

**115632 – WEB-RADR****WEB- Recognising Adverse  
Drug Reactions****WP4 – Scientific Impact  
Evaluation****D4.9**

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**Document History**

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V0.1	05/2017	First Draft
V1.0	29/09/2017	Final Version

## Summary

In the WEB-RADR project, we want to identify signals, i.e., drug-event pairs that cause a surprisingly high number of reports than would be anticipated by analysing the reports that do not involve each pair. We are also interested in using a combination of data from multiple sources to perform this signal detection task. More specifically, we wish to combine data derived from social media with data held in spontaneous reporting systems. Ideally, we'd like to be able to articulate the fact that we trust spontaneous reporting more than social media.

This document is intended to satisfy the requirement on the University of Liverpool to generate D4.9 as relates to 'Evaluating the Performance of Trustworthiness-based Integration Aggregation for the Purpose of Detecting Adverse Drug Reactions (ADRs)' and M4.5 on 'Integration of ADR Data from Different Sources'.

This document is provided on the assumption that it will not be released to the open literature in its current form: the intent is that this document will be used as the basis of a paper that will be submitted for peer-review and such open literature publication would be likely to impact (negatively and significantly) on the ability to publish.

The document begins, in chapter 2, with a potentially novel signal detection algorithm for a single source. Chapter 2.3 then extends this algorithm to consider two sources. Results are then shown in chapter 3 before conclusions are drawn and recommendations made in chapter 4.

Signal Detection using Pharmacovigilance Data from  
Different Sources

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