

USING A RUBBER DAM

I read with interest Dr. Mona Anabtawi and colleagues' February JADA article, "Rubber Dam Use During Root Canal Treatment: Findings From The Dental Practice-Based Research Network" (Anabtawi MF, Gilbert GH, Bauer MR, et al; for The National Dental Practice-Based Research Network Collaborative Group. JADA 144[2]:179-186). I wish to congratulate the authors and all of the members of The Dental Practice-Based Research Network (PBRN) for their honesty and courage in reporting the usage patterns of this most important endodontic tool.

The American Association of Endodontists promotes the use of the rubber dam for nonsurgical root canal therapy and has defined it as the standard of care in our 2010 position statement.¹ The rubber dam not only protects the patient from aspiration of small instruments, fragments of dental materials and intraoral tissue trauma, as well as preventing ingestion of irrigants, but it also is the only way to minimize absolutely the contamination of the root canal space from oropharyngeal microorganisms, either in saliva or aerosolized. Without it, the ability to disinfect the canal space is compromised, and poorer

outcomes would be expected.

While I am gratified that the 14 endodontist members of the PBRN use the rubber dam in all cases of root canal treatment, I was disheartened to read that only 44 percent of the remaining respondents did so. The large number of PBRN clinicians who do not use the rubber dam may affect the results of their research. In a previously published JADA article from another PBRN, the outcomes of nonsurgical root canal treatment appeared to be lower than those in other published studies.² There is evidence that endodontic outcomes are related to rubber dam use, thus the findings of PBRNs, while being reflective of the reality "on the ground," could be portraying endodontic success rates as being artificially low compared with when use of clinical asepsis is strictly adhered to.³⁻⁶

I agree with the authors that the information derived from this study should be a call to arms for our profession to ensure that all patients undergoing endodontic treatment are treated using the rubber dam to enhance the prognosis of treatment and to minimize the risks to our patients' health.

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1. American Association of Endodontists. AAE position statement: dental dams. www.aae.org/uploadedFiles/Publications_and_Research/Guidelines_and_Position_Statements/dentaldamstatement.pdf. Accessed April 4, 2013.

2. Bernstein SD, Horowitz AJ, Man M, et al. Outcomes of endodontic therapy in general practice: a study by the Practitioners Engaged in Applied Research and Learning Network. JADA 2012;143(5):478-487.

3. Ahmad IA. Rubber dam usage for endodontic treatment: a review. Int Endod J 2009;42(11):963-972.

4. de Lourdes Rodrigues Accorinte M, Reis A, Dorado Loguercio AD, de Cavalcanti de Araújo V, Muench A. Influence of rubber dam isolation on human pulp responses after capping with calcium hydroxide and an adhesive system. Quintessence Int 2006;37(3):205-212.

5. Abbott PV. Factors associated with continuing pain in endodontics. Aust Dent J 1994;39(3):157-161.

6. Van Nieuwenhuysen JP, Auwar M, D'Hoore W. Retreatment or radiographic monitoring in endodontics. Int Endod J 1994;27(2):75-81.

PROVING ITS WORTH

Dr. Mona Anabtawi and colleagues' February JADA article, "Rubber Dam Use During Root Canal Treatment: Findings From The Dental Practice-Based Research Network" (Anabtawi MF, Gilbert GH, Bauer MR, et al; for The National Dental Practice-Based Research Network Collaborative Group. JADA 144[2]:179-186), shows a significant portion of dentists are not using a rubber dam for every root canal treatment (RCT). The conclusions of the study are that, "Because the clinical reference standard is to use a rubber dam during RCT, increasing its use may be important."

Huh? If we are really going to do "practice-based research," the

conclusion should be that we should do a study showing success rates of RCT under a rubber dam and no rubber dam to prove its worth.

How can the authors call themselves practice-based researchers if their conclusions are drawn from clinical reference standards and not practice-based research?

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DO NO HARM

When I saw the cover of February JADA, the words "Use of rubber dam in root canal treatment"¹ quickly jumped out at me. I could not wait to turn to page 179 and read about Dr. Sanford C. Barnum's 1864 invention.²

I commend the authors¹ for reporting in their study that only 44 percent of the 524 general dentists who responded to their questionnaire use rubber dams for all their root canal treatments (RCTs); 24 percent use it 51 to 99 percent of the time; 17 percent used it 1 to 50 percent of the time; and 15 percent never used it during RCT.

The authors refer to the rubber dam as having been used in dental care for decades. Actually, the rubber dam has been around for almost 150 years.²

Why not call a spade a spade? Never before have I heard that the rubber dam is considered the

"reference standard" in RCT, and that increasing its use may be important. Why don't the authors put some teeth into their report and say, "The rubber dam is the standard of care when performing RCT. Its use should be mandatory, or face the legal consequences," as I believe many clinicians who have failed to use it can so testify?

As health care providers, we are supposed to do no harm. Those clinicians who fail to use a rubber dam during RCT are playing Russian roulette with their patients.

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1. Anabtawi MF, Gilbert GH, Bauer MR, et al. Rubber dam use during root canal treatment: findings from The Dental Practice-Based Research Network. JADA 2012;144(2):179-186.

2. Christen G, Sanford C. Barnum, discoverer of the rubber dam. Bull Hist Dent 1977;25(1):3-9.

Authors' response: We are pleased to see the interest in our article. These three letters raise a range of issues that we agree are relevant to improving everyday clinical practice and the role that The National Dental Practice-Based Research Network (PBRN) can play in that improvement.

The overarching goal of practice-based research is to improve the oral health of our patients. As Dr. Anderson's comments

imply, the typical PBRN study involves direct data collection during the patient care process, but this is not the only means to gain important information. In this article, a survey of practitioners was an important first step. Now that we have the information that this survey provided, we do agree that more research is needed.

As we point out in our article, and as Dr. Kulild's letter reinforces, the relevant specialty group considers use of rubber dam during root canal treatment (RCT) the standard of care. As we planned this preliminary study, our own assessment was that there seemed to be important medicolegal and clinical reasons to use a rubber dam during all RCTs. Judging from their letters, Drs. Kulild and Freccia appear to have reached the same conclusion.

Because this sample was limited to PBRN practitioners, we expected that rubber dam use would be reported as nearly ubiquitous. However, as we have subsequently presented the results of this study to clinician audiences, a substantial percentage of clinicians clearly judge that methods other than a rubber dam adequately protect their patients from an aspiration or swallowing hazard, and that the isolation they obtain is sufficient to ensure an appropriate treatment result.

Because of the interest

that this topic has generated and because of the potentially important implications for routine clinical practice, The National Dental PBRN is in the process of developing a detailed study of the isolation methods used during RCT, and to determine the barriers and facilitators to using a rubber dam during RCT, with an eye toward an eventual intervention that might be designed to increase its use.

We invite readers to join The National Dental PBRN by completing an Enrollment Questionnaire at <http://NationalDentalPBRN.org>. This “nation’s network” is funded by the National Institute of Dental and Craniofacial Research, part of the National Institutes of Health. Enrollment and maintenance of membership is at no cost to the practitioner.

Please join us in our effort to improve the scientific basis for clinical decision making. We think that you will be glad that you did. If you have any questions about the network or have ideas for

studies, please e-mail us at dentalPBRN@uab.edu, and we will be glad to direct your inquiry to the appropriate person.

**Gregg H. Gilbert, DDS,
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on behalf of all coauthors

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CORRECTION

—There were errors in the Critical Summaries article in December 2012 JADA, “No Difference in Caries Outcome Between Resin-Modified Glass Ionomer Cements and Resin-Based Composites” by Priyanshi Ritwik, BDS, MS (JADA 2012;143[12]:1351-1352).

•The last sentence of the paragraph headed “Strengths and weaknesses of the systematic review” on page 1352 should read thus: “The authors’ inclusion of two separate sets of studies compromises the results of the systematic review, because in one set investigators evaluated restorations and in the other set the investigators

evaluated orthodontic treatment; the two sets of studies are not equivalent because orthodontic treatment increases caries risk.”

•Three sentences at the top of the second column on page 1352, starting with the first complete sentence (“Combining restorations and orthodontic adhesives ...”) and concluding with the sentence that ends “... caries-preventive effect of the adhesive materials used,” are in error and should be disregarded.

JADA regrets the errors.

—An author’s name was misspelled in a 2003 JADA article titled “Glutaraldehyde-Induced Allergic Contact Dermatitis Among Dental Hygienists and Assistants” (Ravis SM, Shaffer MP, Shaffer CL, Dehkharghani S, Belsito DV, JADA 2003;134[8]:1072-1078). The fourth author’s correct name is Seena Dehkharghani, MD.

JADA regrets the error.