What Was the Starting Date of the COVID-19 Epidemic in Iran? Rumors against Management of Public Health Emergencies

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Dear Editor-in-Chief

Control of infectious disease outbreaks is not possible without public support and engagement. This support may not be achieved without public trust in authorities (1).

In the case of COVID-19 epidemic in Iran, some rumors claimed that Iran's Ministry of Health and Medical Education (MOH) did not disclose the information about the onset of the epidemic immediately. These rumors were propagated explosively in an organized manner. This propaganda could destroy public trust in the health system with resultant loss of public support and engagement in the control of the ongoing epidemic which could end in epidemic control failure.

Google search trends is an independent tool that can warn the initiation of an epidemic with a lag of one to three weeks (2). We used data available from Google trends in the COVID-19 epidemic and compared it to information disclosed from Iran's MOH.

We retrieved data on Iranians' Google searches about COVID-19's symptoms, i.e. fever and cough, during the period from 12 Dec 2019 to 5 Mar 2020. We graphed the data to show if there is an increase in relative frequency of searches for fever or cough by Iranians in the weeks preceding the epidemic announcement by Iran's MOH. Segmented regression was also applied to investi-

gate if there is a joinpoint in trends of Google searches.

There was no significant increase or joinpoint in trends of Iranians' Google searches for COVID-19 symptoms before epidemic announcement. Estimated joinpoint was at 18 Feb, 2020 (95% confidence interval: 16 Feb, 2020 to 20 Feb, 2020; Fig. 1). The first cases of COVID-19 were publicly announced on Feb 19, 2020. Therefore, based on this trend study there seems to be no lag in announcement by the MOH and public notice of the starting date of the epidemic and finding of the index case.

Rumors even appeared in some of the international news agencies and were propagated very explicitly by some states against Iran's health system. To stop this unfortunate phenomenon from happening again for any other country, there should be some sort of international regulations to scrutinize propagation of these types of misinformation which may result in difficulty in control of epidemics. The epidemics like COVID-19 would rapidly become an international issue and they could be controlled only through international collaborations and collective actions. These issues should not be part of inimical policies among states.
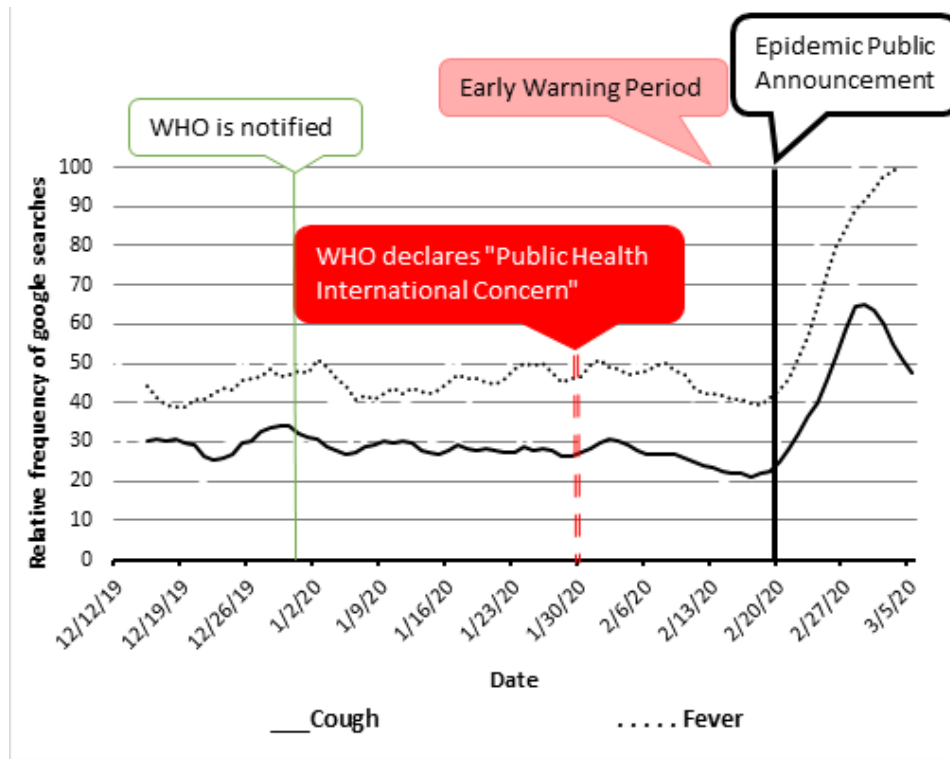
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Fig. 1: Trends of relative frequency of Iranians Google queries for the COVID-19's symptoms

At this time there is need for transparency and also exchange of data, and in the case of Iran, there is an urgent need to lift the unilateral sanctions proposed by the United States of America to increase the access to the diagnostic kits, medical devices and medicines necessary for control of this disease.

Acknowledgements

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