Anesthesia shortage? Depends on the area

Is there a shortage of anesthesia providers now? Does the nation face a shortage in the future? The answer for the current labor supply is: It depends on your area and whether your facility is urban or rural. The anesthesia labor supply and practice patterns vary dramatically, a new in-depth study by the RAND Corporation shows.

“We hope one of the take-aways from the study will be that the market is very heterogeneous,” says Krishna Kumar, PhD, a senior economist for RAND.

“For people who think they can make a single national policy on the anesthesia workforce, the picture is much more nuanced than that.”

Because previous studies have been controversial, this study used 3 methods: surveys of anesthesia providers, a state-level demand-based analysis of the labor supply compared with the volume of work, and an economic analysis to estimate supply and demand.

The study was performed in collaboration with the American Society of Anesthesiologists and the American Association of Nurse Anesthetists and funded by Ethicon Endosurgery.

Shortage “highly likely”

The report’s overall conclusion is that it is “highly likely” there is a current national shortage of anesthesiologists and certified registered nurse anesthetists (CRNAs).

By 2020, the study projects there will be:

• a shortage of anesthesiologists
• a surplus of CRNAs.

These are projections based on past trends. “You have to be careful in interpreting these figures,” Kumar says. “They are simple linear scenarios that assume what we have seen in the past few years is going to continue.”

For instance, the rate of CRNAs entering the profession has been high for the past few years, and the projections assume that will continue, leading to a surplus by 2020. But if the entry rate slows down, that could change.

An uneven labor supply

The current supply differs by state and region. In general, the eastern half of the country has a much greater shortage of both types of providers than the western half (map, p 20).

More than half (54%) of states have a shortage of anesthesiologists, and 60% have a shortage of CRNAs. But there are big variations. Delaware, for example, has an anesthesiologist surplus of over 26%, while Idaho has a shortage of more than 46%. For CRNAs, the biggest surplus (53%) is in Nevada, while New York has a shortage of nearly 28%.
**Practice patterns**

Striking regional differences were also seen in practice patterns, with the biggest contrast between the West and the Northeast.

“In the West, there are not as many CRNAs involved, and anesthesiologists and CRNAs tend to work together less,” Kumar says. “In the Northeast, they tend to work together more, and there is a huge employment of CRNAs. The Northeast also tends to do more MAC procedures (monitored anesthesia care).”

Regarding employment, nearly 80% of both anesthesiologists and CRNAs say their primary employment is with one group or facility (chart). Anesthesiologists work more hours and make about twice as much as
CRNAs, with an average annual income of $337,551 for anesthesiologists and $151,380 for CRNAs.

Anesthesiologists spend a greater percentage of their time on general anesthesia. CRNAs spend more time on MAC.

**Impact on surgeons**

An accompanying survey of surgeons provided additional evidence of a current shortage of anesthesia personnel.

The number of surgeons who reported some procedures were rescheduled because of a lack of anesthesia providers:

- MAC: 16%
  - General anesthesia: 33%
- Regional/spinal anesthesia: 17%.

The number of surgeons who reported some procedures were delayed because of an anesthesia shortage:

- MAC: 55%
- General: 69%
- Regional/spinal: 51%.

**Sedation outside the OR**

There’s also wide variation in who provides sedation for procedures such as colonoscopy and electrophysiology studies. In the surveys, anesthesiologists and CRNAs were asked who provides these services. The responses varied not only by region and procedure but also by who answered the questions.

For colonoscopy/endoscopy, 48% of CRNAs and 58% of anesthesiologists said nonanesthesia providers give the sedation.

Regionally, in the Northeast, anesthesia providers give sedation for colonoscopy more often than in other regions, for 49% of procedures according to CRNAs and for 57% according to anesthesiologists. But in the West, only 20% of CRNAs and 30% of anesthesiologists said anesthesia providers give sedation for colonoscopy.

For adult radiology, the cath lab, the TEE lab, and bronchoscopy as well as colonoscopy, the majority of anesthesiologists said nonanesthesia providers give sedation. But lower percentages were reported by CRNAs for nonanesthesia providers giving sedation in these areas.

One reason for the discrepancies may be that anesthesia providers may not know all of the procedures for which nonanesthesia providers provide sedation, the authors note.

**Reference**

Anesthesia workforce highlights

The RAND economic analysis found:

- The current supply of anesthesiologists would have to increase by 3,800 to meet US demand.
- The current supply of CRNAs would have to increase by 1,282 to meet US demand.
- 54% of states have a shortage of anesthesiologists.
- 60% of states have a shortage of CRNAs.
- Overall, a national shortage of anesthesiologists and CRNAs is "highly likely."
- If past trends hold, a shortage of anesthesiologists and a surplus of CRNAs are projected by 2020.