

ORIGINAL ARTICLE

Centralization of surgery: is it applicable to less populous nations?PARUL J. SHUKLA^a, SUJIT VIJAY SAKPAL^b & VIJAY NARAYNSINGH^c^a*Gastrintestinal Surgical Oncology, Tata Memorial Hospital, Mumbai, India and* ^b*Department of Surgery, Saint Barnabas Medical Center, Livingston, USA and* ^c*Department of Surgery, General Hospital, University of the West Indies, Port-of-Spain, Trinidad and Tobago***Abstract**

The practice of surgery has witnessed substantial evolution over the recent years, especially with significant advancements in the field of medical diagnostics and surgical therapies. Establishment of specialized and super-specialized surgical centers has resulted in concentrated distribution of patient caseload. There is an immense thrust towards the centralization of surgery particularly for complex high-risk procedures in the Western World. However, such concepts may not apply to less populous nations, and the adoption of healthcare delivery system of specialized centers by low-volume hospitals may produce overall better outcomes.

Key Words: *centralization, surgical outcome, low-volume hospitals*

We write to you in reference to the growing literature on centralization of high-risk surgeries and the impact of volume on perioperative outcomes. It was Birkmeyer et al. [1] who presented their landmark paper on significantly lower adjusted-mortality rates in patients who underwent complex surgical procedures at high-volume hospitals compared to those treated at low-volume hospitals. Similarly, Barker II et al. [2] revealed that hospital/surgeon caseload influences outcomes of major surgical interventions, and Topal et al. [3] suggested that performance of high-risk surgeries at more experienced centers may significantly reduce in-hospital mortality rate and duration of hospital stay. Opinions of aforementioned authors have sparked an ongoing discussion of the topic.

As is evident, the thrust toward centralization is mainly coming from European and North American University-affiliated Medical Centers catering to a vast patient drainage area.

Recently on 5 June 2008, the theme of centralization was discussed at the Trinidad Surgical Society meeting at the University of the West Indies. A very

valid observation was made that in countries with smaller populations it would be a norm to have low-volume hospitals. It is important to consider this fact when we espouse the virtues and advantages of concentrating volume at fewer centers. With an increasing thrust toward centralization, it is possible that surgeons who perform complex procedures at low-volume centers may feel vulnerable to criticism.

Beside volume, enhancement of other critical variables at low-volume hospitals is essential in maximizing the overall outcome – adequate experience to surgeons-in-training to develop surgical expertise and adopt treatment patterns; multidisciplinary teams to provide global perioperative management; and patient education to develop knowledge of self's disease and its treatment. Diverting complex surgeries from low-volume hospitals would diminish the opportunity for surgeons-in-training to receive competitive education. Thus the primary goal, contrary to centralization, would be for low-volume hospitals to adopt the healthcare delivery system of advanced, high-volume centers to produce comparable or better outcomes.

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