

epitweetr: R-based automated open-source tool for early detection of public health threats from Twitter

24 November 2020, 12:00-15:00 CET

Scope

On 1 October 2020, ECDC launched epitweetr¹, a free, open source interactive tool for early detection of public health threats using Twitter data.

epitweetr allows users to automatically monitor trends of tweets by time, place and topic, with the aim of detecting public health threats early through signals (i.e. an unusual increase in the number of tweets). It was designed to support public health experts with the early detection of threats from infectious diseases but can be extended to all hazards and other fields of study by modifying the topics and keywords.

To make epitweetr as widely available as possible, R was chosen as the computing platform. R is free, open source, and runs on any modern operating system.

epitweetr can be downloaded free of charge from the ECDC website, the CRAN website (for CRAN users) or GitHub (for GitHub users).

This hands-on session aims at having an understanding of the usage and functionalities of epitweetr for early detection of public health threats using Twitter data.

Objectives of the session

- Understand the aims of epitweetr in the context of epidemic intelligence
- Understand the principles of how epitweetr works
- Acquire skills in using the pages of epitweetr application, especially dashboard, alerts and configuration
- Understand how to change the specifications for topics (including query syntax), languages, important users, subscribers and countries & regions

¹ epitweetr, R package, [software application] Version 0.1.20 Stockholm: European Centre for Disease Prevention and Control; 2020. <https://www.ecdc.europa.eu/en/publications-data/epitweetr-tool>

Participants and registration

The target audience of this session is public health experts working with early detection and/or social media for epidemic intelligence. No previous R knowledge is required.

There will be a maximum of 15 participants with a short list in case of cancellations. Participants are not required to have epitweetr installed in their computer for this session.

If you are interested in participating, please contact Laura Espinosa (laura.espinosa@ecdc.europa.eu) with a short description on your motivation to participate, your professional background and current affiliation.

Chair and speakers

This session is chaired by Bruno Cianco, Head of the Surveillance Section at ECDC.

The speakers and breakout group facilitators are:

- Laura Espinosa, Scientific Officer Epidemic Intelligence at ECDC; and author of the design and concept of epitweetr, and package maintainer
- Ariana Wijermans, Project Officer Epidemic Intelligence at ECDC; and contributor to the design and concept of the package
- Francisco Orchard, Responsible Unit Data Science at Epiconcept; and main developer of epitweetr

Programme

	Connection to main room
	Connection to working group rooms
	Lunch and coffee breaks

	Sessions in main room
	Sessions in working group rooms

11:45 – 12:00	Connection to main room
12:00 – 12:10	Welcome and introduction. <i>Bruno Ciancio, ECDC</i>
12:10 – 12:25	From manual to automated monitoring of Twitter data for early detection of public health threats. <i>Laura Espinosa, ECDC</i>
12:25 – 13:00	Introduction and fundamentals of epitweetr. <i>Francisco Orchard, Epiconcept</i>
13:00 – 13:15	Analysis of signals detected by epitweetr at ECDC. <i>Ariana Wijermans, ECDC</i>
13:15 – 13:25	Comfort break
13:25 – 13:40	Using epitweetr: demo of functionalities and configurable aspects. <i>Laura Espinosa, Epidemic Intelligence group, ECDC.</i>
13:40 – 13:45	Connection to working group rooms
13:45 – 14:25	Working group exercise (3 groups)
14:25 – 14:30	Connection to main room
14:30 – 14:50	Conclusions of working group exercise presented by one representative of each group and plenary discussions
14:50 – 15:00	Wrap up and closing. <i>Bruno Ciancio, ECDC</i>