

Role of social media amidst coronavirus disease 2019 crisis: Expectations versus reality

Dear Editor,

The world is in the midst of an ongoing coronavirus disease 2019 (COVID-19) pandemic caused by the emergence of a 2019-novel coronavirus (2019-nCoV) or severe acute respiratory syndrome coronavirus-2 (SARS-COV-2), as it is now known. Since December 2019, when the initial cases of SARS-COV-2 were reported from Wuhan, the capital city of Hubei province, China, there has been a continuous upsurge in the number of cases throughout the world. As of August 11, 2020, 20,280,518 cases of COVID-19 and 739,761 deaths from 215 countries have been reported.^[1] The first case of COVID-19 in India was reported on January 30, 2020^[2] and as of August 11, 2020, 2,271,034 cases with 45,383 deaths had taken place in India.^[1] During this crisis, the lack of awareness, knowledge, and preparedness would put the general population as well as healthcare staff at risk. Thus, delivering fast, accurate and reliable information addressing critical problems of infection control is of prime importance, and social media if used wisely and prudently serves as a powerful tool for the same. However, this channel of disseminating knowledge sometimes mixed with scare tactics, fearmongering, discrimination, misleading reports, and conspiracy theories can lead to misunderstanding among the general population and can create a panic situation. Hence, social media can have both positive and negative impacts on the general population, and we would like to share our views in this aspect.

Social media has now become an integral part of human life and is often considered as a fast and effective platform for searching, sharing, and distributing health information among the general population. The timely access to reliable information about the disease symptoms, transmission dynamics, and its prevention is imperative, particularly in the situation of crisis the world is currently facing due to the COVID-19 pandemic. In the absence of a specific medical intervention, the world is reliant on public health and social measures to slow or halt the spread of COVID-19, consequently, social media has become a strong platform for spreading public health awareness and advocacy regarding public health issues.

Digital technology innovations have been proven to improve the efficacy of the healthcare system's response to an

epidemic.^[3] The use of mobile applications (mApps) during the Ebola and Zika virus epidemics played an integral role in improving access to testing, contact tracing, supporting frontline healthcare workers, raising public awareness, and disease management.^[4,5] Contact tracing mApps has been a crucial component of COVID-19 response in countries such as China, South Korea, Singapore, the United Kingdom, and Israel.^[6,7] Several hospitals, medical practitioners, and health agencies have opened YouTube, Facebook, and Twitter pages to get access to their patients and to ensure the appropriate use of social media and social networking sites and to prevent any misinformation, have created certain social media utilization standards as well.^[8] To keep people safe and aware of the facts related to the SARS-COV-2, the World Health Organization (WHO) has also initiated dedicated WhatsApp and Facebook messaging services in seven different languages, including Hindi.^[9] Similarly, The Ministry of Electronics and Information Technology, Government of India, has launched "Arogya Setu" mApp, currently available in 11 different Indian languages, for containment of COVID-19 through contact tracing and information dissemination.^[10] Moreover, various State governments and healthcare organizations in India also have developed mApps for enforcing lockdown, monitoring quarantined individuals, and generating awareness among the general population.^[11]

Current research suggests that thoracic radiologists play a very important role in identifying patients with suspected COVID-19 and the progression of disease among them.^[12] At times, thoracic radiologists^[12] are even the first to raise the suspicion of infection among the patients undergoing imaging procedures, more so among the patients presenting with atypical symptoms, and for locations with limited resources handling the mounting caseload can be overwhelming. Consequently, some radiology groups are turning toward social media applications in an effort to pool expert knowledge.^[13] Recently, the Iranian Society of Radiology partnered with radiologists in North America to create a teleradiology consultation service, called the Iranian Society of Radiology COVID-19 Consultants (ISRCC) to devise a standard format of reporting computed tomography scans of patients suspected of having the COVID-19.^[14] Using, WhatsApp (a mApp-based messaging platform) and

teleradiology, this panel of specialists has been constantly updating radiologists on a national basis, and offer online consultation to physicians, reporting of CT scans and radiographs, and follow-up of the patients.

Although nuclear medicine imaging is unlikely to be part of the armamentarium for the initial diagnosis of COVID-19, there have been cases described in the recent past of the incidental detection of COVID-19 in asymptomatic cases undergoing scans for some other indications,^[15-17] wherein fluorodeoxyglucose avid pulmonary lesions have been incidentally detected, and the diagnosis was performed later on a retrospective review of the clinical, laboratory, and imaging data. A thorough preparedness to meet the challenges of handling COVID patients is imperative for every nuclear medicine facility. Among this situation of crisis, imaging departments, including radiology and nuclear medicine are facing major challenges in an effort to continue routine operation, image patients (suspected or proven COVID-19) and ensure the health of workers to reduce the risk of transmission of infection. They are rapidly adjusting their standard operating procedures (SOPs) to cope with the pandemic cases and deliver their services. Sooner or later, COVID cases are bound to find their way into nuclear medicine departments. Knowledge of the imaging spectrum and the SOPs would enable prompt and effective management of patients and healthcare professionals. In this regard, a webinar entitled “Coronavirus disease (COVID-19) Pandemic: Challenges for the Nuclear Medicine Departments,” organized by the International Atomic Energy Agency was broadcasted live on March 25, 2020, with recommendations for nuclear medicine departments in terms of adjustment and adaptation to the ongoing COVID-19 pandemic.^[18] Table 1 depicts the stepwise preventive measures to minimize COVID-19 exposure during nuclear medicine imaging procedures. The principles of “Time, Distance and Shielding” in the appropriate context should be followed at all times. Using mApp-based messaging platform, notices/pamphlets/flow charts/video messages regarding patient triage and infection control can be circulated among the nuclear medicine physicians to keep them updated about the rapidly evolving situation. Similar to teleradiology consultation service, developed by ISRCC, if a telereporting service offering online consultation to nuclear medicine physicians for reporting scans and follow-up of the patients can be developed, will surely be helpful. Exploiting social media using such systems can help alleviate overcrowding in hospitals already struggling to meet patient needs. WhatsApp is a widely used mApp all over the world, including India and is free, developing similar systems and their rational use can turn out to be an excellent tool for social communication, accessing reliable information, and

even optimizing critical care resources based on effective patient triage.

While the Internet is seen as an effective source for obtaining health information, it can be misused as a means of disseminating misinformation, which can have adverse effects on healthcare professionals, students, and healthcare institutions. It creates confusion, spreads fear, and hampers the outbreak response, which eventually can undermine the government’s efforts toward effective and efficient management of the situation. The primary topics of misinformation particularly in the context of COVID-19 include disease statistics, medications, preventive strategies, nutritional guidelines, and mode of viral transmission. Social media platforms often allow the unrestricted exchange of ideas and due to absent or short legal consequences, there is little or no accountability for what is said or communicated. Misinformation on SARS-COV-2 might be the most contagious thing about it and has been termed as *misinfodemic*. Misinformation in the form of rumor or unreliable news can create a panicky situation among the general public and can further worsen the situation. For instance, an unprecedented flurry of misinformation, false news, and political propaganda resulted in panic mass migration, hysteric buying as well as black marketing of face masks and hand sanitizers, essential household commodities, and peddling of unproven treatments in India. Such a situation can turn out to be even worse for low and middle-income countries as they lack the required workforce and financial resources to cope up with the epidemic of this magnitude. Hence, unlike any prior event, the WHO has identified that the “2019-nCoV outbreak and response has been accompanied by a massive *infodemic* – an overabundance of information – some accurate and some not– that makes it hard for people to find trustworthy sources and reliable guidance.”^[19]

The use of social media for any public health crisis requires complete consideration and dedication. Responsible, sensible, and judicial use of social media is one of the crucial factors in public health response particularly in emergency situations we are currently facing. While social media cannot replace in-person contact, there may be ways to better use it to support recovery and resilience. Government and health professionals must embrace and make plans for the use of social, print, and electronic media to work together, establish limits and build guidelines for their optimal usage, and above all make them work for the general population.

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Table 1: Preventive measures to minimize coronavirus disease 2019 exposure during nuclear medicine imaging procedures

Key steps	Preventive measures
Before patient arrival	Screen patients by taking history on phone and categorize them into groups as ordinary, vulnerable, and confirmed/suspected COVID-19 patients Postpone any nonurgent or routine examinations No PET/CT for confirmed or suspected COVID-19 patients. In case of emergency, a portable scanner to be used to perform bedside scan for confirmed or suspected COVID-19 patients. Personnel protection and equipment disinfection as per institutional protocol
On patient arrival	
Reception	PPE for health care professionals Screen patients at the entry point (thermal scanners, history taking using a questionnaire) Limit one visitor per patient and restrict entry for children under 18 years of age Instruct the patient to wear a mask during the entire examination Reception desk personnel to wear a mask with sufficient hand sanitizer available
Waiting before injection	Arrange suspected COVID-19 patients in a negative pressure isolation room equipped with a designated scanner Patients and visitors should be instructed to stay six feet apart with minimal walking around while waiting
Injection of the imaging agent	Hand sanitization before and after injection Dispose of used medical articles separately Disinfect the surfaces of operation tables and instruments after injection
Waiting after injection	Keep the confirmed or suspected COVID patients in the designated isolation room and away from the preinjection waiting area
During the test	Rapid protocols to be used to minimize the frequency, duration of a hospital visit and to reduce potential contact exposure Instruct patients to wear a mask during scanning procedures Hand sanitization after scanning Replace the disposable pad before the next examination
Discharging the patient after the test	Disinfect the areas in contact with the patient, during the procedure Disinfect the equipments and the laboratory area at least once daily as per the institutional infection control guidelines Tele-health should be considered for image interpretation. Reporting or to discuss results with other teams

COVID-19: Coronavirus disease 2019; PPE: Personal protective equipment; PET: Positron emission tomography; CT: Computed tomography

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