Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Editorial

The COVID-19 pandemic, commodity trading, and the required changes to ensure a promising future for the anesthesiology specialty: A call to action

In basic economics, a commodity is defined as an asset that lacks differentiation. A ton of iron or corn is the same in China or in The United States. One trade partner may argue that his/her corn is of greater quality and therefore deserves a greater trading value, but the market often rejects that proposition. In the end, commodity prices are ultimately determined by supply and demand forces: low supply and high demand inevitably leads to high prices.

There has been extensive discussion if health care professionals can be considered commodities in the current healthcare environment [1,2]. As a physician, I feel extremely insulted to be considered a "commodity." In contrast, as someone with prior business training, it is hard for me to justify with data that physicians cannot be considered a commodity in today healthcare environment. If I don't want to be considered a "commodity" in the physician market, I need to be able to show better quality and safety outcomes that are directly related to my differentiation. Moreover, the better quality and safety outcomes need to generate greater willingness to pay from consumers.

Quality and safety studies have demonstrated multiple times that systems rather than individuals are the drivers on improvements in patient outcomes [3,4]. The use of checklists and protocolized medicine has further diminished the value of the individual physician in favor of systems solutions to improve care. In addition, the widespread availability of high-quality information (e.g., UptoDate) and standards for training requirements has decreased variability on quality performance among practicing physicians [5,6].

The more physicians are considered a commodity, the more they will face career threats from midlevel providers. The American Medical Association has expressed concern for the replacement of physicians for midlevel providers with some specialties being affected more than others [7]. On a personal note, my primary care provider is a nurse practitioner and my kids well pediatric visits are often performed by a nurse practitioner. Although many of us physicians cannot accept being treated as commodity, the reality is that the healthcare market is already treating us as one.

Anesthesiologists experience and/or perceive career threats from midlevel providers (CRNAs), especially in states where CRNAs practice independent [8]. The interesting fact is that the specialty response to this career threat has been to support another category of midlevel providers, anesthesiology assistants with the goal of having a more aligned group of midlevel providers that would not seek independent practice [9].

The problem is that if we increase the supply of anesthesia providers by introducing and expanding anesthesiology assistants, we may end up first decreasing the availability of jobs to anesthesiologists. In commodity trading, a cheaper commodity will always replace the most expensive supplier. If the healthcare market sees anesthesiologists as a commodity, the introduction of anesthesiologist assistants will result in them replacing anesthesiologists.

It is well known that solo anesthesiology practices cannot generate the necessary billing to support current anesthesiology salaries. This deficit has been filled by hospital financial support. As hospitals have smaller and smaller profit margins, it is expected that hospital stipend will continue to decrease in the upcoming years. If anesthesiology assistants are widely introduced in the US, they will likely replace solo anesthesiologists in order to decrease and sustain practice costs.

The recent covid-19 pandemic revealed that a doctor with critical care skills is extremely valuable not only to healthcare systems but also for public health reasons. The pandemic exposed the extreme shortage of critical care physicians in the United States. During the peak of the pandemic, we received calls from deans of very prestigious medical schools in New York asking for critical care doctors. Unfortunately, we also had a small critical care staff that would not even supply our needs.

Here is a value preposition to fight the "commodity" problem of the anesthesiology specialty in the United States: change the specialty to Anesthesiology and Critical Care. The Critical Care training component would be 1 year out of 4 years: 6 months during the first year (clinical base year), and 2 months each subsequent clinical anesthesia year. As a residency program director, I understand the barriers to make changes in anesthesiology training programs, but I do believe we can do it to secure the future of our specialty.

The business solution for the commodity problem is to pursue differentiation. If we do not want to be replaced for CRNAs, we need to differentiate from them. If we incorporate critical care training as part of anesthesiology training, we would provide immediate differentiation from CRNAs and we would immediately provide thousands of critical care doctors to fulfill the US shortage of critical care physicians. In many European countries, anesthesiologist are the critical care doctors and they do not face the "commodity" problem.

The summary, the COVID 19 pandemic revealed the need to increase the availability of critical care physicians. Anesthesiologists are well positioned to meet this need. This is editorial is a call to action so we can incorporate more critical care in anesthesiology training. This would certainly differentiate our specialty and position us to fight the "commodity" problem that face many medical specialties in the current healthcare environment.

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