



Developing a consensus for restorative procedures in pediatric dentistry

During the 1960s, new approaches to education were developed. Teaching for mastery was introduced emphasizing what a student learned rather than what a teacher taught. The concept of individualizing student progress through a curriculum was initiated. Rather than all students progressing lock-step through courses in fixed amounts of time with variable levels of achievement, students were allowed to progress in variable amounts of time until they attained successful performance as defined by a fixed level of achievement. Defining the objectives of instruction was integral to the teaching for mastery approach. Mager, a leading voice in educational reform, wrote that students who do not know where they are going, will not know when they get there, and might end up some place else. In dental education, these new developments had their impact. Richard Mackenzie, nationally recognized for his efforts to reform and improve dental education, developed the 7-volume *Instructional Information Exchange for Dentistry in the United States*. His work led to the requirement of specific course goals and defined instructional objectives for accreditation of dental teaching programs. There were also experiments with educational technology, such as computer assisted instruction.

In 1971, the Division of Dentistry of the US Department of Health, Education and Welfare funded Project ACORDE (a consortium on restorative dentistry education). This was a nationwide effort to produce teaching materials for restorative dentistry, and it involved representatives from all dental schools. That same approach was then extended to pediatric dentistry, when in 1974 the division funded Project TAPP to perform task analyses of procedures in pedodontics. Project TAPP attempted to define methods for performing most procedures in pediatric dentistry including sealant application, injection techniques, space maintainer construction, pulp therapy, restorative procedures and even mouth guard construction. The analyses were performed by presumed "experts" in pediatric dentistry with the involvement of representatives of all dental school pediatric dentistry departments. These individuals expressed their opinions to a national expert panel of academy members, consisting of educators and private practitioners that met in Washington, DC to decide how each and every

procedure should be performed. For each procedure, the starting and ending points were defined, and the methods to perform the procedure, including any exceptions to those methods, were also described. Most importantly, measurable criteria to accomplish each procedure were specified. Subsequently, teaching materials, including manuals and videotapes, were produced and some of those are still used at teaching institutions throughout the country. However, while that project represented a noble attempt at developing a unified approach to performing procedures in pediatric dentistry, it was nevertheless based primarily on individual personal opinion rather than on controlled clinical study and evidence-based practice.

More than 25 years later, much of what we do in pediatric dentistry still is based on personal experience rather than on evidence from controlled clinical study. Although there have been many clinical research projects testing a variety of approaches to clinical procedures, there has yet to be developed a consensus on how procedures in pediatric restorative dentistry should be performed. This past April, the American Academy of Pediatric Dentistry, assisted by the generous financial support of the American Society of Dentistry for Children, sponsored a conference to achieve that goal. Kevin Donly, director of postdoctoral pediatric dentistry at the University of Texas Health Science Center at San Antonio, coordinated and chaired the conference, which was held in San Antonio on April 15-16. Sixteen experts in their respective fields were invited to submit papers and present summaries of their findings to a small panel of practitioners and researchers. Eight of the papers were reviews of the current literature and 8 developed position statements based on the literature reviews. The subjects included caries risk assessment and use of sealants, adhesives, glass ionomer cement, amalgam, stainless steel crowns, resin composite and anterior restorations in pediatric dentistry. The 16 papers appear in this special issue of the journal. They are comprehensive and scholarly representing current thinking in regard to the various restorative dentistry procedures. They require many hours to read completely, but that time will be invested wisely as the papers define why we do what we do in pediatric restorative dentistry.