

## Publication

### Utilization of Drugs with Pharmacogenetic Dosing Recommendations in Switzerland: A Descriptive Study Using the Helsana Database.

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In Switzerland 167 drugs on the market contain information about pharmacogenetics in their drug label (PGx drug). Preemptive pharmacogenetic testing is reimbursed by health care insurance for only seven drugs (abacavir, carbamazepine, 6-mercaptopurine, azathioprine, 5-fluorouracil, capecitabine, and irinotecan) although, it is proposed to be a cost-effective approach to personalized medicine. The aim of this study was to describe the use of PGx drugs and their corresponding genes in Switzerland.; We identified 90 drugs with dosing recommendations from the Pharmacogenetic Knowledgebase involving 24 genes. We assessed the utilization of those drugs between 2016 and 2020, using claims data from a large Swiss insurance company (Helsana).; Of 841 491 persons with drug claims during the whole study period, 78.7% were exposed to PGx drugs. Ibuprofen, pantoprazole, and tramadol had the highest number of users. Seven genes (; CYP2C19, CYP2C9, CYP2D6, SLCO1B1, HLA-B, MT-RNR1; , and; VKORC1; ) were responsible for over 95% of all potential drug-gene interactions.; The prevalence of PGx drug prescriptions is high in the Swiss population. Therefore, intensified preemptive testing may be a useful option as a substantial amount of the Swiss population might benefit.

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