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Caring for children? Consider their unique needs

Like their older, larger, and sicker fellow patients, children can be candidates for outpatient surgery, and some ambulatory surgery centers (ASCs) opt to specialize in treating the younger set.

There is more to expanding an ASC's patient base to pediatrics than putting a few toys in the waiting room (although that is a necessary step). Neither is it sufficient to purchase or lease smaller furniture, needles, apparel, and medical devices, although these, too, are necessary.

Clinical staff needs to realize that treating younger patients requires an understanding of their unique clinical characteristics.

"Children have different vital signs parameters, and assessing that population is much more difficult," explains Gina Radewan, BSN, RN, surgical coordinator of Southeast Wisconsin Ambulatory Surgical Center in Kenosha, Wisconsin. In a previous position, Radewan served as circulating nurse for many pediatric procedures. Vital signs that would be alarming in an adult are normal for small children, she notes.

Keith Metz, MD, is an anesthesiologist and medical director of Great Lakes Surgical Center in Southfield, Michigan, where he specializes in pediatric procedures, primarily ear, nose, and throat (ENT). While it is possible to set aside a day or two each week, or a particular section of an ASC, for pediatrics, it is important to generate enough volume to maintain competence, he notes.

According to the Accreditation Association for Ambulatory Health Care (AAAHC) 2012 Handbook, ASCs that treat pediatric patients need to have appropriate equipment, medication, and resuscitative capabilities, as well as "a safe environment," defined as space and supplies dedicated to pediatrics and personnel trained in the specialty.

There is no outpatient pediatric surgical specialty or accreditation and no professional group representing this subgroup of outpatient surgery, however. For example, the Tampa (Florida) Pediatric Surgery Center (PSC) could treat adults, according to administrator Teri Ulm. However, along with its affiliated ASC in Odessa, it chooses to specialize in patients age 21 and younger. The average age is between 2 and 3, and 80% of those are ENT, primarily tonsils and ear tubes. Together, the Tampa and Odessa centers average 10,000 cases per year.

What you need to succeed

According to Dr Metz, the number 1 requirement for any ASC contemplating pediatrics is "staff that really wants to take care of kids."

Training and experience are critical. Nursing and anesthesia staff should be experienced in pediatrics and certified in Pediatric Advanced Life Support.

The center will have to invest in child-appropriate equipment and supplies. These include gowns, masks, socks, intravenous sets, endotracheal tubes, blood-pressure cuffs, and warming devices.

A pediatric emergency cart must be available with a defibrillator and pediatric

doses of medications.

Finally, a separate waiting room or area with plenty of toys is helpful.

Patient selection

As Dr Metz notes, children presenting for outpatient surgery tend to be otherwise healthy, compared with older adults, who may have age-related conditions or comorbidities.

"The main concern is unanticipated respiratory problems," Dr Metz says.

The smaller size and lower weight of children can affect their response to medications.

"Children are not simply little adults," he says, "and they respond differently to anesthetics and other medications." In addition, younger ones often cannot, or will not, comply with instructions.

Unlike adults, he adds, they must be considered as part of a family unit. Concerns, attitudes and behavior of parents and other caregivers may be the deciding factor in the appropriateness of outpatient surgery for a particular child.

Age only one factor

While PSC considers anyone under 21 a pediatric candidate, most of its patients are far younger. But age is only one factor in deciding, "Who are kids?"

Dr Metz's patients range from about 50 weeks postconception to 12 years. Any significant comorbidities must be managed, and the list of typical procedures is short: ENT, hernia repair, ophthalmology, and urology.

Along with age, weight is a significant factor in eligibility for outpatient surgery.

"Lower-weight children may be especially susceptible to dehydration after some types of procedures," Dr Metz says.

According to his ASC's guidelines, full-term infants must be at least 46 weeks postconception, while premature infants must be at least 50 weeks postconception. If determined to be high risk, they must be admitted for 24 hours of cardiorespiratory monitoring. In such cases, according to Dr Metz, "a wiser choice would be to have those children treated in a more specialized setting."

As with adults, malignant hyperthermia is a possible risk, and those with a family history of the condition should be evaluated by an anesthesiologist. For a child who has had a previous incident or a diagnosis of malignant hyperthermia through biopsy, Dr Metz recommends moving the procedure to a hospital.

Then there is the risk of attention-deficit/hyperactivity disorder (ADHD). A study published in February 2012 by the Mayo Clinic in Rochester, Minnesota, found that children who received general anesthesia 2 or more times before the age of 2 were more likely to develop ADHD by age 19. Parents often ask questions about the issue, and clinical staff should be prepared to respond.

Screening for sniffles

When a young patient arrives for surgery sneezing and coughing, different standards apply than for adults.

"Do I have to cancel every kid with a cold?" Dr Metz asks. The answer is no, but careful evaluation is necessary. "Many kids have runny noses. It's not always serious, like bronchitis."

For one thing, he notes, the average child gets 6 to 7 upper respiratory infections (URI) per year. Counting recovery periods, he says, "There are only 9 weeks a year during which the average child is not suffering from or recovering from a URI."

Meanwhile, there are aspects to ENT procedures that may relieve URIs, such as

removing tonsils and adenoids or placing ear tubes.

When not to go ahead

What should prevent the decision to go ahead with surgery despite a cold is the appearance of serious symptoms. One is a temperature above 101°F. Others are severe laryngitis, malaise, sore throat, sneezing, cough, congestion, and runny nose.

Risks include oxygen desaturation, bronchospasm laryngospasm, and respiratory failure. Endotracheal intubation increases the chance of complications.

"The evidence indicates that kids with colds do worse," Dr Metz concludes, "and the younger the patient the higher the risk."

Preop fasting

Another risk of anesthesia is aspiration pneumonia, and it is the reason food and liquids are withheld before surgery. For children, again the rules are different, and, according to Dr Metz, they are changing.

American Society of Anesthesiologists (ASA) guidelines for preoperative fasting in pediatric patients call for stopping solid food 6 hours before surgery; formula, 6 hours; breast milk, 4 hours; and clear liquids, 2 hours.

A newer protocol is emerging, he says, which would allow formula up to 4 hours before the procedure; breast and animal milk, 3 hours; and clear liquids, 1 hour.

Screening protocol makes a difference in a facility's ability to operate efficiently and in the patient's experience. A 1997 study at the University of Michigan Medical Center (related to the hospital outpatient department, not an ASC) showed that of 127 children whose elective outpatient surgery had been cancelled, 34.6% were cancelled due to URIs, 30.7% for other medical reasons, and the rest for failure to fast for the required period, scheduling errors, or lack of transportation. Of all the cancellations, 22.8% occurred on arrival at the surgery center.

The family factor

Should parents or other family members accompany pediatric patients into the OR? That is a matter of debate. Based on her experience, Radewan is all for it. Dr Metz offers pros and cons.

"Studies show that family members benefit from being present when the doctors and nurses are working on the patient during a cardiac arrest so it would make sense that the same principles would apply for a patient going under anesthesia," Radewan notes.

When permitted in the OR for a pediatric procedure, parents stay only until the IV is inserted, not during intubation.

According to Dr Metz, "99% of the time, they appreciate the opportunity to be there."

Benefits, he says, include reduced anxiety and increased compliance for the child, as well as higher satisfaction for both parents and child.

"Family dynamics" play a role, and having certain relatives present could be more disruptive than helpful, he notes. A parent may have an adverse reaction to the situation. There may be family disputes, especially if parents are divorced. In some cases, there may not be enough space in the OR to proceed safely with additional people.

Scheduling and logistics are also important. The University of Michigan study found that canceling pediatric procedures often caused one or both parents to miss work or to make an unnecessary trip.

Once they are admitted, young patients need a separate place to wait with their families, with furnishings appropriate for children, and no long waiting periods.

"It's good to get kids in and out early, so they don't have to wait," advises Dr Metz.

With adequate planning, training and commitment, pediatric surgery can be a rewarding specialty for an ASC: The patients are adorable, innocent, and generally healthy. As Dr Metz notes, "Older patients are often responsible for their ill health. It's never the kid's fault." ❖

—Paula DeJohn

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Keith Siddel will respond to questions in the column. Send your questions to editor@ormanager.com

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