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LETTER TO THE EDITOR

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COVID-19 pandemics and oral health care for older adults

Patients with pneumonia of unknown cause, which was linked to a wet market, were reported in Wuhan, China in December, 2019.[1] The origin of these pneumonia cases was related to a novel betacoronavirus, named initially as 2019 novel coronavirus (2019-nCoV)[1,2] and then later called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[3] The disease caused by SARS-CoV-2 was then named coronavirus disease 2019 or COVID 19.[2,3]

The virus is genetically close to two bat-derived SARS-like coronaviruses that could have originated in chrysanthemum bats. Pangolins, a commonly trafficked scaly anteater whose scales are believed to have medicinal value, have been suggested as a possible intermediate host between bats and humans.[3] The virus has high affinity to angiotensin-converting enzyme 2 (ACE2) receptors, which are expressed in type II alveolar cells in the lungs.[3] The transmission is mainly through respiratory droplets, although fecal transmission is possible.[3] The incubation period ranges from 1 to 14 days, and asymptomatic patients can be carriers of SARS-CoV-2, and the expected number of cases produced per infected person is between two and three,[3-5] which explains its fast spread.[6] After quickly spreading around the globe, COVID-19 was initially declared a public health emergency of international concern,[7] and a few days later a pandemic,[8] by the World Health Organization (WHO).

Clinical findings usually include fever, dry cough, shortness of breath, headache, fatigue, and myalgias.[3,9,10] Other less common symptoms are sore throats, abdominal pain, and diarrhea.[3] Most COVID-19 patients present with mild symptoms, although a considerable percentage (15-25%) require admission to a hospital.[10] Among those, around 30% may need invasive mechanical ventilation, and for this group mortality is very high.[9]

Due to the rapid spread of COVID-19, the risk of it causing significant fatality and the stress it poses for health care workers and its potential to overwhelm the capacity of health care systems resulted in many countries adopting measures to restrict human mobility, in an attempt to limit the spread of the disease.[11,12] Included in these restrictive measures are oral health care providers who were required to halt all nonemergency oral health care procedures, as many dental procedures produce aerosols and COVID-19 spreads mainly by aerosols.[13-15] Another issue was to limit the use of personal protective equipment (PPEs) by dentists, as they were required for hospitals and were in short supply globally.[13,16]

Older adults with multiple comorbidities have been identified as the highest risk group for fatal COVID-19 clinical outcomes.[9,17] A significant number of older adults are prescribed angiotensin-converting enzyme (ACE) inhibitors and angiotensin II receptor blockers to manage diabetes, hypertension, and chronic kidney disease, and these medications put the patients at an increased risk of infection by SARS-CoV-2.[17] Not surprisingly, a number of long-term care facilities (LTCFs) have become *outbreak hot-spots* for COVID-19 infection, because they provide care for older adults with multiple comorbidities. This problem may be exacerbated by the fact that LTCFs have close living quarters, undertrained staff, and a shortage of PPEs.[18] The earliest outbreak of COVID-19 in the United States was in a LTCF in Washington State, which had a high fatality rate.[18] Despite all the risk, older adults unfortunately have not been in the focus of the international health care debate during this current pandemic.[19]

Unfortunately, oral health care has been halted in most LTCFs as part of the recommended measures for isolation,[20] and there is no predictable date when oral health care will be part of the protocol in LTCFs again. Additionally, older adults with multiple comorbidities living in the community are less likely to seek oral health care. This may be caused by a combination of the fear of being exposed to high-risk aerosol generating procedures and knowing that older adults have a higher risk of getting infected and not surviving COVID-19.

Currently, recommended triage and treatment procedures when treating older adults, particularly those with dementia, are hard to follow safely. For older adults with dementia (about 48% of the American LTCFs population[18]), following COVID-19 best practices, such as using facial masks in the reception area and using preoperative mouth rinses,[15] can be anywhere from challenging to impossible. Even for community dwelling older adults, many of them presenting with hearing and vision problems, communicating from a social distance and/or wearing a N95 mask with a full face shield can prove to be challenging. Even providing urgent and emergent oral health care, and following recommended flowcharts for triage can be a challenge, as some questions

(e.g., "What is your pain level on a scale of 1 to 10?")[13] can only be estimated for patients with cognitive impairment.

Older adults with dementia are sometimes treated under general anesthesia (GA), depending on their level of cognitive impairment, their behavior, and the type of oral health treatment they need. Access to operating rooms to use GA is now even more restricted due to the pandemic, and will be for the near future. In a proposed system for prioritization, only urgent oral health care is included.[21]

It is important to notice that the restrictions for accessing oral health care due to the COVID-19 pandemic are not unique. These problems are in addition to the multitude of barriers faced by older adults in accessing oral health care, which has been often previously reported,[22,23] especially for the most vulnerable groups, like individuals living in LTCFs,[24] the homebound,[25] and older adults with dementia.[26] Inevitably, these COVID-19-related barriers are likely to further reduce the already poor access to oral health for frail and functionally dependent older adults. As a consequence, even poorer oral health outcomes might occur among vulnerable older adults in the near future. Therefore, the small[27] but proactive group of oral health providers dedicated to geriatric dentistry will be facing new and greater challenges as the world rebuilds after this current COVID-19 pandemic crisis.

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