

# ENDODONTICS



*Colleagues for Excellence*

PUBLISHED FOR THE DENTAL PROFESSIONAL COMMUNITY BY THE AMERICAN ASSOCIATION OF ENDODONTISTS **Spring/Summer 2005**

## Endodontic Case Difficulty Assessment and Referral

Welcome to *ENDODONTICS: Colleagues for Excellence*...the newsletter covering the latest in endodontic treatment, research and technology. We hope you enjoy our coverage on the full scope of options available for patients through endodontic treatment and that you find this information valuable in your practice. All issues of this *ENDODONTICS* newsletter are available on the AAE Web site at [www.aae.org](http://www.aae.org), and cover a range of topics on the art and science in endodontic treatment.

The aim of nonsurgical endodontic treatment is to address pathosis of the pulpal and periradicular tissues. As the average age of the population has increased, the stigma of tooth loss has become less acceptable for most patients than for previous generations. In addition, increasingly complex, sophisticated restorative techniques and involved treatment plans have led to a higher demand for endodontic treatment. Advances in the understanding of endodontic pathosis, aseptic technique, and principles of canal preparation and obturation have also led to significantly increased and predictable healing rates for endodontic treatment—95 percent and higher under ideal conditions according to current literature (Salehrabi R, Rotstein I. *J Endod.* 2004 Dec;30(12):846-50; also see attached reading list).

This newsletter will address one of the important factors relating to retention of endodontically treated teeth—the quality of endodontic treatment. Nonhealing of root canal treatment can be traced to misdiagnosis, errors in treatment planning and poor case selection. This article speaks to each issue and offers a practical tool for overcoming case assessment pitfalls.

### Contemporary Endodontic Treatment

Recent technological advances in endodontic treatment have resulted in the retention of teeth that were previously deemed untreatable. However, technology, instruments and materials are not a replacement for clinical skill and experience, but rather adjuncts that a practitioner can employ to reach a desired goal. With that in mind, it is imperative that a careful sequence of case selection and treatment planning is carried out based on clinical factors and the dentist's own knowledge of his or her abilities and limitations.

A recent ADA survey estimates that some 15.8 million endodontic procedures were performed in the United States

alone in 1999. This number has climbed from an estimated six million root canal procedures 30 years prior. With demand as high as it is for the treatment of pulpal disease, general practitioners should at a minimum be comfortable with diagnosis of pulpal and periradicular pathosis, and endodontic treatment planning.

### Treatment Planning

The first step in treating the patient is planning the case in full. This initially involves a comprehensive medical review to predict any conditions that may require modification of the usual treatment regimens. The identification of medical conditions that may complicate endodontic treatment will help the dentist avoid potential medical emergencies during treatment. In addition, consideration of complicating patient factors such as anxiety, limited opening or gag reflex will allow the dentist to avoid situations that may compromise treatment outcomes.

Following the medical evaluation, a subjective examination and a radiographic survey should be completed. The practitioner should then be able to perform and interpret diagnostic tests to arrive at a diagnosis and high-quality treatment plan that addresses the patient's needs and desires.

Collection of this data makes it possible to avoid misdiagnosing and therefore mistreating a patient—actions that could lead to a loss of the patient's confidence in the practitioner, the prescribed treatment and ultimately the dental profession. Proper treatment planning not only helps the practitioner avoid procedural shortcomings (e.g., missed canals, excessive removal of dentin, perforations, ledges, separated instruments or over/underfill of the canal space), but also allows the dentist to choose cases based upon his or her experience, skill set and comfort level.

Every clinician must constantly evaluate his or her diagnostic and technical skills. The practitioner then has a legal and ethical obligation to determine, based on the case at hand, whether he or she possesses the skills necessary to predictably manage the patient's endodontic needs, and assure the delivery of timely and effective care. Practitioners electing to perform endodontic treatment are held to the same standard of care as endodontists. Cases that exceed the comfort level or skill set of the dentist should be referred to a specialist with the requisite skills and experience to manage the patient.

### **AAE Case Difficulty Assessment Form and Guidelines**

The American Association of Endodontists has developed a practical tool that makes case selection more efficient, more consistent and easier to document. The *Endodontic Case Difficulty Assessment Form* is intended to assist practitioners with endodontic treatment planning, but can also be used to help with referral decisions and record keeping.

The assessment form identifies three categories of considerations which may affect treatment complexity: patient considerations, diagnostic and treatment considerations, and additional considerations. Within each category, levels of difficulty are assigned based upon potential risk factors. The levels of difficulty are sets of conditions that may not be controllable by the dentist. Each of the risk factors can influence the practitioner's ability to provide care at a consistently predictable level. This may impact the appropriate provision of care and quality assurance. For each level of difficulty, guidelines are given to aid the dentist in determining whether the complexity of the case is appropriate for his or her experience or comfort level.

#### **Minimal Difficulty**



Figure 1: Radiograph of a minimally restored anterior tooth. The root has no apparent curvature and the canal is not reduced in size. In the absence of any modifying patient factors, the nonsurgical root canal treatment of this tooth would be classified as minimally difficult.

Figure 1 illustrates a case with minimal difficulty: a medically healthy patient who presents with pain that is well localized to an anterior tooth. The patient in this case is not anxious and has no limitation in opening. The objective tests, and pulpal and periradicular diagnoses are consistent with the patient's chief complaint. There is no difficulty obtaining radiographs. The root has no apparent curvature

and the canal is not reduced in size. Achieving a predictable treatment outcome should be attainable by a competent practitioner with limited experience. It should be noted that all canals will have some degree of curvature to their course, even if radiographically they appear straight.

#### **Moderate Difficulty**

A case with moderate difficulty would exhibit one or more complicating treatment factors. An example is shown in Figure 2.



Figure 2: Moderately difficult case. The periapical radiograph reveals a pulp space that is not reduced in size. The treatment is complicated by the PFM crown on the tooth.

The patient in this case is healthy, non-anxious, has no limitation in opening and reports pain that is well localized to the mandibular left second premolar. The objective tests, and pulpal and periradicular diagnoses are consistent with the patient's chief complaint. There is no difficulty obtaining radiographs. A periapical radiograph reveals a pulp space that is not reduced in size. The treatment, however, is complicated by the PFM crown on the tooth. There is a risk that the porcelain may fracture during the access, and the orientation of the crown may differ significantly from the orientation of the root. Achieving a predictable treatment outcome will be challenging for a competent, experienced practitioner.

#### **High Difficulty**

A case with high difficulty is one in which the preoperative condition is exceptionally complicated. One way a case may be classified as highly difficult is by exhibiting multiple factors in the "MODERATE DIFFICULTY" category on the assessment form. An example of such a case appears in Figure 3.



Figure 3: Highly difficult case. The second premolar has a full-coverage crown that is not in alignment with the moderately inclined root. The canal is visible, but reduced in size.

The patient in this case is healthy, non-anxious, has no limitation in opening and reports pain that is well localized to the mandibular left second premolar. The objective tests, and pulpal and periradicular diagnoses are consistent with the patient's chief complaint. There is no difficulty obtaining radiographs. The second premolar in this case has a full-coverage crown that is not in

alignment with the moderately inclined root. The canal is visible, but reduced in size. In addition, there is an amalgam restoration, cervical to the crown, which may block the canal space. Because of the tooth inclination, presence of a full-coverage crown, diminished canal size and potential blockage of the canal by the amalgam restoration, there is an increased risk of excessive dentin removal and/or perforation during access. In addition, the decreased pulp space increases the likelihood of creating a blockage in the canal during instrumentation. Therefore, achieving a predictable treatment outcome will be challenging for even the most experienced practitioner with an extensive history of favorable outcomes.

A case may also be classified as highly difficult by exhibiting at least one complicating factor from the “HIGH DIFFICULTY” category on the case assessment form. An example would be the maxillary premolar shown in Figure 4.



Figure 4: The S-shaped curve of the root in the second premolar is sufficient to classify this case as highly difficult.

The patient in this case is healthy, non-anxious, has no limitation in opening and reports pain that is well-localized to the maxillary left second premolar. The objective tests, and pulpal and periradicular diagnoses are consistent with the patient’s chief complaint. There is no difficulty obtaining radiographs. The S-shaped curve alone is sufficient to classify this case as highly difficult, as there is an increased risk of creating a blockage or separating an instrument in the canal. In addition, obturation of the canal space is more complicated. As with the previous case, achieving a predictable treatment outcome will be challenging for even the most experienced practitioner with an extensive history of favorable outcomes.

While the examples described thus far have focused on diagnostic and anatomical factors, it is important to realize that there are a number of patient considerations that may complicate treatment. These include medical complications, difficulties with anesthesia, behavioral management issues, limited opening and emergent situations. Additional considerations would include previous endodontic treatment, a history of trauma, and periodontic-endodontic conditions. For examples of these considerations and how they may affect case difficulty, please refer to the *Endodontic Case*

*Difficulty Assessment Form*. Dentists should be familiar with the information in the form, and be able to assess each case to determine its level of difficulty.

### If Referral is Necessary

If the level of difficulty exceeds the practitioner’s experience and comfort, referral to an endodontist is appropriate. There are several components to an effective referral that make the process a positive experience for the patient, referring dentist and endodontist.

1. Develop a referral relationship with an endodontist prior to the need for referral. Endodontists and general dentists are part of the same team and reinforce each other’s value. Establishing a relationship with an endodontist will allow the endodontist to serve as a consultant and a resource, and will encourage communication, which will better serve the patient.
2. When it becomes apparent that a referral is necessary, make the referral in a timely manner. An efficient referral minimizes the possibility of potential complications such as pain or swelling associated with untreated endodontic pathosis.
3. Explain the reason for referral to the patient. If possible, the referral should be made with the patient in the office, so that any literature, maps and preoperative instructions may be provided at that time.
4. Discuss your diagnosis with the endodontist, and tell him/her exactly what you have explained to the patient. If applicable, discuss the treatment plan and the desired outcome with the endodontist. It is appropriate to include information regarding the planned restoration—if a post and core is necessary, describe how much post space is desired so that it can be prepared at the time of treatment. If verbal communication is not convenient, information can be provided by written referral.
5. If possible, schedule the restorative appointment within one month of the endodontic treatment. For example, if a buildup and crown are planned following endodontic therapy, this should be scheduled with the referring dentist in advance to avoid lengthy delays between completion of the endodontic treatment and placement of the final restoration. Significant delays in the placement of the final restoration can lead to coronal microleakage and nonhealing.
6. Following endodontic treatment, a report including pre- and post-treatment radiographs should be returned to the patient’s general dental office. The prognosis and additional treatment needs should also be clearly stated. For example, if a canal is previously blocked and the endodontist believes that a root end resection may be necessary, this should be communicated in the report.

### Conclusion

In today's society, patients are better educated and have higher expectations regarding the dental care they receive. Dental professionals have the technology, methodology and scientific rationale to repair damage to the dentition that was viewed as irreversible only years ago. These advances allow patients to keep their natural dentition, with a few exceptions, for a lifetime. Teeth that have had surgical and nonsurgical endodontic treatment that has not allowed healing can often be disassembled and "re-engineered" to allow healing, preservation and function of the tooth.

Any of the treatment options offered to the patient must have the patient's best interests and health as a primary

goal. The treatment must be delivered in a predictable manner by the treating practitioner to optimize the healing potential. Nonsurgical root canal therapy results in one of the highest retention rates of any dental procedure when completed under optimal conditions. As clinicians, we can ensure the highest quality treatment with our ability to treatment plan for the patient in such a way that we honestly assess the difficulty of the case and our personal skill levels, and then determine whether to treat or refer. In the final analysis, when the treatment proceeds without complication and healing occurs, the patient and the dentist benefit.

The AAE Public and Professional Affairs Committee and the Board of Directors developed this issue with special thanks to the co-authors, Drs. Alan S. Law and John C. Withrow, and the reviewers, Drs. Gerald C. Dietz Sr. and Tanya Machnick.

### Errata

In the last issue of **ENDODONTICS: Colleagues for Excellence** titled *Disassembly of Endodontically Treated Teeth: The Endodontist's Perspective, Part 2*, the radiographs on page 3 were transposed.

Following is the correction; the AAE regrets this error.



Figure 2A: Maxillary lateral incisor with a post, sectioned silver cone and periradicular lesion



Figure 2B: Fine, ultrasonic tips under microscopic enhanced visualization removal of these materials to facilitate retreatment

*The information in this newsletter is designed to aid dentists. Practitioners must use their best professional judgment, taking into account the needs of each individual patient when making diagnoses/treatment plans. The AAE neither expressly nor implicitly warrants any positive results, nor expressly nor implicitly warrants against any negative results, associated with the application of this information. If you would like more information, call your endodontic colleague or contact the AAE.*

Did you enjoy this issue of **ENDODONTICS**? Did the information have a positive impact on your practice? Are there topics you would like **ENDODONTICS** to cover in the future? We want to hear from you! Send your comments and questions to the American Association of Endodontists at the address below.



**ENDODONTICS:** *Colleagues for Excellence*

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## Reading List

ENDODONTICS: COLLEAGUES FOR EXCELLENCE, SPRING/SUMMER 2005

### *Endodontic Case Difficulty Assessment and Referral*

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- Sjögren U, et al. Influence of infection at the time of root filling of the outcome of endodontic treatment of teeth with apical periodontitis. *Int Endodont J* 1991;24:1.



# AAE Endodontic Case Difficulty Assessment Form and Guidelines

## PATIENT INFORMATION

Name \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_

## DISPOSITION

Treat in Office: Yes  No

Refer Patient to:

\_\_\_\_\_

Date: \_\_\_\_\_

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## Guidelines for Using the AAE Endodontic Case Difficulty Assessment Form

The AAE designed the Endodontic Case Difficulty Assessment Form for use in endodontic curricula. The Assessment Form makes case selection more efficient, more consistent and easier to document. Dentists may also choose to use the Assessment Form to help with referral decision making and record keeping.

Conditions listed in this form should be considered potential risk factors that may complicate treatment and adversely affect the outcome. Levels of difficulty are sets of conditions that may not be controllable by the dentist. Risk factors can influence the ability to provide care at a consistently predictable level and impact the appropriate provision of care and quality assurance.

The Assessment Form enables a practitioner to assign a level of difficulty to a particular case.

### LEVELS OF DIFFICULTY

**MINIMAL DIFFICULTY** Preoperative condition indicates routine complexity (uncomplicated). These types of cases would exhibit only those factors listed in the MINIMAL DIFFICULTY category. Achieving a predictable treatment outcome should be attainable by a competent practitioner with limited experience.

**MODERATE DIFFICULTY** Preoperative condition is complicated, exhibiting one or more patient or treatment factors listed in the MODERATE DIFFICULTY category. Achieving a predictable treatment outcome will be challenging for a competent, experienced practitioner.

**HIGH DIFFICULTY** Preoperative condition is exceptionally complicated, exhibiting several factors listed in the MODERATE DIFFICULTY category or at least one in the HIGH DIFFICULTY category. Achieving a predictable treatment outcome will be challenging for even the most experienced practitioner with an extensive history of favorable outcomes.

Review your assessment of each case to determine the level of difficulty. If the level of difficulty exceeds your experience and comfort, you might consider referral to an endodontist.

The AAE Endodontic Case Difficulty Assessment Form is designed to aid the practitioner in determining appropriate case disposition. The American Association of Endodontists neither expressly nor implicitly warrants any positive results associated with the use of this form. This form may be reproduced but may not be amended or altered in any way.

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# AAE Endodontic Case Difficulty Assessment Form

CRITERIA AND SUBCRITERIA	MINIMAL DIFFICULTY	MODERATE DIFFICULTY	HIGH DIFFICULTY
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## A. PATIENT CONSIDERATIONS

<b>MEDICAL HISTORY</b>	<input type="checkbox"/> No medical problem (ASA Class 1*)	<input type="checkbox"/> One or more medical problems (ASA Class 2*)	<input type="checkbox"/> Complex medical history/serious illness/disability (ASA Classes 3-5*)
<b>ANESTHESIA</b>	<input type="checkbox"/> No history of anesthesia problems	<input type="checkbox"/> Vasoconstrictor intolerance	<input type="checkbox"/> Difficulty achieving anesthesia
<b>PATIENT DISPOSITION</b>	<input type="checkbox"/> Cooperative and compliant	<input type="checkbox"/> Anxious but cooperative	<input type="checkbox"/> Uncooperative
<b>ABILITY TO OPEN MOUTH</b>	<input type="checkbox"/> No limitation	<input type="checkbox"/> Slight limitation in opening	<input type="checkbox"/> Significant limitation in opening
<b>GAG REFLEX</b>	<input type="checkbox"/> None	<input type="checkbox"/> Gags occasionally with radiographs/treatment	<input type="checkbox"/> Extreme gag reflex which has compromised past dental care
<b>EMERGENCY CONDITION</b>	<input type="checkbox"/> Minimum pain or swelling	<input type="checkbox"/> Moderate pain or swelling	<input type="checkbox"/> Severe pain or swelling

## B. DIAGNOSTIC AND TREATMENT CONSIDERATIONS

<b>DIAGNOSIS</b>	<input type="checkbox"/> Signs and symptoms consistent with recognized pulpal and periapical conditions	<input type="checkbox"/> Extensive differential diagnosis of usual signs and symptoms required	<input type="checkbox"/> Confusing and complex signs and symptoms: difficult diagnosis <input type="checkbox"/> History of chronic oral/facial pain
<b>RADIOGRAPHIC DIFFICULTIES</b>	<input type="checkbox"/> Minimal difficulty obtaining/interpreting radiographs	<input type="checkbox"/> Moderate difficulty obtaining/interpreting radiographs (e.g., high floor of mouth, narrow or low palatal vault, presence of tori)	<input type="checkbox"/> Extreme difficulty obtaining/interpreting radiographs (e.g., superimposed anatomical structures)
<b>POSITION IN THE ARCH</b>	<input type="checkbox"/> Anterior/premolar <input type="checkbox"/> Slight inclination (<10°) <input type="checkbox"/> Slight rotation (<10°)	<input type="checkbox"/> 1st molar <input type="checkbox"/> Moderate inclination (10-30°) <input type="checkbox"/> Moderate rotation (10-30°)	<input type="checkbox"/> 2nd or 3rd molar <input type="checkbox"/> Extreme inclination (>30°) <input type="checkbox"/> Extreme rotation (>30°)
<b>TOOTH ISOLATION</b>	<input type="checkbox"/> Routine rubber dam placement	<input type="checkbox"/> Simple pretreatment modification required for rubber dam isolation	<input type="checkbox"/> Extensive pretreatment modification required for rubber dam isolation
<b>MORPHOLOGIC ABERRATIONS OF CROWN</b>	<input type="checkbox"/> Normal original crown morphology	<input type="checkbox"/> Full coverage restoration <input type="checkbox"/> Porcelain restoration <input type="checkbox"/> Bridge abutment <input type="checkbox"/> Moderate deviation from normal tooth/root form (e.g., taurodontism, microdens) <input type="checkbox"/> Teeth with extensive coronal destruction	<input type="checkbox"/> Restoration does not reflect original anatomy/alignment <input type="checkbox"/> Significant deviation from normal tooth/root form (e.g., fusion, dens in dente)
<b>CANAL AND ROOT MORPHOLOGY</b>	<input type="checkbox"/> Slight or no curvature (<10°) <input type="checkbox"/> Closed apex <1 mm diameter	<input type="checkbox"/> Moderate curvature (10-30°) <input type="checkbox"/> Crown axis differs moderately from root axis. Apical opening 1-1.5 mm in diameter	<input type="checkbox"/> Extreme curvature (>30°) or S-shaped curve <input type="checkbox"/> Mandibular premolar or anterior with 2 roots <input type="checkbox"/> Maxillary premolar with 3 roots <input type="checkbox"/> Canal divides in the middle or apical third <input type="checkbox"/> Very long tooth (>25 mm) <input type="checkbox"/> Open apex (>1.5 mm in diameter)
<b>RADIOGRAPHIC APPEARANCE OF CANAL(S)</b>	<input type="checkbox"/> Canal(s) visible and not reduced in size	<input type="checkbox"/> Canal(s) and chamber visible but reduced in size <input type="checkbox"/> Pulp stones	<input type="checkbox"/> Indistinct canal path <input type="checkbox"/> Canal(s) not visible
<b>RESORPTION</b>	<input type="checkbox"/> No resorption evident	<input type="checkbox"/> Minimal apical resorption	<input type="checkbox"/> Extensive apical resorption <input type="checkbox"/> Internal resorption <input type="checkbox"/> External resorption

## C. ADDITIONAL CONSIDERATIONS

<b>TRAUMA HISTORY</b>	<input type="checkbox"/> Uncomplicated crown fracture of mature or immature teeth	<input type="checkbox"/> Complicated crown fracture of mature teeth <input type="checkbox"/> Subluxation	<input type="checkbox"/> Complicated crown fracture of immature teeth <input type="checkbox"/> Horizontal root fracture <input type="checkbox"/> Alveolar fracture <input type="checkbox"/> Intrusive, extrusive or lateral luxation <input type="checkbox"/> Avulsion
<b>ENDODONTIC TREATMENT HISTORY</b>	<input type="checkbox"/> No previous treatment	<input type="checkbox"/> Previous access without complications	<input type="checkbox"/> Previous access with complications (e.g., perforation, non-negotiated canal, ledge, separated instrument) <input type="checkbox"/> Previous surgical or nonsurgical endodontic treatment completed
<b>PERIODONTAL-ENDODONTIC CONDITION</b>	<input type="checkbox"/> None or mild periodontal disease	<input type="checkbox"/> Concurrent moderate periodontal disease	<input type="checkbox"/> Concurrent severe periodontal disease <input type="checkbox"/> Cracked teeth with periodontal complications <input type="checkbox"/> Combined endodontic/periodontic lesion <input type="checkbox"/> Root amputation prior to endodontic treatment

\*American Society of Anesthesiologists (ASA) Classification System

Class 1: No systemic illness. Patient healthy.  
 Class 2: Patient with mild degree of systemic illness, but without functional restrictions, e.g., well-controlled hypertension.  
 Class 3: Patient with severe degree of systemic illness which limits activities, but does not immobilize the patient.

Class 4: Patient with severe systemic illness that immobilizes and is sometimes life threatening.  
 Class 5: Patient will not survive more than 24 hours whether or not surgical intervention takes place.

[www.asahq.org/clinical/physicalstatus.htm](http://www.asahq.org/clinical/physicalstatus.htm)

# Forging Effective Alliances for Quality Patient Care

## How Endodontists and General Dentists Can Build Successful Partnerships

### Complementary Skills

Properly cultivated partnerships between endodontists and general practitioners can lead to powerful, mutually beneficial relationships that strengthen both practices. More importantly, these collaborations ensure that patients receive the best possible care.

According to a recent American Association of Endodontists (AAE) study, in the United States endodontists perform more than a quarter of all root canal treatments each year. While general practitioners perform the majority of root canal treatments, they often rely on the expertise of endodontists for procedures that exceed their training or comfort level. This practice allows general dentists more time for other procedures and enhances their relationship with patients by improving patient satisfaction.

“When I used to do endodontic treatments, I did a really good job, but I was slow as molasses,” says Jeff Chamberlain, D.D.S., of Santa Rosa, Calif. “I’m always impressed with my endodontist because he can do the procedures two to three times faster. He’s helpful because my patients don’t think of root canals as a big deal. They’re in his chair for an hour or so and they leave happy. Referring my endodontic cases frees up my time to do things I’m more effective at.”

On average, endodontists perform nearly 25 root canal treatments a week, while general practitioners perform less than two. This familiarity with the procedure, combined with endodontists’ advanced training in endodontics, expertise in achieving anesthesia, and adoption of technologies, such as digital imaging and operating microscopes, makes them more adept at handling difficult endodontic cases.

“A great deal of the success of my practice is due to endodontists with whom I’ve cultivated relationships,” says Stephen D. Davis, D.D.S., of Santa Rosa, Calif. “I’ve never been comfortable with endodontics and don’t perform the procedures. It’s so different from general dentistry, where vision and access are key. To me, endodontics is like working in a closet with the lights turned off.”

### Availability Is Essential

For the sake of patients, it’s best for general practitioners to initiate and build relationships with endodontists prior to the need for referrals, so delays in treatment are kept to a minimum. “If a patient is in pain, I’ll want him or her seen right away,” says Robert Huot, D.D.S., of Framingham, Mass. “I would prefer that if it isn’t an emergency case, the office would see the patient within a few days, depending on the patient’s schedule.”

Fortunately, most endodontists offer tremendous flexibility in accommodating emergency cases, because they realize its importance to their continued success. “We respond to our top referrers immediately, no matter the time of day,” says endodontist Shepard Goldstein, D.M.D., of Framingham, Mass. “The awkwardness occurs when we hear from a dentist only a few times a year, always at a strange hour, and every case is an emergency.” A strong relationship between an endodontist and general practitioner can prevent these situations and best meet the needs of patients in pain.

### To Refer or Not to Refer?

The decision that has the greatest impact on the quality of patient care during endodontic treatment is the decision whether or not to refer. To prevent treatment errors that cause patients unnecessary complications, the AAE has developed a Case Difficulty Assessment Form, available on the AAE Web site at [www.aae.org](http://www.aae.org), that helps general dentists catalogue and characterize cases prior to treatment.

“The dentists who consistently refer patients to a specialist don’t find themselves in emergency situations – it just doesn’t happen,” says endodontist James Abbott, D.D.S., M.S., of Santa Rosa, Calif. “The Case Difficulty Assessment Form is a valuable tool to help dentists decide whether a referral should be made.”

When the practitioner determines that a referral is in the patient’s best interest, it should be made as quickly as possible to minimize the likelihood of complications such as pain or swelling associated with untreated endodontic pathosis.





## We Need to Talk

The office staff of both general practitioners and endodontists should be well acquainted with each other to maintain the open communication that fosters quality patient care. Should any staffing changes occur at either practice, the other office should be notified to prevent delays and miscommunication. This is crucial to the dentist-endodontist relationship, as well as to the final positive outcome for the patient.

In particular, notes Goldstein, the general dentist's office should be sure to send the endodontist's staff all relevant information regarding the patient's restorative plan, since the timing of the completion of the root canal treatment may vary depending on the dentist's preferences.

Following treatment, the endodontist's office should send a follow-up report, including pre- and post-treatment radiographs, to the patient's general dentist. A prognosis and additional treatment recommendations also should be clearly stated. For example, if one or more of the patient's root canals is calcified, or if a patient's canal is blocked and the endodontist believes that apical surgery may be necessary, this should be communicated in the letter.

Once the root canal treatment has been completed, the patient's restorative work should be scheduled as soon as practical. Significant delays in the placement of the restoration can compromise the effectiveness of root canal treatment.

## Establishing the Relationship

When an endodontist sets up a practice in a new location, contacting the area's general dentists is crucial to developing a referral base. Some endodontists invite the dentists to lunch meetings or schedule other face-to-face appointments. New general practitioners sometimes take the same initiative to build relationships with local endodontists. But after the initial relationship is established, many general dentists and endodontists find such gestures unnecessary, since availability, communication and expert treatment are ultimately the factors that will determine the success of the partnership.

"At the end of the day, the lion's share of America's dentists want what's best for their patients," Abbott says. "Endodontists need to provide a seamless experience, quality care, and the necessary availability to help dentists meet this objective."

## Endodontists the root canal specialists

Earlier this year, the American Association of Endodontists launched an exciting public awareness campaign, **Endodontists: the root canal specialists**. The initiative is designed to inform consumers about what endodontists do, dispel myths and misperceptions about root canal treatment, and celebrate the important partnership between endodontists and general dentists. In the coming months, you may see advertisements in dental trade magazines, articles in your local newspaper or TV news coverage about these issues.

A special campaign Web site contains a number of resources and materials for patients and general practitioners. Included are the AAE Case Difficulty Assessment form, designed to help dental students and general practitioners evaluate endodontic procedures and determine when to refer patients to endodontists, an endodontic fact sheet describing the specialty and dental symptoms, and other links to valuable resources provided by the AAE. For more information, visit [www.rootcanalspecialists.org](http://www.rootcanalspecialists.org).

