Every picture tells a story -- but understanding the story requires a careful inquiry. Recently, the use of passive protective stabilization devices in dentistry has been the subject of unfavorable media coverage. Images of crying children, trapped in restraint systems while being “subjected” to apparently painful dental procedures, have suggested that practitioners may value efficiency and profit over compassion and good patient care.

The truth is considerably more nuanced than these images might suggest. After an especially negative depiction in a segment on the television series Inside Edition (April 26, 2013), the American Dental Association (ADA) issued a statement defending the use of protective stabilization devices to “help keep children still so that the child does not harm himself or the dental staff during treatment.” As the ADA noted, the term “papoose board,” referring to a specific type of stabilization device, is something of a misnomer. According to the ADA, “modern versions are not boards at all - they are often comprised of soft cloth and Velcro®.”

Moreover, use of these devices is not confined to the dental office as various forms of passive protective stabilization are found in emergency rooms and urgent care facilities across the United States.

Defined as “any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a patient to move his or her arms, legs, body, or head freely”, protective stabilization can be active (involving restraint by another person, such as the parent, dentist or dental auxiliary) or passive (through utilization of a restraining device). Currently, at least one state (Colorado) requires training beyond dental education to use stabilization devices.

Public perception that the use of stabilization devices constitutes abuse may derive in part from a shared ambivalence and discomfort on the part of practitioners. Most general dentists receive little, if any, training in the proper use of passive restraints. As the American Academy of Pediatric Dentistry (AAPD) notes, “on average, pre-doctoral pediatric dentistry programs teach students [how] to treat children four years of age and older, who are generally well behaved and have low levels of caries.” Furthermore, 42 percent of institutions reported fewer than 25 percent of students had [even] one ‘hands-on’ experience with passive immobilization for non-sedate patients, while 27 percent of programs provided no clinical experiences.

Lacking experience in the appropriate use of restraints and encountering a public perhaps informed by unbalanced media coverage, many dentists refer the uncooperative pediatric patient to specialists. Currently, only 6,000 active pediatric dentists are available to serve the 83 million Americans under the age of 18. Clearly, general dentists treat millions of pediatric dental patients. In order to provide safe and compassionate care to children presenting with behavioral issues, a number of management techniques and options may be necessary including the use of passive protective stabilization when indicated.

Most practitioners are skilled at using basic behavior guidance techniques, which include tell-show-do, voice control, nonverbal communication, positive reinforcement, distraction, parental presence/absence (as appropriate) and the judicious use of nitrous oxide. These techniques are not always effective, however, with patients who are too young, have special needs or are highly anxious. In these cases, more advanced techniques of behavior guidance, such as protective stabilization, sedation and general anesthesia, are indicated. Unfortunately, the high costs and risks of sedation and general anesthesia often render these alternatives unattractive. Protective stabilization, alternatively, offers a low risk and low cost approach to addressing the challenges presented by difficult pediatric patients, especially when compared to the health risks of general anesthesia and sedation.
Indications and Contraindications
The AAPD offers the following indications for the appropriate use of protective stabilization in treating patients for whom this technique is advisable:

- patients who require immediate diagnosis and/or limited treatment and cannot cooperate due to lack of maturity of mental or physical disability; or
- patients for whom the safety of the patient, staff, dentist or parent, as well as sedated patients require limited stabilization to help reduce untoward movement.3

Contraindications include:
- patients with a history of physical or psychological trauma due to restraint (unless no other alternatives are available);
- cooperative non-sedated patients;
- non-emergent treatment needs in order to accomplish full mouth or multiple quadrant dental rehabilitation, or
- patients who cannot be immobilized safely.2

In no event should protective stabilization “be used as a means of discipline, convenience or retaliation. Furthermore, the use of protective stabilization should not induce pain for the patient.”2

Benefits of Protective Stabilization
Without protective stabilization, many uncooperative patients cannot be treated consciously. Paradoxically, the "swaddling" effect of passive restraint devices places some children into a calm state once fully restrained, particularly if they are very little. “Fewer injuries were incurred due to passive stabilization compared to active stabilization, and fewer injuries occurred with the use of planned passive stabilization compared to its use in emergent situations.”5

Protective Stabilization Devices
The most commonly used passive stabilization devices include a padded board with flaps tailored from solid fabric or mesh. These so-called “papoose boards” are offered in several sizes to ensure an appropriate fit for the patient. For patients who present between sizes, two boards can be used inside each other. The patient is asked to lie on the board, and wrist straps are affixed to his or her arms. Two or three Velcro flaps are then used to fully secure the patient to the device. According to the AAPD, “stabilization around extremities or the chest must not actively restrict circulation or respiration…they must be used with caution, especially for patients with respiratory compromise (e.g., asthma) and/or who will receive medications (i.e., local anesthetics, sedatives) that can depress respirations.”3

Stabilization for the head may be accomplished using forearm-body support, a head-positioner attached to the papoose board, or by an extra assistant. Because the head is placed on a rigid board, it may be prudent to place a towel under the neck to maintain airway. To provide comfort, a parent can hold the child’s hand by reaching under the chest flap. It is sometimes debated whether parents should be present in operatory, but 100 percent of US pediatric residency programs allow parents under the age of 3 in the operatory.6 Moreover, 92 percent of mothers believe they should be with their child when he/she was placed on a rigid stabilization board to increase their child’s security and/or comfort.7
**Risk Management Recommendations**

From a risk management perspective, informed consent for the use of passive restraints is essential—both to prevent potential litigation and to encourage parental acceptance of their use. Typically, only one parent must provide consent and it is recommended that informed consent be discussed and acquired in a separate appointment. If a change in behavior management is needed due to deteriorating behavior, additional consent must be obtained. Interestingly, after witnessing the use of passive restraints 96 percent of parents thought that its use was necessary to perform dentistry safely and effectively on their child, and 86 percent were willing to use passive restraints, if conditions warranted, on their next child.7

In many ways, the use passive restraint in dentistry is analogous to the use of automobile child safety seats. Common acceptance of child safety seats, however, is a relatively recent phenomenon. Automobiles have been around since the early twentieth century, but legislation requiring the use of child safety seats was not enacted in all fifty states until 1985. As recently as 1984 less than half of all children aged 0-4 were transported in car seats.8 Compare that to today’s practice, where the failure to use a car seat would be considered parental negligence. It does not seem farfetched to imagine a world, with the help of appropriate parental education and advocacy by the well-trained and confident practitioner, where protective stabilization is seen as a widely accepted adjunct to safe pediatric dentistry.

When indicated, proper use of protective stabilization permits dental treatment to be provided to the uncooperative patient in a safe work environment for everyone concerned — patient, dentist and staff.

References: