Resource Summary Report

Generated by NIF on May 16, 2025

EU-ADR

RRID:SCR_004028
Type: Tool

Proper Citation

EU-ADR (RRID:SCR_004028)

Resource Information

URL: http://www.euadr-project.org/

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Description: Consortium that created the capability to detect Adverse Drug Response (ADR) signals by creating the infrastructure for large-scale monitoring of drug safety using electronic health records (EHR). The platform leverages EHR""s comprising demographics, drug use and clinical data of over 30 million patients from several European countries. Special attention was given to patient groups that are not routinely involved in clinical trials, for ethical or practical reasons (e.g. pregnant women, elderly people, people using many drugs simultaneously, and children). This project also studies and compares a number of different techniques that all aim to detect unexpected or disproportional rates of events. The algorithms that they studied originate not only from the field of (pharmaco)epidemiology, but also from fields such as bio-terrorism, machine learning, and classical signal detection. EU-ADR specific objectives are: To detect events, To relate these events to drugs, To develop hypothesis that explain adverse events, To detect adverse events earlier, and To avoid false positives. The web-based platform is available at https://bioinformatics.ua.pt/euadr/ EU-ADR has contributed to the ability to conduct better drug safety studies based on the re-use of healthcare data. By facilitating the early detection of adverse drug reactions, but also providing key information on populations at risk, potential drug interactions, potential underlying mechanisms and intervening pathways in adverse events, etc., the project will allow for improved and more complete information to be available for drug and healthcare delivery, leading to increased patient safety and its associated cost savings. The EU-ADR system can be considered as a complementary tool to already existing pharamcovigilance systems. Should the system be widespread in the long term, it has the potential to contribute to the development of future electronic health record systems, insofar as the expected benefits of these IT tools are only fully attainable when EHRs develop themselves in consistency, richness and formats that allow them to be subject of such tools. In anticipation, EU-ADR has been designed to be modular and scalable, so that different EHR databases

(other than those participating in the Consortium) can be progressively enlisted in the future, adopt the software for data extraction and therefore become susceptible of exploitation by the system, for maximum global effect.

Abbreviations: EU-ADR

Synonyms: Exploring and Understanding Adverse Drug Reactions by Integrative Mining of Clinical Records and Biomedical Knowledge

Resource Type: data or information resource, organization portal, consortium, portal

Keywords: adverse drug reaction, clinical, biomedical, drug safety, electronic health record, demographic, drug use, clinical data, late adult human, child, young human, pregnant, drug, adverse event, signal detection, drug development, data sharing, text mining, epidemiology, database, data set, data repository, text extraction software

Funding: European Union FP7

Resource Name: EU-ADR

Resource ID: SCR_004028

Alternate IDs: nlx_158456

Record Creation Time: 20220129T080222+0000

Record Last Update: 20250516T053718+0000

Ratings and Alerts

No rating or validation information has been found for EU-ADR.

No alerts have been found for EU-ADR.

Data and Source Information

Source: SciCrunch Registry

Usage and Citation Metrics

We found 9 mentions in open access literature.

Listed below are recent publications. The full list is available at NIF.

Yang X, et al. (2021) Mining a stroke knowledge graph from literature. BMC bioinformatics, 22(Suppl 10), 387.

Koutkias VG, et al. (2015) Computational approaches for pharmacovigilance signal detection: toward integrated and semantically-enriched frameworks. Drug safety, 38(3), 219.

Arana A, et al. (2015) Risk of Out-of-Hospital Sudden Cardiac Death in Users of Domperidone, Proton Pump Inhibitors, or Metoclopramide: A Population-Based Nested Case-Control Study. Drug safety, 38(12), 1187.

Pacurariu AC, et al. (2015) Useful Interplay Between Spontaneous ADR Reports and Electronic Healthcare Records in Signal Detection. Drug safety, 38(12), 1201.

Li Y, et al. (2015) A Method to Combine Signals from Spontaneous Reporting Systems and Observational Healthcare Data to Detect Adverse Drug Reactions. Drug safety, 38(10), 895.

Bazelier MT, et al. (2015) Data management and data analysis techniques in pharmacoepidemiological studies using a pre-planned multi-database approach: a systematic literature review. Pharmacoepidemiology and drug safety, 24(9), 897.

Valkhoff VE, et al. (2014) Validation study in four health-care databases: upper gastrointestinal bleeding misclassification affects precision but not magnitude of drug-related upper gastrointestinal bleeding risk. Journal of clinical epidemiology, 67(8), 921.

Lopes P, et al. (2013) Gathering and exploring scientific knowledge in pharmacovigilance. PloS one, 8(12), e83016.

Coloma PM, et al. (2013) Drug-induced acute myocardial infarction: identifying 'prime suspects' from electronic healthcare records-based surveillance system. PloS one, 8(8), e72148.