Results Articles included=8, numbers of patients=2926. Only five studies used anticholinergic scales: anticholinergic drug scale (three studies), anticholinergic risk scale (two studies). Three studies correlated anticholinergic drug use with xerostomia and/or xerophthalmia. Five were cross sectional studies, one randomised controlled trial and 2 cohort studies. Mean study duration was 5 months (range 2–10 months). Only three studies found a statistical association between xerostomia and anticholinergic burden when comparing patients without an anticholinergic burden and patients with a high anticholinergic burden. No studies found an association between anticholinergic burden and xerophthalmia.

Conclusion and relevance An association was found only in those studies that compared high anticholinergic burden versus no burden for xerostomia, therefore indicating that measurement of anticholinergic burden could be a good method of predicting xerostomia in patients treated with anticholinergic drugs. However, larger studies are necessary to better corroborate this conclusion.

REFERENCES AND/OR ACKNOWLEDGEMENTS

Conflict of interest No conflict of interest

4CPS-369 PHARMACHECK AS A SCREENING TOOL TO INTERCEPT HIGH RISK SITUATIONS IN INTERNAL MEDICINE THAT COULD LEAD TO ADVERSE DRUG EVENTS

¹C Skalaforis*, ²JL Reny, ²J Stirnemann, ²O Groscurin, ³F Eggimann, ³D Grauser, ¹M Jermini, ¹C Bruggmann, ¹P Bonnabry, ¹B Guignard. ¹Geneva University Hospital, Pharmacy Department, Geneva, Switzerland; ²Geneva University Hospital, General Internal Medicine Division, Geneva, Switzerland; ³Geneva University Hospital, Information Systems Department, Geneva, Switzerland

10.1136/ejhp-pharm-2021-eahpconf.201

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

4CPS-370 PHARMACISTS' INTERVENTIONS BEFORE AND AFTER THE USE OF A CLINICAL DECISION SUPPORT TOOL TO DETECT DRUG RELATED PROBLEMS

O Urbina*, P Martin, MD Martinez, A López De Torre, C Blanco, Y Llorens. Hospital Universitario Álava, Pharmacy Department, Vitoria-Gasteiz, Spain

10.1136/ejhp-pharm-2021-eahpconf.202

Background and importance Drug related problems (DRP) and medication adverse events occur in hospitalised patients. Computer provider order entry (CPOE) systems with clinical decision support systems (CDSS) are a key process for the pharmacist's routine prescription validation to improve medication prescribing and patient safety.

Aim and objectives To evaluate the type and number of pharmacist interventions (PI) before and after the use of a CDSS tool added to the CPOE system.

Material and methods A retrospective observational study was carried out in a 300 bed hospital between January 2019 and May 2020. Data collected were: DRG type, PI and detection method. First period (January–August 2019): pharmacist validation using CPOE and electronic health records (EHR) was performed. The CDSS was introduced in August 2019. The CDSS includes drug information related to dose adjustment according to renal function, monitoring of analytic parameters susceptible to being altered by the drug, and drug–drug/drug–food interactions that are continuously updated by pharmacists. When EHR and CPOE containing demographic, anthropometric and clinical data of the patient as well as pharmacological treatment are integrated with the CDSS, alerts are generated (potential DRP) in real time that are evaluated by pharmacists. When the alerts are considered relevant, pharmacists write a PI in the patient's chart. Second period (August 2019 –May 2020): CDSS alerts were available for prescription validation.

Results First period: 1574 PI. Second period: 1687 PI (1451 using the first period method and 236 using the CDSS alerts). PI as a result of the CDSS were about 14% of total PI, and their type and number comparing both periods are presented in table 1.