

# COVID-19 pandemic and dermatoethics

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The World Health Organization characterized the outbreak of the coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), as a pandemic on March 11, 2020. According to official reports, over 12,300,000 individuals have caught the disease globally over the past six months. Like many other professions, the disease has affected private and academic dermatology practices around the world. The disease has diverse and extensive skin manifestations with implications for dermatology education and research. Some other issues that may concern dermatologists during the pandemic include ethics pertaining to the optimal use of scarce resources like certain drugs and personal protective equipment as well as surcharging patients and the potential of increasing the size of the preexisting health inequity gap. Considering all these issues, discussing the ethical aspects of dermatology, i.e., dermatoethics, during this pandemic is critical. Herein, we review the four basic biomedical ethics principles of autonomy, beneficence, non-maleficence, and justice in the context of the COVID-19 pandemic.

**Keywords:** coronavirus disease 2019, dermatology, ethics, SARS-CoV-2, skin manifestations

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## INTRODUCTION

China reported a cluster of cases of pneumonia of unknown cause in Wuhan, Hubei province to its World Health Organization (WHO) Country Office in December 2019 <sup>1</sup>. The disease, which is now known as the coronavirus disease 2019 (COVID-19), spread rapidly to all parts of the world and is caused by a novel coronavirus officially named as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) <sup>2</sup>. The WHO characterized the outbreak of COVID-19 as a pandemic on March 11, 2020 <sup>3</sup>. According to official reports, some 12,300,000 individuals have caught the disease globally over the past six months <sup>4</sup>.

Chinese researchers published one of the first peer-reviewed articles describing the acro-ischemic signs of COVID-19 such as finger and toe cyanosis and skin blisters on March 28, 2020 <sup>5</sup>. Since then, it has been known that skin lesions in COVID-19

patients are common and diverse <sup>6,7</sup>.

As the number of COVID-19 cases increases and its skin manifestations become better known to healthcare providers, the need for discussing ethical issues about different aspects of dermatology practice, research, and training during the pandemic becomes more and more evident <sup>8,9</sup>. A crucial point of bioethical debates during pandemic crises is the fact that there are crossroads between public health ethics and clinical care ethics. We briefly point out a few ethical concerns of the COVID-19 pandemic that are relevant to dermatologists based on the four biomedical ethical principles, i.e., autonomy, beneficence, non-maleficence, and justice <sup>10</sup>.

### Ethics concerning outpatient dermatology clinic practice

Several protocols and consensus statements recommend checking patients' temperatures at the

clinic entrance, having all patients wear facial masks unless there is a medical reason for not doing so, and proper use of personal preventive equipment (PPE) including facial masks, facial shields or goggles, disposable gloves, and protective gowns and caps<sup>11,12</sup>. They also recommend postponing all cosmetic procedures and non-urgent outpatient visits and surgical procedures<sup>13,14</sup>.

The authors consider any breach in the aforementioned measures, which increases a patient's exposure risk to SARS-CoV-2, as being unethical. We believe that failure to follow the recommended measures violates the non-maleficence principle, i.e. do not harm, biomedical ethics principle<sup>15</sup>. Fortunately, teledermatology enables dermatologists to diagnose and manage many of their cases without direct contact with patients; however, protecting the privacy and confidentiality of patients is of paramount importance, and users of teledermatology have to be meticulous in taking care of these issues<sup>16,17</sup>.

Safe management of patients with dermatoses is crucial during this pandemic. Dermatologists are responsible for adjusting doses or stopping several drugs like biologic and immunosuppressive agents because of safety concerns<sup>18,19</sup>. It is difficult to create evidence-based clinical guidelines for recommending best practices during a rapidly evolving pandemic caused by a new virus<sup>20</sup>. Nonetheless, national and international dermatology organizations have developed some interim protocols and guidelines to enable dermatologists to manage their patients properly<sup>21,22</sup>. However, it is the dermatologist's responsibility to evaluate and manage each individual case carefully such that they do not breach the beneficence and non-maleficence ethical principles.

### **Ethical implications for dermatology training**

The dermatological manifestations of COVID-19 are common, diverse, and can help prompt healthcare providers to make an early diagnosis of the disease<sup>6,7,23</sup>. Knowledge and skills to correctly diagnose and manage skin lesions associated with COVID-19 are important for clinical care providers. It is the collective ethical responsibility of public health and healthcare authorities, local, national, and international medical and nursing organizations, associations, colleges, and academies to provide

updated training and education. Individual healthcare professionals have to learn and practice according to the current best available evidence in this rapidly changing situation. It is obvious that a lack of possessing the needed knowledge breaches the ethical principles of beneficence and non-maleficence, and can potentially violate the principle of justice.

In addition to the need for training from an ethical perspective, some specific ethical issues related to dermatology training and education during the COVID-19 pandemic have to be addressed. For example, during the current pandemic and given the requirement for practicing physical distancing, traditional face-to-face training at dermatology clinics and wards is not safe and ethical<sup>24</sup>. Appropriate use of telecommunication technologies to hold webinars and teledermatology sessions to provide distant training to students and dermatology residents, and continued education for dermatologists, emergency medicine physicians and nurses, and others who need such training are reasonable options in many cases<sup>24-26</sup>. Meanwhile, it is crucial to protect the privacy and confidential information of patients who participate in online teaching sessions. In order to adequately address issues related to the autonomy principle of biomedical ethics, obtaining an informed consent that briefly describes the process, purposes, advantages and disadvantages of the process, and expected outcomes for the patient is necessary. Unfortunately, online training for dermatological procedures such as excising malignant skin neoplasms will not give dermatology residents the required hands-on training and practice, and can potentially result in them lacking the needed expertise, hence violating the principles of beneficence and non-maleficence if not addressed properly<sup>24</sup>.

### **Implications for dermatology research during the COVID-19 pandemic**

There were a few instances, such as the lockdown of Wuhan during the initial outbreak of COVID-19 and the quarantine imposed on the *Diamond Princess* cruise ship, that were aligned with the literal definition of quarantine during the COVID-19 pandemic<sup>27</sup>. However, addressing the ethical issues of doing research on individuals in quarantined

communities cannot be overemphasized because most of those issues also relate to strict lockdowns, social restrictions, and isolations, which have been used extensively all over the world. As public health authorities control quarantined communities, confined individuals may not be able to participate voluntarily in research projects, i.e., they may be obliged to participate<sup>27-29</sup>. Coercion is a clear breach of the autonomy principle of biomedical ethics. The violation of justice principles is another key ethical concern. Both public health authorities and researchers may treat quarantined individuals differently than others. In addition, while being quarantined, some individuals are healthy and may not benefit from the research findings individually, a fact that adds more complexity to the ethical issues of conducting research involving quarantined individuals.

Ethical principles and mandates on designing, conducting, analyzing, and reporting clinical trials under normal circumstances have been established and many reliable resources including books, guides, and courses (including online ones) are available to provide the needed training to research team members. However, each principal investigator (PI) has to take care of specific ethical issues of conducting clinical trials during the COVID-19 pandemic according to their discretion<sup>30</sup>. For example, the PI has to decide whether to continue or discontinue an ongoing trial considering the harm/benefit ratio for the participants. It is also the PI's responsibility to not cause any harm to research team members and participants. For example, those research team members who are at higher risk of developing complications if they catch COVID-19 should be reallocated to work remotely. With regards to avoiding maleficence for participants, using communication technologies such as Zoom, Skype, or Google Hangouts for virtual visits can serve as valuable substitutes for unnecessary in-person visits if permission is obtained from the Institutional Review Board/Ethics Committee (IRB/EC), sponsors, and monitoring bodies. If not possible, the researchers should schedule such visits after the clinic's working hours, administer recommended sanitization protocols, discourage participants from using public transit, and inform them that they must contact the research team if they experience any COVID-19 symptoms<sup>30</sup>.

Since the beginning of the COVID-19 outbreak

in Wuhan, a large number of articles on the dermatological aspects of the disease have been published<sup>31</sup>. The importance of rapid sharing of new information about a novel fast-spreading viral infection is essential; however, the validity and reliability of publications should not be compromised<sup>32</sup>. We believe that disseminating preliminary information based on data of uncertain quality and publishing findings of methodologically flawed research studies, particularly in peer-reviewed journals, is unethical. Poorly reported preprints and similar publications because of studies that are ongoing in parallel are just a couple of examples of so-called "research waste" during the current pandemic<sup>33</sup>.

### **Other dermatoethical issues related to pandemics**

There are other issues related to dermatoethics. For example, someone may ask if it is ethical for a dermatologist to prescribe and store drugs, such as hydroxychloroquine, for possible later use for older family members; this can result in a breach of the principles of non-maleficence and distributive justice<sup>34</sup>. Similar concerns arise about using PPE when supply is limited<sup>35,36</sup>. Another issue is the ethical responsibility (in terms of the principles of beneficence and non-maleficence) of dermatologists to educate healthcare providers and the public about dermatoses such as contact dermatitis caused by repeated handwashing and the excessive use of disinfecting agents and sanitizers. A similar rationale is pertinent to educating others about the proper use of PPE to avoid skin damage<sup>37</sup>. The ethical issues related to treating a highly contagious patient comprise another dilemma<sup>38</sup>. Surcharging patients because of increased expenses for extra sanitation imposed by COVID-19 may violate the justice and non-maleficence ethical principles<sup>39</sup>.

Existing health inequities are an important issue whenever public health and biomedical ethical issues are discussed. Unfortunately, COVID-19 has more seriously affected various vulnerable communities, including those living in poverty, ethnic and racial minorities, homeless individuals, and other marginalized populations<sup>40,41</sup>. While digging into this issue is beyond this text, it is important to note that access to the internet and telecommunication may be limited among these

populations and can increase the preexisting health inequities, although some authors also consider this pandemic as an opportunity to extend these services to those who are underserved<sup>42</sup>.

## CONCLUSION

The COVID-19 pandemic has affected the individual and social lives of humans all over the world in an unprecedented way. Public health and healthcare professionals are among the most significant frontline forces. In order to reduce the burden of this pandemic, biomedical ethics must be observed by all health professionals, and dermatologists are no exception. We hope that this short review of dermatoethics helps explain the need for adhering to ethical principles in dermatology practice, education, and research during the COVID-19 pandemic.

**Conflict of interest:** None declared.

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