This protocol was implemented in a third-level hospital with 330 average daily ED assistance and five daily hours of presential pharmaceutical activity.

ED pharmacists made individual recommendations: early reconciliation was performed in all patients reviewed, and remaining conciliation interventions were performed in patients with stays longer than 12 hours and complexity criteria.

Results The chronic medication of 1,645 patients was reviewed over a 2-month period: 475 recommendations of early reconciliations were given in 337 patients and physicians accepted 248 (52.32%). Demographic data: 73 (13,64) average age, 196 (58,16%) men. Mean time of recommendations from arrival to ED was 6.73 hours. Time average of reintroduction by physicians was 10,38h. Within the first 12 hours, 179 drugs (72.18%) were introduced.

Forty pharmacological groups were recommended to be reintroduced: insulin and analogues (A10A) and beta blockers (C07A) were the most recommended (N=236), following others: antithrombotic (B01A) (N=37), Calcium channel blockers (C08C) (N=34), immunosuppressant (L04A) (N=37), antiepileptic (N03A) (N=33), nitrates (C01DA) (N=18).

A total of 402 patients with stays longer than 12 hours and complexity criteria were reviewed, leading to 171 recommendations.

Pharmaceutical interventions were analysed over a period of 2 months comparing before and after protocol application: variety of intervention were similar, but quantity increased after protocol implementation (531 vs 1043 interventions).

Conclusion and relevance Early conciliation led to early reintroduction of priority drugs, ensuring safety and quality across care transitions and with a high rate acceptance among physicians.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

4CPS-229 SUSTAINABILITY: A PERSON-CENTRED, WHOLE SYSTEMS APPROACH TO MEDICINES OPTIMISATION

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10.1136/ejhpharm-2024-eahp.333

Background and Importance Suboptimal medicines use is a challenge for health systems globally, contributing to suboptimal outcomes, inefficiencies and sustainability issues, including waste.

Aim and Objectives The aim was to utilise the Clinical Pharmacy Team to drive medicines optimisation and sustainability in a Health and Social Care Trust through the safe, effective and economic use of medicines.

Material and Methods In 2001, a person-centred, whole systems approach to medicines optimisation was implemented in a Health and Social Care Trust. Central to the model was a ward-based Clinical Pharmacy team delivering a comprehensive clinical pharmacy service including medicines reconciliation, medicine review, patient education, interface communication and extended roles for the Clinical Pharmacy team. Evaluation included length of stay, readmission, medicines appropriateness using the Medicines Appropriateness Index and clinical significance of pharmacist interventions using the Eadon grading tool. The model was further developed and evaluated over two decades to include pharmacist prescribing, post-discharge telephone follow-up and person-centred structured medicine review and was extended to include nursing and intermediate care settings.

Results Initial evaluation demonstrated significantly improved medicines appropriateness, reduced length of stay (2 days) and readmission (number needed to treat =12). Further benefits were achieved through post-discharge telephone follow-up (10% reduction in readmission) and structured medicine reviews (94.7% interventions deemed clinically significant and 92% of medicines stopped remained stopped 1year post-review).

Conclusion and Relevance This work has demonstrated improved medicines optimisation and sustainability and has been scaled and spread to other European countries including Austria and Poland. It has been identified as an example of best practice to inform Clinical Pharmacy Services in Central and Eastern Europe[1] and work is ongoing to innovate and further develop the model.

REFERENCES AND/OR ACKNOWLEDGEMENTS

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Conflict of Interest No conflict of interest.

4CPS-230 IDENTIFICATION OF RARE DPYD VARIANTS ASSOCIATED WITH TOXICITY TO FLUOROPYRIMIDINES IN A CLINICAL PHARMACOGENOMICS PROGRAMME

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10.1136/ejhpharm-2024-eahp.334

Background and Importance Dihydropyrimidine dehydrogenase (DPYD) is a key enzyme in the metabolism of fluoropyrimidines. Patients with deficiency in DPYD are at great risk of severe adverse events when treated with fluoropyrimidines (5-fluorouracil, capecitabine). It is recommended that patients are screened for the most common variants in this gene before initiating chemotherapy. However, some patients still develop early serious toxicities.

Aim and Objectives We report the result of a clinical pharmacogenomics programme targeted to patients who developed toxicity with fluoropyrimidines. The aim was to identify rare variants in the DPYD gene associated with severe toxicity, and to provide patients and clinicians with pharmacogenomic counselling.

Material and Methods Patients who suffered severe toxicities (grade≥3) during their first three cycles of treatment with fluoropyrimidines were identified by their oncologist or oncology pharmacist. They were all negative for the four recommended variants (DPYD*2A, c.2846A>T, c.1679T>G, and c.1236G>A). A methodology for sequencing the 23 exons of DPYD was developed by the Pharmacogenomics Unit, integrated in the Hospital Pharmacy Department. The study was approved by the local Ethics Committee. Patients were informed and gave consent to participate in the programme.

Results Since 2017, 91 patients have been included in the programme and 32 variants in DPYD were identified. Nine of

these 32 variants were associated with the development of severe toxicity in these patients (c.257C>T, c.704G>A, c.775A>G, c.851G>T, c.1977–1984-CTCCAGAA>C, c.2197insA, c.2242+1G>T, c.2324T>G and c.2087G>A). As a result of the programme, the cause for toxicity was found in 10% (9/91) of patients. The results of the test together with a dose adjustment recommendation were communicated to patients and included in their electronic medical record to make the information available for the oncologist and the rest of the clinical team.

Conclusion and Relevance This programme helped us to identify uncommon variants in the DPYD gene that were associated with toxicity to fluoropyrimidines in a clinical practice setting. These variants will be included in a new test that is currently under development. We believe that performing this extended test before initiating treatment can improve patient safety.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

5PSQ-001 INCIDENCE OF HEPATITIS B VIRUS REACTIVATION IN PSORIASIS PATIENTS TREATED WITH CYTOKINE INHIBITORS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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10.1136/ejhpharm-2024-eahp.335

Background and Importance The safety of cytokine inhibitors in psoriasis patients with hepatitis B virus (HBV) remains uncertain due to their exclusion from clinical trials. Observational studies have recently raised clinical concerns about HBV reactivation (HBVr) risk in psoriasis patients using cytokine inhibitors, but a comprehensive systematic review is still lacking.

Aim and Objectives This study aimed to evaluate the risks of HBVr in psoriasis patients treated with cytokine inhibitors.

Material and Methods Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses, we conducted a systematic literature search in PubMed, Embase, Web of Science, and Cochrane Central Register of Controlled Trials for relevant observational studies on 5 May 2023. We included studies with >5 cases and complete HBV status. Two independent reviewers performed the study selection and data extraction, and the discrepancies between reviewers would be solved by the full discussion. A random-effects meta-analysis assessed the pooled incidence of HBVr. We also conducted subgroup analyses to compare HBVr incidence across different cytokine inhibitors and HBsAb status.

Results Eight observational studies comprising 181 psoriasis patients were included. Among HBsAg+ individuals without antiviral prophylaxis, the pooled HBVr incidence was 25.3% (95% CI: 10.4 to 49.7%) with a median onset at 5 months (range: 3–7 months) from the cytokine inhibitor initiation. No HBVr events were observed in HBsAg+ individuals with antiviral prophylaxis. Among HBsAg−/HBcAb+ individuals, the pooled HBVr incidence was 5.0% (95% CI: 2.3 to 10.8%) with a median onset at 12 months from the cytokine inhibitor initiation. Subgroup analysis showed similar pooled HBVr incidence for IL-12/23 inhibitors (4.0%, 95% CI: 1.3 to 11.8%), IL-17 inhibitors (6.6%, 95% CI: 1.9 to 20.5%), and IL-23 inhibitors (5.0%, 95% CI: 0.3 to 47.5%). No significant risk difference was found between patients with and without HBsAb (risk difference: −0.01%; 95% CI −0.16 to 0.13%).

Conclusion and Relevance This systematic review and meta-analysis shed light on the incidence of HBVr associated with cytokine inhibitors in psoriasis patients. Prophylactic antiviral use is crucial for patients with HBV. Physicians and pharmacists must ensure proper HBV protection through prophylaxis and monitoring when administering cytokine inhibitors, in addition to adhering to recommended HBV vaccination.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of Interest No conflict of interest.

5PSQ-002 PRESCRIBING TREND OF FLUOROQUINOLONES FOLLOWING LATEST EMA RECOMMENDATIONS

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10.1136/ejhpharm-2024-eahp.336

Background and Importance The European Medicines Agency (EMA), following a 2018 European-wide review to assess the risk of serious and disabling adverse reactions, has recommended that the use of fluoroquinolones should be restricted. In 2019, the use of these antibiotics was significantly limited. However, a subsequent study, showed that these drugs are still prescribed outside the recommended uses. For this reason the EMA, in May 2023, issued a reminder.

Aim and Objectives The aim is to analyse the prescribing trend of fluoroquinolones, following EMA's reminder.

Material and Methods Analysis of prescription (PR) dispensed through community pharmacies, relating to the active ingredients (p.a.) classified with the anatomic, therapeutic and chemical classification (ATC) J01MA. The period considered is from 2017 to 2022. The analysed data were in the pharmaceutical service database, grouped by p.a./ATC, patient's age and was processed via Microsoft Excel.

Results The number of PR of p.a. analysed decreases significantly starting from 2019. Pefloxacin and pipemidic acid are no longer prescribed from 2020. Approximately 50% of the PR, per single p.a., are intended for patients aged 65 or over (302314/601603 total PR in 6 years). The most prescribed p. a. are levofloxacin (273976 total PR) and ciprofloxacin (290553 total PR); the number of PR of these two p.a., in 2021, decreased by 66% (from 74705 to 25032) and 41% (from 65980 to 38916) respectively compared to 2017. However, in 2022 there was an increase of 14% (28741 PR) for levofloxacin and 7% (41785) for ciprofloxacin, compared to the previous year. In the remaining p.a., excluding moxifloxacin, no prescribing increase was observed between 2021 and 2022.

Conclusion and Relevance The restrictions introduced by EMA aim to reduce the risk of disabling and potentially irreversible side effects linked with fluoroquinolones use, especially in the elderly population. The results suggest that the restrictions introduced in 2019 have been adopted effectively, resulting in a decrease of prescriptions up to 2021. The increase of levofloxacin, ciprofloxacin and moxifloxacin observed in 2022 could be caused by reduced prescribing attention, shortage/