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# Guiding principles for prioritization of limited in-person dermatology appointments during the COVID-19 pandemic



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Coronavirus disease 2019 (COVID-19) has led dermatology practices to severely limit in-person appointments due to social distancing and shelter-in-place measures.<sup>1</sup> Even as infection rates fall and practices reopen, epidemiologic modeling predicts future resurgences of COVID-19, likely compelling practices to intermittently restrict in-person appointments again.<sup>2</sup> Principles of scarce health care resource distribution have been applied during the COVID-19 pandemic, commonly for critical care resources.<sup>3,4</sup> However, these principles have not been modified for or applied to limited in-person dermatology appointments during the pandemic. Guiding principles can inform dermatologists about how to prioritize patients and skin diseases in this context.

Our department convened an in-person appointment prioritization workgroup including the Department Chair (R.A.S.), Vice Chair (S.C.C.), Residency Program Director (J.B.M.), Pediatric Dermatology Director (L.P.L.), Dermatologic Surgery Director (T.W.B.), and Dermatopathology Head of Operations (B.K.S.), who is a Fellow at the Emory Center for Ethics and chaired the workgroup. Many institutions have encouraged telehealth during the pandemic. As suggested by our institution, the workgroup assumed that any dermatologic problem that could be adequately addressed

#### Abbreviations used:

COVID-19: coronavirus disease 2019  
TBSE: total-body skin examination screening

using teledermatology would be handled in that fashion.

Using a modified Delphi approach with 2 rounds, the workgroup chair drafted guiding principles that were sent to workgroup members for anonymous feedback. The workgroup then met virtually for discussion and voting on areas of disagreement. The document was revised and recirculated until consensus was reached via simple majority. The workgroup chair presented the principles to the department and then sent them to faculty, trainees, administrators, nursing representatives, and select patients for further feedback and revision before they were finalized (Table 1).

The first 3 principles are grounded in maximizing benefits, an essential guiding principle for health care utilization during pandemics.<sup>4</sup> Health care workers have instrumental value to society because they care for others. Diagnostic procedures permit triage decisions about which subsequent treatments are most impactful. Prioritizing patients with severe

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**Table I.** Guiding principles for allocation of limited in-person dermatology appointments during the COVID-19 pandemic

Guiding principle	Examples
<ol style="list-style-type: none"> <li>1. Health care providers, other health care employees, and public health officials should be given priority, especially if their skin disease interferes with delivering care or other essential duties, because of their instrumental value to the health of others.</li> <li>2. Diagnostic procedures, including but not limited to skin biopsies, should be prioritized because pathologic and/or microbiologic diagnosis often allows for better characterization of risk of morbidity and mortality of malignancies, serious infections, and severe inflammatory disorders.</li> <li>2A. Clinical lesions or eruptions for which the differential diagnosis includes high-risk malignancies, serious infections, or severe inflammatory disorders should be prioritized.</li> <li>3. Patients with severe skin disease that is life-threatening, function-limiting, and/or emotionally debilitating who would benefit most from an in-person evaluation should be prioritized over patients with mild disease or patients with severe disease who would gain less in order to maximize benefits.</li> <li>4. For patients with similar prognoses, consider a random selection process for determining who gets a particular in-person appointment.</li> <li>5. Patients with skin disease burden resulting in substantial functional and/or emotional morbidity who do not have access to or cannot effectively use tele-dermatology platforms should be prioritized.</li> </ol>	<ul style="list-style-type: none"> <li>• A hospitalist with an inflamed epidermoid cyst on the face interfering with masking and requiring intralesional corticosteroid injection or incision and drainage</li> <li>• An emergency department nurse with new-onset tense bullae on the lower extremities causing pain and edema</li> <li>• A patient at high risk for melanoma with a changing pigmented lesion</li> <li>• An immunosuppressed patient with a tender nodule concerning for severe infection requiring biopsy and/or tissue culture</li> <li>• A patient with acute-onset tense bullae</li> <li>• A patient with mycosis fungoides with new nodules or erythroderma</li>   <li>• A patient with moderate hidradenitis suppurativa with an acute abscess on the buttocks preventing sitting and requiring incision and drainage</li> <li>• A solid-organ transplant recipient with a high-risk squamous cell carcinoma on the scalp requiring excision</li> <li>• A patient with an enlarging keloid on the chest causing severe pain and requiring intralesional corticosteroid injection</li> <li>• An infant with a high-risk vascular lesion</li> <li>• For a list of patients with low-risk basal cell carcinoma awaiting treatment, random selection can be used to determine when each patient is scheduled for definitive treatment.</li> <li>• A patient without a smartphone, tablet, computer, and/or internet connectivity with widespread dermatitis</li> </ul>

disease who would gain most from in-person intervention maximizes benefits as well.

The final 2 principles are rooted in justice and respond to health care access disparities during the pandemic.<sup>5</sup> Random allocation has been promoted for distributing resources because of recognized injustices associated with a first-come, first-served distribution method, such as favoring those who can travel quickly and wait.<sup>3</sup> To illustrate how our practice has put into operation this principle, which is uncommonly deployed in health care, providers were given a list of patients requiring in-person appointments and assigned each to a priority tier 1 to 3 based on the other principles. Schedulers then randomized patients within each tier and assigned them to appointment slots, such that tier 1 priority patients got the first available appointments and so on. Finally, allocating some in-person appointments

to patients lacking access to or capability for tele-dermatology accommodates medically underserved populations during pandemics and may alleviate burdens on other specialties, such as emergency medicine.

Although cancer screening is often delayed during pandemics, the workgroup addressed total-body skin examination screening. The workgroup concluded that if sufficient in-person appointment capacity for total-body skin examination screening exists, a tiered prioritization scheme that balances risk of skin cancer with risk of severe COVID-19 (Table II) can be considered.

Several limitations apply to these principles. First, principles are not rules and should not dictate all appointment allocation decisions. Further, translating these principles into operations may not be immediately possible or may require adaptations for

**Table II.** Application of guiding principles to total-body skin examination screening (TBSE) during the COVID-19 pandemic

Tier	Description	Example
1 (highest priority)	Patients at very high risk for skin cancer (primary, recurrent, or metastatic)	A patient with a history of invasive melanoma or high-risk squamous cell carcinoma within the last 6 months
2	Patients with a low to moderate risk of skin cancer with strong preferences for TBSE and relatively low risk for severe COVID-19	A healthy 45-year-old patient with a family history of melanoma requesting TBSE
3	Patients with low risk for skin cancer and high risk of severe COVID-19*	An elderly patient with chronic lung disease and few risk factors for skin cancer

COVID-19, Coronavirus disease 2019; TBSE, total-body skin examination screening.

\*Risk factors for severe COVID-19: age >65 years, residency in a nursing home, underlying diseases: chronic lung disease, coronary artery disease, liver disease, chronic kidney disease, diabetes mellitus, obesity, hypertension, and immunosuppression.

different practices. These principles may not apply when there is less appointment scarcity due to increased supply of appointments, decreased demand for them, or both.

These principles provide a framework for in-person appointment prioritization during times of appointment scarcity, such as the COVID-19 pandemic.

#### REFERENCES

1. Chen Y, Pradhan S, Xue S. What are we doing in the dermatology outpatient department amidst the raging of

the 2019 novel coronavirus? *J Am Acad Dermatol.* 2020;82(4):1034.

2. Kissler SM, Tedijanto C, Goldstein E, Grad YH, Lipsitch M. Projecting the transmission dynamics of SARS-CoV-2 through the postpandemic period. *Science.* 2020;368(6493):860-868.

3. Persad G, Wertheimer A, Emanuel EJ. Principles for allocation of scarce medical interventions. *Lancet.* 2009;373(9661):423-431.

4. Emanuel EJ, Persad G, Upshur R, et al. Fair allocation of scarce medical resources in the time of Covid-19. *N Engl J Med.* 2020;382(21):2049-2055.

5. Dorn AV, Cooney RE, Sabin ML. COVID-19 exacerbating inequalities in the US. *Lancet.* 2020;395(10232):1243-1244.