

Social media can guide public pandemic policy: research

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Led by Associate Professor Tan Yigitcanlar from QUT's School of Built Environment, and in collaboration with researchers in Afghanistan, Iran and Italy, the researchers collected 96,666 geotagged tweets originating from Australia between 1 January and 4 May 2020, and analyzed 35,969 of them after data cleaning to remove automated messages, irrelevant messages and web links. Credit: QUT

With 2020 hijacked by COVID-19, a team of QUT researchers in Brisbane, Australia, say social media analytics can capture the attitudes and perceptions of the public during a pandemic. They also suggest social media is now the best way to encourage people to follow measures and restrictions.

Led by Associate Professor Tan Yigitcanlar from QUT's School of Built Environment, and in collaboration with researchers in Afghanistan, Iran and Italy, the researchers collected 96,666 geotagged tweets originating from Australia between 1 January and 4 May 2020, and analyzed 35,969 of them after data cleaning to remove automated messages, irrelevant messages and web links.

The resultant paper—How can social media analytics assist authorities in [pandemic](#)-related policy decisions? Insights from Australian states and territories—has been published by Springer journal *Health Information Science and Systems*.

"From the Plague of Athens in 430 B.C., to the Black Death of the 1300s, through to the Spanish Flu of 1918-1920 and the Swine Flu outbreak in 2009, pandemics are not new. However, increased globalization since the 1980s has accelerated their spread, as we have seen this year with COVID-19," said Professor Yigitcanlar.

"What started late last year in Wuhan, China was declared a pandemic by the World Health Organization in March. Global cases are heading towards 50 million and there have been more than 1.2 million deaths so far.

"The pandemic has led to many countries introducing lockdowns and limited citizen movements. These restrictions in turn have triggered an increased use of digital technologies and platforms by the public.

"Our aim was to generate insights into how social media analytics can assist authorities in pandemic-related policy decisions.

"We chose Australia as our case study because it has been highly successful in flattening the curve and social media analytics are increasingly used by the health sector here.

"Australia is also an advanced nation with a diverse culture that adapts the technological trends of the world, with the largest being social media. In 2018, 79 per cent of Australians used social media."

Professor Yigitcanlar said the study concluded social media analytics are a valuable tool in understanding the thoughts and actions of the public during a pandemic. Co-author and QUT Ph.D. student Nayomi Kankanamge added that crowdsourced social media data could guide interventions and decisions of authorities during a pandemic.

"We also found that effective use of government social media channels, such as Twitter or Facebook, can help enhance public health education and awareness concerning social distancing restrictions and other measures or restrictions such as the latest lockdown in the UK and much of Europe. This is the best way to reach people in the 21st century", she said.

"In this digital age, local community perceptions and suggestions about social distancing policies, self-isolation, quarantines, movement control, [travel restrictions](#), lockdowns and other changes are well reflected through social media messages.

"A thorough analysis of such social media data helps us understand the community demands, issues, and reflections."

Associate Professor Yigitcanlar said the researchers chose Twitter

because it has become the fastest growing [social media](#) platform source in the world. It also offers an Application Programming Interface (API) to researchers and practitioners to conduct analysis.

"Social [media](#) analytics can help assist policy- and decision-makers to review community perceptions about COVID-19, and to identify the key requirements of the community to cope with the pandemic situation", he said.

"Our analysis has shown that the Australian public was not happy at the early stage of the pandemic curve as they seemed to believe that the Australian government was not responding appropriately.

"As such, people were in a panic mode, and tried to prepare to face the pandemic at their capacity. The words, 'toilet/paper' were very common in Twitter in all states/territories during this stage. This was because consumer panic buying patterns took place in Australia, where people tried to stock toilet paper, hand sanitisers, food, and other commodities. This indicated how Australian people act when the government does not provide confidence.

"From February 2020 onwards, the Australian government started to add travel restrictions to combat COVID-19 which built trust. Popular words like 'testing' and 'shutdown' among positively classified tweets showed people were generally happy about the actions taken by the government to combat the virus dispersion in Australia.

"For instance, the tweets circulated in Queensland emphasized the significance of expanding the number of testing per day at the early stage to stop spreading the virus rapidly. Most of the tweets discussed the importance of wearing masks."

More information: Tan Yigitcanlar et al, How can social media

analytics assist authorities in pandemic-related policy decisions? Insights from Australian states and territories, *Health Information Science and Systems* (2020). [DOI: 10.1007/s13755-020-00121-9](https://doi.org/10.1007/s13755-020-00121-9)

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