



2.A. ORAL PRESENTATIONS

Communication in times of the Covid-19 pandemic



WCPH 2020

GOES VIRTUAL

Twitter monitoring evidence of Covid-19 infodemic in Italy

Annalaura Carducci

Calamusa A., Tardelli S., Avvenuti M., Cresci S., Federigi I., Tesconi M., Verani M., Carducci A.

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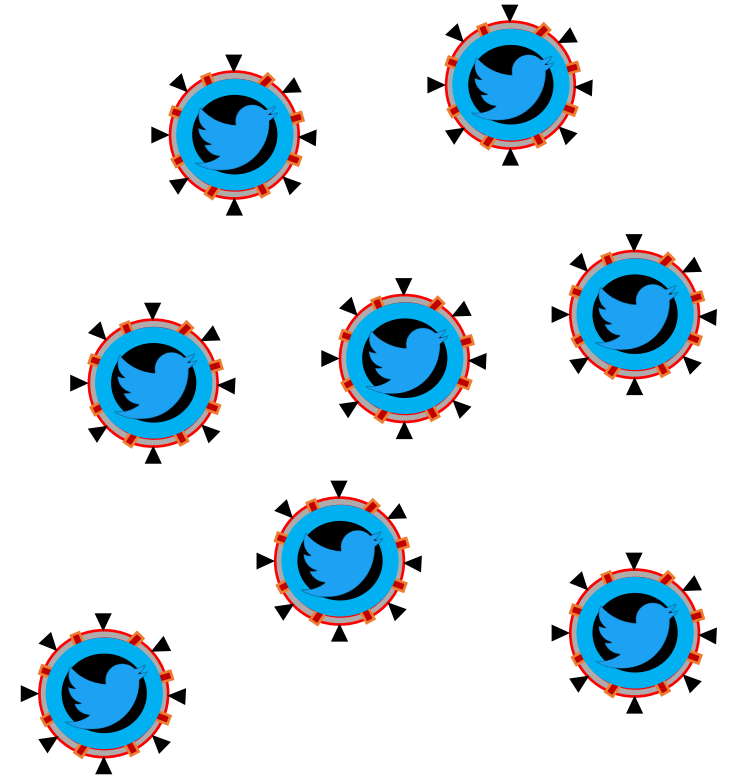
www.wcph2020.com

info@wcph2020.com

BACKGROUND: monitoring social media for Risk Communication and Community Engagement (RCCE)

- The Covid-19 risk management is largely depending on citizen behaviors as social distancing and use of masks.
- The public compliance to these behaviors is influenced by the mass communication that should create a balanced risk perception.
- The huge amount of information and opinions spread through social networks, poses the risk of inducing confusion, anxiety, mistrust in institutions and wrong choices
- This excess of information with its negative consequences is called “infodemia”.
- The WHO guidelines on Risk Communication and Community Engagement (RCCE) outline the need of a monitoring system of mass and social media in any phase of the pandemic spread
- The tools of data mining allow to collect and analyze messages from the social media.
- Just before the initial spread of Covid-19 in Italy we started to observe the evolution of tweets about this topic, with the aim of evidencing peaks of fear.

INFODEMIA



METHODS: Twitter selection and quantitative analysis

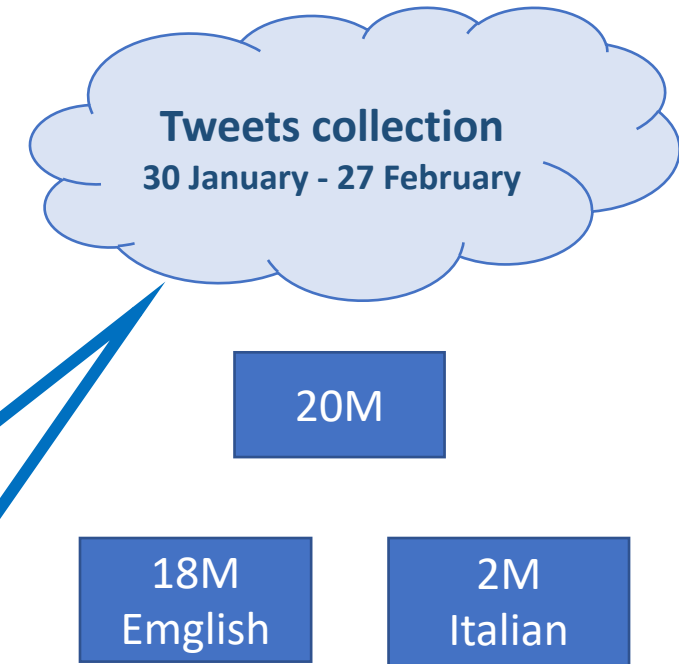
Large collection of Italian and English tweets using Twitter Streaming API which provides real time access to Twitter data and returns all public tweets based on specific keyword search queries.

KEYWORDS:

“coronavirus”, “2019-nCov”, “CoronavirusOutbreak”, “CoronavirusWho”, “WuhanCoronavirus”, “coronaviruschina”, “coronavirusitalia”, “virus cina”, “virus cinese”, “virus mascherine”, “virus paura”, “virus polmonite” and “virus vaccine”.

Following the World Health Organization announcement of the official name of the new virus, on 14th February 2020 we added the keywords “Covid-19” and “SARS-CoV-2”.

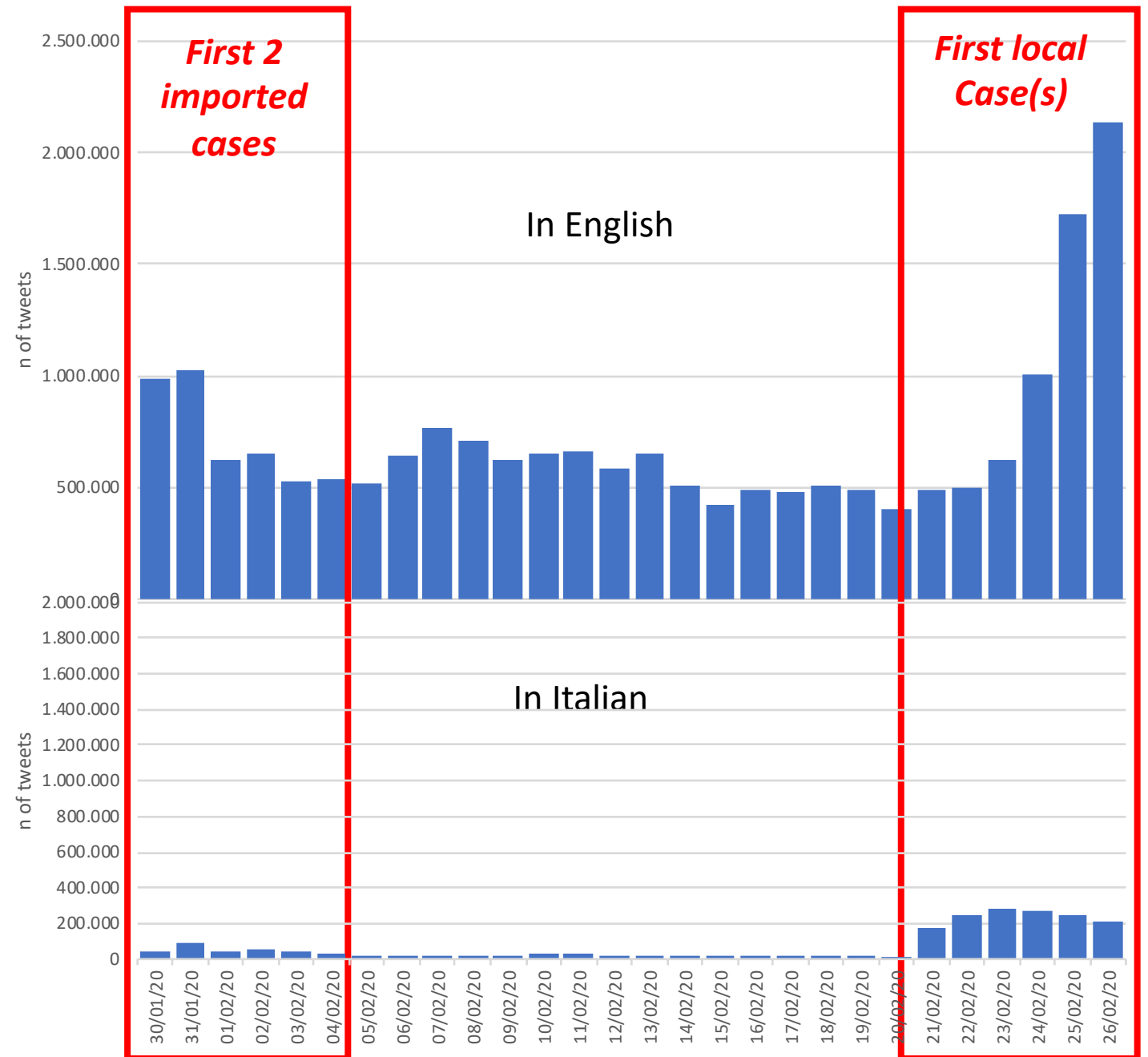
The word “paura” was used as a proxy of “infodemic”, to timely evidence this phenomenon.



Results (1): Total twitter collected daily

The trend of the volume of tweets gathered shows a first small peak in the volume of tweets between Jan 30th and Feb 1st, when the epidemic in China overcame 10.000 cases and two Chinese tourists tested positive for the virus in Rome.

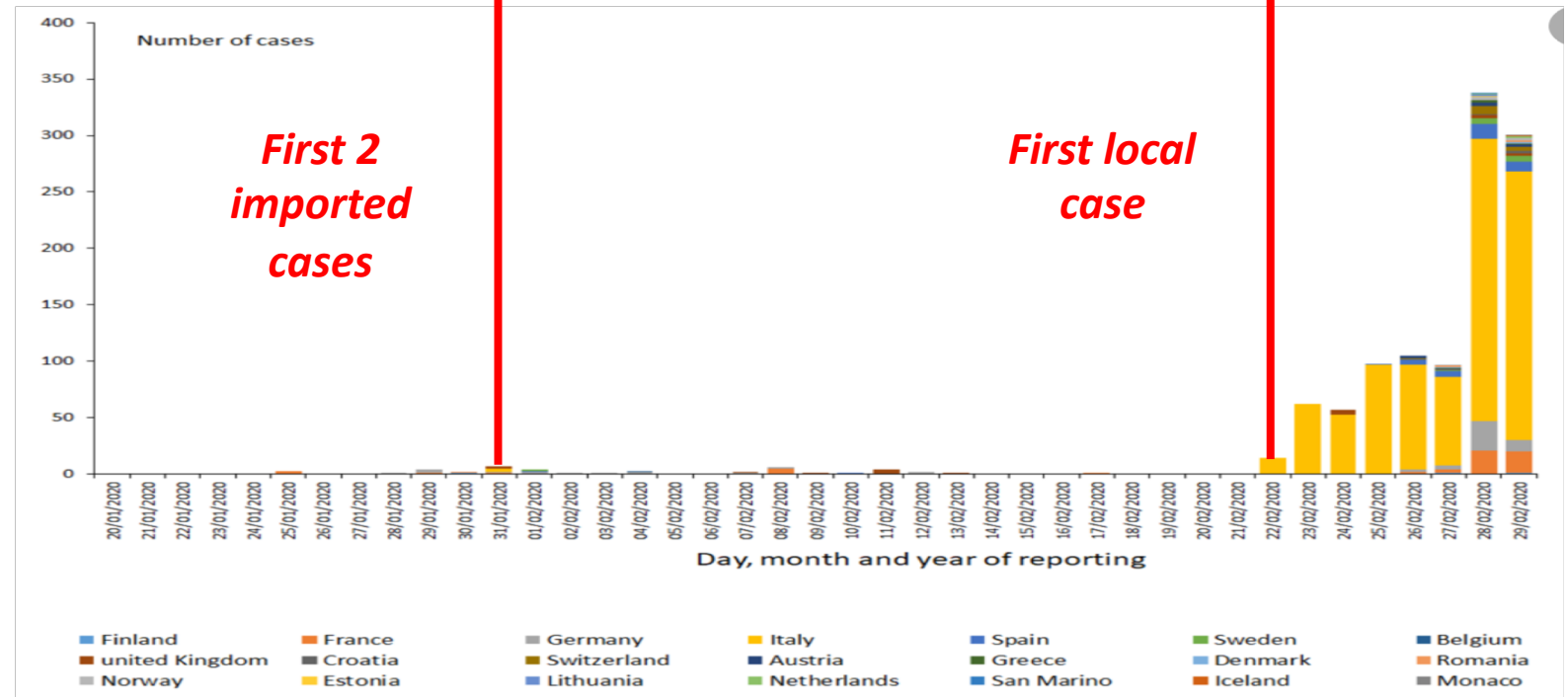
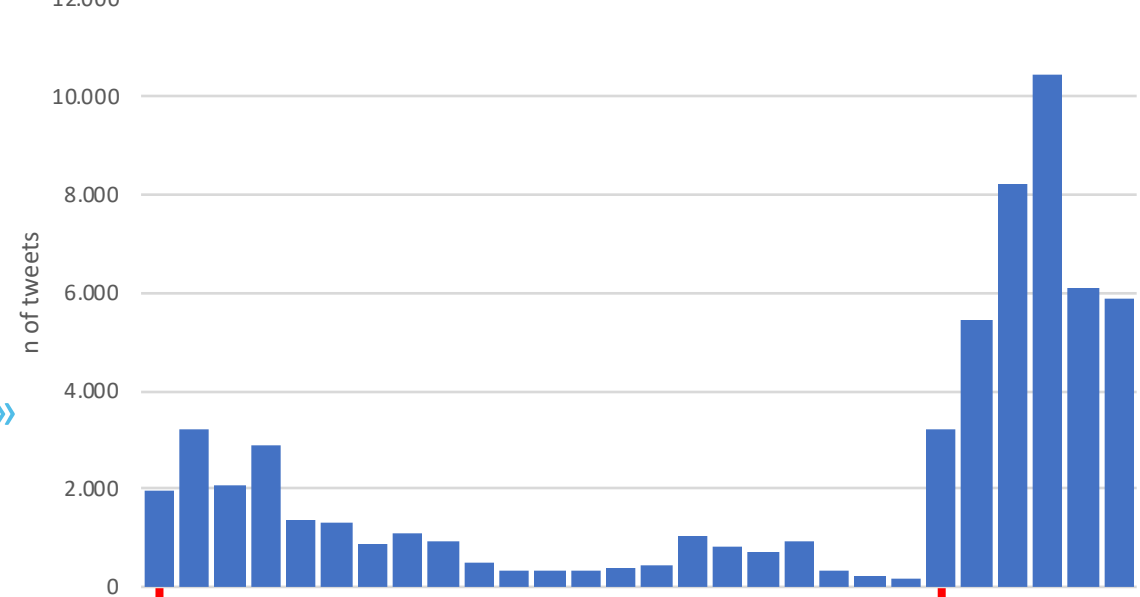
A second peak of tweets is visible after the 21st February, following the report of the first Covid-19 cluster in Italy. Such trend becomes more evident when focusing only on the Italian tweets. In fact, they account for 6% of the first peak and, notably, for 22% of the second.



RESULTS (2): Twitter collected with the word «paura»

The Italian word “paura” (that is fear) is present in a smaller percentage of Italian tweets (1%): it firstly appeared on Feb 5th, with a peak after Feb 21th, when the first local case occur.

Even in the english tweets (not shown) the word «fear» showed two peaks, but less visible, due to the larger amount of data.

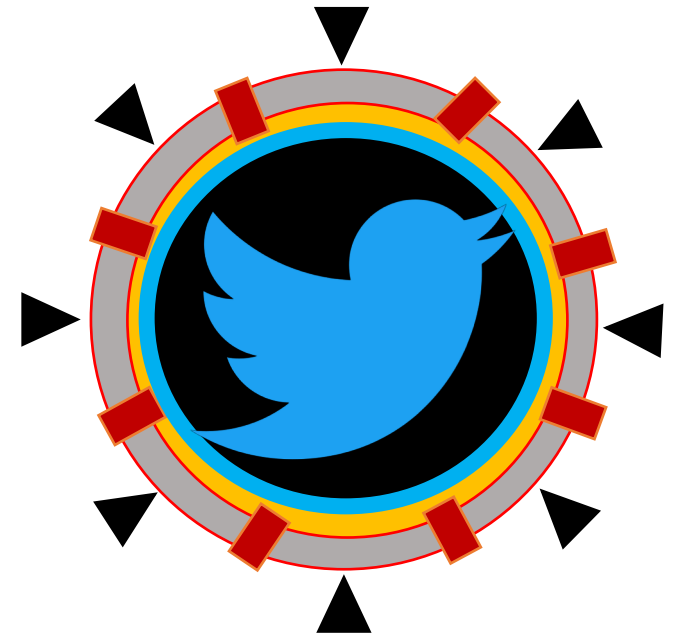


CONCLUSIONS AND HIGHLIGHTS

- The tweets follow up in public health can provide data to evidence the so called “infodemics” or “media storms”, that are situations of uncontrolled diffusion of news and opinions, frequently leading to irrational and counterproductive behaviors.
- The timely evidence of the onset of an infodemic could allow the adoption of corrective actions and also the monitoring of their efficacy.
- The use of a *proxy* (a *sensor word*), representing a simple, quick and automatic indicator, can help in following the onset and the evolution of an “infodemic”
- The word “paura” was able to demonstrate a peak of anxiety at the very beginning of the epidemic in Italy

MAIN MESSAGES

- With the twitter monitoring we demonstrated that since the 21th of February an infodemic was spreading in Italy.
- The twitter follow up using “*sensor words*” could be used to timely evidence a public alarm and motivate corrective interventions for the public health control as well as to evaluate the efficacy of these actions.



THANK YOU FOR
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