Pediatric surgeons develop standards for children's surgical care in the US

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The American College of Surgeons (ACS) has published new comprehensive guidelines that define the resources the nation's surgical facilities need to perform operations effectively and safely in infants and children. The standards—published in the March issue of the *Journal of the American College of Surgeons*—also have the approval of the American Pediatric Surgical Association and the Society of Pediatric Anesthesia. Representatives of these organizations as well as invited leaders in other pediatric medical specialties, known as the Task Force for Children's Surgical Care, developed the consensus recommendations over the past three years.

"The intent of these recommendations is to ensure that all infants and children in the United States receive care in a surgical environment matched to their individual medical, emotional, and social needs," said Keith T. Oldham, MD, FACS, task force chair and the surgeon in chief at Children's Hospital of Wisconsin, Milwaukee.

Millions of children undergo surgical procedures in this country every year according to Dr. Oldham. "There are still children today who receive surgical care in environments not matched to their needs," he said. "This scenario can affect how children fare after an operation."

Many studies show better results—from fewer complications to shorter hospital stays—when newborns and children undergo surgical procedures in environments that have expert resources for pediatric patients, compared with nonspecialized centers.

In its published report, the Task Force for Children's Surgical Care defined the proper surgical environment for children as one "that offers all of the facilities, equipment, and, most especially, access to the professional providers who have the appropriate background and training to provide optimal care."

To use terms familiar to the public, the task force assigned levels of resources,1 as the ACS has done for trauma centers for decades. The classification for children's surgical centers is as follows:

- Level I (highest level): Possesses adequate resources to provide comprehensive surgical care and perform both complex and noncomplex surgical procedures in newborns and children of all ages, including those with the most severe health conditions and birth defects. Is staffed 24 hours a day, 7 days a week with properly credentialed pediatric specialists, including pediatric and subspecialty surgeons, pediatric anesthesiologists, pediatric diagnostic and interventional radiologists, and pediatric emergency physicians. Has a Level IV neonatal intensive care unit (NICU), the highest level of critical care for newborns.
- Level II: Possesses adequate resources to provide advanced surgical care for children of all ages, including those who have accompanying ("comorbid") medical conditions. Operations would typically be performed by a single surgical specialty. Personnel include a certified pediatric surgeon, pediatric anesthesiologist, and pediatric radiologist; with other pediatric specialists readily available for consultation; and has an emergency physician and an intensive care unit that both have pediatric expertise. Has a Level III or higher NICU.
- Level III: Possesses adequate resources to provide basic surgical care and perform common, low-risk surgical procedures in children older than 1 year who are otherwise healthy. Has a general surgeon, anesthesiologist, radiologist, and emergency

physician, all of whom have pediatric expertise. Has a Level I NICU (well-newborn nursery) or higher.

Both Level II and III surgical centers must be able to stabilize and transfer critically ill children to a hospital with higher-level resources. All children's surgical centers must have at least one pediatric surgical nurse, a pediatric rapid response team of critical care professionals available at all hours, and an in-house physician with Pediatric Advanced Life Support certification or equivalent qualifications. Furthermore, these centers must be capable of performing pediatric resuscitation in all areas of the facility.

Additional guidelines for ambulatory, or outpatient, surgical centers include having preoperative and recovery areas dedicated to pediatric patients. Also according to the task force report, a pediatric anesthesiologist at an ambulatory surgical center should administer or supervise the administration of a general anesthetic or sedative to all infants below the age of 1 year.

Acknowledging that the standards are high, ACS Executive Director David B. Hoyt, MD, FACS, a member of the Task Force for Children's Surgical Care, added, "I think many hospitals will rise to these new standards by adding resources."

In designating the resources that children's surgical centers need, the Task Force for Children's Surgical Care reportedly relied on published scientific evidence and expert opinion. According to Dr. Oldham, supporting evidence included the success of the ACS' nationwide classification and verification system for trauma centers. By helping ensure that injured patients receive care at the appropriate level, the trauma system has saved many lives, he pointed out.

Plans are under way to develop criteria for evaluating existing facilities

that perform children's surgical procedures, he reported. The ACS will oversee the site verification process, which Dr. Oldham expects to become available sometime this year. Dr. Hoyt said the College has extensive experience in managing similar quality programs, including those for cancer, bariatric surgery, breast, and trauma centers. The verification process for children's surgical centers will distinguish their scope of resources, not quality of care, he stressed. However, he said the classification should help patients' families feel confident that they will get excellent routine surgical care at their community hospital.

Under the guidelines, some patients will need to go to a different hospital with more advanced resources. Although that may mean a small percentage of families must travel farther from home for their child's surgical care, Dr. Hoyt noted "the goal is to make sure the highest level of care is available for patients with the most complex needs."

"We have tried to put first the best interests of patients—sick kids with problems that need surgical care," he said.

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