

Analysis on the Impact of Adverse Drug Reactions Surveyed from Social Media through Pharmacovigilance Surveillance †

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Abstract: Social media has become a novel source of information about pharmacovigilance (PV) and patient perceptions on adverse events (AEs). This research aims to determine whether the social media data assessment can determine the new signals, recognized signals from routine PV, recognized signals earlier, and certain problems such as patients' perceptions and quality issues. In addition, the task is to obtain the number of 'posts with similarity to AEs' (proto- AEs) and the classifications/forms of products that benefit from social media data assessment. These can handle the entire endorsed social interests related to the patient's safety and protection from ADRs. A systematic configuration for examining pharmacovigilance is shown in this research work. This work involves the data collected from social sites such as Twitter, Facebook, YouTube, Tumblr, DailyMotion, Flickr Vkontakate, Web, and Reddit. Several databases were included to cover a broad range of domains as grey literature, computer science, nursing, and health and medical research. This work also considered the other supplementary approaches that involved searching of internet search engines, contacting experts in this field, reference checking all consisted articles and included articles, newsletters, and conference proceedings, hand searching journals, browsing internet blogs, and related systematic reviews. The outcomes from the selected social media sites were used to calculate the adverse event of posts by using the narrative analysis. Nearly 4% of the adverse event measured from the posts of Facebook, while it is in between 2-4% for Twitter. The internet searches and database detected 5075 records. Such outcomes were further augmented with the research works acknowledged from peer reviewers' suggestions, contacting experts, reference checking, hand searching, and studies already recognized by the authors. **Conclusions:** The pilot study suggests adverse events are recognizable on social media by monitoring the major social sites. Although, it has substantial heterogeneity in the type as well as the frequency of reported events. In addition, the validity or reliability of data has not been comprehensively assessed.

Keywords: pharmacovigilance; adverse drug reaction (ADR); social buzz; big data; social media.

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Conflicts of Interest

The authors declare no conflict of interest.