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SPECIAL TOPIC

Coronavirus Disease 2019 State Guidelines on Elective Surgery: Considerations for Plastic and Reconstructive Surgeons

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Background: Vague recommendations regarding elective surgery have been proposed by national organizations in an attempt to conserve personal protective equipment and to protect healthcare workers during the coronavirus disease 2019 pandemic. In response, some states have attempted to provide more clear guidance.
Methods: An internet search was performed to identify and analyze what guidance each state published through government websites through April 10, 2020.
Results: Thirty-five states and the District of Columbia published guidance in the form of either a recommendation or a mandate. Procedures relating to cosmetics and malignancy were found to be mentioned in 4 and 12 states, respectively, but ultimately lacked case-specific information.
Conclusions: Current government and state recommendations do not provide clear guidance on how plastic and reconstructive surgeons should approach elective surgeries. Ultimately, it is the responsibility of all plastic and reconstructive surgeons to operate under appropriate law while individualizing their practices to best suit the needs of their patients while being mindful of resource limitations and exposure risks. *(Plast Reconstr Surg Glob Open 2020;8:e2904; doi: 10.1097/GOX.0000000000002904; Published online 11 May 2020.)*

INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has influenced national and local healthcare policy and has abruptly changed medical practices around the world. The United States has lacked clear guidance from national societies on how surgical and procedure-oriented professions should temporarily alter their practices. On March 13 and 15, 2020, the American College of Surgeons[1] and Centers for Medicare and Medicaid Services (CMS),[2] respectively, released recommendations on how to approach elective/nonurgent surgery. Recommendations, however, are not guidelines and, thus, neither mandatory, nor enforceable. In light of CMS guidelines and an overall effort to decrease unnecessary utilization of personal protective equipment (PPE), many states have published more official guidance on how to address elective surgeries and procedures during the pandemic. The effect this will have on plastic and reconstructive surgery as a specialty will be variable and unpredictable. The authors seek to communicate the landscape of the most current guidance published by each state and provide discussion on the impacts to the field of plastic and reconstructive surgery.

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Received for publication March 29, 2020; accepted April 15, 2020.

Information presented is intended for the recognition of the landscape of the variety of guidance published by state governments regarding surgical procedures and should not be used as a substitute for each reader's respective local or state guidance. Given the rapidly evolving nature of the coronavirus disease 2019 pandemic, official guidance may have changed by the time you are reading this.

DOI: 10.1097/GOX.0000000000002904

METHODS

To identify recommendations, the Ambulatory Surgery Center Association State Guidance on Elective Surgeries webpage was referenced in addition to an independent internet search.[3] Data are accurate through April 10, 2020. States were categorized by the presence of any

Disclosure: *Dr. Janis received royalties from Thieme Publishing. The other authors have no financial interest to declare.*

government-issued guidance. Of those with formal guidance, the duration of guidance and mention of specific guidelines using examples were recorded.

RESULTS

Thirty-five states and the District of Columbia (71%) published guidance for healthcare providers that came in the form of either a mandate or a recommendation.[4–39] Characteristics of the date of announcement, implementation, and end date are shown in Table 1. Of the 36 with published guidance, 18 contain specific guidance.[5–8,10,14,16,18–21,24,25,28,30,31,33,38] Table 2 summarizes the specific guidance because it relates to plastic and reconstructive surgery.

DISCUSSION

As a specialty that performs a large number of elective and outpatient surgeries, the long-term consequences of the COVID-19 pandemic on plastic surgery are unknown. With 71% of states currently recommending limitations on elective procedures, it is postulated that there will be a negative financial impact for both private and academic surgeons. But the state guidelines do not just impact plastic surgery; plastic surgeons play a role in the larger picture and can ultimately contribute positively or negatively to overall disease burden and PPE. To briefly assess the impact of the temporal trend compared with cases, the states of the authors' institutions can be analyzed. The 2 states under evaluation are Ohio and New York, both of which have published guidance during our data collection period. Ohio's guidelines, however, are published 6 days before New York's.[26,28] At the time of their respective publications, Ohio had 67 confirmed cases (0.57 cases per 100,000 people)[40] and New York had 12,339 confirmed cases (63 cases per 100,000 people).[41] If New York had issued guidance on the same day as Ohio, it would have occurred when the state was at roughly 5 cases per 100,000 persons. As it currently stands at the time of writing on April 10, 2020, Ohio has controlled the disease better than New York, at 50 and 486 cases per 100,000 persons, respectively. Although guidelines on elective surgery are certainly not the only factor influencing disease transmission, one can speculate the impact it has on disease burden as a single piece of a bigger objective toward overall eradication of the virus. Further, early data from China suggest a relatively high patient mortality rate of 20.5% when performing elective surgery during the asymptomatic incubation period of COVID-19.[42]

The other side of the double-edged sword, however, is how the guidelines will affect plastic and reconstructive surgeons. Those who have built practices in areas such as cancer reconstruction will less likely be affected than the surgeons in cosmetic-only service. Accordingly, 4 of the 18 states that gave specific guidance specifically mentioned cosmetic procedures, while leaving other areas, such as reconstructive surgery, without mention.[10,20,24,38] Although the current absence of elective procedures can be discouraging, Wang et al[43] in China have shown that volume will increase appropriately following adequate control of the disease, and as such, surgeons should be prepared to resume normal workload.

Furthermore, the response to the COVID-19 pandemic is unlike others encountered in world history, as Rohrich et al[44] explain in their recent article. In their article, they discuss that in case of other pandemics, such as the Spanish Flu, governing agencies did not provide public health mandates such as social distancing, and surely there were no elective surgery guidelines. Agencies such as CMS have adapted by providing detailed tiered systems on how to approach surgery during a global health crisis. Tiers range from lower acuity 1a to higher acuity 3b and are given recommendations of postpone, consider postponing, or do not postpone. The approach to cancer, though, is nuanced. "Most cancers" are placed into category 3a, meaning, do not postpone. However, the CMS guidelines do not provide commentary as to which aspects of oncology treatment should be postponed, leaving reconstructive surgeons without clear guidance.[2]

Using breast cancer as an example, the number of women who undergo immediate breast reconstruction following breast surgery ranges from 41% to 63%,[45] which necessitates the need for official direction on the approach to reconstructive breast surgery. For further insight into this specific scenario, providers are forced to consult other literature such as that published by Ueda et al,[46] the Society of Surgical Oncology,[47] or the American Society of Plastic Surgeons,[48] which have all published recommendations on this very situation even more recently than CMS. However, despite their advice, these 3 organizations urge providers to rely on institutional and/or local or state policy.

If a provider was to seek guidance from the state level, physicians in 15 of the 50 states would not find answers. Relating back to the breast cancer scenario described previously, only 12 states present information regarding malignancy or its related processes, none of which provide clarity on reconstruction.[6–8,10,14,20,21,25,28,30,31,38] And as Teven and Rebecca[49] point out in their letter to the editor, many of these cancer patients may be immunocompromised,

Table 1. Characteristics of Dates of States' Guidance

	Median	Range
Most recent announcement (n = 35)	23 March, 2020	15 March, 2020, to 8 April, 2020
End date (n = 14)	30 April, 2020	15 April, 2020, to 15 June, 2020
Duration from most recent announcement to end date (d) (n = 14)	30	20–88

Table 2. State Guidelines Specific to Plastic and Reconstructive Surgery

	States with Guidance, n (%)	States without Guidance, n (%)
Cosmetic/esthetic	4 (22)	14 (78)
Organ system or limb dysfunction	12 (67)	6 (33)
Malignancy or related processes	12 (67	6 (33)

Values are presented out of the 18 states that gave specific guidance.

thus putting them at higher risk for infection. Ultimately, reconstructive surgeons are forced to search elsewhere for official direction when not under the immediate guidance of institutional policy. It is clear that the vague language used in state recommendations needs to not only be improved in terms of quality, but quantity as well, and must extend to all 50 states.

In a global health crisis as serious as the COVID-19 outbreak, where the risk of disease transmission to patients and healthcare workers is high and PPE shortages loom, the need for decisive guidance is critical. In such situations, national societies and healthcare organizations need to step up to fill in the gaps of what the states cannot or will not provide. And although many national societies have chimed in, the input from multiple organizations can make it challenging for surgeons to interpret how to best conduct their practices during the COVID-19 pandemic. Ultimately, it is the responsibility of all plastic and reconstructive surgeons to operate under appropriate law while individualizing their practices to best suit the needs of their patients while being mindful of resource limitations and exposure risks.

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