Background and importance In the internal medicine department of our hospital, medication review provided by pharmacists during medical rounds is offered to only a fraction of the 200 inpatients, due to limited resources. In order to detect high risk situations potentially leading to adverse drug events, we developed PharmaCheck, an electronic tool that screens all patient electronic health records (EHR) in real time, by aggregating drug prescriptions, laboratory values, vital signs and medical problems.

Aim and objectives To determine the impact of PharmaCheck in the identification of high risk situations and on the clinical pharmacist’s interventions.

Material and methods PharmaCheck was set to screen 20 situations distributed into four risk classes: a drug prescription with an abnormal laboratory value, a contraindication, a drug–drug interaction (DDI) and an inadequate administration mode. For 150 days (February to August 2020), PharmaCheck performed a daily screen of patients’ EHR, admitted to the internal medicine department. As soon as an alert was triggered, the clinical pharmacist analysed the patient’s clinical context to suggest a treatment adjustment when needed. An observational prospective study was performed to assess the distribution of each risk class, the predictive positive value of each alert (PPV: proportion of situations associated with an intervention) as well as the acceptance rate by the prescribers.

Results 430 alerts were triggered for 387 patients (3.3±1.9 alerts/day) with a global PPV of 19.3% (n=83/430). Regarding risk classes, PPVs were 25.6% (n=58/226) for abnormal laboratory value, 3.10% (4/127) for contraindications, 28.2% (20/71) for DDIs and 16.7% (1/6) for inadequate administration mode. The approval rate of treatment adjustment suggestions was 71.1% (n=59/83); rejections were related to an acceptable risk–benefit balance (n=20) or an unknown cause (n=4).

Conclusion and relevance PharmaCheck identified a significant number of high risk situations. By contextualising these alerts the clinical pharmacist selected the most relevant ones to suggest treatment adjustment, mostly accepted by physicians. Beyond the clinical context, the relevance of alerts depends on the informative quality of the triggering elements, explaining a low PPV for some risk classes (eg, contraindication, depending on unstructured textual medical problems). PharmaCheck expands the coverage of the clinical pharmacist for selected situations and we plan to transpose this strategy to other, more fragile, patient populations (eg, geriatrics, paediatrics, oncology).

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest
Conclusion and relevance The number of PI made in the two periods was similar but the CDSS tool allowed pharmacists to detect certain types of DRP that use of the CPOE alone did not allow. Moreover, the use of this tool optimised the pharmacist’s medical prescription review time and facilitated the PI registration task. To increase the usefulness of the CDSS it is necessary to increase the number of relevant alerts introduced in this application.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

Conflict of interest No conflict of interest

4CPS-371 USABILITY EVALUATION OF A PERSONALISED HEALTH RECORD FOR DETECTING MEDICATION DISCREPANCESS

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Background and importance An online personalised health record (PHR) is a valid tool to reduce medication discrepancies (MDs), defined as unexplained differences among medication regimens. The success of a PHR depends on the usability and patient’s experienced utility of the PHR.

Aim and objectives The aim of this study was to explore the usability and utility of an online PHR for the identification of MDs, and to describe the association between the usability and patient, setting and medication related factors.

Material and methods Patients with an outpatient visit to the rheumatology department or a planned admission to the cardiologists (MDs), and to describe the association between the usability and patient registration task. To increase the usefulness of the CDSS it is necessary to increase the number of relevant alerts introduced in this application.

REFERENCES AND/OR ACKNOWLEDGEMENTS

None.

Conflict of interest No conflict of interest

4CPS-372 PHARMACEUTICAL INTERVENTIONS IN HOSPITALISED PATIENTS DURING THE FIRST WAVE OF THE SARS-COV-2 PANDEMIC

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Background and importance The activity of pharmacy services increased during the first wave of the SARS-Cov-2 pandemic. An example of this was the activity carried out during the validation of inpatient treatments.

Aim and objectives To evaluate pharmaceutical interventions carried out in a second level hospital during the pandemic and compare them with those in the same period of the previous year.

Material and methods This was a retrospective study. All pharmaceutical interventions between March and May 2020 (pandemic period: P) and those between March and May 2019 (pre-pandemic period: pre-P) were reviewed. Data collected were: number of interventions, hospital stay, intervention rate (number of interventions × 1000 hospital stays), therapeutic group involved and type of intervention. Data analysis: Stata V.15.1. The χ² Mantel–Haenszel test was used to compare intervention rates and the χ² Pearson to compare proportions.

Results The number of interventions was 690 versus 115, and the number of hospital stays was 27 415 versus 27 062 for the P and pre-P periods, respectively. The intervention rate (P vs pre-P) was 25.2×1000 stays versus 4.2×1000 stays (χ² Mantel–Haenszel, p<0.0001). Therapeutic groups involved (P vs pre-P, respectively) were: P01-antiparasitics/hydroxychloroquine (40% vs 0%), J01-antibiotics and J05-antivirals (17% vs 19%), N05-antipsychotics (7% vs 6%), B01-anticoagulants antitragagents (6% vs 15%), N02 analgesics (5% vs 21%) and other groups (25% vs 39%). Statistically significant differences were found between both distributions (χ² Pearson, p<0,001).

Type of interventions (P vs pre-P, respectively): drug interaction monitoring (40% vs 11%), stop treatment (26% vs 17%), dosage change (26% vs 60%) and other interventions (8% vs 12%). Both distributions (P and pre-P) were compared, and there were statistically significant differences between them (χ² Pearson, p<0,001).