharmaceutical guideline for giving QT advice was adjusted in collaboration with cardiologists.

Aim and objectives To compare the feasibility and clinical relevance of QT advice guided by the original and adapted QT guideline.

Material and methods QT advice provided by the pharmacist was analysed. This retrospective analysis included: number of times QT advice was given according to the original (April 2018 to January 2019) and the adapted guideline (May 2019 to October 2019), number of QT drugs (defined as drugs on the CredibleMeds list KR) per prescription and QTc interval >500 ms (if known). For 1 month (15 May to 14 June 2019), the acceptance rate of the pharmaceutical advice, including the QT advice was registered.

Results Differences between the original and adapted guideline are: (1) threshold for advising an ECG (original: ≥ 2 prescribed QT drugs or 1 QT drug in combination with a drug that inhibits the metabolism of a QT drug; adapted: ≥ 1 prescribed QT drug) and (2) definition of a recent ECG (original: maximum 1 year old; adapted: during hospitalisation). If no recent ECG is available or the QTc interval is >500 ms, advice is given to the physician.

The number of times advice was given using the original and adapted guideline were 78 (8 advices/month) and 243 (41 advices/month), respectively. On average, using the adapted guideline, advice related to QTc interval ≥ 500 ms was given 5 times per month compared with once using the original guideline. The acceptance rate of QT advice was 40% with an overall acceptance rate of 79% for all pharmaceutical advices.

Conclusion and relevance Adapting the QT flow resulted in a fivefold increase in the number of times advice was given in relation to QT. The rather low acceptance rate may be explained by the fact that the pharmacist only selected patients on QT drug prescriptions. To enhance the number of times clinically relevant advice is given, patient related risk factors (hypokalaemia, age, gender, cardiovascular comedications) should be included. It is therefore necessary that personalised risk assessment systems help the pharmacist to identify patients at greatest risk for QT prolongation.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of interest No conflict of interest

4CPS-365 INTEGRATION OF THE HOSPITAL PHARMACIST INTO A MULTIDISCIPLINARY COMPLEX CHRONIC PATIENT CARE TEAM

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Background and importance The integration of the hospital pharmacist into a multidisciplinary team is needed due to the increase in hospital admissions of complex chronic patients.

Aim and objectives To describe discrepancies and potentially inappropriate prescriptions (PIPs) of medications detected by the pharmacist, integrated into multidisciplinary team, in complex chronic patients (CCP) hospitalised in the chronic patient unit (CPU).

Material and methods This was a descriptive and prospective 5 month analysis (June to November 2019). We developed a protocol to standardise the pharmacotherapeutic plan review of all patients admitted to the CPU. We also developed a registry model of pharmaceutical interventions (PI). Anthropometric and demographic patient data were analysed (sex, age and number of chronic medications). A patient/care giver interview was conducted at hospital admission and the following PI were registered:

- Reconciliation: detection of unjustified discrepancies when comparing outpatient drug with hospital therapy.
- Adequacy: detection of PIPs using explicit/implicit criteria with CheckTheMeds software.

Individualised strategies based on the prescription's evidence of adequacy were communicated verbally and also by means of the electronic medical records.

Results 138 hospitalised CCP were included in the study, 58.7% men, with a mean age of 82.25 ± 9.4 years. The average number of drugs administered per patient was 10.83 ± 5.5 . For all prescribed drugs (1490), discrepancies were found for 623 (40.81%), meaning that 127 patients presented with discrepancies from which 56.02% were justified. The average reconciliation errors were 4.5 ± 2.9 per patient and these were: omission (50%), different route of administration, different dose or frequency (36.9%), contraindicated drug (9.9%), duplicity (2.6%) and different drug (0.7%).

100% of patients had at least one PIP and the total number of PIPs was 481 (3.5/patient). The most common PIPs were related to drugs that increased the risk of falls (154 (32%)) and CNS related drugs (140 (29%)). PIPs related to greater duration than that indicated in the technical data sheet in the benzodiazepine group (83 patients) and duplicity (67 patients) were also detected.

Conclusion and relevance Pharmacist inclusion on the equipment allows an exhaustive review of pharmacological therapy, an important role in patient safety (polypharmacy, patient complexity, etc). The next step is to measure the results of the PI performed to measure the magnitude of the effect of the intervention.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-366 COMPARING THE MEDICATION PROCESS ACROSS COUNTRIES USING THE FUNCTIONAL RESONANCE ANALYSIS METHOD

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Background and importance The medication process in hospitals that comprises prescribing, dispensing, administration and monitoring is an interprofessional collaboration. This includes hospital pharmacists (HPs) in one or more stages, which improves patient safety and reduces costs. However, the use of HPs varies greatly between countries and so do the results of studies evaluating the benefit of HPs. The differences between the HP's role across countries has not yet been described on a tangible level.

Aim and objectives The aim of this study was to use the functional resonance analysis method (FRAM) to compare the HP's role in the medication process in three countries using the same electronic health record (EHR) software.

Material and methods To compare the medication process across countries, field study observations were carried out by the same observer in the USA, the Netherlands and Denmark in hospitals using the EPIC Systems for the EHRs. FRAM, a way to describe outcomes using the idea of resonance arising from the variability of everyday performance, was used to illustrate and analyse the medication process. The FRAM model highlights the connection between the workflows involved in the medication process, and maps out functions, represented by hexagons and the associated aspects of each function, as well as interconnections between them. The aspects used are input (I), output (O), precondition (P), resource (R), control (C) and time (T).

Results When studying the FRAM model describing the medication process, differences between countries became apparent. HPs in Denmark take part in monitoring, such as medication reconciliation and medication review, whereas HPs in the USA and the Netherlands take part in medication verification, review of medication orders made in the hospital setting by physicians as well as monitoring. In the USA and the Netherlands, monitoring includes antibiotic stewardship, therapeutic drug monitoring as well as pharmacogenomics. In Denmark, HPs act as a resource for the physician in the monitoring process, whereas for both the USA and the Netherlands, the HP is in charge of both medication verification and monitoring.

Conclusion and relevance By comparing the hospital pharmacist's role across countries, the potential for extended use of hospital pharmacists emerged.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-367 IMPACT OF PHARMACEUTICAL CONSULTATION IMPLEMENTATION ON PHARMACEUTICAL INTERVENTIONS AND THE ROLE OF PHARMACISTS IN MULTIDISCIPLINARY TEAMS

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Background and importance Our hospital serves a population of 278 000, and we have, on average, 1500 monthly patient visits for drug dispensing. The pharmacists, working in this context, are responsible for activities such as analysing the patient's pharmacotherapeutic profile, prescribing drug dosages, identifying possible interactions between different drugs or natural products/foods, confirming the indication of the prescription and alerting to possible drug adverse effects. This process may originate more than one pharmaceutical intervention (PI). Since we implemented the pharmaceutical consultation (PC) in 2015, pharmacists have become specialists for specific pathologies (starting with hepatitis C) and are closely monitoring their patients. Currently, PCs have been expanded to HIV, oncology, neurology, biological drugs, among others. Although drug dispensation is still the main source of PIs, PCs plays an increasing crucial role.

Aim and objectives To characterise the PIs performed in the outpatient setting as an indicator of the PCs implemented.

Material and methods A retrospective analysis of PI data was conducted in the context of outpatient drug dispensation, from January 2017 to August 2020.

Results From January 2017 to August 2020, 3149 PIs were registered in 1453 patients. PIs have been growing annually as a result of PC implementation: 186 until 2017 (3 PC); 901 in 2018 (6 PC); 943 in 2019 (9 PC); and this year we have already done 2017. The infectious diseases specialty had the highest number of PIs (31%), followed by ophthalmology (26%), gastroenterology (17%), oncology (10%), biological drugs (7%), neurology (5%) and others (4%). Of all of the PIs, 61% were about compliance, 19% were about appointments and laboratory analysis, 4% related to missing medication prescriptions, 3% were about excessive duration of medications, notification of adverse drug reactions and drug interactions, 2% were related to changing the dose and 1% were due to therapeutic duplication and referral to the emergency department. From all PIs, 96% were accepted with modification (AwM—prescription/behaviour modified as suggested), 3% were accepted without modification (AoM—intervention accepted but with justified prescription/behaviour maintenance) and 1% were not accepted.

Conclusion and relevance As seen previously, the number of PIs has been increasing over time, which is in part justified by the implementation of PCs. Having 96% of PIs AwM clearly shows the pharmacist's impact, as part of the multidisciplinary team, in terms of patient compliance, quality of life and outcomes.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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4CPS-368 SYSTEMATIC REVIEW OF THE ASSOCIATION BETWEEN ANTICHOLINERGIC BURDEN AND XEROSTOMIA AND XEROPHTHALMIA

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Background and importance Xerostomia and xerophthalmia are described as common adverse effects of anticholinergic drugs. Recently, anticholinergic scales had been developed to measure the anticholinergic burden, the accumulative effect of anticholinergic drugs. It is not known whether anticholinergic burden could be correlated with xerostomia and/or xerophthalmia.

Aim and objectives The objective was to collect the evidence of the association between anticholinergic burden calculated by different anticholinergic scales or anticholinergic drug use and xerostomia and/or xerophthalmia.

Material and methods A literature search was performed in MEDLINE, EMBASE and CINAHL using terms such as elderly, aged, 80 and over, anticholinergic drugs, anticholinergic burden, xerophthalmia, dry eye, dryness mouth, xerostomia, hyposalivation and dry mouth. Clinical trials and observational articles were selected. The following variables were collected: number of patients, anticholinergic scales used, study duration and statistical association between xerophthalmia or xerostomia and anticholinergic burden or anticholinergic drug use.