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| Paper Title | Data Platform | Data Type | Key Information Retrieval from the Data | Evaluation Metrics | Methods Category | Method | Research Topic Category | Research Question |
| Patient-Reported Reasons for Antihypertensive Medication Change: A Quantitative Study Using Social Media | WebMD online health forum | Patient medication reviews and ratings | Reasons for changes in angiotensin receptor II blocker (ARB) and angiotensin-converting enzyme inhibitor (ACEI) treatments | Comparison of adverse events reported in WebMD reviews versus FDA data | Quantitative analysis, Natural Language Processing (NLP) | Extraction using an NLP classifier, manual annotation of a subset of reviews | Pharmacovigilance, medication adherence, social media mining | What are the patient-reported reasons for changes in antihypertensive medication, and how do these reasons compare with data from formal adverse event reporting systems? |
| Preventive Pharmacovigilance: timely and precise prevention of adverse events through person-level patient screening and dose-level product surveillance | Not explicitly mentioned; implies the use of healthcare data systems and social media for AE data collection | Adverse event (AE) data from provider/patient reports, health records, and social media | Identification of susceptible individuals and defective doses to prevent AEs | Not specified; the paper likely evaluates the effectiveness of preventive measures in reducing AEs | Pharmacovigilance, Data Science, Measurement Science | Integration of data science and measurement science for person-level patient screening and dose-level product surveillance | Preventive Pharmacovigilance, Patient Safety, Drug and Vaccine Safety Monitoring | How can AEs associated with drugs and vaccines be prevented in a timely and precise manner through person-level patient screening and dose-level product surveillance? |
| Characterization of COVID-19 vaccine clinical trial discussions on the social question-and-answer site Quora. Trials. | Quora, a social question-and-answer site | User-generated questions and answers related to COVID-19 vaccine clinical trials | User experiences, attitudes, topics, and discussions of barriers to COVID-19 vaccine trials | Not explicitly mentioned; likely qualitative metrics based on content analysis | Infodemiology, content analysis, social media analysis | Retrospective collection and analysis of user posts using inductive content coding approach; examination of user profile metadata | COVID-19 vaccine clinical trials, social media analysis, health communication, public engagement | How do discussions on Quora reflect user concerns, experiences, and barriers related to participation in COVID-19 vaccine clinical trials, particularly among racial and ethnic minority populations? |
| Communication of COVID-19 Misinformation on Social Media by Physicians in the US. | High-use social media platforms (Twitter, Facebook, Instagram, Parler, and YouTube) and news sources (The New York Times, National Public Radio) | Social media posts and news articles by US-based physicians | Types of COVID-19 misinformation propagated, characteristics of physicians spreading misinformation, and online media channels used | Categories of misinformation propagated, number and traits of physicians engaged in misinformation propagation, type of online media channels used, and potential reach | Mixed-methods study, content analysis | Structured searches using CDC guidelines to define misinformation, identification of physicians' licensure and specialty, extraction of follower counts, qualitative content analysis of messages | COVID-19 misinformation, social media, public health, physician behavior | What are the types of COVID-19 misinformation propagated by US physicians on social media, what are the characteristics of these physicians, and what online platforms do they use to propagate misinformation? |
| Evaluation of the Needs and Experiences of Patients with Hypertriglyceridemia: Social Media Listening Infosurveillance Study | Q&A search platforms and online consultation platforms in China | Social media posts and online consultations related to hypertriglyceridemia | Patients' disease cognition level, choice of intervention measures, status quo of online consultations and Q&A platforms | Volume of online discussions, doctors' influence on these platforms, patients' level of disease cognition, demand for disease concept and treatment, willingness for drug interventions | Social Media Listening (SML), Infosurveillance Study | Comprehensive search using predefined keywords, data aggregation and evaluation using an aggregator tool | Hypertriglyceridemia, patient experiences, online health information seeking behavior | What are the disease cognition levels and intervention preferences of patients with hypertriglyceridemia, and how do online consultation and Q&A platforms serve their needs and experiences? |
| Using Transformer-Based Topic Modeling to Examine Discussions of Delta-8 Tetrahydrocannabinol: Content Analysis. | Reddit, a social media platform hosting large web-based drug forums | Social media posts discussing Delta-8 Tetrahydrocannabinol (THC) | Emerging trends and topics of discussion about delta-8 THC, including symptoms and adverse health outcomes | Number of posts identified, number of topics isolated, prevalence of specific topics, mentions of delta-8 THC per cannabis posts | Natural Language Processing (NLP), Topic Modeling, Social Media Analysis | Unsupervised topic modeling using transformer-based models to cluster posts into topics and assign labels | Public Health, Substance Use, Social Media Content Analysis | What are the emerging trends and topics of discussion about delta-8 THC from social media discourse, including potential symptoms and adverse health outcomes experienced by users? |
| Current Scenario and Future Prospects of Adverse Drug Reactions (ADRs) Monitoring and Reporting Mechanisms in the Rural Areas of India. | Not specified; likely includes data from healthcare institutions, government reports, and international collaborations. | Qualitative and quantitative data on ADRs in rural India, including reporting rates, types of ADRs, and patient demographics. | The current state of ADR monitoring and reporting in rural India, challenges faced, and potential improvements. | Effectiveness of ADR reporting mechanisms, awareness levels among healthcare professionals and the public, and the impact on patient safety. | Pharmacovigilance, Public Health, Policy Analysis | Review and analysis of existing ADR monitoring and reporting systems, identification of gaps, and proposal of future strategies. | Pharmacovigilance in rural settings, drug safety, healthcare policy and regulation in India. | What is the current scenario of ADR monitoring and reporting in rural areas of India, and what are the future prospects for improvement? |
| Interrogating the pill: Rising distrust and the reshaping of health risk perceptions in the social media age. | Social media platforms and in-depth interviews | Social media content, qualitative interview data | The impact of social media on young women's perceptions of the contraceptive pill, including reliability, safety, and broader health concerns. | Changes in contraceptive choices, social media's role in shaping health risk perceptions, and the influence of peer influencers. | Social Science Research, Qualitative Analysis | Exploratory online observation and in-depth interviews with informants in Germany and Denmark | Health Communication, Risk Perception, Social Media Impact, Pharmacovigilance | How does social media influence the reshaping of health risk perceptions, particularly regarding the contraceptive pill, among young women in Western Europe? |
| A holistic AI-based approach for pharmacovigilance optimization from patients behavior on social media. | Social media platforms | Patient social media data, specifically comments on medical forums | Evolution of user behavior indicators over time, including word frequency, semantic similarity, mentions of Adverse Drug Reactions (ADRs), and sentiment analysis | Accuracy of detecting new safety signals (75%) | Artificial Intelligence (AI), Deep Learning, Natural Language Processing (NLP), Pharmacovigilance | Word Cloud Convolutional Neural Network (WC-CNN) for classification, analysis of temporal resolutions, and NLP pre-processing techniques | AI in healthcare, Social media analysis, Pharmacovigilance optimization | Can a holistic AI-based approach using patient behavior on social media optimize the pharmacovigilance process by identifying normal vs. abnormal time periods and flagging the need for immediate attention and further investigation? |
| Can Twitter posts serve as early indicators for potential safety signals? A retrospective analysis. | Twitter | Social media posts (tweets) | Adverse events (AEs) of medications mentioned in tweets | Distribution and proportion of AEs from Twitter compared to the Yellow Card system; sentiment analysis of tweets | Pharmacovigilance, Social Media Analysis, Retrospective Study | Collection and analysis of English tweets for 35 drug-event pairs, manual identification and encoding of AEs using the MedDRA dictionary | Pharmacovigilance, Social Media Monitoring, Signal Detection | Can tweets serve as an early indicator for potential safety warnings, and how do the trends of AEs posted on Twitter compare with those from the Yellow Card system in the United Kingdom? |
| Consumer perception, knowledge, and uses of cannabidiol | Not specified in the provided search results; likely includes surveys, interviews, or social media platforms where consumer opinions are shared | Survey responses, interview transcripts, social media posts, and comments | Consumer understanding, beliefs, and reported uses of cannabidiol (CBD) | Frequency of reported CBD uses, common misconceptions, and the gap between perceived and actual knowledge | Survey Research, Qualitative Analysis, Social Media Analysis | Distribution and analysis of a survey to assess consumer knowledge and perceptions of CBD; thematic analysis of qualitative data from interviews or social media | Consumer Behavior, Health and Wellness, Cannabis and CBD Products | What are the perceptions, knowledge levels, and reported uses of cannabidiol among consumers, and how do these compare with the scientific evidence and regulatory status of CBD? |
| Patient safety discourse in a pandemic: a Twitter hashtag analysis study on #PatientSafety. | Twitter | Tweets containing the hashtag #PatientSafety | Themes, sentiments, and trends in patient safety discussions during the pandemic | Frequency of tweets, engagement (likes, retweets, replies), sentiment analysis scores | Social Media Analysis, Public Health Communication | Content analysis of tweets using qualitative and quantitative methods; thematic analysis; sentiment analysis | Patient Safety, Social Media in Healthcare, Pandemic Communication | How is the topic of patient safety discussed on Twitter during a pandemic, and what themes and sentiments emerge from the use of the hashtag #PatientSafety? |
| Automated Social Media Surveillance for Detection of Vaccine Safety Signals: A Validation Study | Social media platforms (specifically Twitter) | Publicly available tweets | Vaccine safety signals, adverse events following vaccination, public concerns and sentiments | Sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), accuracy, and timeliness of signal detection | Pharmacovigilance, Social Media Monitoring, Signal Detection, Machine Learning | Development and validation of an automated surveillance system using natural language processing (NLP) and machine learning algorithms to identify and classify safety signals from social media data | Vaccine Safety, Public Health Surveillance, Digital Health | Can an automated social media surveillance system effectively detect vaccine safety signals and contribute to post-marketing surveillance? |
| Identifying COVID-19 cases and extracting patient reported symptoms from Reddit using natural language processing. | Reddit | User-generated posts and comments | Identification of COVID-19 cases and extraction of patient-reported symptoms | Precision, recall, F1 score, accuracy of symptom extraction and case identification | Natural Language Processing (NLP), Social Media Analysis, Public Health Surveillance | Development and application of NLP algorithms to analyze text data from Reddit, identify COVID-19 cases, and extract symptoms | COVID-19, Digital Epidemiology, Health Informatics | Can NLP techniques accurately identify COVID-19 cases and extract patient-reported symptoms from Reddit data, contributing to public health surveillance efforts? |
| The Role of Social Media for Identifying Adverse Drug Events Data in Pharmacovigilance: Protocol for a Scoping Review. | Various social media platforms | User-generated content related to adverse drug events (ADEs) | Reports of ADEs, patient experiences, and discussions about medication side effects | Not specified; scoping review metrics may include the quantity and quality of sources, relevance of data, and thematic analysis | Scoping Review, Pharmacovigilance, Social Media Analysis | Systematic search and analysis of literature to map the extent, range, and nature of research on using social media for ADE data in pharmacovigilance | Pharmacovigilance, Social Media in Healthcare, Adverse Drug Events | What is the role of social media in identifying and reporting adverse drug events, and how can it be integrated into pharmacovigilance practices? |
| Analysis of online user discussions on Reddit associated with the transition of use between HIV PrEP therapy. | Reddit | User-generated discussions, comments, and posts related to HIV PrEP therapy | User experiences, perceptions, reasons, and concerns about transitioning between different HIV PrEP medications | Frequency of discussions, sentiment analysis, thematic content analysis | Social Media Analysis, Public Health, Qualitative Research | Content analysis of Reddit discussions, including qualitative analysis of user comments and posts to identify themes and sentiments | HIV Prevention, PrEP Therapy, Social Media in Healthcare, Patient Experience | How do online user discussions on Reddit reflect the experiences, perceptions, and concerns of individuals transitioning between different HIV PrEP medications? |
| Automating Detection of Drug-Related Harms on Social Media: Machine Learning Framework | Social media platforms (e.g., Twitter) | Publicly available social media posts and comments | Identification of posts discussing drug-related harms | Precision, recall, F1 score, accuracy of the machine learning model | Natural Language Processing (NLP), Machine Learning, Pharmacovigilance | Development and application of a machine learning framework using NLP techniques to detect and classify social media content related to drug-related harms | Social Media Analysis, Pharmacovigilance, Public Health Surveillance | Can a machine learning framework accurately detect and classify social media content to identify discussions of drug-related harms, thereby supporting pharmacovigilance efforts? |
| Uptake of the COVID-19 Vaccination and Associated Factors Among Health Care Providers in Addis Ababa, Ethiopia. | Not specified; likely includes surveys or health facility records | Survey data, vaccination records of health care providers | COVID-19 vaccination rates among health care providers, factors influencing vaccination uptake | Vaccination coverage, multivariate analysis of factors associated with vaccination uptake | Epidemiological Study, Health Services Research | Cross-sectional study design, using questionnaires to collect data, followed by statistical analysis to identify associated factors | Public Health, COVID-19 Vaccination, Health Care Providers | What are the levels of COVID-19 vaccination uptake among health care providers in Addis Ababa, Ethiopia, and what factors are associated with their vaccination status? |
| Improving drug safety with adverse event detection using natural language processing. | Not specified; likely includes electronic health records, clinical trial databases, or other repositories of patient health data | Textual data from various sources, including but not limited to patient reports, clinical notes, and forum discussions | Detection and classification of adverse drug events (ADEs) from unstructured text | Performance metrics of the NLP system (e.g., precision, recall, F1 score, accuracy) | Natural Language Processing (NLP), Pharmacovigilance, Machine Learning | Development and application of NLP algorithms to identify and classify ADEs from textual data | Drug Safety, Pharmacovigilance, Health Informatics | How can NLP techniques be utilized to improve the detection of adverse drug events, thereby enhancing drug safety monitoring and pharmacovigilance? |
| Artificial Intelligence in Pharmacovigilance and COVID-19 | Social media platforms, healthcare databases, and electronic health records | Textual data from social media posts, structured data from health records, and adverse event reports | Identification of adverse drug events, extraction of symptoms and treatment effects, sentiment analysis regarding COVID-19 vaccines and treatments | Accuracy, precision, recall, F1-score, and area under the curve (AUC) | Natural language processing (NLP), machine learning, and deep learning | BERT-based models for text classification, sentiment analysis using NLP, and predictive modeling with machine learning algorithms | Pharmacovigilance, public health surveillance, AI in healthcare, and COVID-19 related drug safety | How can artificial intelligence techniques be utilized to enhance pharmacovigilance practices and improve the monitoring of drug safety during the COVID-19 pandemic? |
| Acceptance and Hesitancy Toward the Covid-19 Vaccine Among Medical Students in Kabul, Afghanistan | Survey distributed to medical students in Kabul | Quantitative data from survey responses | Vaccine acceptance rates, hesitancy factors, knowledge and awareness about COVID-19, and demographic influences | Proportions, chi-square tests for association, and multivariate logistic regression analysis for predictors of vaccine hesitancy | Cross-sectional survey research | Distribution of a self-administered questionnaire to gather information on vaccine attitudes and intentions | Public health, vaccine hesitancy, medical education, and COVID-19 | What are the levels of acceptance and hesitancy toward the COVID-19 vaccine among medical students in Kabul, Afghanistan, and what factors influence their attitudes? |
| GLP-1 Receptor Agonists and Related Mental Health Issues; Insights from a Range of Social Media Platforms Using a Mixed-Methods Approach | Multiple social media platforms (e.g., Facebook, Twitter, Instagram) | Textual data from social media posts and comments | Public perceptions, experiences, and concerns related to GLP-1 receptor agonists and mental health issues | Qualitative thematic analysis, quantitative content analysis metrics (e.g., frequency, reach, engagement) | Mixed-methods research | Combination of qualitative (thematic analysis) and quantitative (content analysis) approaches to analyze social media data | Pharmacovigilance, social media analytics, mental health, and diabetes treatment | How do social media users perceive the relationship between GLP-1 receptor agonists and mental health issues, and what insights can be gained to inform healthcare practice? |
| Patterns and Influencing Factors of COVID-19 Vaccination Willingness Among College Students in China | Online survey distributed to college students in China | Quantitative data from survey responses | Willingness to receive COVID-19 vaccine, knowledge about the virus and vaccination, perceived risk and efficacy, and sociodemographic factors | Descriptive statistics, t-tests, ANOVA, and regression analysis | Cross-sectional study | Self-administered online questionnaire survey | Public health, health behavior, vaccine hesitancy | What are the patterns of COVID-19 vaccination willingness among Chinese college students, and what sociodemographic and psychological factors influence their willingness? |
| An Assessment of Mentions of Adverse Drug Events on Social Media With Natural Language Processing: Model Development and Analysis | Social media platforms (e.g., Twitter) | Textual data from social media posts | Identification and classification of adverse drug event mentions | Precision, recall, F1 score, and accuracy | Natural Language Processing (NLP), Machine Learning | Development and training of NLP models for adverse event extraction | Pharmacovigilance, Social Media Mining, NLP | How effective are NLP models in identifying and analyzing adverse drug events mentioned on social media? |
| Medical and Health-Related Misinformation on Social Media: Bibliometric Study of the Scientific Literature | Scientific databases (e.g., PubMed, Scopus, Web of Science) | Bibliometric data from published scientific articles | Publication trends, research themes, authorship, and institutional collaboration | Number of publications, citations, h-index, and collaboration networks | Bibliometric analysis | Systematic search and analysis of scientific literature using bibliometric tools | Health informatics, misinformation, social media, and scientific communication | What is the scope and impact of medical and health-related misinformation research as reflected in the scientific literature? |
| Detecting Personal Medication Intake in Twitter via Domain Attention-Based RNN with Multi-Level Features | Twitter | Textual data from tweets | Detection of tweets indicating personal medication intake | Precision, recall, F1 score, and accuracy | Natural Language Processing (NLP), Machine Learning | Recurrent Neural Network (RNN) with domain attention mechanism and multi-level features | Social Media Mining, Pharmacovigilance, Health Informatics | How effectively can an RNN model with domain attention and multi-level features detect personal medication intake from Twitter data? |
| Young Adults' Knowledge, Perceptions, and Use of Cannabidiol Products: A Mixed-Methods Study | N/A (Study does not rely on a specific data platform) | Quantitative (survey responses) and qualitative (interview transcripts) data | Knowledge levels, perceptions, attitudes, and usage patterns of cannabidiol (CBD) products among young adults | Thematic analysis for qualitative data, descriptive statistics and inferential statistics for quantitative data | Mixed-Methods Research | Combination of quantitative survey and qualitative interviews to gather and analyze data | Public Health, Substance Use, Cannabis-Related Products | What are the knowledge, perceptions, and usage patterns of cannabidiol (CBD) products among young adults, and how do these factors interrelate? |
| Correlates of Coronavirus Disease 2019 (COVID-19) Vaccine Hesitancy Among People Who Inject Drugs in the San Diego-Tijuana Border Region | N/A (Study does not rely on a specific data platform) | Quantitative data from survey responses | Vaccine hesitancy factors, demographic information, drug use behaviors, and health beliefs | Descriptive statistics, chi-square tests, and multivariate regression analysis | Cross-Sectional Survey Research | Self-administered questionnaires for data collection | Public Health, Vaccine Hesitancy, Substance Use, Border Health | What are the correlates of COVID-19 vaccine hesitancy among people who inject drugs in the San Diego-Tijuana border region? |
| Social Media and COVID-19: Perceptions and Public Deceptions of Ivermectin, Colchicine, and Hydroxychloroquine: Lessons for Future Pandemics | Social media platforms (e.g., Twitter, Facebook) | Textual data from social media posts and comments | Public perceptions, misinformation, and discussions about Ivermectin, Colchicine, and Hydroxychloroquine as COVID-19 treatments | Content analysis metrics (e.g., frequency of mentions, sentiment analysis), engagement metrics (likes, shares, comments) | Social Media Analytics, Public Health Communication | Mixed-methods approach combining quantitative content analysis and qualitative sentiment analysis | Health Informatics, Vaccine Hesitancy, Misinformation | How have social media discussions around Ivermectin, Colchicine, and Hydroxychloroquine as COVID-19 treatments influenced public perceptions, and what can be learned for future pandemics? |
| Engaging Patients via Online Healthcare Fora: Three Pharmacovigilance Use Cases | Online healthcare forums and discussion boards | Textual data from patient discussions and experiences shared on forums | Patient-reported adverse drug reactions, treatment experiences, and medication side effects | Qualitative analysis metrics (e.g., frequency of specific terms, sentiment analysis), patient engagement levels | Pharmacovigilance, Social Media Analytics | Content analysis of forum posts, sentiment analysis, and identification of adverse events | Health Informatics, Patient Engagement, Pharmacovigilance | How can online healthcare forums be leveraged for pharmacovigilance, and what are the potential use cases for patient engagement in this context? |
| Can Social Media Monitoring Help Identify the Next EVALI? An Examination of Reddit Posts about Vitamin E Acetate and Dank Vapes | Reddit | Textual data from Reddit posts and comments | References to Vitamin E acetate and Dank Vapes, user experiences, health effects, and discussions related to vaping | Content analysis metrics (e.g., frequency of mentions, context of use), sentiment analysis | Social Media Analytics, Public Health Surveillance | Qualitative content analysis of Reddit posts and comments, keyword searches, and thematic analysis | Health Informatics, Pharmacovigilance, Substance Use | Can social media monitoring on platforms like Reddit effectively identify potential outbreaks of vaping-related lung injuries similar to EVALI by analyzing user discussions about specific vaping products? |
| Comparison of Online Patient Reviews and National Pharmacovigilance Data for Tramadol-Related Adverse Events: Comparative Observational Study | Online patient review platforms and national pharmacovigilance databases | Textual data from patient reviews and structured data from pharmacovigilance reports | Adverse events related to Tramadol, patient experiences, and reported side effects | Descriptive statistics, prevalence rates, and comparison of adverse event profiles | Comparative Analysis, Pharmacovigilance | Comparative observational study analyzing data from both online reviews and pharmacovigilance databases | Health Informatics, Patient Experience, Drug Safety | How do online patient reviews compare to national pharmacovigilance data in terms of reporting Tramadol-related adverse events? |
| Using Twitter Data for Cohort Studies of Drug Safety in Pregnancy: Proof-of-concept With β-Blockers | Twitter | Textual data from tweets | Identification of pregnancy-related discussions mentioning β-blockers, extraction of demographic and temporal data | Coherence score, positive predictive value (PPV), sensitivity, specificity | Pharmacovigilance, Social Media Analytics | Text mining and cohort study design using Twitter data | Health Informatics, Pharmacovigilance, Pregnancy, Drug Safety | Can Twitter data be effectively used to conduct cohort studies for assessing the safety of drugs, specifically β-blockers, during pregnancy? |
| Exploiting Social Media for Active Pharmacovigilance: The PVClinical Social Media Workspace | Social media platforms, specifically integrated into the PVClinical framework | Textual data from social media posts and user interactions | Adverse drug reactions, medication side effects, patient experiences, and treatment outcomes | Data extraction accuracy, response time, user engagement, and sentiment analysis scores | Pharmacovigilance, Social Media Monitoring | Development and implementation of a social media workspace within the PVClinical platform for active surveillance | Health Informatics, Drug Safety, Social Media Analytics | How can social media be effectively integrated into pharmacovigilance practices to enhance the detection and analysis of adverse drug reactions? |
| Using Twitter Data to Understand Public Perceptions of Approved Versus Off-Label Use for COVID-19-Related Medications | Twitter | Textual data from tweets | Public perceptions, attitudes, and discussions about approved and off-label use of COVID-19 medications | Frequency of tweets, sentiment analysis, topic modeling, and trend analysis | Social Media Analytics, Public Health Surveillance | Text mining and content analysis of tweets related to COVID-19 medications | Health Informatics, Pharmacovigilance, Public Opinion | How do the public perceptions differ between approved and off-label use of medications for COVID-19 as reflected in Twitter data? |
| Patient-Reported Reasons for Switching or Discontinuing Statin Therapy: A Mixed Methods Study Using Social Media | Social media platforms (e.g., Facebook, Twitter) | Textual data from patient posts and comments | Reasons for discontinuing or switching statin therapy as reported by patients | Qualitative thematic analysis, quantitative frequency analysis | Mixed-Methods Research | Combination of qualitative (thematic analysis) and quantitative (frequency analysis) methods to analyze social media data | Health Informatics, Patient Experience, Pharmacotherapy | What are the patient-reported reasons for switching or discontinuing statin therapy, as identified through social media discourse? |
| Scientific Evidence Supporting Coronavirus Disease 2019 (COVID-19) Vaccine Efficacy and Safety in People Planning to Conceive or Who Are Pregnant or Lactating | N/A (The paper likely reviews existing scientific literature and data from clinical trials) | Systematic review of scientific literature, clinical trial data, and meta-analyses | Evidence on COVID-19 vaccine efficacy and safety for people planning to conceive, pregnant, or lactating individuals | Not applicable (The paper summarizes existing evidence rather than using a metric-based evaluation) | Systematic Review, Literature Review | Analysis and synthesis of existing scientific evidence from clinical trials and observational studies | Public Health, COVID-19, Vaccines, Pregnancy, Lactation | What is the scientific evidence regarding the efficacy and safety of COVID-19 vaccines in people planning to conceive, those who are pregnant, and those who are lactating? |
| Spread of COVID-19 Vaccine Misinformation in the Ninth Inning: Retrospective Observational Infodemic Study | Social media platforms, online news sites, and public health forums | Textual data from social media posts, comments, news articles, and forum discussions | Identification of COVID-19 vaccine-related misinformation, its sources, and the narratives it promotes | Quantitative metrics (e.g., frequency, reach, engagement) and qualitative analysis of misinformation themes | Infodemic Analysis, Social Media Analytics, Content Analysis | Retrospective content analysis of social media and online content to trace the spread of misinformation | Health Informatics, Public Health, Misinformation, Infodemics | How has misinformation about COVID-19 vaccines spread during the later stages of the pandemic, and what are its characteristics and potential impact on public health and vaccine confidence? |
| Artificial Intelligence in Pharmacovigilance: An Introduction to Terms, Concepts, Applications, and Limitations | N/A (Theoretical paper) | N/A (Theoretical paper) | Overview of AI applications in pharmacovigilance | N/A (Theoretical paper) | Theoretical and Conceptual Review | Literature review and conceptual analysis of AI in pharmacovigilance | Pharmacovigilance, Artificial Intelligence, Health Informatics | How can artificial intelligence be effectively integrated into pharmacovigilance practices, and what are the key concepts, applications, and limitations? |
| Adversarial Neural Network with Sentiment-Aware Attention for Detecting Adverse Drug Reactions | N/A (Theoretical or experimental study without a specific platform mentioned) | Textual data from medical records, social media, patient forums, or other relevant sources | Identification of adverse drug reactions from unstructured text | Precision, recall, F1 score, accuracy, and possibly area under the ROC curve (AUC) | Natural Language Processing (NLP), Machine Learning, Deep Learning | Implementation of an adversarial neural network with a sentiment-aware attention mechanism | Health Informatics, Pharmacovigilance, NLP in Healthcare | How can an adversarial neural network with sentiment-aware attention improve the detection of adverse drug reactions in textual data? |
| Utilizing Social Media Data in Post-Market Safety Surveillance | Social media platforms (e.g., Twitter, Facebook) | Textual data from social media posts | Identification of adverse drug reactions and medication side effects | Precision, recall, F1 score, and accuracy | Social Media Analytics, Pharmacovigilance | Text mining and natural language processing (NLP) techniques | Health Informatics, Drug Safety, Social Media Mining | How can social media data be effectively used to monitor the safety of medications post-market? |
| Drug-Induced Liver Injury in a Patient with Nonsmall Cell Lung Cancer after the Self-Administration of Fenbendazole Based on Social Media Information | Social media platforms (specifically where the information about Fenbendazole was obtained) | Textual data from social media posts and patient medical records | Details of the patient's self-administration of Fenbendazole, liver injury symptoms, and treatment outcomes | N/A (Case study with no defined evaluation metrics for this specific scenario) | Medical Case Report, Pharmacovigilance | Analysis of the patient's medical history, social media information exposure, and subsequent medical interventions | Clinical Medicine, Oncology, Pharmacovigilance, Social Media Influence | What is the impact of self-administered medications based on social media information on patient health outcomes, as illustrated by a case of drug-induced liver injury in a patient with Nonsmall Cell Lung Cancer? |
| Pharmacovigilance Bibliometrics: Visualizing Thematic Development in the Category of Pharmacology and Pharmacy in Web of Science | Web of Science | Bibliometric data from published scientific articles | Publication trends, most cited papers, authorship patterns, and thematic analysis | Citation counts, h-index, co-authorship network analysis, and keyword co-occurrence | Bibliometric Analysis | Data extraction from Web of Science and visualization of thematic development in pharmacology and pharmacy | Pharmacology and Pharmacy, Scientometrics | How has the thematic development in pharmacology and pharmacy evolved over time, as reflected in the bibliometric data from Web of Science? |
| Automation in Signal Management in Pharmacovigilance: An Insight | Various pharmacovigilance databases and data management systems | Structured and semi-structured data from adverse event reports, medication records, and patient information | Detection of potential safety signals, data pattern recognition, and signal validation | Performance metrics such as sensitivity, specificity, accuracy, and processing time | Pharmacovigilance, Data Analysis, Automation, Machine Learning | Application of automated algorithms and machine learning techniques for signal detection and management | Health Informatics, Drug Safety, Data Science | What is the impact of automation on the efficiency and effectiveness of signal management in pharmacovigilance? |
| Adverse Drug Reaction Reporting by Patients in 12 European Countries | National pharmacovigilance databases in the 12 European countries | Aggregated data from patient-reported adverse drug reactions (ADRs) | Patient demographics, medication details, type and severity of ADRs, reporting pathways | Quantitative analysis of ADR reports, comparison of reporting rates and patterns | Pharmacovigilance, Epidemiology, Comparative Analysis | Cross-sectional study analyzing patient-reported ADR data from multiple European countries | Health Informatics, Drug Safety, Pharmacovigilance | How do patient-reported adverse drug reactions vary across 12 European countries, and what factors influence patient reporting? |
| Infodemiological Examination of Personal and Commercial Tweets About Cannabidiol: Term and Sentiment Analysis | Twitter | Tweets (personal use and commercial/sales) | Medical conditions, symptoms, side effects, body parts, and other substances referenced in tweets | Sentiment scores calculated using the VADER model for personal CBD tweets | Infodemiology, Sentiment Analysis, Text Mining | Collection of tweets using Tweepy Python package, binary text classifiers for corpus creation, sentiment analysis | Public Health, Social Media Analysis, Unregulated Substances, CBD (Cannabidiol) | How do personal and commercial tweets on Twitter present and discuss the use and efficacy of CBD as a medical treatment? |
| Peer-to-Peer Social Media Communication About Dietary Supplements Used for Weight Loss and Sports Performance Among Military Personnel: Pilot Content Analysis of 11 Years of Posts on Reddit | Reddit | Social media posts (textual data) | - Types of dietary supplements mentioned<br>- User motivations and experiences<br>- Perceptions on weight loss and sports performance<br>- Safety and efficacy concerns | - Frequency of posts and comments<br>- Sentiment analysis of user opinions<br>- Thematic content analysis | Content analysis, Social media research, Military health, Nutrition | Pilot content analysis of Reddit posts over an 11-year period | Social media and health, Dietary supplements, Military nutrition, Sports performance, Weight loss | What are the patterns, perceptions, and discussions around the use of dietary supplements for weight loss and sports performance among military personnel on social media? |
| The Role of Advanced Technologies Supplemented with Traditional Methods in Pharmacovigilance Sciences. | PubMed, Google Scholar, Springer, ScienceDirect (Elsevier), Web of Science | Scientific articles, patents, public repositories data | - Detection of adverse drug reactions (ADRs)<br>- Post-marketing safety reports<br>- Advanced technologies in pharmacovigilance | - Relevance to pharmacovigilance<br>- Innovation in risk prediction and management | Pharmacovigilance, Data Mining, Public Health, Bioinformatics | Literature review and data mining using advanced algorithms | Health Informatics, Drug Safety, Pharmacovigilance, Biotechnology Research | How can advanced technologies complement traditional methods to improve pharmacovigilance practices? |
| DeepADEMiner: a deep learning pharmacovigilance pipeline for extraction and normalization of adverse drug event mentions on Twitter. | Twitter | User-generated texts (tweets) | Adverse Drug Event (ADE) mentions, normalized MedDRA preferred term identifiers | Performance metrics of NER and classification tools (precision, recall, F1-score) | Pharmacovigilance, Deep Learning, Natural Language Processing (NLP), Social Media Analysis | Named entity recognition (NER) and classification using machine learning and deep learning frameworks | Health Informatics, Drug Safety, Social Media Mining, Adverse Event Extraction | How can deep learning methods be applied to extract and normalize ADE mentions from Twitter data? |
| Lexicon Knowledge Boosted Interaction Graph Network for Adverse Drug Reaction Recognition From Social Media | Social Media | Textual data from social media posts | Adverse Drug Reaction (ADR) mentions and their boundaries in social media texts | Performance metrics of the proposed model (precision, recall, F1-score) | Pharmacovigilance, Natural Language Processing (NLP), Graph Networks, Machine Learning | Interaction Graph Network (IGN) with graph attention networks (GATs) | Health Informatics, Social Media Mining, Pharmacovigilance, NLP, Machine Learning | How can a neural network approach with lexicon knowledge and interaction graphs improve ADR recognition from social media texts? |
| The Use of Social Media in Detecting Drug Safety-Related New Black Box Warnings, Labeling Changes, or Withdrawals: Scoping Review | Social Media Platforms (e.g., Twitter, Facebook) | Social media posts and user interactions | Detection of signals related to new black box warnings, labeling changes, or drug withdrawals | Time interval between social media signals and regulatory authority action | Pharmacovigilance, Social Media Analysis, Scoping Review | Scoping review following PRISMA-ScR guidelines, data extraction, and analysis of included studies | Health Informatics, Drug Safety Surveillance, Social Media Mining | How effectively can social media be used to detect signals associated with new black box warnings, labeling changes, or drug withdrawals? |
| A New Era in Pharmacovigilance: Toward Real-World Data and Digital Monitoring | Clinical databases, electronic health records, social media, digital health devices | Real-world data, clinical data, social media posts, digital health device data | Adverse drug reactions (ADRs), patient experiences, medication usage, safety concerns | Not explicitly stated; however, implications for drug safety and regulatory actions are discussed | Pharmacovigilance, Health Informatics, Digital Health, Review Article | Literature review and analysis of current pharmacovigilance methods and digital tools | Drug Safety, Pharmacovigilance, Real-World Data, Digital Monitoring, Health Informatics | How can real-world data and digital monitoring enhance the pharmacovigilance landscape and improve postmarket drug safety surveillance? |
| Quantifying the Severity of Adverse Drug Reactions Using Social Media: Network Analysis | Social Media (Reddit), Food and Drug Administration Adverse Event Reporting System (FAERS) | Social media posts, ADR reports | Adverse Drug Reactions (ADRs), their severity, and associations with drugs | Spearman correlations with FAERS case outcomes, severity scores based on label propagation | Pharmacovigilance, Social Media Analysis, Network Analysis, Machine Learning | Semi-supervised approach using lexical network of ADR word embeddings and label propagation | Health Informatics, Drug Safety, Social Media Mining, Pharmacovigilance | How can social media data be used to quantify the severity of adverse drug reactions (ADRs)? |
| A Comparative View of Reported Adverse Effects of Statins in Social Media, Regulatory Data, Drug Information Databases and Systematic Reviews | Social Media (Twitter), FDA Adverse Event Reporting System (FAERS), UK Medicines and Healthcare products Regulatory Agency (MHRA), Drug Information Databases (DIDs), Systematic Reviews | Social media posts, adverse event reports, drug information, systematic review data | Adverse events of statin medications, comparison of adverse event data across different sources | Proportion, relative frequencies, and rank of adverse events using MedDRA® primary System Organ Class codes | Pharmacovigilance, Social Media Analysis, Comparative Analysis, Systematic Review | Data collection from multiple sources, manual annotation of tweets, comparison of data across sources | Health Informatics, Drug Safety, Social Media Mining, Comparative Effectiveness Research | How consistent is the adverse event data of statin medications from social media compared to other sources such as regulatory data, drug information databases, and systematic reviews? |
| Developing Crowdsourced Training Data Sets for Pharmacovigilance Intelligent Automation | Social Media Posts, Amazon Mechanical Turk (AMT) | De-identified social media narratives related to drugs and medically relevant topics | Annotations of social media posts for pharmacovigilance-related concepts | Accuracy of crowdsourced curation compared to a reference dataset, time efficiency, and cost | Pharmacovigilance, Machine Learning, Crowdsourcing | Creation of a reference dataset by experts, crowdsourced annotation via AMT, evaluation of curation quality | Health Informatics, Drug Safety, Social Media Mining, Crowdsourcing | Can crowdsourcing be used to accurately and efficiently develop training datasets for pharmacovigilance automation? |
| Public Perspectives of Using Social Media Data to Improve Adverse Drug Reaction Reporting: A Mixed-Methods Study | Online health discussion forum (HealthUnlocked) and qualitative focus groups | Survey responses and qualitative focus group discussions | Public awareness of pharmacovigilance, experiences with ADRs, opinions on automated data mining for ADR reporting | Quantitative analysis of survey data and thematic analysis of focus group discussions | Pharmacovigilance, Social Media Analysis, Mixed-Methods Research | Online survey and qualitative focus groups to gather public perspectives on ADR reporting and data mining | Health Informatics, Drug Safety, Social Media Mining, Public Opinion Research | What are the public's perspectives on using social media data and automated methods for ADR reporting to enhance pharmacovigilance efforts? |
| The Impact of the COVID-19 "Infodemic" on Drug-Utilization Behaviors: Implications for Pharmacovigilance | Social media platforms (Twitter), news websites, online forums, and health-related websites | Social media posts, online news articles, forum discussions, and health information from websites | Public discussions and concerns about COVID-19 treatments, misinformation, and drug utilization behaviors | Volume of online content, sentiment analysis, and thematic analysis of discussions | Pharmacovigilance, Social Media Analysis, Public Health Communication | Content analysis of online discussions and news articles related to COVID-19 treatments | Health Informatics, Pharmacovigilance, COVID-19, Misinformation, Social Media | How has the "infodemic" surrounding COVID-19 influenced public perceptions and drug-utilization behaviors, and what are the implications for pharmacovigilance? |
| Sentiment analysis of social media posts on pharmacotherapy: A scoping review. | Social media platforms (Twitter was the most frequently analyzed platform) | Social media posts related to pharmacotherapy | Public sentiment about medications, detection of adverse drug reactions, impact of news media on public sentiment | Not explicitly stated; however, the review focused on uses and implications of sentiment analysis | Pharmacovigilance, Sentiment Analysis, Scoping Review | Scoping review using a keyword search strategy across various databases | Health Informatics, Pharmacotherapy, Social Media Analysis, Public Opinion | Can sentiment analysis be used to extract meaningful themes from social media discussions on pharmacotherapy? |
| Adverse Drug Reaction Detection in Social Media by Deep Learning Methods | Twitter and "Ask a Patient" datasets | Social media posts and reviews | Adverse Drug Reaction (ADR) comments and classifications | Accuracy of the deep learning models (93% for the combination of datasets) | Pharmacovigilance, Deep Learning, Natural Language Processing (NLP), Social Media Analysis | Use of deep learning methods with word2vec, HAN, FastText, and CNN architectures | Health Informatics, Drug Safety, Social Media Mining, Machine Learning Applications | Can deep learning methods accurately detect and classify ADRs from social media data? |
| Combining Social Media and FDA Adverse Event Reporting System to Detect Adverse Drug Reactions | Social Media (Twitter), FDA Adverse Event Reporting System (FAERS) | Social media posts, FDA adverse event reports | Potential drug–ADR posts extracted from Twitter, safety signals from FAERS | Area under the receiver operating characteristics curve (AUC) | Pharmacovigilance, Social Media Analysis, Data Integration, Bayesian Hierarchical Modeling | Extraction of drug-ADR posts, generation of safety signals, integration using Bayesian model | Health Informatics, Drug Safety, Social Media Mining, Pharmacovigilance | Can the combination of social media data and FAERS improve the detection of adverse drug reactions? |
| Discrepancy Between Personal Experience and Negative Opinion with Human Papillomavirus Vaccine in Web Forums | French web forums | Textual data from forum posts | Posts associated with HPV vaccine, personal experiences, adverse drug reactions, and opinions | Percentage of posts describing personal experiences, adverse reactions, positive, neutral, and negative opinions | Pharmacovigilance, Social Media Analysis, Public Opinion Research | Qualitative content analysis of web forum posts | Health Informatics, Vaccine Safety, Social Media Mining, Public Perception of Vaccines | How does the personal experience of individuals and the negative opinions expressed in web forums correlate regarding the human papillomavirus vaccine? |
| Communicating Adverse Drug Reaction Insights Through Patient Organizations: Experiences from a Pilot Study in the Netherlands | Dutch thyroid organization's digital channels (newsletter, social media, website, print magazine) | Engagement metrics (views, clicks, interactions) and patient experiences shared on social media | Effectiveness of communication through patient organizations, patient engagement and feedback | Number of subscribers reached, views and clicks on social media, tone of interactions | Pharmacovigilance, Patient Communication, Social Media Analysis | Tailoring of communication content for patient understanding and dissemination through patient organization channels | Health Informatics, Patient Engagement, Social Media, Pharmacovigilance | How can adverse drug reaction insights be effectively communicated to patients through patient organizations? |
| Prospective Evaluation of Adverse Event Recognition Systems in Twitter: Results from the Web-RADR Project | Twitter | Social media posts (tweets) | Adverse event (AE) recognition and classification based on tweets | Precision, recall, and F1-score of the AE recognition systems | Pharmacovigilance, Social Media Analysis, Machine Learning, Evaluation Study | Development and prospective evaluation of AE recognition systems using a proprietary dataset and the WEB-RADR reference dataset | Health Informatics, Drug Safety, Social Media Mining, Pharmacovigilance | How effective are adverse event recognition systems in detecting AEs from Twitter data? |
| Measuring the impact of pharmacoepidemiologic research using altmetrics: A case study of a CNODES drug-safety article. | N/A (the study discusses altmetrics in general and uses a case study for illustration) | N/A (conceptual analysis of altmetrics) | Understanding of altmetrics, their benefits, limitations, and role in assessing research impact | Altmetrics (including social media mentions, downloads, etc.) as a complement to traditional citation-based metrics | Pharmacoepidemiology, Research Impact Assessment, Bibliometrics, Review Article | Literature review and case study analysis of a pharmacoepidemiologic research article | Health Informatics, Pharmacoepidemiology, Research Metrics, Social Media | How can altmetrics be used to measure the impact of pharmacoepidemiologic research? |
| A focused netnographic study exploring experiences associated with counterfeit and contaminated anabolic-androgenic steroids. | Online discussion forums | Qualitative data from forum threads | Personal experiences with counterfeit and contaminated AAS, harms and benefits associated with such products | Thematic analysis of forum threads | Netnography, Qualitative Research, Public Health | Analysis of online forum threads using search terms related to counterfeit AAS | Health Informatics, Substance Abuse, Social Media, Public Health Concerns | What are the experiences of individuals who have purchased and consumed counterfeit anabolic-androgenic steroids (AAS)? |
| Adverse Events in Twitter-Development of a Benchmark Reference Dataset: Results from IMI WEB-RADR. | Twitter | Public English-language Twitter posts (Tweets) | Products, adverse events, indications, product-event combinations, and product-indication combinations extracted from Tweets | Creation of a benchmark reference dataset for evaluating automated methods and systems for adverse event recognition | Pharmacovigilance, Social Media Analysis, Benchmarking, Data Analysis | Retrospective analysis of Twitter data, manual extraction and coding by safety reviewers | Health Informatics, Pharmacovigilance, Social Media Mining, Data Science | How can a benchmark reference dataset be developed from Twitter data to evaluate the performance of automated methods for adverse event recognition? |
| Drug Safety Issues Covered by Lay Media: A Cohort Study of Direct Healthcare Provider Communications Sent between 2001 and 2015 in The Netherlands. | LexisNexis Academic™ (newspaper articles), Coosto™ (social media postings) | Media coverage data (newspapers and social media) | Coverage of drug safety issues communicated through Direct Healthcare Professional Communications (DHPCs) by newspapers and social media | Proportion of DHPCs covered in newspapers and social media, associations with specific drug characteristics | Pharmacovigilance, Media Analysis, Cohort Study | Retrieval and analysis of media coverage of DHPCs, assessment of determinants of media coverage | Health Informatics, Pharmacovigilance, Media Coverage, Social Media Analysis | To what extent are drug safety issues communicated through DHPCs covered by lay media, and what factors are associated with this coverage? |
| Online Conversation Monitoring to Understand the Opioid Epidemic: Epidemiological Surveillance Study. | Internet (social media, blogs, forums, and public websites) | Online posts and discussions mentioning opioids | Frequency and trends of online posts discussing opioid abuse, misuse, addiction, overdose, and death | Estimated number of posts, odds ratios for key risk discussions by platform type | Epidemiological Surveillance, Infoveillance, Social Media Analysis | Data collection from various online sources, manual coding and categorization of posts, application of sampling weights and statistical analysis | Public Health, Opioid Epidemic, Internet Surveillance, Infodemiology | How do online conversations reflect the trends and characteristics of the opioid epidemic in the United States? |
| Use of Social Media for Pharmacovigilance Activities: Key Findings and Recommendations from the Vigi4Med Project. | Social media platforms, mainly web forums | User-generated content related to pharmacovigilance | Ethical considerations, quality of information, and statistical analysis methods for social media use in pharmacovigilance | Recommendations for ethical, qualitative, and quantitative approaches in social media pharmacovigilance | Pharmacovigilance, Social Media Analysis, Research Synthesis | Analysis of existing literature and evaluation of social media's role in pharmacovigilance activities | Health Informatics, Pharmacovigilance, Social Media, Patient Experience | How can social media be effectively utilized for pharmacovigilance activities, and what are the key findings and recommendations from the Vigi4Med Project? |
| A systematic approach for developing a corpus of patient reported adverse drug events: A case study for SSRI and SNRI medications. | Online healthcare forum (askapatient.com) | Patient narrative data for psychiatric medications (SSRIs and SNRIs) | Adverse drug reactions (ADRs), withdrawal symptoms (WDs), sign/symptoms/illness (SSIs), drug indications (DIs), drug effectiveness (EF), and drug ineffectiveness (INF) | F-Score of machine learning classifiers, improvement in cTAKES system performance | Pharmacovigilance, Natural Language Processing (NLP), Text Mining, Machine Learning | Development of an annotated corpus (PsyTAR), sentence classification, entity identification, and entity normalization | Health Informatics, Drug Safety, Text Mining, Machine Learning, Psychiatric Medications | How can a corpus of patient-reported adverse drug events be systematically developed for SSRI and SNRI medications? |
| Recommendations for the Use of Social Media in Pharmacovigilance: Lessons from IMI WEB-RADR. | Social media platforms (Twitter, Reddit, etc.) as part of the IMI WEB-RADR project | Social media posts, comments, and user interactions | Detection of adverse drug reactions (ADRs) from social media data | Lessons learned and recommendations for using social media in pharmacovigilance | Pharmacovigilance, Social Media Analysis, Recommendations Development | Analysis of social media data for ADR detection and qualitative synthesis for recommendations | Health Informatics, Pharmacovigilance, Social Media, Drug Safety | What recommendations can be made for the use of social media in pharmacovigilance based on the IMI WEB-RADR project's findings? |
| Social media monitoring on the perceived safety of medication use during pregnancy: A case study from the Netherlands. | Social media, blogs, and forums | Online posts related to medication safety during pregnancy | Availability and accuracy of social media content on perceived safety of medication use in pregnancy | Comparison of perceived safety in posts with Dutch Teratology Information Service (TIS) safety classifications | Pharmacovigilance, Social Media Analysis, Pregnancy, Risk Perception | Systematic search and content analysis of online posts using Coosto, a social media monitoring tool | Health Informatics, Pharmacovigilance, Pregnancy, Social Media | How does social media content reflect the perceived safety of medication use during pregnancy, and how accurate is this information compared to professional guidelines? |
| Social Media Surveillance of Multiple Sclerosis Medications Used During Pregnancy and Breastfeeding: Content Analysis. | Social media platforms | Social media posts and comments related to the use of Multiple Sclerosis (MS) medications during pregnancy and breastfeeding | Identification and analysis of content related to MS medications and their use in the context of pregnancy and breastfeeding | Not explicitly stated; however, the paper involves a qualitative content analysis of social media posts | Health Informatics, Social Media Analysis, Content Analysis, Pharmacovigilance | Systematic search and qualitative content analysis of social media content | Health Informatics, Pharmacovigilance, Pregnancy, Breastfeeding, Multiple Sclerosis | How is the use of Multiple Sclerosis (MS) medications during pregnancy and breastfeeding discussed and perceived on social media platforms? |
| Recommendations on the Use of Mobile Applications for the Collection and Communication of Pharmaceutical Product Safety Information: Lessons from IMI WEB-RADR. | IMI WEB-RADR project | Data from mobile applications and social media for pharmacovigilance | Effectiveness of mobile apps in reporting adverse drug reactions and broadcasting safety information | Policy, technical, and ethical recommendations for the development and implementation of digital tools | Pharmacovigilance, Mobile Health, Digital Health, Safety Information Communication | Development and evaluation of mobile applications for adverse drug reaction reporting and safety information dissemination | Health Informatics, Mobile Applications, Pharmacovigilance, Digital Health Interventions | How can mobile applications be effectively utilized for the collection and communication of pharmaceutical product safety information, and what recommendations can be made based on the IMI WEB-RADR project's findings? |
| Computational Advances in Drug Safety: Systematic and Mapping Review of Knowledge Engineering Based Approaches | PubMed/MEDLINE, Web of Science® | Scientific papers published between 2006 and 2017 on Knowledge Engineering and Drug Safety | Usage of Knowledge Engineering (KE) approaches in Drug Safety (DS) research | Number of selected articles, application areas, data sources, computational methods used | Systematic Review, Mapping Review, Knowledge Engineering, Pharmacovigilance | Literature search, filtering, full-text review, mapping analysis based on defined criteria | Health Informatics, Drug Safety, Knowledge Engineering, Pharmacovigilance | What computational advances have been made in drug safety through the use of knowledge engineering-based approaches, and what trends and gaps exist in the domain? |
| A Machine Learning Approach for the Detection and Characterization of Illicit Drug Dealers on Instagram: Model Evaluation Study | Instagram | Social media posts and comments | Detection and characterization of illicit drug dealers on Instagram | Model accuracy, precision, recall, and F1-score | Machine Learning, Social Media Analysis, Drug Trafficking Research | Development and evaluation of a machine learning model for identifying illicit drug-related content on Instagram | Health Informatics, Social Media, Drug Safety, Machine Learning | How effective is a machine learning approach in detecting and characterizing illicit drug dealers on Instagram? |
| [Informativity of French web forums for the evaluation of side effects of baclofen]. Therapie. 2019;74(6):569-78. | French web forums | Textual data from forum posts | Indication, posology, adverse events, and their seriousness related to baclofen use | Informativity, quality of information, comparison with French Pharmacovigilance Database (FPVD) | Pharmacovigilance, Social Media Analysis, Data Quality Assessment | Evaluation of the quality of potential pharmacovigilance case reports from forum posts | Health Informatics, Pharmacovigilance, Social Media, Drug Safety | How informative are French web forums for evaluating the side effects of baclofen? |
| Industry Assessment of the Contribution of Patient Support Programs, Market Research Programs, and Social Media to Patient Safety | Various (Patient Support Programs, Market Research Programs, Social Media) | Data from patient support programs, market research, and social media posts | Contribution of data sources to patient safety understanding and characterization of product's safety profile | Identification of core company data sheet changes, drug safety label changes, and vigiGrade scores | Pharmacovigilance, Data Analysis, Patient Safety, Postmarketing Surveillance | Analysis of data from patient support programs, market research, and social media | Health Informatics, Pharmacovigilance, Patient Safety, Social Media | How do patient support programs, market research programs, and social media contribute to the understanding and characterization of a product's safety profile? |
| Comparison of drug safety data obtained from the monitoring system, literature, and social media: An empirical proof from a Chinese patent medicine. | National monitoring system, literature databases, and social media platforms (Baidu post bar and Sina micro-blog) | Adverse events (AEs) and adverse drug reactions (ADRs) data from different sources | Consistency of AEs and ADRs reported in monitoring system, literature, and social media | Frequencies, relative frequencies, rank, and radar chart analysis | Pharmacovigilance, Comparative Analysis, Social Media Analysis | Literature search, data extraction, coding using WHO-ART, and comparison of organ-system classes | Health Informatics, Pharmacovigilance, Social Media, Traditional Medicine Safety Research | How consistent are the adverse events and adverse drug reactions reported in the monitoring system, literature, and social media for a Chinese patent medicine? |
| Understanding Public Attitudes Toward Researchers Using Social Media for Detecting and Monitoring Adverse Events Data: Multi Methods Study. | Social Media Platforms (Facebook, Twitter, Instagram, LinkedIn, Snapchat, Mumsnet, patient forums, Tumblr, Reddit, YouTube) | Qualitative data from interviews, virtual discussions, and focus groups | Public attitudes towards the use of social media data for research on adverse events | Not explicitly stated; however, themes and subthemes were identified and analyzed | Qualitative Research, Social Media Analysis, Pharmacovigilance | Multi-methods design including qualitative semistructured interviews, focus groups, and web-based discussions | Health Informatics, Social Media, Pharmacovigilance, Public Opinion | What are the public attitudes towards researchers using social media for detecting and monitoring adverse events data? |
| Pharmacoepidemiologic Evaluation of Birth Defects from Health-Related Postings in Social Media During Pregnancy. | Social Media (Twitter) | Health-related social media postings during pregnancy | Mention of birth defects, medication intake, pregnancy and maternal demographics, and birth outcomes | Not explicitly stated; however, the study assessed the feasibility of using social media data for pregnancy surveillance | Pharmacoepidemiology, Social Media Analysis, Feasibility Study | Automated method to identify Twitter accounts of pregnant women, data extraction, and manual annotation | Health Informatics, Pharmacoepidemiology, Social Media, Pregnancy, Birth Defects | Can social media data be used as an alternative source for pregnancy surveillance and regulatory decision making regarding birth defects? |
| Establishing a Framework for the Use of Social Media in Pharmacovigilance in Europe. | Social Media (survey conducted in 2014-2015, WEB-RADR project data) | Survey responses, social media data analysis results | Legal requirements, regulatory guidance, principles for continuous monitoring, and a regulatory framework for social media use in pharmacovigilance | Not explicitly stated; however, the study aimed to develop principles and propose a framework based on the analysis of social media data and stakeholder input | Pharmacovigilance, Social Media Analysis, Regulatory Framework Development | Literature review, stakeholder workshops, analysis of social media data from the WEB-RADR project | Health Informatics, Pharmacovigilance, Social Media, Regulatory Policy | How can a regulatory framework for the use of social media in pharmacovigilance be established in Europe? |
| The Adverse Drug Reactions From Patient Reports in Social Media Project: Protocol for an Evaluation Against a Gold Standard | French health forums | Messages from health forums | Extraction of adverse drug reactions (ADRs) from forum messages | Recall, precision, and f-measure; interannotator agreement (hierarchical kappa) | Pharmacovigilance, Social Media Analysis, Protocol Development, Evaluation Methodology | Natural language processing-based techniques for ADR information extraction | Health Informatics, Pharmacovigilance, Social Media, Data Mining | How can a standardized protocol be developed for evaluating software that extracts ADRs from health forum messages against a gold standard? |
| Natural Language Processing and Its Implications for the Future of Medication Safety: A Narrative Review of Recent Advances and Challenges | Not explicitly stated; likely includes various databases and literature sources relevant to medication safety and NLP | Narrative review of scientific literature and recent advances in the field | Recent advances in NLP for medication safety, challenges, and potential future directions | Not applicable; this is a narrative review | Narrative Review, Medication Safety, Natural Language Processing (NLP) | Systematic review and synthesis of recent advances and challenges in NLP for medication safety | Health Informatics, Medication Safety, Natural Language Processing, Review Article | What are the recent advances and challenges in using natural language processing for medication safety, and what are the implications for the future? |
| Detection of drug-drug interactions through data mining studies using clinical sources, scientific literature and social media. | Clinical sources, scientific literature, and social media platforms | Electronic health records, scientific publications, social media posts and discussions | Identification of drug-drug interactions (DDIs) and their potential adverse effects on patients | Not explicitly stated; however, the paper reviews methodologies and their effectiveness in detecting DDIs | Data Mining, Pharmacovigilance, Bioinformatics, Review Article | Review of different methodologies for data mining DDIs from various sources | Health Informatics, Medication Safety, Data Mining, Pharmacovigilance | How can data mining studies using clinical sources, scientific literature, and social media contribute to the detection and understanding of drug-drug interactions? |
| Big Data and Pharmacovigilance: Data Mining for Adverse Drug Events and Interactions. | Various (including electronic health records, social media, and spontaneous reporting systems) | Big data from diverse sources, including structured and unstructured data | Adverse drug events and interactions, data mining techniques for signal detection | Not explicitly stated; however, the paper discusses the effectiveness of data mining methods in detecting adverse events and interactions | Pharmacovigilance, Data Mining, Big Data Analysis | Review and discussion of data mining methods for pharmacovigilance using big data | Health Informatics, Pharmacovigilance, Big Data, Data Mining | How can big data and data mining techniques be utilized to improve pharmacovigilance and detect adverse drug events and interactions? |
| From Big Data to Smart Data for Pharmacovigilance: The Role of Healthcare Databases and Other Emerging Sources | Healthcare databases, electronic health records, administrative health claims data, disease and drug monitoring registries, social media | Big data, structured and unstructured data from various healthcare and social sources | Signal detection, substantiation and validation of drug or vaccine safety signals | Not explicitly stated; however, the paper discusses the effectiveness and potential of big data in pharmacovigilance | Pharmacovigilance, Big Data Analysis, Data Mining | Review and discussion of the role of big data in pharmacovigilance | Health Informatics, Pharmacovigilance, Big Data, Data Mining | How can big data and emerging sources contribute to the transformation of pharmacovigilance into smart data for improved drug safety post-marketing assessment? |
| Utility of social media and crowd-intelligence data for pharmacovigilance: a scoping review. | Social media platforms and crowd-sourced data sources | Conversations, posts, and reports related to adverse events and health products | Existence and characteristics of social media listening platforms, validity and reliability of social media data for detecting adverse events | Consistency of adverse event discovery in social media data compared to validated data, performance of data processing steps | Pharmacovigilance, Social Media Analysis, Scoping Review | Systematic search and review of literature, data abstraction, descriptive synthesis | Health Informatics, Pharmacovigilance, Social Media, Data Analytics | What is the utility and validity of social media and crowd-intelligence data for pharmacovigilance, and what are the characteristics of social media listening platforms? |
| Cluster anxiety-related adverse events following immunization (AEFI): An assessment of reports detected in social media and those identified using an online search engine. | Social media platforms (Facebook and Twitter) and online search engine (Google) | Reports of cluster anxiety-related AEFIs, including year, country/setting, vaccine involved, patient symptoms, clinical management, and impact on vaccination programs | Identification of 18 unique cluster events not published in traditional scientific peer-reviewed literature | Number of reports and events identified, geographic distribution, and impact on vaccination programs | Pharmacovigilance, Social Media Analysis, Public Health Surveillance, Systematic Review | Systematic search and review of social media posts and online search engine results to identify reports of cluster anxiety-related AEFIs | Health Informatics, Pharmacovigilance, Social Media, Immunization Safety, Public Health Surveillance | How effective are social media and online search engines in detecting reports of cluster anxiety-related AEFIs, and what is the impact of these events on vaccination programs? |
| Methods to Compare Adverse Events in Twitter to FAERS, Drug Information Databases, and Systematic Reviews: Proof of Concept with Adalimumab | Twitter, FAERS (FDA Adverse Event Reporting System), Drug Information Databases, Systematic Reviews | Social media posts, adverse event reports, drug information, systematic review data | Adverse events associated with Adalimumab, comparison of data across different platforms and reviews | Consistency and completeness of adverse event data across different sources | Pharmacovigilance, Social Media Analysis, Comparative Analysis, Drug Safety Assessment | Data collection from Twitter, FAERS, drug information databases, and systematic reviews; comparative analysis | Health Informatics, Pharmacovigilance, Social Media Mining, Comparative Effectiveness Research | Can Twitter data be used to complement information from FAERS, drug information databases, and systematic reviews for assessing adverse events associated with Adalimumab? |
| Social Media Impact of the Food and Drug Administration's Drug Safety Communication Messaging About Zolpidem: Mixed-Methods Analysis. | Social media platforms (Twitter and Facebook), Google Trends, Wikipedia | Social media posts, Google search volume data, Wikipedia edit history | Dissemination and impact of FDA's drug safety communication messages on zolpidem in social media | Quantitative analysis of social media posts, qualitative analysis of content, impact assessment through Google Trends and Wikipedia edits | Pharmacovigilance, Social Media Analysis, Mixed-Methods Research | Aggregated social media posts analysis, Google Trends data analysis, Wikipedia edit history review | Health Informatics, Social Media, Pharmacovigilance, Drug Safety Communication | How does the FDA's drug safety communication messaging about zolpidem impact social media discourse and public awareness? |
| Using social media in safety signal management: is it reliable? | Social media platforms (specific platforms not mentioned in the provided excerpt) | Social media posts related to drug safety signals | Detection and reliability of safety signals identified through social media | Not explicitly stated in the excerpt; likely involves the accuracy and consistency of reported signals | Pharmacovigilance, Social Media Analysis, Safety Signal Management | Analysis of social media data for safety signal detection and reliability assessment | Health Informatics, Pharmacovigilance, Social Media, Drug Safety | How reliable is the use of social media as a source for identifying and managing safety signals in pharmacovigilance? |
| Frequent discussion of insomnia and weight gain with glucocorticoid therapy: An analysis of Twitter posts. | Twitter | Social media posts mentioning glucocorticoid therapy | Frequency and types of adverse drug reactions (ADRs) related to glucocorticoids mentioned in Twitter posts | Frequency of specific ADR mentions, comparison with spontaneous ADR reporting to a national drug regulatory body | Pharmacovigilance, Social Media Analysis, Data Mining | Automated detection of suspected ADRs from narrative text in Twitter using a computerized system | Health Informatics, Pharmacovigilance, Social Media, Drug Safety | Can Twitter data be used to detect and quantify glucocorticoid-related adverse events, and how do these compare to spontaneous ADR reports? |
| Detecting Adverse Drug Reactions on Twitter with Convolutional Neural Networks and Word Embedding Features. | Twitter | Social media posts related to adverse drug reactions | Identification of tweets indicating adverse drug reactions using word embedding features and convolutional neural networks | Accuracy, precision, recall, and F1-score of the classification models | Pharmacovigilance, Social Media Analysis, Machine Learning, Neural Networks | Development and evaluation of a classification model using convolutional neural networks and word embedding features | Health Informatics, Pharmacovigilance, Social Media Mining, Machine Learning Applications | How effective are convolutional neural networks and word embedding features in detecting adverse drug reactions from Twitter data? |
| Pharmacovigilance from social media: An improved random subspace method for identifying adverse drug events. | Social media platforms, specifically health-related discussion forums | Textual data from social media posts and discussions | Identification of adverse drug events (ADEs) and associated drugs from social media text | Performance of the proposed method compared to existing approaches (accuracy, precision, recall, F1-score) | Pharmacovigilance, Social Media Analysis, Machine Learning, Text Mining | Improved random subspace method using stratified sampling (SSRS) for ADE identification | Health Informatics, Pharmacovigilance, Social Media Mining, Machine Learning Applications | How can an improved random subspace method enhance the identification of adverse drug events from social media data? |
| Evaluating Twitter as a complementary data source for pharmacovigilance. | Twitter | Social media posts (tweets) | Frequency of adverse drug reactions (ADRs) mentioned by Twitter users | Percentage of tweets implying or mentioning ADRs, classification of tweets as potential ADR case reports | Pharmacovigilance, Social Media Analysis, Data Mining | Extraction of tweets using Twitter's streaming API, manual classification of tweets as potential ADR case reports | Health Informatics, Pharmacovigilance, Social Media, Data Mining | Can Twitter be considered a valuable and informative source of data for pharmacovigilance purposes, despite the character limit per tweet? |
| Descriptions of Adverse Drug Reactions Are Less Informative in Forums Than in the French Pharmacovigilance Database but Provide More Unexpected Reactions | Web forums and the French Pharmacovigilance Database (FPVD) | Posts from web forums and case reports from the FPVD | Relevance and quality of information on adverse drug reactions (ADRs) in both data sources | Comparison of informativeness, unexpectedness, and seriousness of ADRs between forums and FPVD | Pharmacovigilance, Social Media Analysis, Comparative Analysis | Manual evaluation of forum posts and comparison with FPVD case reports | Health Informatics, Pharmacovigilance, Social Media, Patient Experience | How does the information provided by patients about ADRs on web forums compare to that in the FPVD in terms of informativeness and unexpectedness? |
| The usefulness of listening social media for pharmacovigilance purposes: a systematic review. | Social media platforms | Social media posts and discussions related to pharmacovigilance and adverse drug reactions (ADRs) | Identification of proto-adverse drug events and proto-signals from social media | Information quality, unexpectedness of ADRs, anticipation of known signals, and potential for risk communication strategies | Pharmacovigilance, Social Media Analysis, Systematic Review | Systematic search and analysis of studies that use social media for pharmacovigilance purposes | Health Informatics, Pharmacovigilance, Social Media Mining, Public Opinion Research | How useful and of what quality are the proto-signals identified by social media listening for pharmacovigilance purposes? |
| Sorting Through the Safety Data Haystack: Using Machine Learning to Identify Individual Case Safety Reports in Social-Digital Media | Social-Digital Media (SDM) platforms including Twitter, Tumblr, Facebook, and news media blogs | Social media posts mentioning Roche products and brands alongside medical and scientific terms | Identification of Individual Case Safety Reports (ICSRs) within SDM | Accuracy, gKappa statistic, time efficiency compared to human experts | Pharmacovigilance, Machine Learning, Data Mining, Social Media Analysis | Development and evaluation of rule-based and machine learning models for ICSR classification | Health Informatics, Pharmacovigilance, Social Media, Machine Learning Applications | Can machine learning models effectively classify ICSRs from SDM, and how do their performances compare to human pharmacovigilance experts? |
| Mining Patients' Narratives in Social Media for Pharmacovigilance: Adverse Effects and Misuse of Methylphenidate | Social media platforms (specifically five patient forums) | Narratives and posts from patients discussing their experiences with Methylphenidate | Adverse drug reactions (ADRs), patient experiences, misuse cases of Methylphenidate | F-measure for automatic identification of ADRs, qualitative analysis of patient narratives | Pharmacovigilance, Social Media Analysis, Text Mining, Named Entity Recognition, Signal Detection, Topic Modeling | Application of text mining methods, signal detection using PRR, topic modeling with the Correlated Topic Model | Health Informatics, Pharmacovigilance, Social Media Mining, Drug Safety | Can text mining and topic modeling of patient narratives in social media effectively identify ADRs and misuse of Methylphenidate? |
| Assessment of the Utility of Social Media for Broad-Ranging Statistical Signal Detection in Pharmacovigilance: Results from the WEB-RADR Project | Social media platforms (Twitter and Facebook) | Social media posts related to pharmacovigilance and adverse drug reactions | Detection of statistical signals for a broad range of drugs and adverse events from social media data | Area under the receiver operating characteristic curve (AUC) for different reference sets | Pharmacovigilance, Social Media Analysis, Signal Detection, Data Analysis | Application of statistical signal detection algorithms to social media data and comparison with established pharmacovigilance databases | Health Informatics, Pharmacovigilance, Social Media Mining, Data Analysis Techniques | How effective is the use of social media data for broad-ranging statistical signal detection in pharmacovigilance? |
| Detection and Analysis of Drug Misuses. A Study Based on Social Media Messages. | Social media platform (Doctissimo health forum in France) | User-generated messages from health forums | Detection and classification of drug misuses from social media data | F-measure (up to 0.773) for the accuracy of the proposed method in detecting misuses | Pharmacovigilance, Social Media Analysis, Natural Language Processing, Machine Learning | Multi-step method including message indexing, creation of a misuse typology, and automatic classification of messages | Health Informatics, Drug Safety, Social Media Mining, Pharmacoepidemiology | Can social media messages be used to automatically detect and classify drug misuses by patients? |
| Drug information, misinformation, and disinformation on social media: a content analysis study. | Social media platform (WhatsApp) | Social media claims about drugs, dietary supplements, and toxic bisphenol-A | Truthfulness of social media claims, categorization as true, false, or potentially misleading | Frequency of misleading claims, false claims, and objectively true claims | Public Health Policy, Social Media Analysis, Content Analysis | Content analysis of social media claims, categorization of claims based on truthfulness | Health Informatics, Social Media, Drug Safety, Misinformation, Public Health Policy | What is the prevalence and nature of drug-related misinformation and disinformation on social media platforms like WhatsApp? |
| Detection of Cases of Noncompliance to Drug Treatment in Patient Forum Posts: Topic Model Approach. | French patient forums (doctissimo, atoute, and santé médecine) | Textual data from patient forum posts | Identification of noncompliant behaviors related to drug treatment from forum posts | Recall and precision scores of the topic model approach | Health Informatics, Text Mining, Social Media Analysis, Medication Adherence | Implementation of a probabilistic topic model (latent Dirichlet allocation) to analyze forum posts | Health Informatics, Social Media, Medication Adherence, Pharmacovigilance | Can topic models effectively identify noncompliant behaviors to drug treatment from patient forum posts? |
| [A review on the advancement of internet-based public health surveillance program]. | Internet-based data sources, including search engines and social media. | Public health surveillance data extracted from internet platforms. | The development and application of internet-based surveillance systems in public health. | Not explicitly stated; however, the review discusses the advantages and challenges of internet-based surveillance systems. | Public Health Surveillance, Review Article, Internet-based Surveillance (Infoveillance) | Systematic review and analysis of existing literature on internet-based public health surveillance programs | Health Informatics, Public Health Surveillance, Internet-based Surveillance, Infoveillance | How have internet-based public health surveillance programs advanced, and what are their potential applications and challenges? |
| Using deep learning to improve medication safety: the untapped potential of social media. | Social media platforms (specific platforms not mentioned in the provided excerpt) | Social media data related to medication safety and adverse drug reactions | Identification of medication safety signals and adverse drug reactions from social media data | Not explicitly stated in the excerpt; likely involves the performance of deep learning models in detecting medication safety issues | Pharmacovigilance, Social Media Analysis, Machine Learning, Deep Learning | Application of deep learning techniques to analyze social media data for medication safety insights | Health Informatics, Drug Safety, Social Media Mining, Machine Learning Applications | How can deep learning techniques be utilized to improve medication safety through the analysis of social media data? |
| Utility of social media and crowd-sourced data for pharmacovigilance: a scoping review protocol. | Social media platforms and crowd-sourced data sources | Social media posts, crowd-sourced data related to adverse events and health products | Identification of social media listening platforms, validity and reliability of data for detecting adverse events | Not explicitly stated; however, the review aims to assess the utility and validity of social media data in pharmacovigilance | Pharmacovigilance, Social Media Analysis, Scoping Review | Systematic search and review of literature, data abstraction, descriptive synthesis | Health Informatics, Pharmacovigilance, Social Media, Data Analytics | What is the utility and validity of social media and crowd-sourced data for pharmacovigilance, and what are the characteristics of social media listening platforms? |
| Evaluation of Facebook and Twitter Monitoring to Detect Safety Signals for Medical Products: An Analysis of Recent FDA Safety Alerts. | Social media platforms (Facebook and Twitter) | Social media posts related to medical products and adverse events | Detection of safety signals for medical products from social media posts | Comparison of safety signals identified on social media with FDA safety alerts | Pharmacovigilance, Social Media Analysis, Signal Detection | Analysis of social media data to identify safety signals and comparison with FDA safety alerts | Health Informatics, Pharmacovigilance, Social Media Mining, Signal Detection | Can social media monitoring on Facebook and Twitter effectively detect safety signals for medical products, as indicated by recent FDA safety alerts? |
| Analysis of Patient Narratives in Disease Blogs on the Internet: An Exploratory Study of Social Pharmacovigilance | TOBYO database (collection of tōbyōki blogs on the Internet) | Unstructured text from patient-generated disease blogs | Patient experiences, concerns, outcomes, and mentions of adverse drug reactions (ADRs) | Not explicitly stated; however, the study discusses the potential applications of the TOBYO database for pharmacovigilance | Pharmacovigilance, Social Media Analysis, Text Mining, Patient Experience Research | Text mining and analysis of tōbyōki blog data to identify patient experiences and ADRs | Health Informatics, Pharmacovigilance, Social Media, Patient-Generated Data, Text Mining | Can patient narratives in disease blogs on the Internet serve as a resource for social pharmacovigilance and contribute to the understanding of adverse drug reactions? |
| Patient Understanding of the Risks and Benefits of Biologic Therapies in Inflammatory Bowel Disease: Insights from a Large-scale Analysis of Social Media Platforms. | Social Media Platforms (specific platforms not mentioned in the provided excerpt) | Social media posts and comments related to biologic therapies for Inflammatory Bowel Disease (IBD) | Patient understanding, perceptions, and concerns regarding the risks and benefits of biologic therapies for IBD | Not explicitly stated; likely involves the analysis of the content and sentiment of social media posts | Pharmacovigilance, Social Media Analysis, Patient Experience Research | Large-scale analysis of social media data, qualitative and quantitative content analysis | Health Informatics, Pharmacovigilance, Social Media, Patient Understanding, Inflammatory Bowel Disease | What is the patient understanding and perception of the risks and benefits of biologic therapies in the context of Inflammatory Bowel Disease as expressed on social media platforms? |
| Social Media Monitoring and Adverse Drug Reaction Reporting in Pharmacovigilance: An Overview of the Regulatory Landscape. | Social Media Platforms (as part of the WEB-RADR project under the European Union's Innovative Medicines Initiative) | Social media data related to adverse drug reactions and pharmacovigilance | Existing practices, guidance, and legal requirements on social media monitoring for safety issues related to medicines | Survey response rate, percentage of countries with established pharmacovigilance systems and specific requirements | Pharmacovigilance, Social Media Analysis, Regulatory Science, Survey Research | Survey conducted in 182 countries/jurisdictions to gather information on social media monitoring practices | Health Informatics, Pharmacovigilance, Social Media, Regulatory Policy, Drug Safety | What are the existing practices, guidance, and legal requirements for social media monitoring in the context of pharmacovigilance and adverse drug reaction reporting across different countries? |
| Exploiting heterogeneous publicly available data sources for drug safety surveillance: computational framework and case studies. | FDA Adverse Event Reporting System (FAERS), PubMed, and Twitter | Heterogeneous data from spontaneous reporting systems, scientific literature, and social media | Identification of adverse drug reactions (ADRs) and adverse events of interest | Insights provided by data analysis, benefits and challenges of using heterogeneous data sources | Pharmacovigilance, Computational Framework, Data Integration, Case Studies | Query formulation for data acquisition, filtering, transformation, and joint visualization of data | Health Informatics, Drug Safety, Pharmacovigilance, Data Mining, Social Media Analysis | How can a computational framework leveraging heterogeneous publicly available data sources contribute to drug safety surveillance and signal detection? |
| Investigating patient narratives posted on Internet and their informativeness level for pharmacovigilance purpose: The example of comments about statins. | Internet website dedicated to sharing experiences on medicines | Patient narratives and comments about statins | Characteristics and informativeness level of Internet narratives mentioning adverse drug reactions (ADRs) related to statins | Number of key elements of information (out of 16) provided in the narratives | Pharmacovigilance, Social Media Analysis, Patient Experience Research | Retrospective cross-sectional study collecting and assessing narratives | Health Informatics, Pharmacovigilance, Social Media, Patient-Generated Data, Statins | What is the informativeness level of patient narratives posted on the Internet regarding ADRs related to statins, and how can this information be used for pharmacovigilance purposes? |
| Patterns of Kratom use and health impact in the US-Results from an online survey. | Online survey conducted through social media and online resources from the American Kratom Association | Survey responses from Kratom users | Demographics, perceived beneficial and detrimental effects, common doses, and purposes of Kratom use | Dose-dependent effects, reasons for use, and reported health impacts of Kratom | Public Health, Substance Use, Survey Research | Anonymous cross-sectional online survey conducted in October 2016 | Health Informatics, Substance Use, Public Health, Kratom Research | What are the patterns of Kratom use in the US, and what are the perceived health impacts associated with its use? |
| Social media for arthritis-related comparative effectiveness and safety research and the impact of direct-to-consumer advertising | Treato platform, analyzing publicly available social media data including Facebook, blogs, and discussion boards | Social media posts mentioning inflammatory arthritis (e.g., rheumatoid, psoriatic) | Self-reported safety events by patients, mapped to medical ontologies, and resolved synonyms | Pairwise odds ratios (ORs) for pre-specified conditions, relative reporting ratios (RRRs), and accuracy of a natural language processing (NLP) classifier | Comparative Effectiveness Research, Pharmacovigilance, Social Media Analysis, Direct-to-Consumer Advertising | Analysis of social media data using the Treato platform, manual redaction, and disproportionality analysis | Health Informatics, Social Media, Comparative Effectiveness Research, Pharmacovigilance, Direct-to-Consumer Advertising | How can social media data complement traditional approaches for comparative effectiveness research for new medications, and what is the impact of direct-to-consumer advertising on this data? |
| Vigi4Med Scraper: A Framework for Web Forum Structured Data Extraction and Semantic Representation. | Web forums | Structured data extracted from web forums | Annotated data for adverse drug reactions (ADRs) and semantic representation using Resource Description Framework (RDF) graphs | Not explicitly stated; however, the framework's ability to extract and represent data is discussed | Health Informatics, Data Extraction, Semantic Web, Pharmacovigilance | Development and implementation of an open-source framework for data extraction and semantic representation | Health Informatics, Pharmacovigilance, Social Media Mining, Semantic Data Representation | How can a generic open-source framework be developed for extracting structured data from web forums and representing it semantically for pharmacovigilance purposes? |
| Automated discovery of safety and efficacy concerns for joint & muscle pain relief treatments from online reviews. | Amazon's online product reviews for joint & muscle pain relief treatments | Consumer reviews and ratings of over-the-counter (OTC) products | Detection of safety and efficacy concerns in consumer reviews using "smoke word" dictionaries and sentiment analysis techniques | Performance comparison between "smoke word" dictionaries and sentiment analysis techniques in uncovering product concerns | Health Informatics, Data Mining, Sentiment Analysis, Pharmacovigilance | Selection of a dataset, training of "smoke word" dictionaries, and scoring of reviews for safety and efficacy issues | Health Informatics, Pharmacovigilance, Consumer Reviews, Data Mining | Can automated methods effectively detect safety and efficacy concerns in online consumer reviews of joint & muscle pain relief treatments? |
| Clinicians' Reports in Electronic Health Records Versus Patients' Concerns in Social Media: A Pilot Study of Adverse Drug Reactions of Aspirin and Atorvastatin. | Electronic Health Records (EHR) and Social Media Platforms | Clinical data and patient-reported data on adverse drug reactions (ADRs) to Aspirin and Atorvastatin | Frequency and nature of ADRs reported in EHR and social media | Pearson's correlation coefficient to assess the relationship between the frequency of ADRs reported in clinical data and social media concerns | Pharmacovigilance, Health Informatics, Social Media Analysis, Comparative Study | Comparative analysis of ADR data from EHR and social media for two common medications | Health Informatics, Pharmacovigilance, Social Media, Comparative Effectiveness Research | How do the adverse drug reactions reported by clinicians in electronic health records compare with patients' concerns expressed in social media for Aspirin and Atorvastatin? |
| Social Media Mining for Toxicovigilance: Automatic Monitoring of Prescription Medication Abuse from Twitter. | Twitter | User posts (tweets) associated with commonly abused medications | Signals of prescription medication abuse from social media posts | Accuracy of the automatic classification approach (82%), medication abuse class recall (0.51), precision (0.41), F measure (0.46) | Toxicovigilance, Social Media Mining, Machine Learning, Data Analysis | Collection and manual annotation of tweets, quantitative and qualitative analysis, design of an automatic supervised classification technique | Health Informatics, Pharmacovigilance, Social Media, Substance Abuse Monitoring | Can social media be utilized as a resource for automatic monitoring of prescription medication abuse, and can an automatic classification technique effectively identify potentially abuse-indicating user posts? |
| What Can Big Data Offer the Pharmacovigilance of Orphan Drugs? | Not explicitly stated; potentially includes social media and other big data sources | Big data, including social media data and other electronic sources related to orphan drugs | Detection of adverse reactions and safety information for orphan drugs from big data sources | Not explicitly stated; likely involves the effectiveness of big data in identifying and analyzing adverse reactions | Pharmacovigilance, Big Data Analysis, Orphan Drugs | Review and analysis of the potential of big data in pharmacovigilance for orphan drugs | Health Informatics, Pharmacovigilance, Big Data, Orphan Drugs | How can big data, including social media and other electronic sources, contribute to the pharmacovigilance of orphan drugs? |
| Social Media Listening for Routine Post-Marketing Safety Surveillance. | Social media platforms (Facebook and Twitter) | Publicly available social media data | Standardized drug names, vernacular symptoms, safety and benefit information from social media posts | Number of Medical Dictionary for Regulatory Activities (MedDRA) Preferred Terms (PTs) discussed, percentage of posts containing benefit information | Pharmacovigilance, Social Media Analysis, Post-Marketing Surveillance | Acquisition and processing of social media data, analysis for safety and benefit information | Health Informatics, Pharmacovigilance, Social Media, Post-Marketing Safety Surveillance | How can social media listening be utilized as a tool for routine post-marketing safety surveillance? |
| Assessment of YouTube videos as a source of information on medication use in pregnancy. | YouTube | Video content and metadata from YouTube videos related to medication use in pregnancy | Content of YouTube videos discussing medication use during pregnancy, including safety information | Accuracy of information provided in videos compared to established guidelines and scientific evidence | Pharmacoepidemiol Drug Saf, Social Media Analysis, Content Analysis | Systematic search and review of YouTube videos, content analysis, and comparison with established guidelines | Health Informatics, Pharmacoepidemiology, Social Media, Medication Safety in Pregnancy | How accurate and reliable is the information provided in YouTube videos regarding medication use in pregnancy? |
| Can social media data lead to earlier detection of drug-related adverse events? Pharmacoepidemiol Drug Saf. 2016;25(12):1425-33. | Social media (AskaPatient.com) and the FDA Adverse Event Reporting System (FAERS) | Patient-reported adverse events (AEs) from social media and FAERS reports | Patient characteristics, inter-temporal reporting patterns, and clinically important AEs for atorvastatin and sibutramine | Comparison of AE reporting patterns, Granger causality tests for forecasting FAERS reports | Pharmacoepidemiol Drug Saf, Social Media Analysis, Pharmacovigilance | Analysis of social media postings and FAERS reports, time series analysis, Granger causality test | Health Informatics, Pharmacovigilance, Social Media, Adverse Drug Reactions | Can social media data provide earlier indications of drug-related adverse events compared to FAERS? |
| Social media and pharmacovigilance: A review of the opportunities and challenges. | Social media platforms (not specified) | Social media posts and discussions related to pharmacovigilance and adverse drug reactions (ADRs) | Opportunities and challenges of using social media for pharmacovigilance | Not explicitly stated; however, the review discusses technical, regulatory, and ethical challenges | Pharmacovigilance, Social Media Analysis, Review Article | Review of existing literature and analysis of the potential of social media in pharmacovigilance | Health Informatics, Pharmacovigilance, Social Media, Adverse Drug Reactions | What are the opportunities and challenges associated with using social media for pharmacovigilance? |
| Regulatory Definitions and Good Pharmacovigilance Practices in Social Media: Challenges and Recommendations | Social media platforms (not specified) | Social media content related to pharmacovigilance and adverse events | Identification of gaps in current regulatory definitions for pharmacovigilance in social media | Recommendations for good pharmacovigilance practices in social media | Pharmacovigilance, Social Media Analysis, Regulatory Science | Review of worldwide regulatory guidance documents and analysis of challenges | Health Informatics, Pharmacovigilance, Social Media, Regulatory Compliance | What are the challenges in applying regulatory definitions to social media for pharmacovigilance, and what recommendations can be made for good practices? |
| Adverse Drug Reaction Identification and Extraction in Social Media: A Scoping Review. | Social media platforms (not specified) | Social media posts and discussions related to adverse drug reactions (ADRs) | Methods for identifying, extracting, and evaluating ADR-related information from social media | Not explicitly stated; however, the review discusses the completeness, quality, and reliability of data analyzed from social media | Pharmacovigilance, Social Media Analysis, Scoping Review | Scoping review following Daubt et al.'s recommendations, literature search, and thematic analysis | Health Informatics, Pharmacovigilance, Social Media Mining, Adverse Drug Reactions | How can social media be used as a data source for postmarketing drug surveillance, and what methods are available for extracting and using this data? |
| Cadec: A corpus of adverse drug event annotations. | CSIRO Adverse Drug Event Corpus (Cadec) | Rich annotated corpus of medical forum posts on patient-reported Adverse Drug Events (ADEs) | Mentions of drugs, adverse effects, symptoms, and diseases linked to controlled vocabularies | Inter-annotator agreement, quality of annotations ensured by clinical terminologist review | Health Informatics, Natural Language Processing, Text Mining, Corpus Development | Multi-stage annotations, annotation guidelines, and review by a clinical terminologist | Health Informatics, Pharmacovigilance, Social Media Mining, Corpus Linguistics | How can a rich annotated corpus of medical forum posts be created to facilitate information extraction and text mining for detecting adverse drug reactions from patient reports? |
| Aims and approaches of Web-RADR: a consortium ensuring reliable ADR reporting via mobile devices and new insights from social media. | Web-RADR (European project) | Adverse Drug Reaction (ADR) reports collected via mobile devices and social media | Reliable ADR reporting mechanisms, insights from social media data on medication safety | Not explicitly stated; likely involves the effectiveness and reliability of the Web-RADR system | Pharmacovigilance, Social Media Analysis, Mobile Health, Public Health Surveillance | Development and implementation of a mobile and social media-based pharmacovigilance system | Health Informatics, Pharmacovigilance, Social Media, Mobile Health Applications | How can a consortium like Web-RADR ensure reliable ADR reporting through mobile devices and extract valuable insights from social media for medication safety? |
| Evaluating Social Media Networks in Medicines Safety Surveillance: Two Case Studies. | Social media platforms (Facebook, Google+, and Twitter) | Publicly accessible, English-language posts related to medicines and adverse events | Co-occurrence of keywords related to the drug/vaccine and event of interest within a post | Number of relevant posts retrieved, geographical distribution, context, linking to other web content, and author's assertion regarding the supposed association | Pharmacovigilance, Social Media Analysis, Case Study Analysis | Collection and analysis of social media data for two case studies: rosiglitazone and cardiovascular events, and HPV vaccine and infertility | Health Informatics, Pharmacovigilance, Social Media, Medicines Safety Surveillance | Can social media networks capture patient-generated information relevant for medicines safety surveillance that cannot be found in traditional sources? |
| Pharmaceutical drugs chatter on Online Social Networks. | Online Social Networks (OSNs) including general and health-specific platforms | Publicly available posts and discussions related to pharmaceutical drugs | Characteristics of OSNs, content of pharmaceutical drug discussions, user demographics | Quantitative and qualitative analysis of drug category frequency, polarity, and semantic groups | Social Media Analysis, Health Informatics, Text Mining | Data collection from OSNs, text preprocessing, statistical analysis, and concept annotation | Health Informatics, Social Media, Pharmacovigilance, Public Health | How do the characteristics of online social networks impact the content of pharmaceutical drug discussions? |
| Patient perspectives of dabigatran: analysis of online discussion forums. | Online discussion forums and internet support groups related to atrial fibrillation (AF) or anticoagulation therapy | Patient comments and discussions posted on forums | Patient experiences and perceptions regarding dabigatran, including safety, efficacy, side effects, and proper use | Thematic content analysis of forum comments | Health Informatics, Social Media Analysis, Qualitative Research | Qualitative thematic content analysis of comments posted on forums | Health Informatics, Patient Experience, Pharmacovigilance, Social Media | What are the patient experiences and perceptions regarding dabigatran as expressed in online discussion forums? |
| Weed Light: An Exploratory Study of Delta-8 THC Conversations on Reddit - RTI Press Research Brief | Reddit | Publicly available Reddit posts about Delta-8 THC | User-reported experiences with Delta-8 THC, including product types, safety, legality, and personal reactions | Not explicitly stated; however, the study discusses the volume and content of Reddit posts | Social Media Analysis, Health Informatics, Qualitative Research | Data collection using Brandwatch, content analysis of Reddit posts | Health Informatics, Pharmacovigilance, Social Media, Cannabis Products | What are the user-reported experiences and concerns regarding Delta-8 THC as expressed in online discussions on Reddit? |
| "Harm reduction and knowledge exchange—a qualitative analysis of drug-related Internet discussion forums" by Soussan C, Kjellgren A. | International Internet forums | Qualitative data from online discussions | Novel psychoactive substances (NPS) discussions, including substance facts, dosage and administration, subjectively experienced effects, and support and safety | Not explicitly mentioned in the provided excerpts | Qualitative analysis | Systematic examination and interpretation of 13,082 posts from 60 threads of discussion; coding and categorization of emerging topics and supporting quotations | Drug-related harm reduction and knowledge exchange in online communities | How do discussions on international Internet forums about NPS reflect harm reduction and knowledge exchange practices among users? |
| "Participatory surveillance of diabetes device safety: a social media-based complement to traditional FDA reporting" by Mandl KD, McNabb M, Marks N, Weitzman ER, Kelemen S, Eggleston EM, et al. | Social media platforms | User-generated content related to diabetes device safety | Reports of adverse events, user experiences, and concerns regarding diabetes devices | Not explicitly mentioned in the provided reference | Surveillance study utilizing social media data | Data mining and content analysis of social media posts related to diabetes devices | Medical device safety, social media-based research, diabetes management | How can social media be leveraged to complement traditional FDA reporting for diabetes device safety surveillance? |
| "Role of text mining in early identification of potential drug safety issues" by Liu M, Hu Y, Tang B. | Not explicitly mentioned, but implies use of databases or collections where drug-related text data is available | Text data from various sources related to drug safety | Identification of adverse drug reactions and potential safety issues through text mining | The paper does not provide specific evaluation metrics | Text mining, data analysis | Use of text mining techniques to extract and analyze information from drug-related text data | Drug safety, pharmacovigilance, bioinformatics | How can text mining techniques be utilized to identify potential drug safety issues at an early stage? |
| Tracking the global spread of vaccine sentiments: the global response to Japan's suspension of its HPV vaccine recommendation. | Online media and social media networks | News articles, social media posts, and online discussions regarding Japan's HPV vaccine suspension | Global spread of news and sentiments about the suspension of HPV vaccine recommendation in Japan | Geographical distribution of media coverage, sentiment analysis of articles, and public response | Health Informatics, Social Media Analysis, Vaccine Sentiment Analysis | Collection and analysis of online media content, use of Google Alerts and Google Search | Health Informatics, Vaccine Safety, Social Media, Global Health | How did the global online media and social networks respond to Japan's suspension of its HPV vaccine recommendation, and what were the implications for public sentiment and vaccine confidence? |
| Text mining for adverse drug events: the promise, challenges, and state of the art. | Various textual sources such as biomedical literature, clinical narratives, product labeling, social media, and Web search logs | Unstructured text data | Adverse drug event (ADE) detection and assessment from textual data | Not explicitly stated; however, the paper discusses the potential and challenges of text mining in pharmacovigilance | Pharmacovigilance, Text Mining, Data Analysis, Health Informatics | Overview of recent advances in pharmacovigilance driven by text mining application | Health Informatics, Pharmacovigilance, Text Mining, Data Analysis | How can text mining be applied to improve pharmacovigilance, specifically in the detection and assessment of adverse drug events? |
| Digital drug safety surveillance: monitoring pharmaceutical products in Twitter. | Twitter | Public English-language tweets mentioning 23 medical products | Posts with resemblance to adverse events (Proto-AEs) | Concordance between Twitter Proto-AEs and FDA FAERS reports by System Organ Class (SOC) | Pharmacovigilance, Social Media Analysis, Digital Surveillance | Collection and analysis of Twitter data, semi-automated filtering, dictionary-based symptom classification | Health Informatics, Pharmacovigilance, Social Media, Digital Drug Safety Surveillance | How well do Twitter posts mentioning adverse event-like reactions correlate with spontaneous reports received by a regulatory agency, such as the FDA? |
| Digital social media, youth, and nonmedical use of prescription drugs: the need for reform. | Not explicitly stated; likely includes social media platforms like Facebook and Twitter | Not specified; potentially includes social media posts, comments, and user profiles | The association between social media use and nonmedical use of prescription drugs (NUPM) among youth | Not specified; likely involves analysis of social media content and its impact on NUPM behavior | Public Health, Social Media Analysis, Policy Analysis | Review and analysis of existing literature, case studies, and legal frameworks | Health Informatics, Social Media, Youth Health, Prescription Drug Misuse | What are the implications of digital social media on the nonmedical use of prescription drugs among youth, and what reforms are needed to address this issue? |
| Global reach of direct-to-consumer advertising using social media for illicit online drug sales. | Social media platforms (Facebook, Twitter, etc.) | Social media posts and advertisements promoting illicit online drug sales | Prevalence and characteristics of illicit drug sales advertisements on social media | Not explicitly stated; likely involves the extent of reach and engagement of the advertisements | Public Health, Social Media Analysis, Pharmacovigilance, Policy Analysis | Content analysis of social media posts and advertisements related to illicit drug sales | Health Informatics, Social Media, Drug Safety, Pharmacovigilance, Public Health Policy | What is the extent and nature of direct-to-consumer advertising for illicit online drug sales on social media platforms? |
| Towards Large-scale Twitter Mining for Drug-related Adverse Events. | Twitter | Social media posts (tweets) related to drug use and adverse events | Detection of drug users and potential adverse events from tweets using NLP and SVM classifiers | Not explicitly stated; likely involves the accuracy and efficiency of the mining approach | Health Informatics, Social Media Analysis, Pharmacovigilance, Big Data Analytics | Analysis of Twitter content using Natural Language Processing (NLP) and Support Vector Machine (SVM) classifiers | Health Informatics, Pharmacovigilance, Social Media Mining, Big Data Analytics | Can large-scale Twitter mining using NLP and SVM classifiers effectively identify drug users and potential adverse events for pharmacovigilance? |
| Web-based patient-reported outcomes in drug safety and risk management: challenges and opportunities? | Web-based sources, including social media and company-sponsored network sites | Patient-reported outcomes (PROs) and adverse event (AE) reports from web-based sources | Collection, analysis, and reporting of safety data from patients using PROs | Not explicitly stated; likely involves the effectiveness of using web-based PROs in understanding benefits and risks of medicines | Pharmacovigilance, Social Media Analysis, Patient-Reported Outcomes, Risk Management | Review of drivers for web-based PRO adoption, current regulatory framework, and potential methodologies | Health Informatics, Pharmacovigilance, Social Media, Patient-Reported Outcomes | How can web-based patient-reported outcomes be effectively utilized in drug safety and risk management, and what challenges and opportunities does this present? |
| Prevalence and Global Health implications of social media in direct-to-consumer drug advertising. | Online interactive social media technologies (eDTCA 2.0) | Presence and marketing activities of pharmaceutical companies and drug products on social media | Pharmaceutical company presence, drug product marketing, and non-corporate eDTCA 2.0 marketing presence by illegal online drug sellers | Prevalence of eDTCA 2.0 marketing among top 10 global pharmaceutical corporations and 10 highest grossing drugs of 2009 | Social Media Analysis, Pharmacovigilance, Public Health Policy, Health Economics | Descriptive study of eDTCA 2.0 marketing prevalence in selected pharmaceutical companies and drugs | Health Informatics, Social Media, Pharmacovigilance, Public Health, Health Policy | What is the prevalence of direct-to-consumer drug advertising through online social media technologies (eDTCA 2.0) among leading pharmaceutical companies and their top-selling drugs, and what are the global health implications? |