Evidence-based best practices are yet to be established for the management of caries-associated pulpal disease in young permanent and primary teeth. Controversies still remain among practitioners, including pediatric dentists and endodontists, as to which treatment modalities are most predictable in the contemporary practice of pulp therapy. Many clinicians still remain divided as to whether indirect pulp capping is a viable procedure in primary and young permanent teeth, or whether formocresol remains the medicament of choice for pulpotomies in primary teeth. To begin the process of establishing evidence-based best practices in pulpal therapy as well as highlight some of the future directions in pulp therapy including pulp regeneration with stem cells and root canal revascularization, the American Academy of Pediatric Dentistry (AAPD) and the American Association of Endodontists (AAE) jointly sponsored “Emerging Science in Pulp Therapy: New Insights into Dilemmas and Controversies.” The symposium was held on November 2–3, 2007, in Chicago, Illinois.

The convening of this pulp therapy symposium was heralded as a major event in that it was a first time conjoint symposium sponsored by these 2 national specialty organizations. The genesis of the idea for joint sponsorship was the need to examine the shared procedures performed by the 2 specialties. With specialty organizations routinely producing evidence-based practice guidelines that provide the foundation for treatments performed, it is critical that when 2 specialties perform the same or similar treatments, their guidelines are parallel in language and in content. Without these guidelines, confusion and uncertainty will result in clinical practice when a rational treatment plan is required to manage a specific pathologic entity such as caries.

Pediatric dentistry and endodontics share in the important treatment decisions associated with pulpal therapy for the cariously involved young permanent tooth. In addition, endodontists are consultants to and involved in pulp therapy treatment decisions for the cariously involved primary tooth. With the eventual expectation that the 2 organizations could come together and produce practice guidelines that share common goals and language for caries-associated pulp therapy for primary and young permanent teeth, the decision was made to bring together a panel of world-renown experts from both specialties to present the current best evidence as a first step in developing the anticipated guidelines.

Individuals identified to be on the planning committee from the AAE were Drs Gerald N. Glickman, Alan Gluskin, and Bradford Johnson. From the AAPD, Drs Suzi Seale, Elizabeth Barr, and James Coll were selected. These individuals met and identified the following areas as appropriate for focus: the nature of the carious lesion of dentin; indirect pulp therapy, including stepwise excavation for both young permanent teeth and primary teeth; primary tooth pulpotomy agents with special emphasis on formocresol and the controversy surrounding its use; and revascularization of young permanent teeth and pulpal regeneration by using stem cells. To that end, a cadre of 9 experts was identified and invited to present evidence for assigned topics. The articles resulting from their presentations appear in this publication.

During the conference Professor Lars Bjørndal discussed the caries process and its effect on the pulp. He applied this information to the dilemma of the deep carious lesion and indirect pulp capping, with special emphasis on the coronal seal. Dr Joe Camp focused on diagnostic dilemmas in vital pulp therapy for young immature teeth. Dr Martin J. Trope spoke on how new trends are changing our understanding of the regenerative potential of the dental pulp, whereas Dr David Witherspoon spoke on new directions and treatment perspectives involving pulpal revascularization for permanent teeth. Dr Anna Fuks presented a compilation of the evidence for different pulpotomy agents in treating the vital cariously involved primary tooth. Dr Jim Coll provided information about indirect pulp capping for primary teeth as an alternative to pulpotomy. Drs Alan Milnes and P. J. Waterhouse presented opposing views about the controversy over formocresol as a
pulpotomy agent for human teeth. Finally, Dr Ken Hargreaves provided evidence for the future of pulpal regeneration for the young permanent tooth.

Because 2 specialty groups were represented, the planning committee sought to determine, through a brief pretest completed before the first speaker, the baseline opinions of the audience about the various topics to be presented. After the last speaker, a more lengthy set of questions about the same topics were presented to the audience for their opinions by using an audience response system. Attendees’ responses were identified by specialty, and the results of the comparisons of the presymposium and postsymposium opinions within specialty and across specialties are also presented in this publication.

We believe this symposium represented an important landmark in bringing together different disciplines with potentially different opinions to reach an evidence-based consensus about common treatment dilemmas. Because practice guidelines increasingly drive our treatment decisions, it is important that we are in agreement about their content, ultimately for the care and benefit of our patients.

Conflict of Interest: Gerald N. Glickman, DDS, MS, reports no financial interests or potential conflicts of interest. N. Sue Seale, DDS, MSD, reports no financial interests or potential conflicts of interest.

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