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Commentary: Regionalization for every region?

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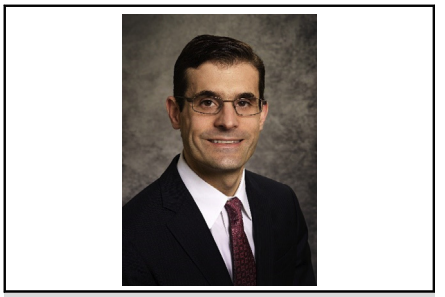

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CENTRAL MESSAGE

Regionalization strategies in health care must be carefully considered to meet patient, provider, hospital, health system, and societal needs.

I read with great interest in this month's *Journal* the invited essay "Regionalization for Thoracic Surgery: Economic Implications of Regionalization in the United States" by Subramanian and colleagues.[1] In this contribution, the expert authors clearly outline the rational for regionalization of complex thoracic oncologic surgical procedures in the United States and discuss potential unintended consequences, the impact of which is unclear. Volume-based referral strategies have been proposed but are not widely adopted at present in this country. Although some evidence does exist that variably associates surgical volume with improved clinical outcomes, thus supporting regionalization, economic implications on patients, payers, and health systems remain unknown.

The case for regionalization of complex thoracic oncologic procedures is based on the concept that outcomes will continuously improve with larger institutional and surgeon experience, as well as from referral patterns being driven by outcomes over time. Greater institutional experience would lead to efficiencies and improved outcomes which, although not well studied, would be expected to drive down costs. However, as the authors correctly note, the relationship between volume and clinical outcomes has been shown to be nonlinear and incompletely characterized. Further, it is exceeding difficult to identify an objective volume threshold that identifies a center of excellence, and this would surely vary based on a multitude of surgeon, hospital, and health system factors.

There are several concerns related to the regionalization of thoracic surgery. As noted, it is important to recognize that much surgery is performed at low-volume hospitals. Whereas high-volume hospitals stand to benefit from increased referrals, this benefit may be blunted if only high-risk patients are referred. Selective referral of older or greater-risk patients to regional centers of excellence may conversely lead to increased cost for health care delivery at these sites. Conversely, there is greater risk for low-volume hospitals. Financial consequences could lead to closures and decreased access to already-disadvantaged populations. Those living at a distance from a referral center would likely incur increased costs related to travel. Minority patients are more likely to be taken care of in low-volume hospitals, have greater resistance to travel, and have significant concerns about cost. Therefore, regionalization may actually increase barriers to care for some populations, the resultant effect being greater disparities in care.

It is apparent that the prospect of universal implementation of regionalization raises as many questions as it provides potential solutions. For instance, at what distance would social and economic costs outweigh the benefits of regionalization? Or which criteria would be used to determine regional centers or providers? Would this be based on cost-effectiveness, volume, outcomes, expertise, resources, or combinations thereof? Are there ways to apply regionalization selectively based on the needs of particular parts of the country? Given the heterogeneity that exists in our country, it is plausible that the approach to regionalization of care would vary by the needs of specific regions.

Reference

1. Subramanian MP, Yang Z, Chang SH, Puri V. Regionalization for thoracic surgery: economic implications of regionalization in the United States. *J Thorac Cardiovasc Surg*. 2021;161:1705-9.

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