Attending surgeons performing concurrent operations in 2 separate rooms with qualified surgical trainees assigned to the individual rooms constitutes a longstanding common practice in academic medical centers. This practice has been increasingly questioned and at times reflexively changed without full consideration of the relevant issues. Although there are minimal data specifically defining the appropriateness of concurrent workflows in academic medical centers, its common practice suggests an assumption of safety. The purported benefits include time and cost-effectiveness as well as provision of incremental responsibility for surgical trainees. We posit that the practice of concurrent surgery, within the confines of strict adherence to certain guiding principles and a continued critical assessment of surgical outcomes, is a means of delivering safe, ethically sound, high quality, and cost-effective care.

The vulnerable anesthetized surgical patient places immense trust in his or her surgeon irrespective of trainee involvement, and accordingly the surgeon has a responsibility for the conduct and outcome of the entire procedure. Trainee involvement requires full disclosure to the patient, and academic medical centers should have trainee involvement noted in the anesthesia and operative informed consent documents. Running 2 rooms requires adherence to all safety checkpoints including surgical timeouts. The attending surgeon must recognize the skill sets of involved trainees, provide appropriate supervision, be immediately available for the entire case, be physically present for all critical parts of the procedure, and document this in the medical record. Medicare policy currently allows the teaching physician to be involved in 2 overlapping surgeries provided he or she is present for the critical portions and documents his or her presence during the key portions of the case. In this regard, trainee involvement falls within the scope of procedural delegation.

Procedural delegation to subordinate practitioners is widely accepted across all professional environments, with procedures of lesser complexity entrusted to qualified, albeit perhaps less trained personnel. Indeed, were this practice eliminated (eg, requiring attending surgeon placement of peripheral intravenous or urinary catheters, care could not be delivered. This approach remains both appropriate and efficient so long as the attending pays diligent attention to the competency of the subordinate practitioners, which include specialty-trained advanced practice providers and trainees. In this circumstance, the trainee should clearly be defined as someone who has not yet achieved his or her final level of education, and not as someone who is untrained. For surgical house staff, trainees are all licensed physicians who often, as is the case of a chief resident or fellow in surgery, have more formal training than most attending physicians in other specialties. A surgical resident has, during each year of his or her training, been shown to be proficient in the conduct of many surgical procedures or their component parts. Every case can be deconstructed into steps, and to the extent that the trainee has demonstrated their mastery of a given step, their performance of that step under the jurisdiction of the attending is not unlike the conduct of a physician assistant or nurse practitioner’s activities under the license of a supervising physician. For all procedures, there are defined critical portions when the attending surgeon must be present even if the resident can physically perform the task. These critical portions should be delineated for commonly performed cases and understood by the attending surgeon and trainee. However, there should also be defined steps that do not define the essence of the case and that can be appropriately delegated. The complexity of these steps vary by the competence of the resident surgeon involved, but can include maneuvers required to position the patient, gain exposure to the focal point of the operative intervention, or set up the defining procedure. Residents must also possess sufficient experience to make independent progress such that anesthetized patients are not waiting for the attending surgeon to be available. Logistically, cases can be staggered such that the critical portions of the case occur during distinct times. If the critical portions of the case do overlap, plans must be in place for another attending surgeon to be physically present during the critical portions. In fact, Medicare policy mandates the teaching physician arrange for another qualified surgeon to immediately assist the resident in the other case should the need arise. Procedural delegation to trained personnel under the direction and responsibility of the attending physician is currently a widely accepted practice in many domains of health care and this principle can be applied to surgical trainees.

The incremental acquisition of surgical competence during training is critically important to maintaining a surgical workforce. To be sure, the first time a surgeon operates alone should not be his or her first day as an attending surgeon; this must occur during training even if only for parts of cases. The progressive development of skills is manifest in the autonomy demonstrated by recent graduates of advanced fellowship surgical training, who have been shown to achieve high-quality surgical outcomes from the very beginning of their post-fellowship practices, similar to those of their experienced mentors. Prospective study and continued critical review of the impact of concurrent procedural management on outcomes is imperative. Few studies have examined concurrent operating rooms specifically, and this should be recognized as a knowledge gap worthy of funded health services research. However, initial studies have established that concurrent procedural conduct is feasible and bolsters both efficiency and productivity. Similarly, early studies addressing this practice in complex operative environments, such as those involved in cardiothoracic surgeries, and quantifying the impact of attending’s overseeing simultaneous operations on operative duration, operating room utilization, and patient outcomes in cardiothoracic surgery have shown no statistically significant differences in observed or risk-adjusted outcomes in any category. Additional critical evaluation is certainly warranted, with detailed focus on surgical outcomes and efficient utilization of highly trained attending surgeons. At present, the data speak to comparable outcomes and improved efficiency.
between single room attending cases, non–trainee-involved cases, and concomitant cases involving trainees.

Safety supersedes productivity. Nevertheless, improved health care delivery is a national priority that requires objective consideration. Overseeing concurrent rooms maximizes the skills of the attending surgeon and ultimately improves the efficiency with which health care can be delivered. As the operating room is the most costly environment in all of health care, incremental gains in this domain amount to significant improvements in the delivery of cost-effective care. On the basis of existing data, we advocate the continued practice of surgeons conducting concomitant cases under the established Medicare guidelines.

REFERENCES