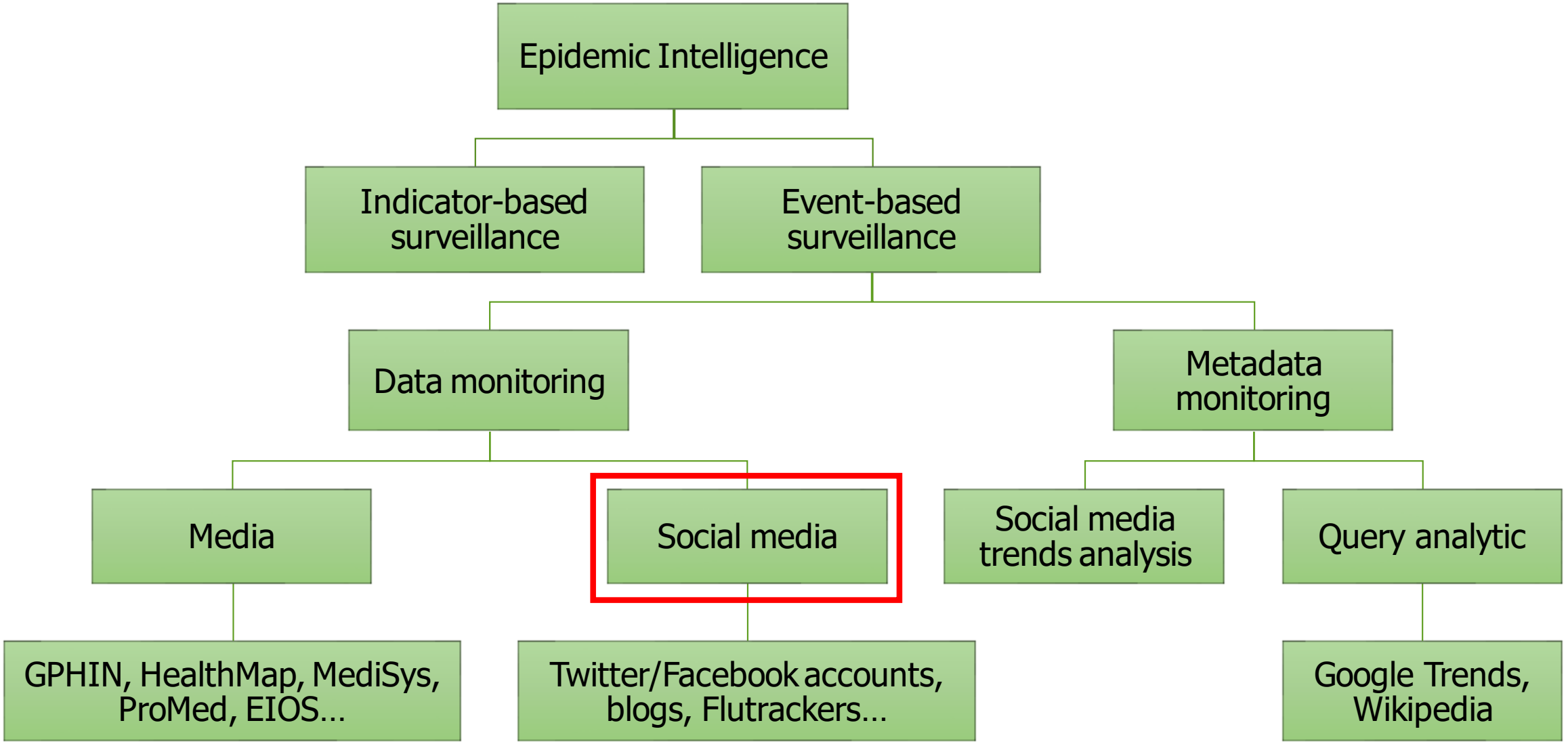
Social media trends analysis

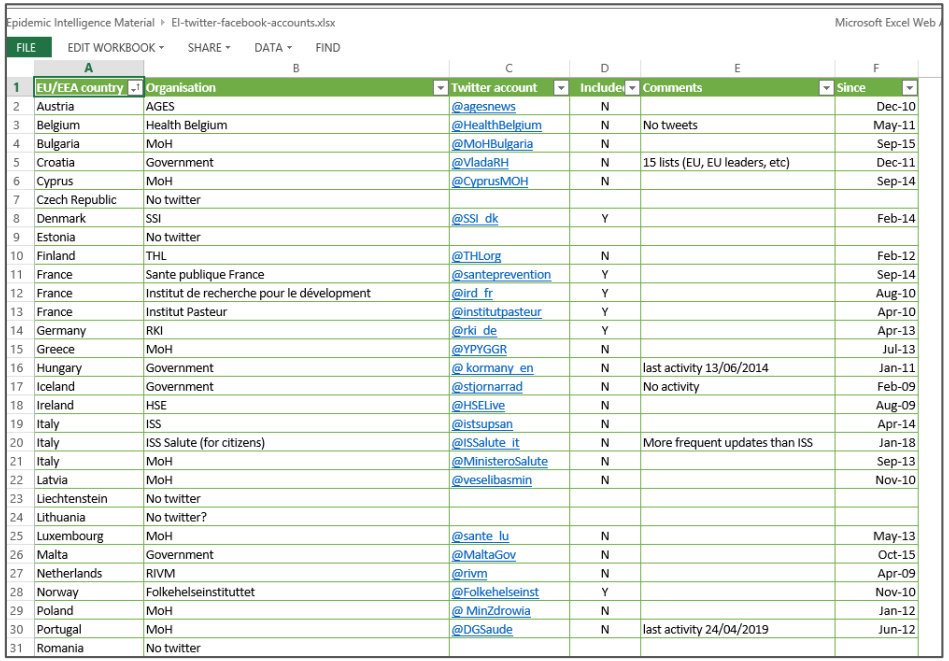
Epidemic Intelligence group, ECDC

Epidemic Intelligence at ECDC



Social media

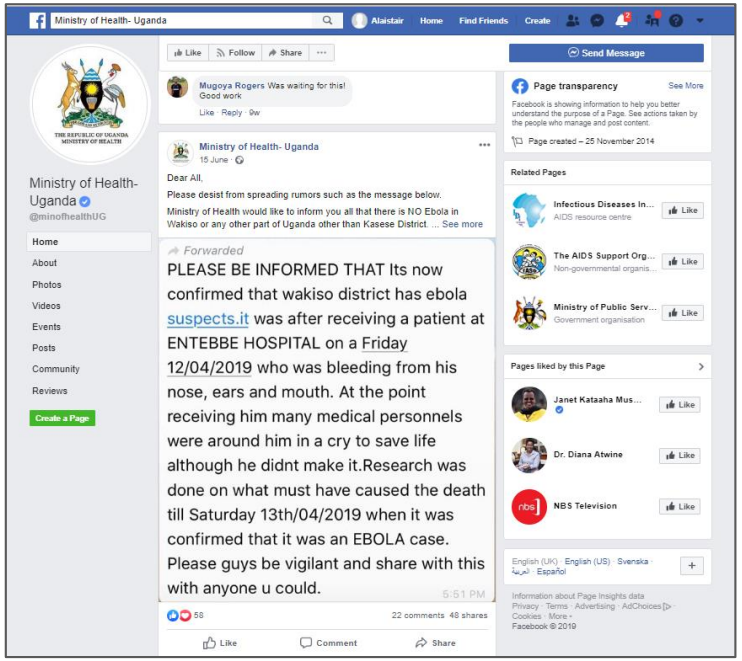
- ECDC is following 100 twitter accounts in real time
- ECDC mapped the main accounts of interest (Twitter and Facebook)
- 30-50% of our signals from Twitter
- More event validation done through Facebook



Epidemic Intelligence Material › EI-twitter-facebook-accounts.xlsx — Microsoft Excel Web

FILE | EDIT WORKBOOK | SHARE | DATA | FIND

	A	B	C	D	E	F
1	EU/EEA country	Organisation	Twitter account	Include	Comments	Since
2	Austria	AGES	@agesnews	N		Dec-10
3	Belgium	Health Belgium	@HealthBelgium	N	No tweets	May-11
4	Bulgaria	MoH	@MoHBulgaria	N		Sep-15
5	Croatia	Government	@VladaRH	N	15 lists (EU, EU leaders, etc)	Dec-11
6	Cyprus	MoH	@CyprusMOH	N		Sep-14
7	Czech Republic	No twitter				
8	Denmark	SSI	@SSI_dk	Y		Feb-14
9	Estonia	No twitter				
10	Finland	THL	@THLorg	N		Feb-12
11	France	Sante publique France	@santeprevention	Y		Sep-14
12	France	Institut de recherche pour le dévelopment	@ird_fr	Y		Aug-10
13	France	Institut Pasteur	@institutpasteur	Y		Apr-10
14	Germany	RKI	@rki_de	Y		Apr-13
15	Greece	MoH	@YPYGGR	N		Jul-13
16	Hungary	Government	@ kormany_en	N	last activity 13/06/2014	Jan-11
17	Iceland	Government	@stjornarrad	N	No activity	Feb-09
18	Ireland	HSE	@HSELive	N		Aug-09
19	Italy	ISS	@istsupsan	N		Apr-14
20	Italy	ISS Salute (for citizens)	@ISSalute_it	N	More frequent updates than ISS	Jan-18
21	Italy	MoH	@MinisteroSalute	N		Sep-13
22	Latvia	MoH	@veselibasmin	N		Nov-10
23	Liechtenstein	No twitter				
24	Lithuania	No twitter?				
25	Luxembourg	MoH	@sante_lu	N		May-13
26	Malta	Government	@MaltaGov	N		Oct-15
27	Netherlands	RIVM	@rivm	N		Apr-09
28	Norway	Folkehelseinstituttet	@Folkehelseinst	Y		Nov-10
29	Poland	MoH	@ MinZdrowia	N		Jan-12
30	Portugal	MoH	@DGSaude	N	last activity 24/04/2019	Jun-12
31	Romania	No twitter				



Ministry of Health- Uganda

Ministry of Health-Uganda
@minofhealthUG

Home | About | Photos | Videos | Events | Posts | Community | Reviews | Create a Page

Mugoya Rogers Was waiting for this! Good work

Ministry of Health- Uganda
15 June

Dear All,

Please desist from spreading rumors such as the message below.

Ministry of Health would like to inform you all that there is NO Ebola in Wakiso or any other part of Uganda other than Kasese District. ... See more

Forwarded

PLEASE BE INFORMED THAT Its now confirmed that wakiso district has ebola suspects.it was after receiving a patient at ENTEBBE HOSPITAL on a Friday 12/04/2019 who was bleeding from his nose, ears and mouth. At the point receiving him many medical personnels were around him in a cry to save life although he didnt make it.Research was done on what must have caused the death till Saturday 13th/04/2019 when it was confirmed that it was an EBOLA case. Please guys be vigilant and share with this with anyone u could.

5:51 PM

58 | 22 comments 48 shares

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Page transparency

Related Pages

Infectious Diseases In... — AIDS resource centre

The AIDS Support Org... — Non-governmental organis...

Ministry of Public Serv... — Government organisation

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Dr. Diana Atwine

NBS Television

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CMRE RDC

CMRE

Comité Multisectoriel de la Riposte à la Maladie à Virus Ebola

SECRETARIAT TECHNIQUE

CMRE RDC
@cmre_rdc

Bienvenu sur le compte officiel du Secrétariat Technique du Comité National Multisectoriel à la Riposte à la Maladie à Virus Ebola (CMRE).

Joined August 2019

15 Following 67 Followers

Followed by thelonevirologist, IAN M MACKAY, PHD, and 4 others you follow

Tweets | Tweets & replies | Media | Likes

Following

London trends

1 · Trending — Rashford — 69.2K Tweets

Premier League — Should Marcus Rashford have taken the penalty against ...

2 · Trending — #TuesdayThoughts — 19.8K Tweets

3 · Trending — #TuesdayMotivation — 14.1K Tweets

4 · Trending — #TuesdayMorning — 7,201 Tweets

5 · Trending — James Cleverly — 2,278 Tweets

Show more

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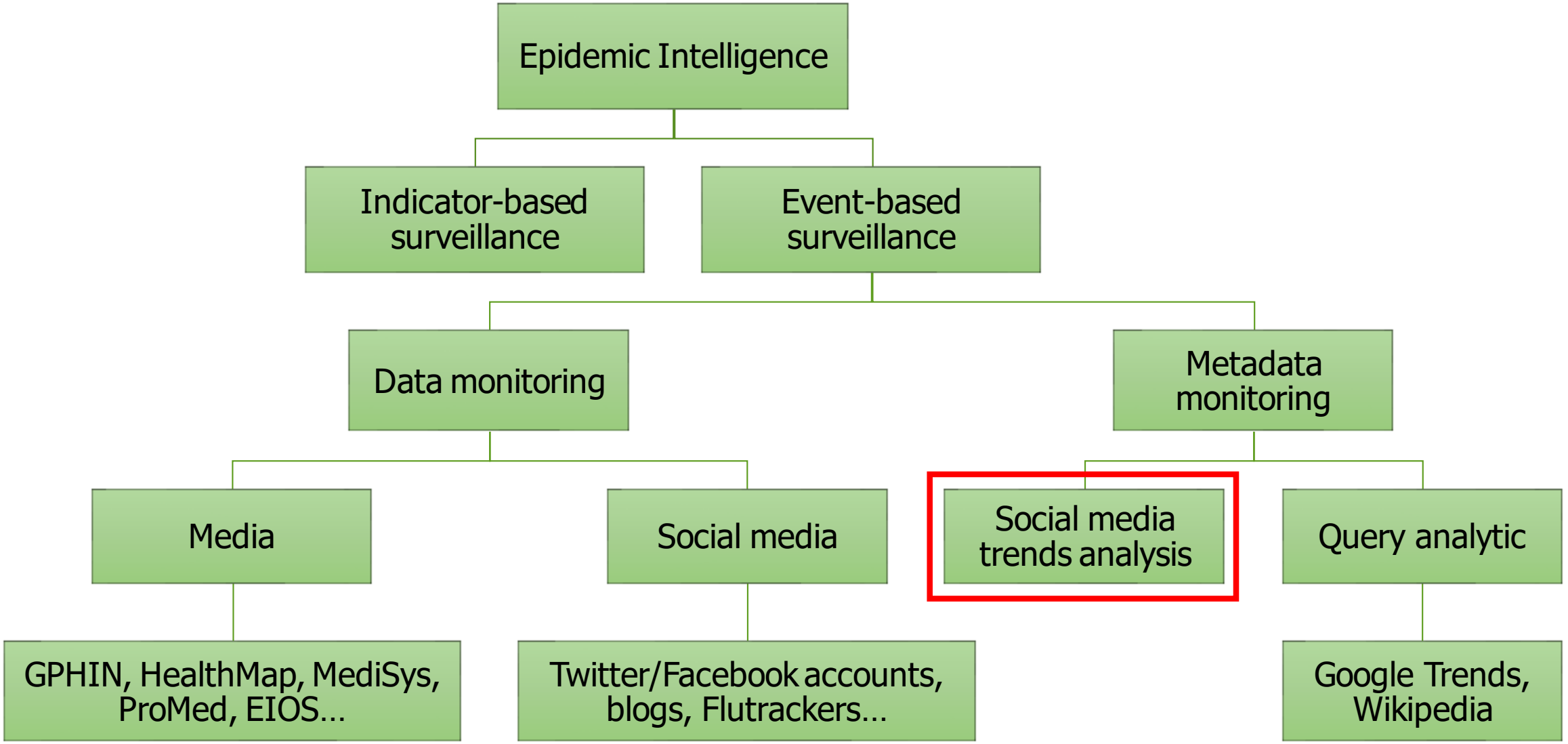
Show this thread

Epidemic Intelligence at ECDC



Why social media trends analysis (vs. social media or media monitoring)?

- Detect low intense signals
- Detect signals in places where media coverage is not appropriate
- Improve timeliness
- Reduce human intervention (instead of us looking into Twitter/Facebook, Twitter/Facebook alerting us)

Tools and literature review

- Use of Twitter and Facebook to analyse real-time trends and/or early detect signals of infectious diseases
- Literature review: 1 800 articles (268 for full-text review)
- Screening and data collection and analysis: R, Covidence and Excel

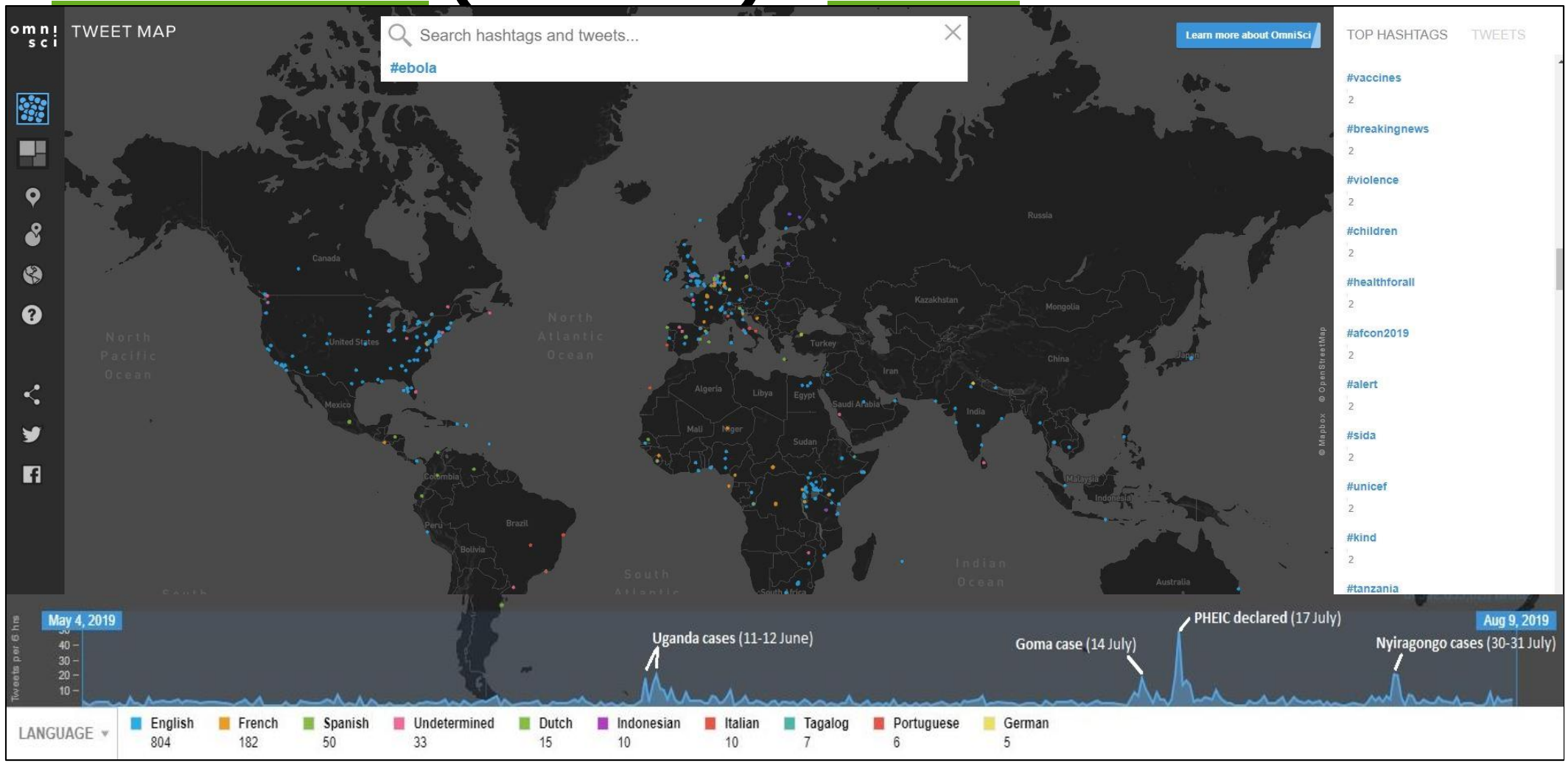
3. Available tools (I)- Macro requirements

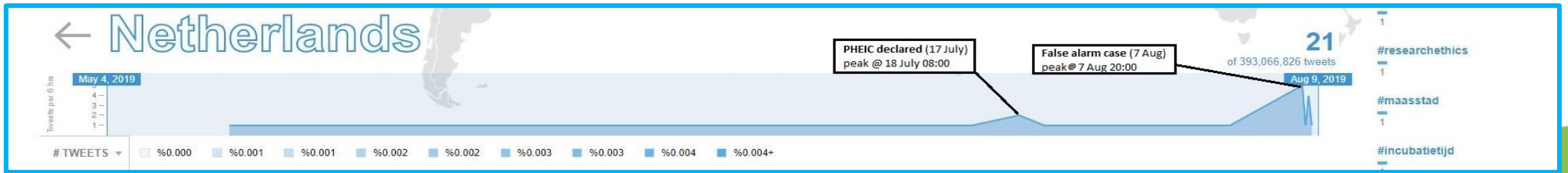
	Mandatory	Optional/Desired
Access	Twitter & Facebook	Weibo
	Real-time	
	Access 10% of messages	
	30% geodata (country geotag + context extraction)	
	Languages: English, French, Spanish, Portuguese (or translation)	Extra languages: Arabic, Chinese, Russian
Customization	Web interface	Quick search option for # or words
	Analysis visualisation by topic: map, timeline, etc	
	12-month history	Filter tweets by time period/peaks
	Cluster by time, topic, geography	Filter by language, region, media type
	Filter: Tweet vs re-tweet	
	Customizable baseline: key words, baseline data, accounts	
Output	Generation of alerts based on Baseline	
	Url/content of messages	Related or trending #'s or messages
	Data extraction to Excel or other database	
		Sentiment analysis, Influencers

2. Available tools (II)

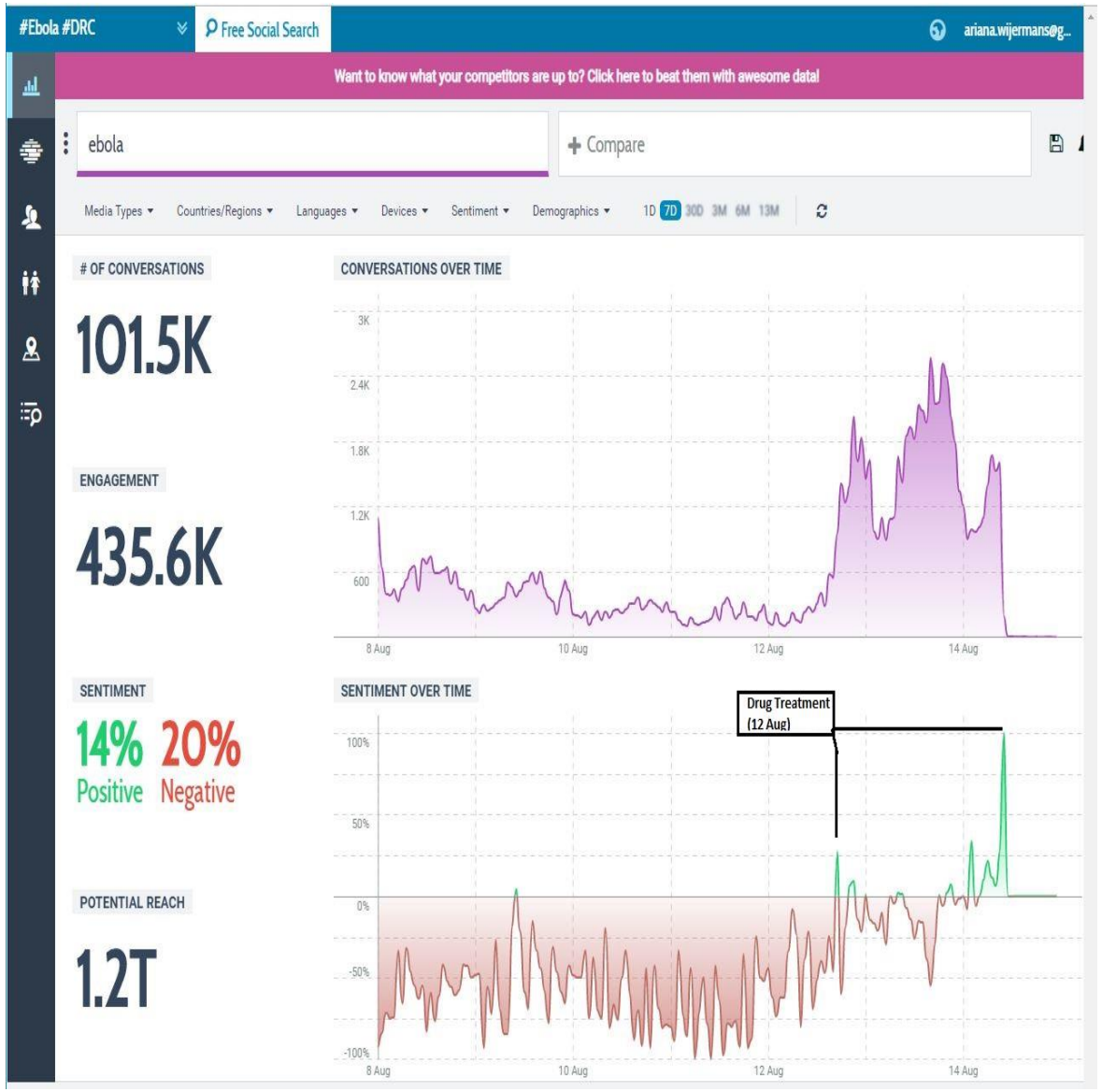
Tool	Cost	Real-time	Geo information	Comments
R	Free	Yes	1-3% geotag of tweets Extraction from tweets?	Twitter App needed Analysis available
OMNISCI - TweetMap	Trial Free & enterprise options	Yes	Yes, unclear how much	Codes freely available (Linux)
Topsy	License (14-days trial)	Yes	1-2% geotag 95% geo information	Sentiment analysis included
Talkwalker	License (Basic = 6000€/year), Free QuickSearch option by #	Yes	Yes, unclear how much	Sentiment analysis & analysis included Export data to Excel and PDF
Epidemic	Free access	Yes	Yes, unclear how much	Korean & some English, no adaptations
#hashtag'd	Trial			For marketing. Gathers content.
NapoleanCat				
Socialbakers	Trial (cheapest 200 USD per month)			
NVIVO	License (769€) 30 d trial Team license upon request	Unknown	Unknown	Export data Perpetual license (one payment only)
DEFENDER				Only description found, not accessible

TWEET MAP (OmniSci) - Codes

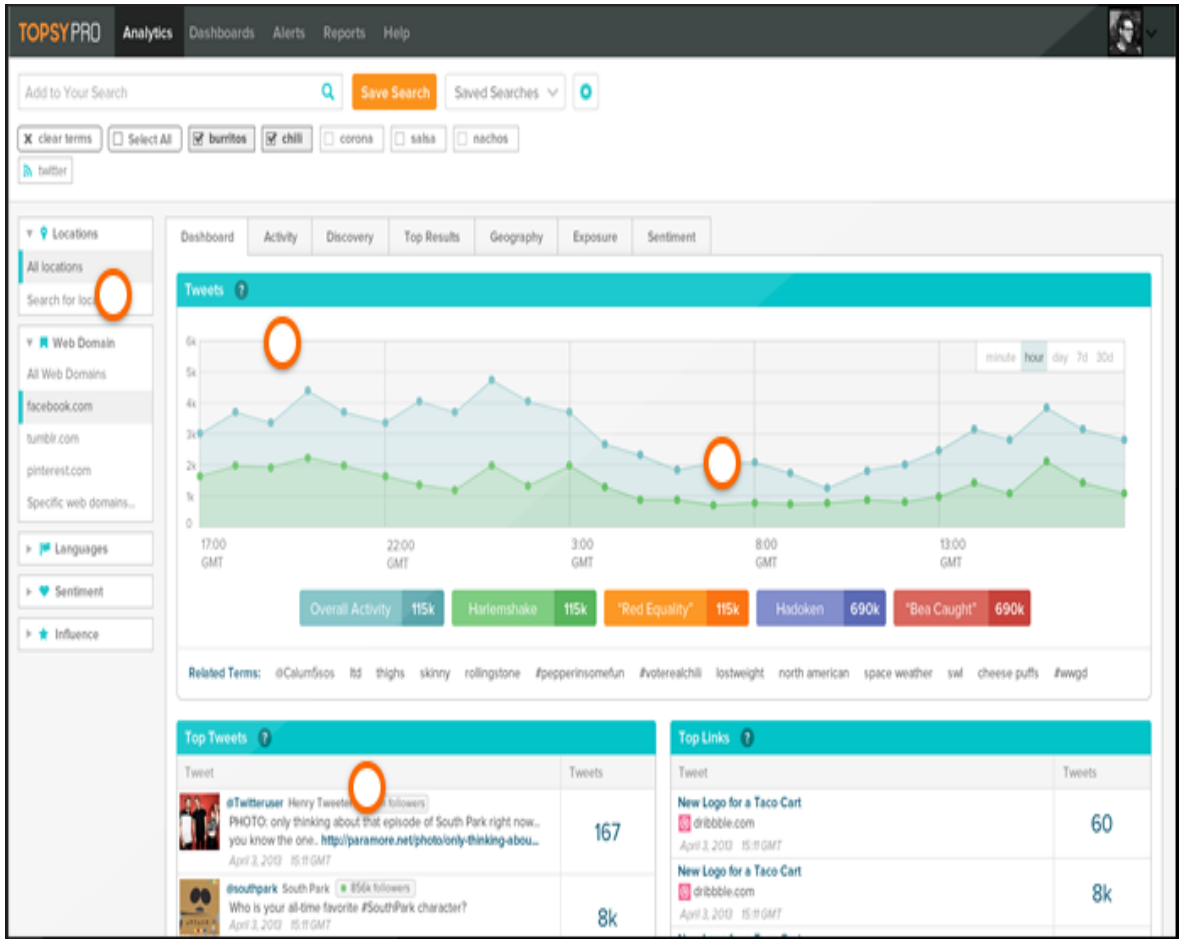




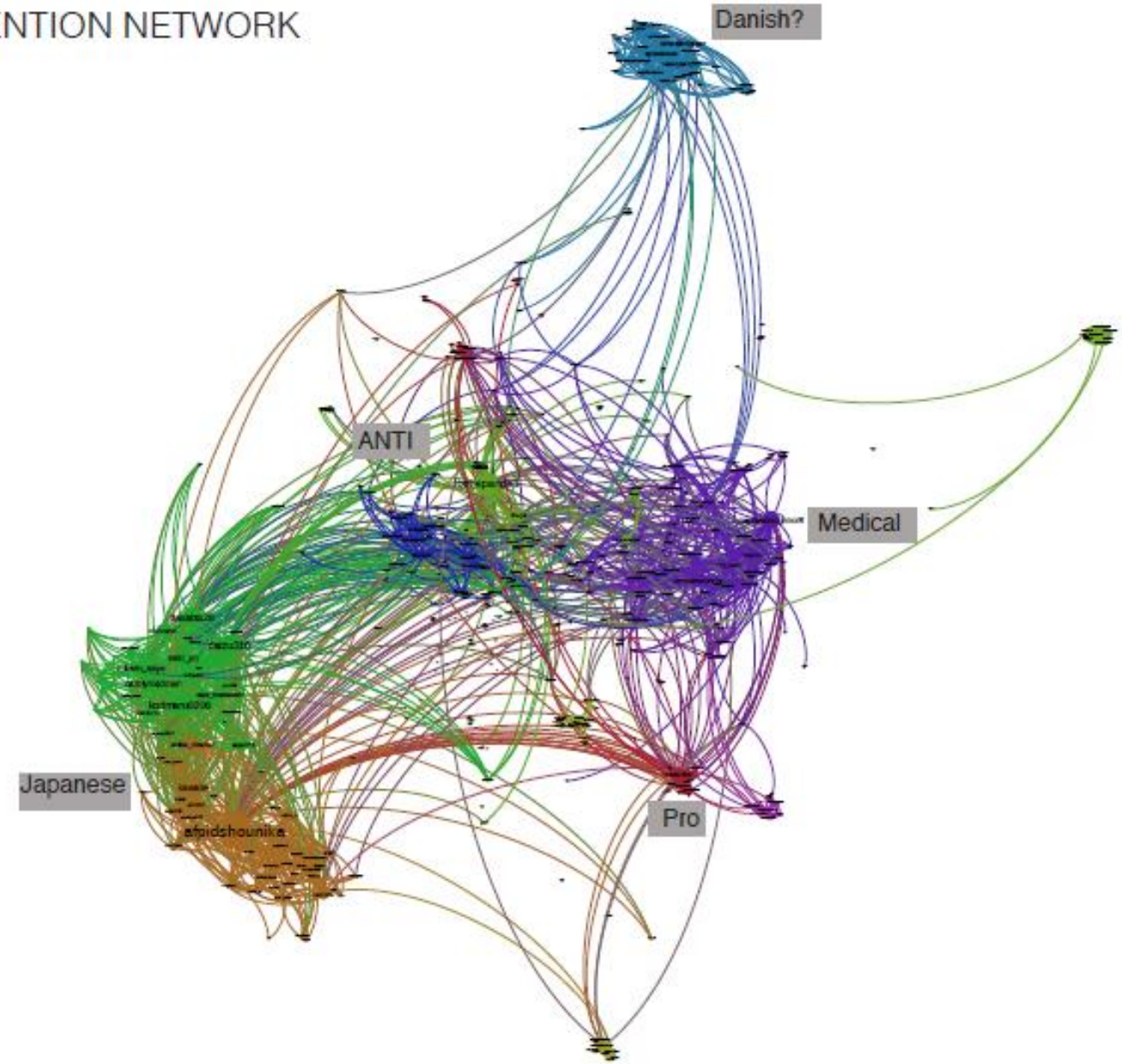
Talkwalker



Topsy

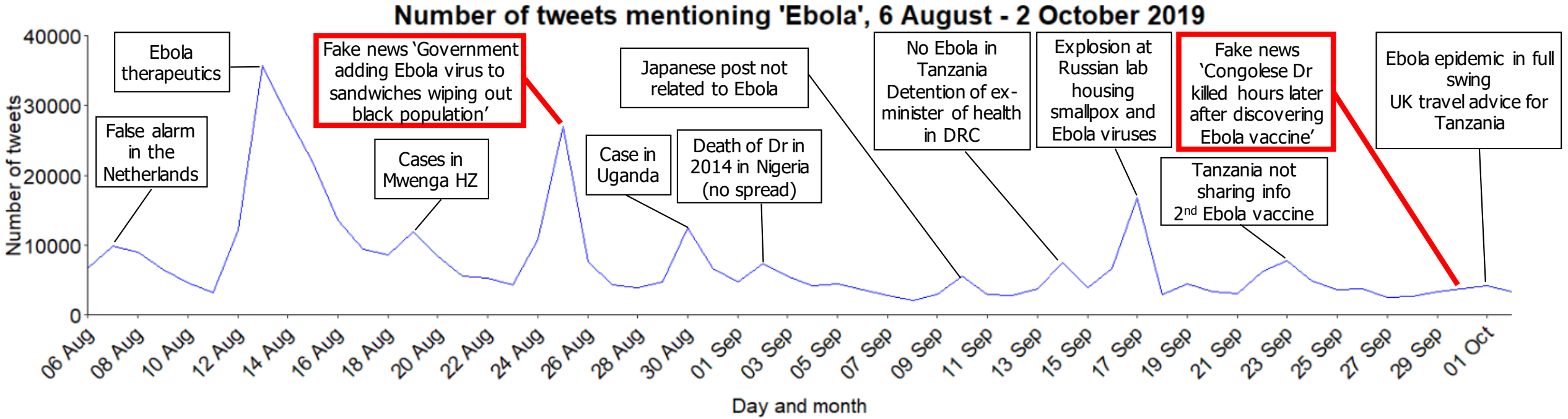


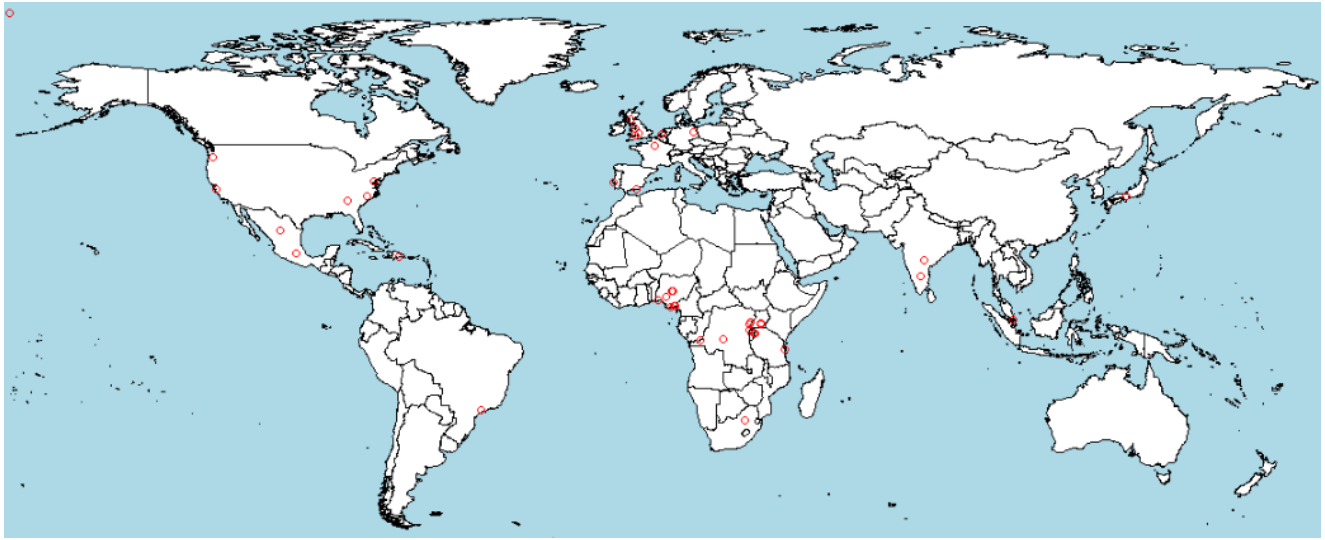
HPV @MENTION NETWORK



HPV TOP TWEETERS PATTERNS

R (example with 'Ebola' tweets) - twitteR

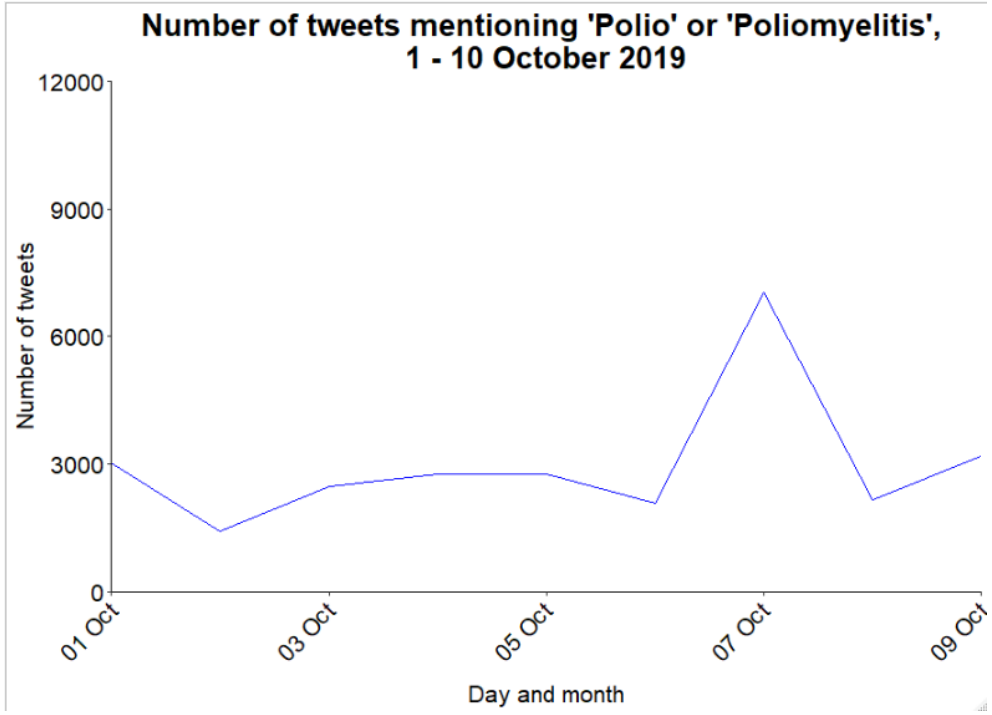


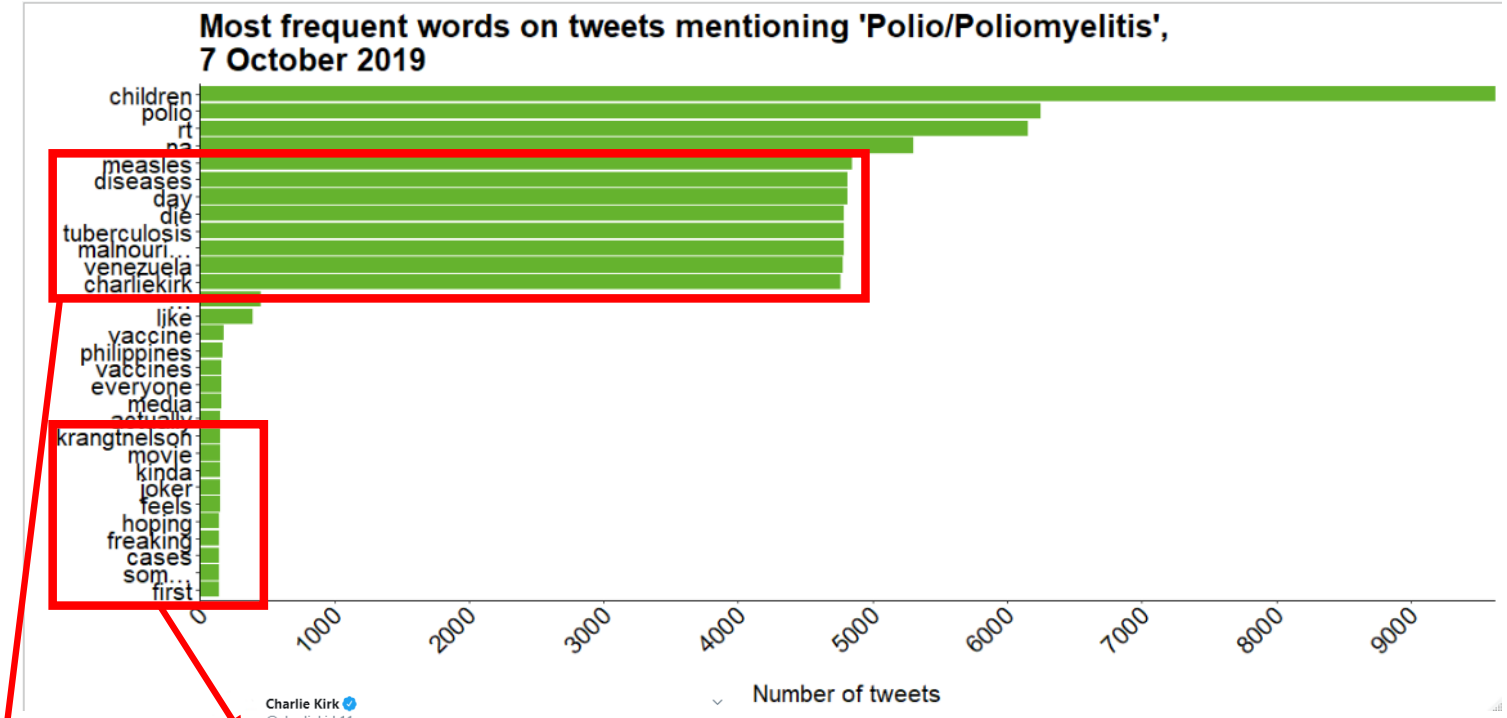


From 6 August to 2 October 2019:
429 983 tweets → 90 geotagged

Fake news (25 Aug and 30 Sep):
- Similar user profiles
- One tweet being retweeted several times

R (example with 'Polio/Poliomyelitis' tweets) - twitteR





franz turdinhand
@KrangTNelson

ME: so like everyone is freaking out about this joker movie but it kinda feels like the media is actually hoping that something bad will happen so it will be a big viral story. there's been some good content on twitter tho
1920'S GUY: all fourteen of my children have polio

5:55 am · 7 Oct 2019 · Twitter for iPhone

172 Retweets **2.7K** Likes

Charlie Kirk
@charliekirk11

In Venezuela:

30 children a day die from diseases such as tuberculosis, polio and measles

68% of children are malnourished

Nearly 300,000 could die by the end of the year due to lack of food

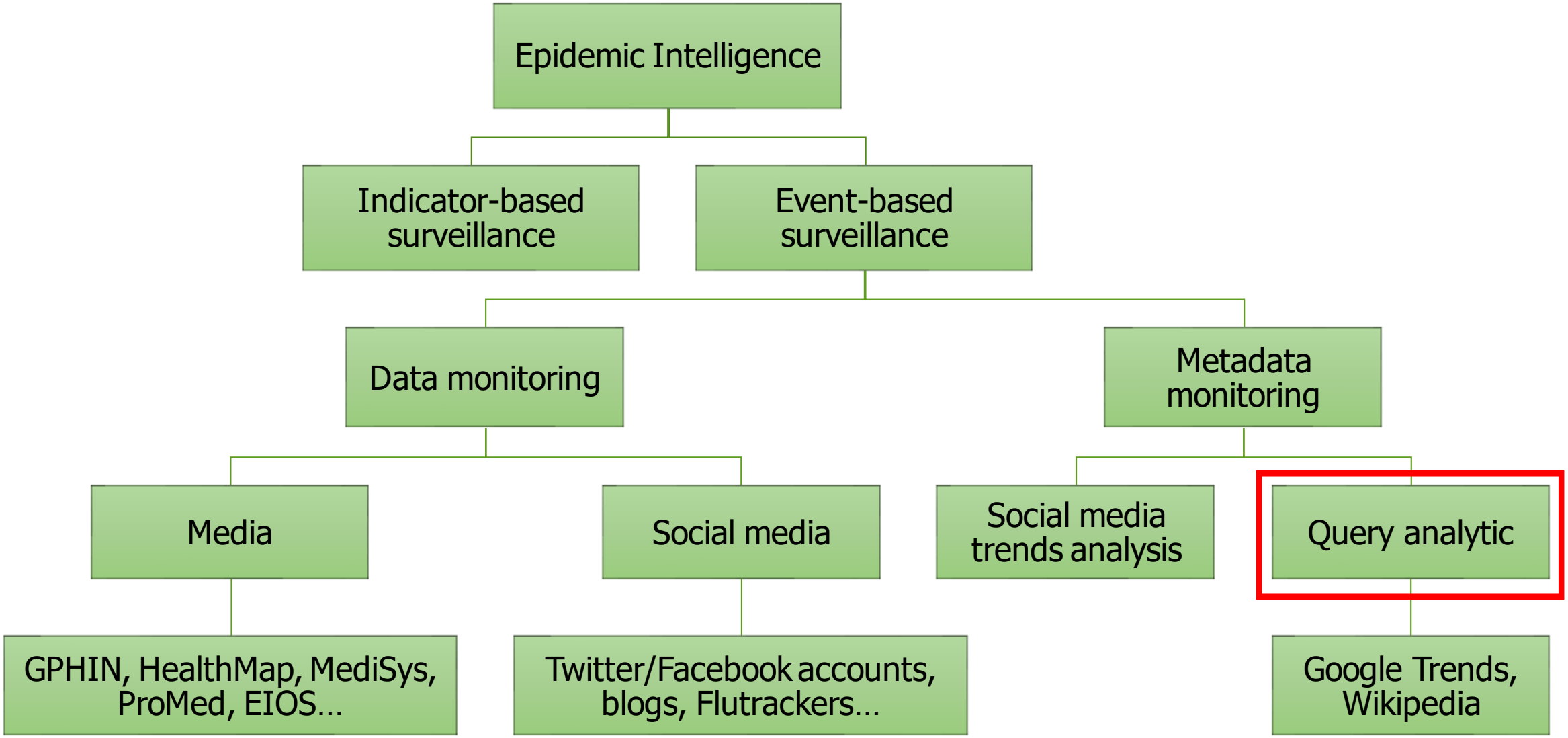
14% of the population has fled since the Socialism was implemented

#SocialismSucks

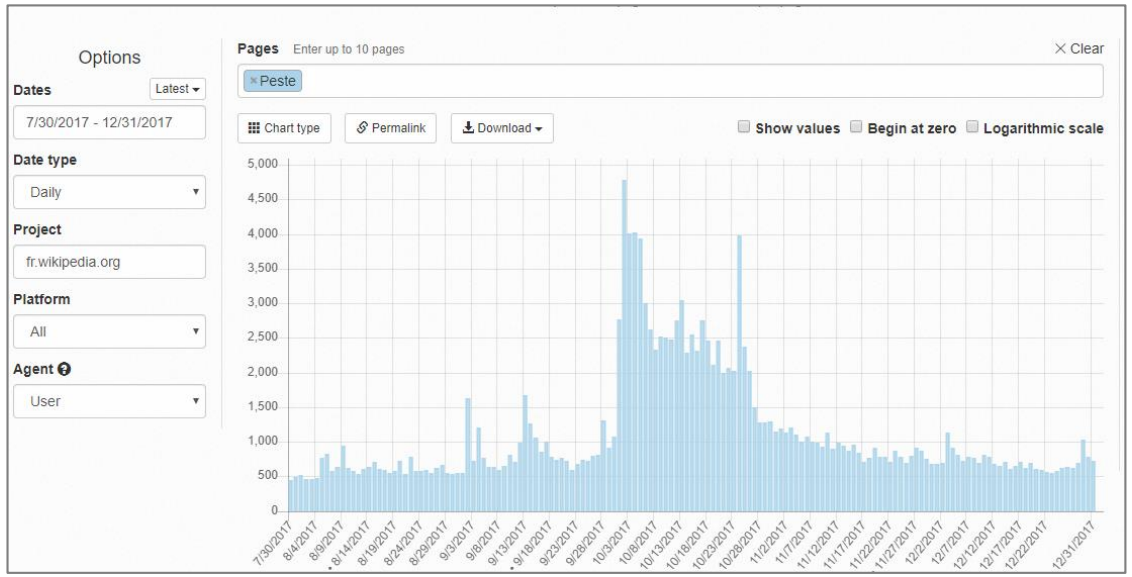
5:10 am · 7 Oct 2019 · Twitter Web App

5.5K Retweets **11.3K** Likes

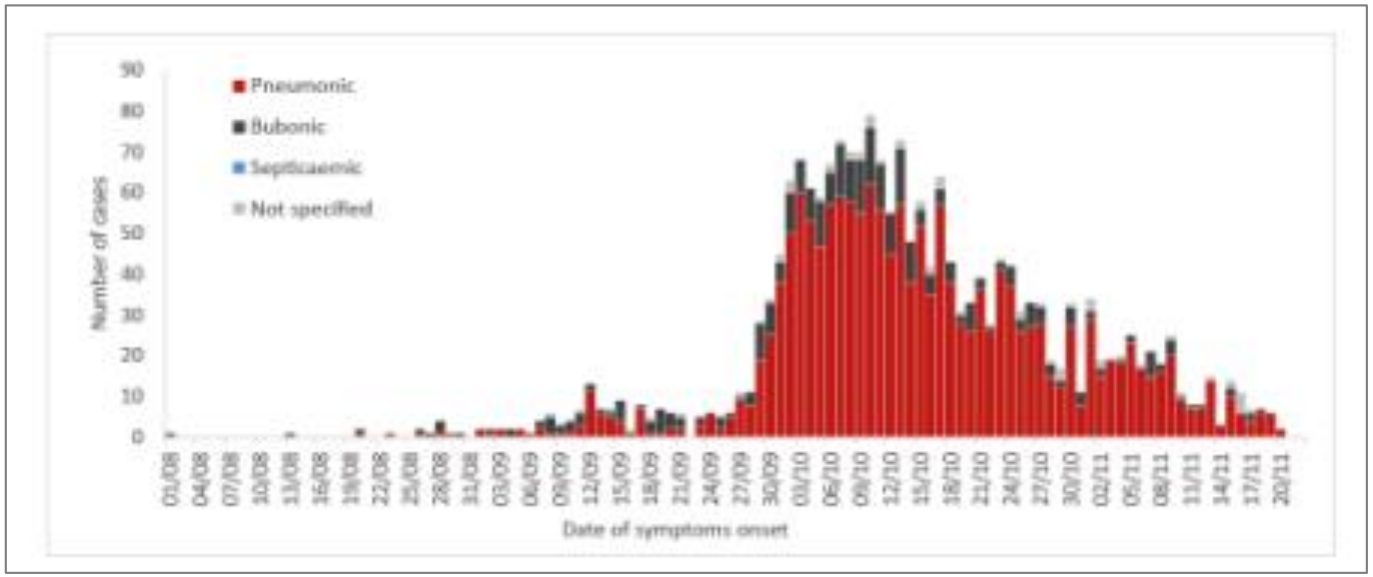
Epidemic Intelligence at ECDC



Google/Wikipedia query analytic: Plague Madagascar

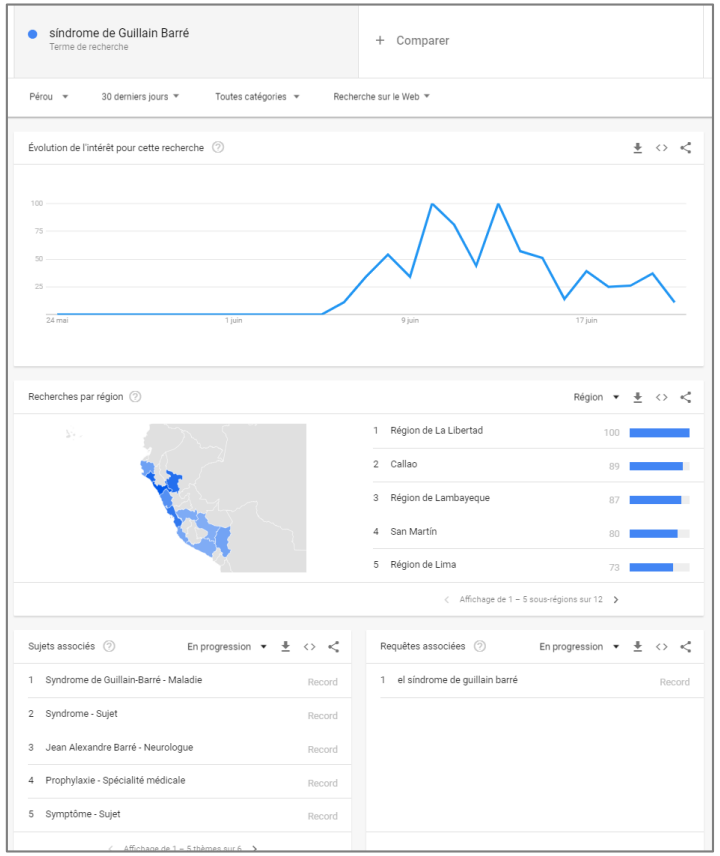


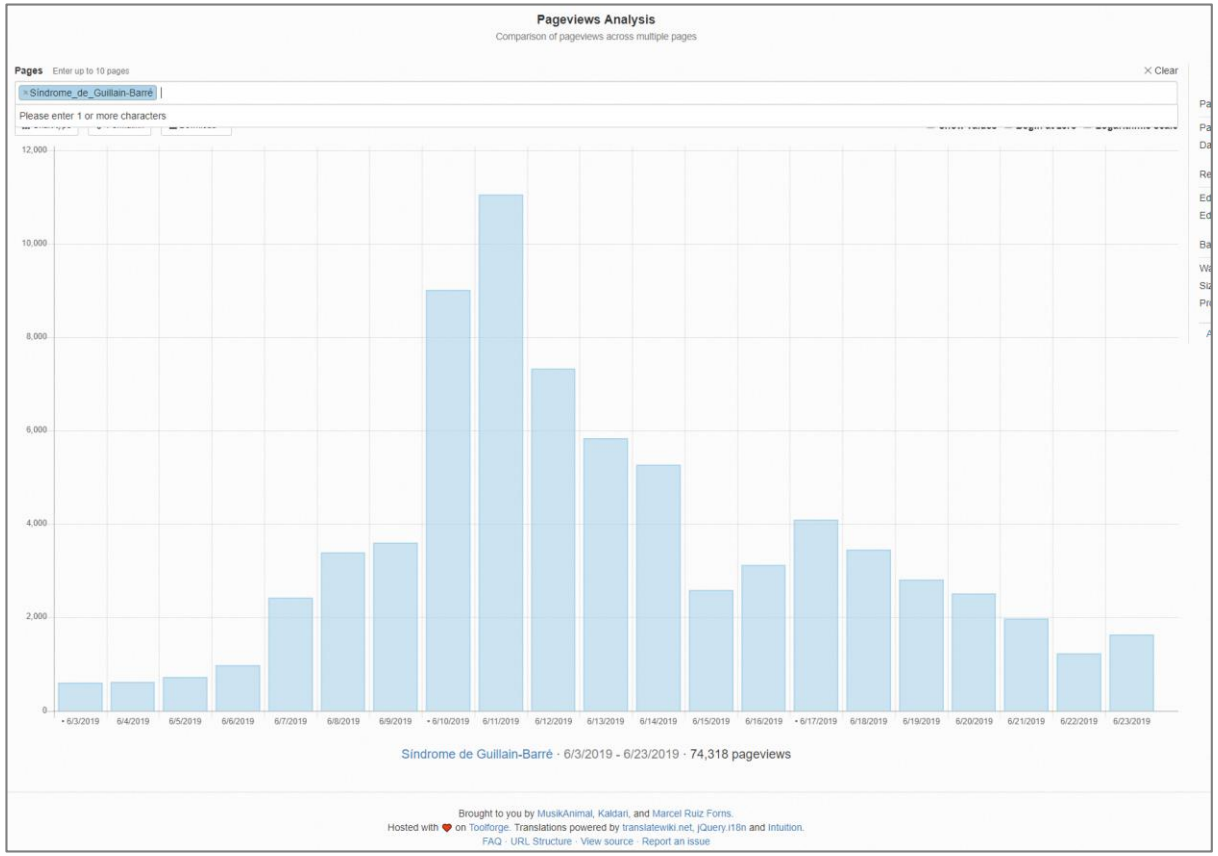
Wikipedia queries "peste"

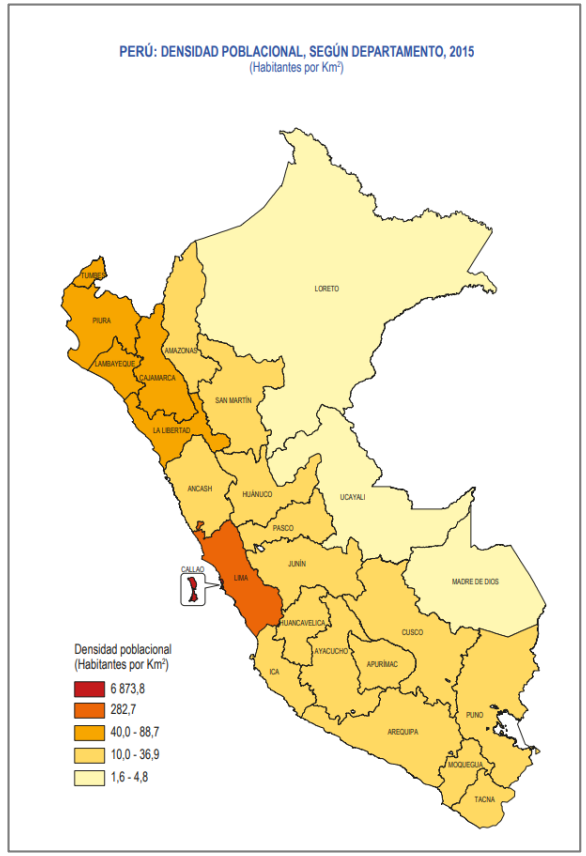


Plague cases (WHO-DON)

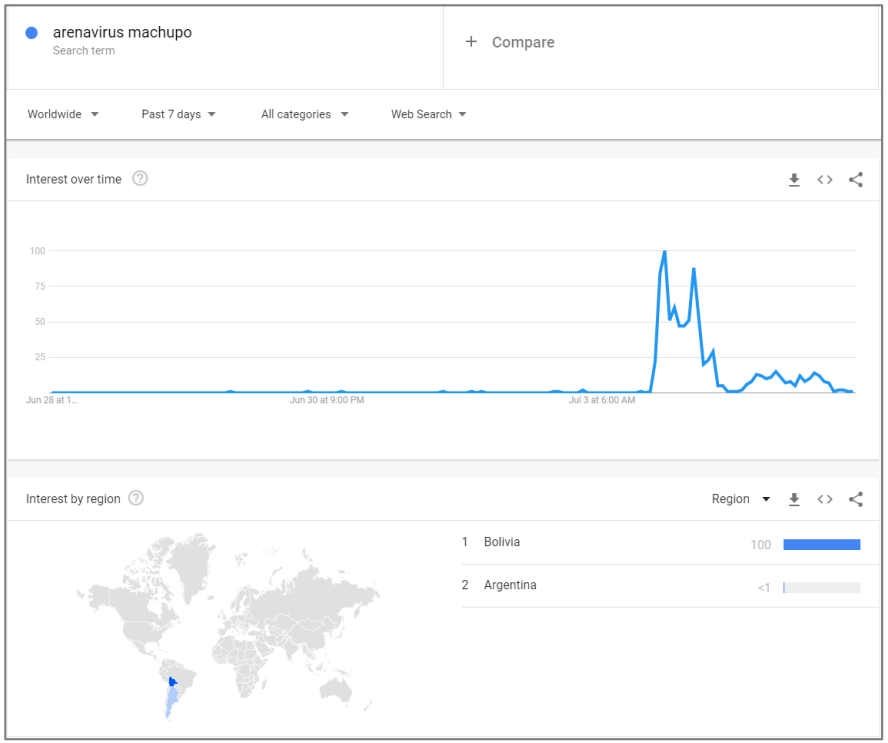
Google/Wikipedia query analytic: GBS in Peru

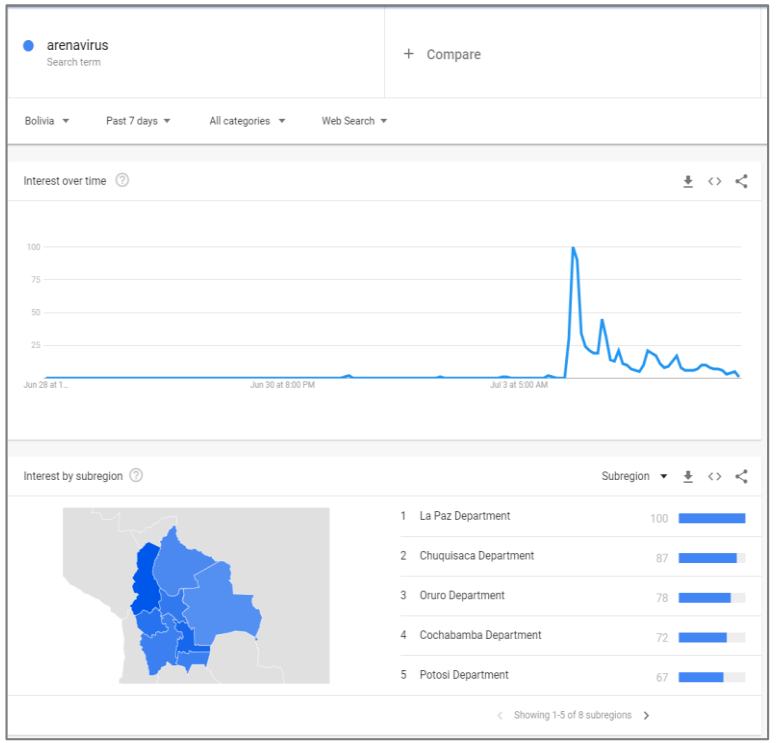


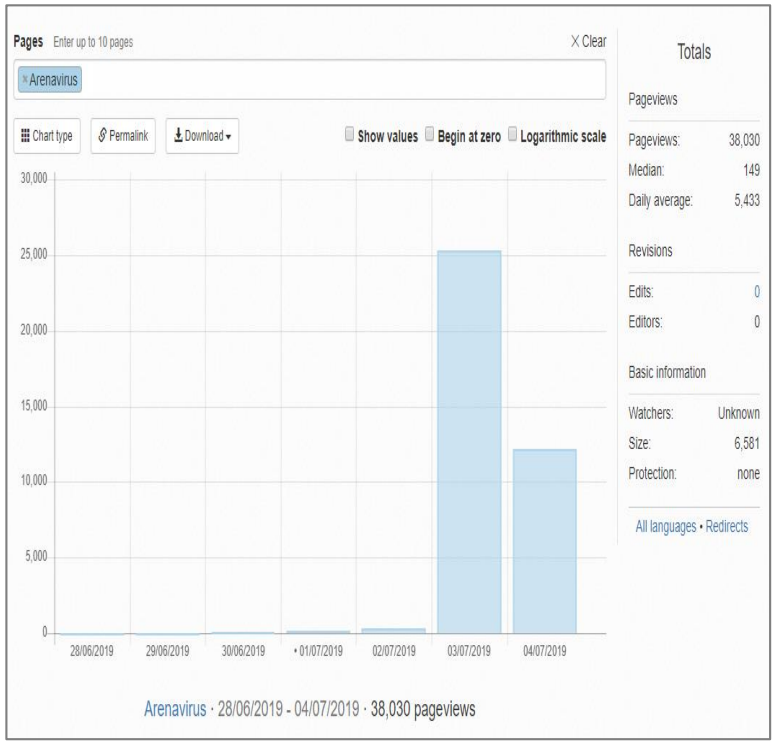


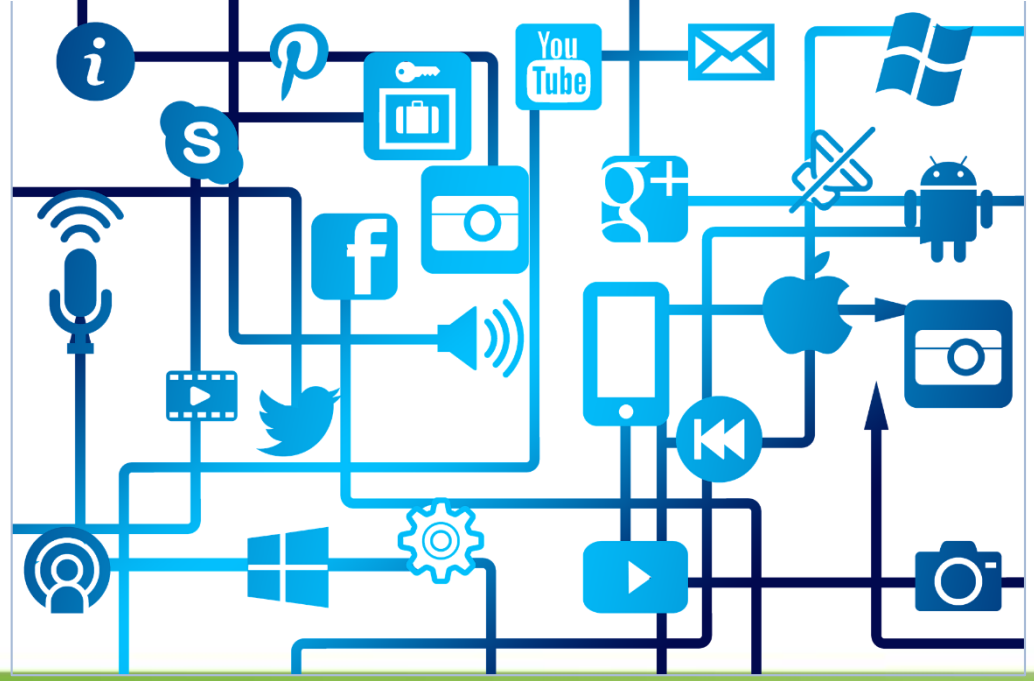


Google/Wikipedia query analytic: Arenavirus in Bolivia









Thank you.
Questions? Comments?