accounting for 21.2% and 16.2% of total AED consumption (DDD 163.7 and 125.2, respectively). In the same year, oxcarbazepine and lamotrigine were the most used new AEDs (10.91% and 10.79% of total; DDD 84.1 and 83.2, respectively), while gabapentin and pregabalin exhibited the higher incidence of use. The main indication of use was epileptic disorders for older AEDs and neuropathic pain for newer AEDs. A high number of patients treated with older AEDs, in particular carbamazepine, phenobarbital, and valproic acid, received coprescription at clinically relevant interaction risk. Among newer AEDs, lamotrigine showed a high annual rate of possible interaction.
Conclusion: Significant differences were shown in the prescribing pattern of newer and older medications: older AEDs were mainly used in the treatment of epileptic disorders, while newer compounds were also preferred for conditions other than epilepsy, in particular neuropathic pain. The fall in the use of newer AEDs during 2007 agreed with revised reimbursement criteria for gabapentin and pregabalin. The coprescription should be evaluated with caution and avoided if possible. Drugs at risk of interactions should be replaced with others having same indication of use.
Disclosure of Interest: None declared.

PP179—IDENTIFICATION OF DRUG–DRUG INTERACTIONS THROUGH A DIGITAL HEALTH SERVICE

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Introduction: Drug–drug interactions (DDIs) may have severe and life-threatening health consequences. To identify DDIs, a cloud-based surveillance has been implemented in a network of 12 pharmacies, 1 general hospital, and 24 general physicians of the ASS2 Health District, North East Italy.
Patients (or Materials) and Methods: DDIs were identified through a fully automated, closed loop system that records and updates, by specifically designed software interfaces loaded on Information and Communication Technology (ICT) programs of the network, all the drugs taken during therapy cycle/s. Each patient, agreeing to participate, was linked through her/his tax code to all prescription/OTC drugs managed from October 2012 to March 2013, generating a personal pharmacologic profile. Data on age, sex, and comorbidity were collected in the beginning of the study. DDIs were identified and classified according to Mario Negri Institute definition in 3 severity groups: low (no suspension or change in therapy required), moderate (change in treatment, additional therapy or hospitalization required), and high (potentially fatal).
Results: A total of 369 patients (58.3% women) were included. About 30% shown 1 comorbidity and 11.8% 2 or more. Cardiovascular diseases (22.7%) represented the most frequent comorbidity, followed by musculoskeletal pathology (13.6%), diabetes (8.6%), cancer (5.1%), and depression (4.8%). The Charlson Comorbidity Index was 0 in 65.2%, 1 in 25.7%, 2 in 7.0% and 3 to 4 in 2.1%. A total of 67 patients (mean age, 72 [12] years; 52.2% women) had at least 1 DDI. About 50% (N = 33) had up to 2 DDIs, 25% from 3 to 7 DDIs and 25% ≥8 (from 9–74 DDIs per person). A total of 501 DDIs were identified: the severity was low in 35.5%, moderate in 59.7% and high in 4.8%. The top 10 drugs involved in DDI were: acetylsalicylic acid (ASA), hydrochlorothiazide, ibuprofen, diclofenac, digoxin, nebivolol, pantoprazole, ramipril, furosemide, and nimesulide. DDIs occured more frequently with ASA and hydrochlorothiazide (6.2%), hydrochlorothiazide and pantoprazole (4.6%), ASA and ibuprofen (3.4%), ASA and nebivolol (3.4%), and ASA and nitroglycerin (3.2%). About 50% of DDIs involving ASA, hydrochlorothiazide, and ibuprofen were of low severity and another 50% of moderate severity. For diclofenac, low severity DDIs were 27.6% and 72.4% moderate while for digoxin 75.7% were moderate and 24.3% high.
Conclusion: ICT technologies are useful to timely identify DDIs of clinical relevance and the drugs most frequently involved.
Disclosure of Interest: None declared.

PP180—ROLE OF ORGANIC ANION TRANSPORTING POLYPEPTIDES 1A2 AND 2B1 IN CELLULAR UPTAKE OF NADOLOL

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Introduction: Due to its high solubility and low permeability, nadolol, a nonselective β-blocker, is categorized as a class III drug in a Biopharmaceutics Classification System, and therefore nadolol may require active influx transporters to permeate gut wall mucosa during intestinal absorption. Members of the organic anion transporting polypeptide (OATP) family such as OATP1A2 and OATP2B1 have previously been reported to be involved in intestinal absorption of several drugs. However, the molecular mechanism of nadolol uptake into enterocytes still remains unknown.
Patients (or Materials) and Methods: Human embryonic kidney (HEK) 293 cell lines stably expressing OATP1A2 or OATP2B1 were used to investigate whether nadolol is a substrate for these transporters using [3H]nadolol. Epigallocatechin 3-gallate (EGCG), a flavonoid highly abundant in green tea, was used as an inhibitor of OATP1A2- and OATP2B1-mediated transport.
Results: No significant nadolol uptake was observed in OATP2B1-expressing cells. In contrast, the uptake of nadolol in OATP1A2-expressing cells was significantly greater than that in vector-transfected cells. OATP1A2-mediated nadolol uptake was saturable with *K*m and *V*max values of 84.3 (1.0) μM and 332.8 (125.5) pmol/min/mg protein, respectively. OATP1A2-mediated uptake of nadolol was inhibited in a concentration dependent manner by EGCG with an *IC*50 value of 37.3 (5.9) μM.
Conclusion: These data suggest that OATP1A2 is predominantly involved in the cellular uptake of nadolol, while the role of OATP2B1 may be negligible. The inhibition of OATP1A2-mediated nadolol uptake might be involved in drug–drug and drug–food interactions with this β-blocker.
Disclosure of Interest: None declared.

PP181—EVALUATION OF THE INTERACTION BETWEEN METHOTREXATE AND PROTON PUMP INHIBITORS USING HUMAN OAT1 AND OAT3 HEK TRANSFECTED CELLS

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