Academicians Session

Treatment outcomes in pediatric dentistry

Moderator: Ann L. Griffen

We are facing increasing pressure from several directions to provide scientific evidence and outcomes measures for our treatments. The interests of the pediatric dental practice community, academic community, and organized dentistry meet in our struggle with these issues. A session on "Treatment Outcomes in Pediatric Dentistry" was held as part of the American Academy of Pediatric Dentistry Annual Session on May 25, 1997 in Philadelphia. This program was an outgrowth developed in response to the interest expressed the previous year by practitioners and academics alike after the Academicians Session on outcomes. The 1997 session took the place of the usual Academicians Session, and speakers included academicians, policy makers, and private practitioners. The following papers are based on the talks and commentary presented that day.

1. **How outcomes and evidence can strengthen the role of the pediatric dentist**
   Burton L. Edelstein, DDS, MPH
2. **Oral health outcomes and evidence-based care**
   B. Alex White, DDS, DrPH
3. **Outcomes and the scientific basis of clinical care**
   Peter S. Vig, BDS, PhD, FDS, D Orth (RCS)
   Ann L. Griffen, DDS, MS
   Kate WL Vig, BDS, MS, FDS, D Orth (RCS)
4. **Pediatric dental treatment outcomes: the importance of multiple perspectives**
   James J. Crall, DDS, ScD

How outcomes and evidence can strengthen the role of the pediatric dentist

Burton L. Edelstein, DDS, MPH

In addition to the wide range of clinical roles we normally attribute to ourselves: diagnostician, educator, counselor, and surgeon, we pediatric dentists also daily perform a wide range of roles as health care providers. Within this businessperson umbrella, we are each a practice manager, quality assurance official, contractor, and business strategist. Our commitment to our specialty and to the welfare of children add roles as communicator and promoter. In each of these roles, the overt application of "outcomes" and "evidence" are increasingly critical to success.

Outcomes are objective measures of performance. Sometimes called "performance measures", "impact statements", or "accountability criteria", outcomes are used to answer the simple question, "What did I get for my time and money?" Examples of outcomes at the individual level are improvement in function, quality of dental care, and satisfaction with the dental visit. Examples of outcomes at the purchaser level are percentage of covered children who receive any dental care, portion of enrollees who complain about their dental care, and cost of claims paid in relation to quantity and quality of care obtained. To be useful, outcomes must be discrete, measurable, and meaningful. That is, they must be specific enough for clarity. They must be objectively quantifiable. They must bear some significant relationship to all parties involved—the dentist, the parent, the patient, and the payer. In sum, outcomes allow for accountability by clearly measuring performance and characterizing the impact of treatment.

Evidence, a very different concept, relates to justification of what we do. Like outcomes, evidence is most useful when fully objective and quantifiable. Ideally, objective evidence is obtained through clinical studies of efficacy (how well an intervention performs in a "perfect world") and effectiveness (how well an intervention performs in the "real world"). Much of what we do in practice, however, is derived not from careful studies but from clinical experience, extrapolation of science to practice, training, intuition, and the "art of dentistry". This doesn't suggest that unstudied procedures are less valuable, only that they are unstudied and therefore potentially suspect. Health policy expert Peter Budetti employs the play on words "informed consensus" to describe what clinicians do in the absence of objective evidence that meets the strict rules and

criteria of evidence studies. Evidence is often used to compare alternatives. For example, a patient may rightfully ask for evidence in deciding between clinical alternatives such as a composite versus an amalgam, or a restoration versus extraction.

These two concepts, outcomes and evidence, are used by each of us in our daily practice throughout our many roles. As clinicians, our days are spent making a long series of complex judgments and decisions that affect the care we deliver. At some level, each decision is based on weighing the evidence for and against potential alternatives and on a clear notion of the desired outcome we wish to assure. Some argue that this subtle moment-to-moment process is the very essence of our being "doctors"; that it should be deferred to, respected, and left alone, allowing us to provide the best care we can for each patient under the circumstances presented to us.

There are two limitations to this conviction. First, we are not the only decision-makers in the process. The parent and patient and even the third-party payer have important roles in deciding between alternatives. They too need information on outcomes and evidence to make wise decisions. Second, despite tremendous variation between dentists in treating the same presentation, there may be one treatment among many which is most efficient and cost-effective. As every individual constantly seeks to maximize economic efficiency—to get the most for their efforts—information on evidence and outcomes is essential. Indeed, we can welcome the opportunity to objectify and verify that the subtle processes inherent in our specialty care are based on strong evidence and yield excellent outcomes. Doing so will only strengthen our various roles.

As practice managers we are already familiar with many of the approaches to evidence and outcomes through our billing systems and financial performance activities. To effectively assess our billing procedures, we use baseline evidence (assess performance prior to making a change in policy), we measure (objectively assess evidence about collections and operating costs), and we assess outcomes (study the impact of office policy changes). Many extend these business analyses to time, cost, and production studies in efforts to maximize practice performance. The same concepts can be readily applied to measurements of outcomes important to you and your patients: treatment plan acceptance and completion rates, patient satisfaction, and health outcomes of patients-of-record or patients who utilize your care. Objective study of these criteria allows you, in your role as practice manager, to improve the performance and impact of your practice.

As quality-assurance officials, each of us is responsible for the totality of care delivered in our offices—from the quality of customer services at the first phone call to the quality of technical care at the chair. The "evidence and outcomes" mindset and techniques are inherent in quality measurement, quality improvement, and quality assurance. They also allow comparison of different providers' performance within a practice, comparison of a single practice's performance over time, and comparison between practices. Patients and third-party payers, as purchasers of care, constantly decide among practice alternatives in their quest to obtain the best quality (outcome) for their commitment of time, trust, and money. The more you can provide objective measures (evidence) of that quality, the stronger is your role in marketing your practice and negotiating with payers.

As contractors, each of us is increasingly asked to "sign on the bottom line" with third parties. Whether in the form of long-standing traditional contracts with the Blues or Delta, the more constraining contracts with preferred provider organizations, or the narrow contracts with dental managed care organizations, each is a formal purchaser's agreement with you, the supplier. All contracts are, by definition, negotiable. Market pressures increasingly demand that third parties show employers, government, and other group purchasers that they deliver measurable outcomes for the premium paid to them. In turn, strong evidence of our performance allows us to negotiate well in the dental financing third-party marketplace. In many cases, pediatric dentists have obtained very favorable contracts, including payments from "discount plans", at full fee-for-service rates because they have been able to establish their critical role in the plan's success. As the health care financing industry slowly moves from simple cost considerations to value purchasing, evidence and outcomes describing our specialty and our practices will be essential for obtaining favorable consideration in the market.

Our role as promoters of pediatric dentistry as the most appropriate source of care for children requires attention to evidence and outcomes. The American Academy of Pediatric Dentistry's white paper, *Pediatric Dentists—a Model of Cost Effective Primary Dental Care*, justifying the pediatric dentists' role as primary care provider for children, depended heavily on evidence that the care we provide meets all the standardized criteria of primary care as well as the criteria for specialty care. This position statement is used widely by the Academy to show purchasers that we must be allowed to treat children comprehensively and not only on referral of a gatekeeper. Similarly, evidence of our cost effectiveness and the value of our care (outcome per unit cost) is used to promote the specialty.

We each play a role in advancing the specialty of pediatric dentistry, nudging it forward as it adapts to new scientific knowledge and dental technology and to changing concepts of health care. Today's sophistication demands that change in clinical practices must

be solidly based on objective evidence and, once implemented, measurable outcomes. Advancing the science base and the social place of pediatric dentistry demands that we each become proficient in weighing evidence and assessing our performance.

In each of our roles we are communicators. Whether shaping the behavioral environment of a child's dental experience, describing treatment alternatives to a parent, explaining our bill to a payer, negotiating a contract, promoting the specialty, or justifying action by government, we are constantly communicating our values and beliefs. Every opportunity to back up those convictions with evidence and outcomes is an opportunity to enhance clarity and gain our objective.

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Oral health outcomes and evidence-based care

B. Alex White, DDS, DrPH

Rising costs have dramatically changed the organization, financing, and delivery of health care services in the US. The market for health care services through the early 1980s could be described as open checkbook, with open choice for patients and practitioners. Many third-party payers, including Medicare, reimbursed practitioners and health care institutions based on the provider-determined cost. A noncompetitive environment offered few incentives to control costs, because revenues might have decreased. Individuals could choose their own practitioner and the hospital of their choice. Practitioners could use the facility of their choice to care for patients. Financial incentives led to increased use of technology and procedures. As a result, health care costs skyrocketed.

In response to these rising costs, employers who provided health benefits to their employees and federal and state governments which provided insurance coverage for the elderly, the disabled, and the poor sought new ways to control costs and shift some or all of the financial risk to providers and patients. New models for reimbursement arose, such as preferred provider organizations (PPOs) and independent practitioner associations, and emerging for-profit companies began to promise to reduce health care costs. Medicare began reimbursing hospitals based on diagnostic resource groupings; hospitals received a predetermined reimbursement for an admission based on diagnosis. Individuals were given incentives to narrow their choice of practitioners, and practitioners began to share in the financial risk of providing care for their patients.

The focus was clearly on cost. These efforts to reduce costs have induced a backlash in the market. Health plans are pitted against practitioners, especially when practitioners believe that plans are dictating the care that practitioners can provide. Plans are pitted against patients, who often feel they are denied coverage. And worst of all, patients are pitted against practitioners.

In the 1990s, pressure from patients, practitioners, and third-party payers has begun to change the focus from cost to value. At some point, no excess cost will remain in the system. When health care costs do not differ, the focus will shift to value. Patients, employers, and other benefit purchasers increasingly request information about the value of their resources spent on health care. They would like to know, in short, if they're getting their money's worth. One way to determine the value of dollars spent for dental care is to measure the outcomes associated with such treatment. By comparing the outcomes associated with dental care to its cost, one can compare different types of dental treatment. This paper briefly describes dental care outcomes and identifies possible ways that outcomes might be used in answering the question as to whether patients and purchasers get their money's worth.

Oral health outcomes

Oral health outcomes have been defined as the elements of oral health status and quality of life that matter to patients and their families, and those clinical or physiologic measures that matter to health care professionals.[1] At least two perspectives are important: those of patients and their families and those of practitioners. In addition, outcomes have multiple dimensions including clinical and physiological elements, as well as quality-of-life elements.

Outcomes are important for several reasons; foremost is their role in setting public policy. In an era of budget deficits, constrained resources, and rising costs, public attention is focused more sharply on the health care system. Health policy makers, public health officials, employers, insurers, practitioners, and consumers seek to ensure that appropriate and cost-effective health care technologies and services are available. Much of this interest is driven by the widely held belief that too many resources are consumed for health care services without a commensurate improvement in overall health.[2,3] Although many health care services and technologies offer some benefit, not all are equally effective and their costs can vary significantly. Without appropriate outcomes, sound policy decisions cannot be made.