COMMENTARY

The Moral Lessons of Covid-19: A Call for Renewal

ABSTRACT

The Covid-19 pandemic struck physicians at a time of unprecedented dissatisfaction and burnout, providing a stress test whose lessons might guide structural changes in healthcare. While selflessly rescuing patients from death, many doctors were exposed to unacceptable risk, with little protection for themselves, and, by extension, for their families and patients. This essay examines the basis and limits of duty to treat in a time of crisis and explores how these experiences could leave doctors morally stressed and even compromised. We question whether a physician-patient relationship that treats patients' safety and well-being as separate from their doctors' personal and professional values, needs, and dignity is the best way to deliver care. Such questions predated coronavirus but were brought to the forefront because of the epidemic. As physicians process their experiences, we hope to begin a deeper moral and social conversation that might help us be better prepared for future crises. **[Am J Med Sci 2021;361(2):146–150.]**

"Unhappy is the land that needs heroes."

Bertolt Brecht's "Life of Galileo", 1938

INTRODUCTION

In this essay, we revisit three ethical issues that have long been part of the medical conversation, and have now come to the forefront because of coronavirus: 1) Freedom of moral conscience in times of high risk; 2) Moral injury; and 3) The need for a more balanced patient/physician relationship. These are important issues to consider not only because it is likely that modern society will again confront a pandemic as severe as Covid-19, but also because many industries are using the current crisis as an opportunity for structural changes, and thus we hope health care will do the same.[1]

FREEDOM OF MORAL CONSCIENCE IN TIMES OF HIGH RISK

Certain personal risks are unavoidable in patient care, but how does the duty to treat change when physicians are dealing with a novel and poorly understood epidemic? Where does individual moral conscience come into play? What questions might one legitimately ask in order to decide whether to step forward and treat?

Some might suggest that there are no decisions to be made when duty calls, since physicians are morally bound to society whatever the circumstances might be. After all, society supports the training of doctors,[2] and thus it is natural that in return society expects care to be delivered whenever the need arises.[3] Yet, duty based on this moral contract has never been an absolute. In times of high risk to self and, by extension, to family members and patients, physicians have often retained the inalienable freedom of individual conscience without fear of retaliation, shame, or hierarchical threats. In fact, the idea of duty to treat in times of epidemic is nowhere to be found in Hippocratic writings, and only developed in the wake of the great plague pandemic of the mid-1300s. As people realized that the "Black Death" was highly contagious,[4] villages and towns found it increasingly difficult to recruit physicians willing to treat patients. The nature of the epidemic also raised concerns that physicians themselves might infect healthy individuals. Hence, local governments chose to hire community plague doctors whose sole responsibility was to treat plague victims.[5] Since these physicians not only risked their lives but also had to be quarantined for the entire duration of the epidemic, they tended to be young and inexperienced country doctors who saw this as an opportunity to secure board, lodging, a good salary, plus access to "markets" otherwise off limits. Not surprisingly, public opinion of the medical profession eroded somewhat during the plague, and, in turn, this reputational loss slowly encouraged a social expectation of duty to treat.[4]

These issues became relevant again during Covid-19, since physicians' general duty toward society is not supposed to abrogate the right to self-protection or diminish the need for individual discernment. Consider, for example, the first physician to die of coronavirus in Italy, who reportedly told a colleague, "we are running out of face masks and gloves, but we're not stopping. We're being careful and pressing on."[6] Those words are undoubtedly inspiring, but they are also words that society should never force a doctor to say. Not only because they justify unacceptable risk to self (Dr. Roberto Stella died within 10 days of uttering those lines), but also because they imply unacceptable risk to family, peers and patients. No healthcare workers signed up to be a hero,[7] especially when left unprotected. Physicians ought to be able to inquire about the risks they face. How contagious and lethal is this virus? Can it cause me lasting harm? Will it easily spread to my family members? Will I need to sleep in a hotel room to avoid infecting my spouse and children? Do I have an underlying condition that makes me vulnerable? Do I have enough experience with personal protecting equipment, and is this available to me? Is my high personal risk justified by the benefit derived by patients? Am I ready to put myself in harm's

way by performing procedures like intubation and resuscitation on frail and old patients with small odds of ever surviving? Am I required to practice outside my sphere of clinical competence, thus putting patients at risk of medical errors? Am I being pressured to treat? Is my job security threatened? More importantly, are institutional, local and national leaders supplying the necessary safety protocols and protection?

Undoubtedly individual experience with the epidemic varied somewhat depending on where one practiced. A doctor who worked in New York probably faced a very different situation compared to a doctor who worked in less affected areas. We also realize that there might be generational differences in regard to whether self-care is perceived as weakness. Yet, the questions we pose should be asked regardless. Assumptions about the duty to treat should not be so broad as to trample the freedom of individual conscience and best judgment, especially when physicians' influence on public policy is disregarded by authorities or even threatened,[8,9] public health agencies have been systematically defunded,[10] and government in general has failed to hold up its end of the bargain.[11] This is particularly important considering that Covid-19 has hit a profession already struggling with high rates of dissatisfaction,[12] burnout,[13] and mental health issues.[14] In a recent survey, one-third of U.S. doctors planned to either shut down or change their practice, leave patient care, or simply retire as a result of the coronavirus epidemic.[15] This is reason to worry in times of unprecedented physician shortage.[16]

MORAL INJURY

Now that the adrenaline has faded, many healthcare workers are suffering psychological sequelae similar to those caused by SARS in 2003.[17,18] The sense of despair and alienation comes not only from having been asked to risk their own and their patients' lives without adequate protection,[19] but also from having been forced by government mismanagement to make decisions that often went against their conscience.[20] It is a moral injury characterized by shame, guilt, and negative thoughts toward themselves and others, which is very similar to that experienced by soldiers pressured to violate basic ethical tenets.[21] The military term of "moral injury" was first used in a medical context by Dean and Talbot in 2018 as a possible substitute for burnout,[22] since in contrast to the latter (which implies a physician's weakness or failure), moral injury reflects a failure of the system which, in turn, forces individuals to "perpetrate, bear witness to, or fail to prevent an act that transgresses our deeply held moral beliefs."[23]

A reason for moral injury during the pandemic was having to decide who was going to live and who was going to die simply because there were not enough ventilators[24] or ICU beds,[25] moral dilemmas that did not spare the U.S.[26,27] Furthermore, no physician feels comfortable putting a patient through the ordeal of prolonged aggressive intensive care treatment inclusive of intubation, mechanical ventilation, and isolation from family members as typically required by Covid-19 beyond the point when it becomes clear that this is no longer worthwhile. As Dr. Lorna Breen said a few days before killing herself, "I just wanted to help people and I couldn't do anything."[28] Heroic treatment, especially when unsupported by evidence, might often be perceived by clinicians as overtreatment that only hurts the patient. Not surprisingly, moral injury has been a sequela of Covid-19.[29]

Conversations amongst physicians, ethicists, patients, and patients' families might provide a better way to avoid aggressive treatments that would only add suffering to the patient's ordeal without hope of much success. Would our transactional medical model coupled with our culture of "rescue medicine"[30] and "denial of death"[31] be receptive to such conversations? Hopefully coronavirus will now allow us to address these questions since not only are they paramount in times of limited resources,[32] but also they may explain why approximately half of all intensivists burnout.[33] Stressors in the ICU are manifold, including high mortality; futility of care; challenging ethical situations; extensive documentation and coding; and burdensome workload. To this long list coronavirus has added: 1) Limited access to protection and testing; 2) Lack of transparency;[34] 3) Risk of exposure to self and/or family; 4) Having to make decisions that conflict with deeply held beliefs; 5) Limited time to process emotional injury; 6) Unmet family needs as work hours and demands increase; 7) "Uncertainty that the organization would support/take care of personal and family needs in case of infection";[35] 8) A sense of betrayal for the general lack of preparation and leadership;11 and 9) Repeated injunctions from hospital administrators not to speak to the press or public.[36]

Conversations about these issues, and actions to address them, could not only remove moral stressors, but also prevent the exposure of medical staff to unnecessary risks. More importantly, they would remove the misperception of personal culpability that often results from having to make difficult decisions. Yet, a dialogue of this sort also needs to be linked to clear clinical guidelines and laws to protect physicians from medical liability lawsuits for withholding service in situations beyond their control.[37]

A MORE BALANCED PATIENT/PHYSICIAN RELATIONSHIP

Physicians have historically viewed themselves as altruistic individuals, who acted for the benefit of patients while mostly setting aside concerns of self-care. Yet, altruism should not encompass self-neglect. Among Greco-Roman physicians, self-care was actually a mandate. Thus, the ancient epitaph of an Athenian doctor read, "These are the duties of a physician: First, to heal his [sic] mind and to give help to himself [sic] before giving it to anyone else."[38] This prime directive of physician, heal thyself comprises not only the right to

self-preservation, but also the need to maintain an emotional balance in the interest of patient care.

Today, there is a movement to address the burnout crisis that posits that physician self-care may be analogous to, and equally as important as, Patient Centered Care—i.e. "care that is respectful of and responsive to individual patient preferences, needs, and values, thus ensuring that patient values guide all clinical decisions."[39] In 2006 Drs. Mary Catherine Beach and Thomas Inui suggested that medicine should consider Relationship-Centered Care as an alternative to Patient Centered Care, since the latter focuses too narrowly on the impact of clinicians on patients, thus forgetting that patients' outcomes often depend on clinicians' mental and physical health.[40] In 2018 the "Charter on Physician Well-Being" reiterated the need for professional ethics to assert the virtue of self-regard[41] and suggested four principles: 1) Effective patient care requires and promotes physician well-being; 2) Physician well-being is linked to the well-being of all members of the health care team; 3) Physician well-being is a quality marker; and 4) Physician well-being is a shared responsibility. In the wake of Covid-19, we suggest that the psycho-physical health of physicians cannot be separated from that of their patients, and thus any attempt to portray them as oppositional is in essence a false dichotomy. Physicians are also rightfully sensible of systemic barriers towards exercising professional judgment—especially in times when medicine has increasingly adopted from industry corporate metrics like "productivity", "benchmarks", and "Relative Value Units". Ironically, while physicians were being championed as heroes, 20% received furloughs and pay cuts[42]—and this under circumstances in which other emergency workers have historically received hazard pay. In fact, job losses in the American healthcare sector have been second only to those in the restaurant industry, even as the salaries of many hospital CEOs either increased or underwent only cosmetic cuts. [43,44]

Why did hospitals lose so much money during Covid-19 that they were unable to maintain staff salaries? The answer lies in the reimbursement and incentive system of the U.S. healthcare model, which highly compensates elective surgeries and procedures while providing little coverage for preventive or primary care. Flaws of this sort should be eliminated, not only because it is the right thing to do, but also the smart thing to do. Teams led by dissatisfied doctors provide worse care and raise organizational costs.[45] Early retirement and reduced clinical hours add further costs that have increased over time.[46] Ironically, a recent poll by the Kaiser Family Foundation found that postponement of elective procedures actually impacted little on the health of patients with stable chronic conditions.[47] This makes one wonder whether overtreatment might not only be costly but also wasteful.[48] So, let us hope that Covid-19 will give physicians the necessary momentum to regain control of their profession and thus foster those changes that can ultimately result in better patient care. As the former Surgeon General Dr. Vivek Murthy reminded us, doctors must speak up on moral issues: "People will accuse us of being political, but if people accuse you of being political because you're standing up for people who can't stand up for themselves, then you should do it anyway, because that is at the heart of our profession."[49]

This is why it was remarkable to see medical residents protest in Brooklyn, New York, so that they could get a seat at the table in the planning committee for the second wave of Covid-19.[50] As the ones who directly experienced what lack of organization and structural deficits can do to both patients and doctors, these young physicians had no qualms about putting their careers on the line. And this despite administrators reminding them that such actions could have resulted in disciplinary measures, including termination.

CONCLUSIONS

We hold that physicians have a moral right to self-determination, even in the context of a pandemic emergency. Duty to treat should not be an absolute mandate, but rather a coherent general principle that helps frame individual discernment without dictating moral conscience. No administrator should disregard individual conscience.

We hold that moral injury is a more accurate descriptor than burnout. Since systemic stressors responsible for moral injury are often responsible for poor patient outcomes, physicians should never accept situations that betray their deeply held values and principles.

Lastly, we hold that healthcare systems and workers ought to enter into a new moral contract that values physicians' professional judgment, autonomy, ethics and personal safety as important determinants of patient outcomes. Without the mental and physical wellbeing of physicians, we doubt that there can be any sustained good patient outcomes, since the two are inextricably linked.

ACKNOWLEDGMENTS

The authors wish to thank Ms. Jennifer Wilson for her editorial assistance.

Salvatore Mangione[1,*]
Stephen G. Post[2,**]

[1]Associate Professor of Medicine, Director Humanities Track and History of Medicine Series, Sidney Kimmel Medical College of Thomas Jefferson University, Hamilton Building, 1001 Locust Street, Suite 309c, Philadelphia, PA 19107, USA

[2]Professor, Department of Family, Population & Preventive Medicine, Division Head, Medicine in Society, Director, Center for Medical Humanities, Compassionate Care & Bioethics, Stony Brook University School of Medicine, Health Sciences Tower, Level 3, Rm 080B, Stony Brook, New York 11794-8335, USA

*E-mail: Salvatore.Mangione@Jefferson.edu

Funders: This study had no funding sources.
Authors' conflicts of Interest: None declared.

**www.stonybrook.edu/bioethics, www.stephengpost.com

REFERENCES

1. **King JS.** Covid-19 and the Need for Health Care Reform. *N Engl J Med*. 2020;382(26):e104.
2. **Weiman DS.** *Who Pays for Resident Salaries?* HuffPost; Nov 15, 2016. Available at: https://www.huffpost.com/entry/who-pays-for-resident-sal_b_12967008. Accessed June 16, 2020.
3. **Post SG, Botkin JR, Headrick LA.** Medical students in a time of HIV: education and the duty to treat. *Med Educ*. 1995;29(2):128–132.
4. **McNeill WH.** *Plagues and peoples*. New York, NY: Anchor Books; 1998.
5. edited by **Cipolla CM.** A plague doctor in *The Medieval City*. In: Miskimin HA, Herlihy D, Udovitch AL, eds. *New Haven and London*. Yale University Press; 1977.
6. **Povoledo E.** *Roberto Stella, Regional Doctor with a National Presence, Dies at 67*. The New York Times; March 31, 2020. Available at: https://www.nytimes.com/2020/03/31/obituaries/roberto-stella-dead-coronavirus.html. Accessed June 16, 2020.
7. **O_'Donoghue ML, Rosenbaum LS.** *No Shame in Choosing Not to Be a COVID-19 Hero*. Medscape Medical News; June 25, 2020. Available at: https://www.medscape.com/viewarticle/932918#vp_2. Accessed June 26, 2020.
8. **Elving R.** *What It Means When Trump Doesn't Wear A Mask*. NPR; May 8, 2020. Available at: https://www.npr.org/2020/05/08/852093558/the-president-as-a-model-for-the-nation-from-toasters-and-sweaters-to-masks. Accessed June 16, 2020.
9. **Bosman J.** *Health Officials Had to Face a Pandemic. Then Came the Death Threats*. June 22, 2020. Available at: https://www.nytimes.com/2020/06/22/us/coronavirus-health-officials.html. Accessed 23 June 2020.
10. **Sun LH.** *CDC To Cut By 80% Efforts to Prevent Global Disease Outbreak*. The Washington Post; Feb 1, 2018. Available at: https://www.washingtonpost.com/news/to-your-health/wp/2018/02/01/cdc-to-cut-by-80-per-cent-efforts-to-prevent-global-disease-outbreak/. Accessed June 16, 2020.
11. **Keshavan M.** *'We're being put at risk unnecessarily': Doctors fume at government response to corona virus pandemic*. Stat News; April 9, 2020. Available at: https://www.statnews.com/2020/04/09/doctors-fume-at-government-response-to-coronavirus-pandemic/. Accessed June 16, 2020.
12. **Zuger A.** Dissatisfaction with medical practice. *N Engl J Med*. 2004;350(1):69–75.
13. **Patel RS, Bachu R, Adikey A, Malik M, Shah M.** Factors Related to Physician Burnout and Its Consequences: A Review. *Behav Sci (Basel)*. 2018;8(11):98.
14. **Gerada C.** Doctors, suicide and mental illness. *B J Psych Bull*. 2018;42(4):165–168.
15. *Physicians and Covid-19. A Survey Examining How Physicians Are Being Affected by and Are Responding to the Coronavirus Pandemic*. Merritt Hawkins and the Physicians Foundation; April, 2020. Available at: https://www.merritthawkins.com/uploadedFiles/Corona_Physician_Survey_Merritt_Hawkins_Report.pdf. Accessed June 16, 2020.
16. *New Findings Confirm Predictions on Physician Shortage*. AAMC; Apr 23, 2019. Available at: https://www.aamc.org/news-insights/press-releases/new-findings-confirm-predictions-physician-shortage. Accessed June 16, 2020.
17. **McAlonan GM, Lee AM, Cheung V, Cheung C, Tsang KWT, Sham PC, Chua SE, Wong JGWS.** Immediate and sustained psychological impact of an emerging infectious disease outbreak on health care workers. *Can J Psychiatry*. 2007;52(4):241–247.
18. Dreifuss BA. I'm a Health Care Worker. You Need to Know How Close We Are to Breaking. The New York Times. June 26, 2020. Available at: https://www.nytimes.com/2020/06/26/opinion/coronavirus-arizona-hospitals.html?referringSource=articleShare. Accessed 26 June 2020.
19. Privitera G. Italian doctors: 'We are like soldiers on the front without weapons.' Politico. Available at: https://www.politico.eu/article/coronavirus-italian-doctors-we-are-like-soldiers-on-the-front-without-weapons/. Accessed June 16, 2020.
20. **Beall A.** The heart-wrenching choice of who lives and dies. *BBC News*. April 28, 2020. Available at: https://www.bbc.com/future/article/20200428-coronavirus-how-doctors-choose-who-lives-and-dies?ocid=global_future_rss. Accessed June 16, 2020.
21. **Litz BT, Stein N, Delaney E, Lebowitz L, Nash WP, Silva C, Maguen S.** Moral injury and moral repair in war veterans: a preliminary model and intervention strategy. *Clin Psychol Revi*. 2009;29(4):695–706.
22. **Dean W, Talbot S, Dean A.** Reframing clinician distress: moral injury not burnout. *Fed Pract*. 2019;36(9):400–402.
23. **Kopacz MS, Ames D, Koenig HG.** It's time to talk about physician burnout and moral injury. *Lancet Psychiatry*. 2019;6(11):e28. https://doi.org/10.1016/S2215-0366(19)30385-2.
24. **Kliff S, Satariano A, Silver-Greenberg J, Kulish N.** *There Aren't Enough Ventilators to Cope with the Coronavirus*. The New York Times; March 18, 2020. Available at: https://www.nytimes.com/2020/03/18/business/coronavirus-ventilator-shortage.html. Accessed June 16, 2020.
25. **Najmabadi S, Chaampagne SR.** *Coronavirus patients crowd some Texas ICUs as Gov. Greg Abbott touts "abundant" hospital capacity*. The Texas Tribune; June 23, 2020. Available at: https://www.texastribune.org/2020/06/23/texas-coronavirus-hospitalizations-icu-houston/. Accessed June 23, 2020.
26. **Rosenthal BM, Pinkowski J, Goldstein J.** *'The Other Option Is Death': New York Starts Sharing of Ventilators*. The New York Times; March 26, 2020. Available at: https://www.nytimes.com/2020/03/26/health/coronavirus-ventilator-sharing.html. Accessed June 16, 2020.
27. **Sainato M.** *Texas hospital forced to set up' death panel' as Covid-19 cases surge*. July 26, 2020. Available at: https://www.theguardian.com/world/2020/jul/26/covid-19-death-panels-starr-county-hospital-texas. Accessed July 26, 2020.
28. **Knoll C,** *Rothfeld*. *'I Couldn't Do Anything': The Virus and an E.R. Doctors' Suicide*. The New York Times; July 11, 2020. Available at: https://www.nytimes.com/2020/07/11/nyregion/lorna-breen-suicide-coronavirus.html. Accessed July 11, 2020.
29. **Williams RD, Brundage JA, Williams EB.** Moral injury in times of COVID-19. *J Health Serv Psychol*. 2020;46:1–5.
30. **Jecker NS.** Rethinking rescue medicine. *Am J Bioeth*. 2015;15(2):12–18.
31. **Nevidjon BM, Mayer DK.** Death is not an option, how you die is – reflections from a career in oncology nursing. *Nurs Econ*. 2012;30(3):148–152.
32. Emanuel EJJ. Principles for allocation of scarce medical interventions. The Lancet (North American edition). 373(9661):423–431.
33. **Embriaco N, Azoulay E, Barrau K, et al.** High level of burnout in intensivists: prevalence and associated factors. *Am J Respir Crit Care Med*. 2007;175:686–692.
34. **Champagne SR.** *Texas won't specify where hospital beds are available as coronavirus cases hit record highs*. The Texas Tribune; July 2, 2020. Available at: https://www.texastribune.org/2020/07/02/texas-hospital-capacity-coronavirus/. Accessed July 2, 2020.
35. **Shanafelt T, Ripp J, Trockel M.** Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic [published online ahead of print, 2020 Apr 7]. *JAMA*. 2020;323(21):2133–2134.
36. **Carville O, Court E, Brown KV.** *Hospitals Tell Doctors They'll Be Fired If They Speak Out About Lack of Gear*. Bloomberg; March 31, 2020. Available at: https://www.bloomberg.com/news/articles/2020-03-31/hospitals-tell-doctors-they-ll-be-fired-if-they-talk-to-press. Accessed June 16, 2020.
37. **Henry TA.** *Why physicians need COVID-19-related medical liability protections*. The American Medical Association Website; June 15, 2020. Available at: https://www.ama-assn.org/practice-management/sustainability/why-physicians-need-covid-19-related-medical-liability. Accessed June 16, 2020.
38. **Oliver JH.** An ancient poem on the duties of a physician. *B Hist Med*. 1939;7(3):315–323.
39. **Institute of Medicine (US) Committee on Quality of Health Care in America.** *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington DC: National Academies Press (US); 2001.
40. **Beach MC, Inui T.** Relationship-centered care research network. relationship-centered care. a constructive reframing. *J Gen Intern Med*. 2006;21(Suppl 1):S3–S8.
41. **Thomas LR, Ripp JA, West CP.** Charter on physician well-being. *JAMA*. 2018 Apr 17;319(15):1541–1542.
42. **Japsen B.** *Coronavirus Hits One in Five U.S. Doctors with Pay Cut*. Forbes; Apr 22, 2020. Available at: https://www.forbes.com/sites/brucejapsen/2020/04/22/coronavirus-hits-one-in-five-us-doctors-with-pay-cuts-furloughs/#6b17821c2bef. Accessed June 16, 2020.

43. **U.S Department of Labor.** *The Employment Situation — May 2020. Bureau of Labor Statistics News Release*. Los Angeles Times; June 5, 2020. Available at: https://www.bls.gov/news.release/pdf/empsit.pdf. Accessed June 16, 2020.
44. **Silver-Greenberg J, Drucker J, Enrich D.** *Hospitals Got Bailouts and Furloughed Thousands While Paying C.E.O.s Millions*. The New York Times; June 8, 2020. Available at: https://www.nytimes.com/2020/06/08/business/hospitals-bailouts-ceo-pay.html. Accessed June 22, 2020.
45. **Dewa CS, Loong D, Bonato S, Thanh NX, Jacobs P.** How does burn-out affect physician productivity? A systematic literature review. *BMC Health Serv Res*. 2014;14:325.
46. **Buchbinder SB, Wilson M, Melick CF, Powe NR.** Estimates of costs of primary care physician turnover. *Am J Manag Care*. 1999;5(11):1431–1438.
47. Hamel L, Kearney A, Kirzinger A, Lopes L, Muñana C, Brodie M. *Impact of Coronavirus on Personal Health, Economic and Food Security, and Medicaid. May 27, 2020*. KFF Health Tracking Poll - May 2020. Available at: https://www.kff.org/coronavirus-covid-19/report/kff-health-tracking-poll-may-2020/. Accessed June 22, 2020.
48. **Jauhar S.** *People Have Stopped Going to the Doctor. Most Seem Just Fine*. The New York Times; June 22, 2020. Available at: https://www.nytimes.com/2020/06/22/opinion/coronavirus-reopen-hospitals.html. Accessed June 22, 2020.
49. **Frieden J.** *Physicians Must Speak Up on Moral Issues, Murthy Says*. Medpage Today; Apr 12, 2019. Available at: https://www.medpagetoday.com/meetingcoverage/acp/79184. Accessed June 16, 2020.
50. **Mulroney Eldred S.** Residents Demand Changes in Advance of Second Wave of COVID-*19*. Medscape Medical News; June 5, 2002. Available at: https://www.medscape.com/viewarticle/931844. Accessed June 28, 2020.