



DPBRN Newsletter

Summer 2007

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Welcome to the DPBRN quarterly newsletter! This newsletter is designed to provide you a synopsis of the contents of our website, <http://www.DentalPBRN.org>.

You can also view the projects we are currently recruiting dental practitioners for as well as suggest and view new research ideas.

When you visit our website you can complete your online training course that will provide the foundation for you to begin on a project.

Studies Update

DPBRN Study 1 “Assessment of Caries Diagnosis and Caries Treatment”

The purpose of this project was to identify methods that DPBRN dentists use to diagnose and treat caries lesions. The goal was to enroll at least 200 DPBRN practitioner-investigators, each of whom would complete a 10-page questionnaire about caries diagnosis and treatment assessment. Findings from DPBRN study 1 will be related to treatment that is actually delivered as determined in DPBRN Study 2 and DPBRN Study 3. Note that our recruitment of practitioner-investigators for this study far exceeded our goal.

| Region | Number |
|--|------------|
| Alabama and Mississippi | 296 |
| Florida and Georgia | 105 |
| Kaiser Permanente/Permanente Dental Associates | 51 |
| Scandinavia | 38 |
| HealthPartners and Minnesota | 31 |
| Region not assigned | 11 |
| Total | 532 |

DPBRN Study 2 “Reasons for placements of restorations on previously unrestored surfaces”

This purpose of this study is to record information of previously-untreated permanent tooth surfaces. The goal is to enroll 100-200 DPBRN practitioner-investigators, each of whom will record information about 50 consecutive restorations that they place on unrestored permanent tooth surfaces. The study will record the main reason that the restoration was placed, the preoperative and postoperative depth of the caries lesion on the previously unrestored surface, and the type of dental restorative material that was used. Our recruitment for Study 2 is going very well, exceeding our goals.

Practitioners Who Enrolled Patients or Complete Study 2

| Region | Number |
|--|------------|
| Alabama and Mississippi | 60 |
| Kaiser Permanente/Permanente Dental Associates | 57 |
| Florida and Georgia | 38 |
| HealthPartners and Minnesota | 31 |
| Scandinavia* | 0 |
| Total | 186 |

* Began the study after these numbers were collected

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DPBRN Study 7 “Trans-PBRN case-control study of osteonecrosis of the jaw”

Osteonecrosis of the jaws (ONJ) is a potentially morbid and costly oral condition. In the recent past more than 200 cases of ONJ have been described in patients treated with bisphosphonates (BPs) for osseous cancer lesions or osteoporosis. The number of BP prescriptions has been steadily increasing, creating concerns about this potential side effect. The causes and risk factors for ONJ are not known. The purpose of the study is to investigate these issues making use of the research infrastructure from the three PBRNs funded by NIDCR. Cases will be identified by a dentist in the PBRN and will have been diagnosed by the dentist or a specialist as having ONJ with an onset between January 2005 and January 2007. DPBRN's goal is to enroll 100 cases and 300 controls, with a goal of 50 ONJ cases for the AL/MS region. As of the date of this newsletter, the AL/MS region has enrolled all 50 ONJ cases. ONJ cases for the KP/PDA and HP/MN regions are actively being recruited. Thanks to all practitioners participating in the study!

Tip of the Month

Tip of the month for July provided by John M. Coke DDS, Professor and Director, General Dental Residency, UAB School of Dentistry. Email address: jmcoke@uab.edu

New AHA Guidelines: common sense is finally prevailing

New AHA guidelines have been published concerning the use of antibiotic prophylaxis for patients with specific cardiac conditions. The past nine AHA guidelines, which were first established in 1955 with the latest in 1997, were closely looked at by a select panel of physicians and dentists. The new guidelines reflect an ever-growing concern on the over prescription of antibiotics seen in the United States the past two decades and an increasing emphasis on prevention rather than intervention. We now know that the use of antibiotics can create adverse events for our patients, such as the development of resistant flora and risk of allergic reactions. Simply put, were we doing more harm than good for our patients in prescribing these antibiotics?

The new guidelines (below) are simpler for all concerned. There are now only four cardiac conditions that warrant antibiotic prophylaxis and most importantly the laundry list of dental procedures of when to use has been eliminated. The authors of the new guidelines looked at the relative risk of acquiring infective endocarditis from dental procedures on patients with underlying cardiac conditions. Mitral valve prolapse (MVP) deemed to be the lowest risk (1 per 1.1 million) and was thus taken off the list. Most importantly, the authors concluded that “the maintenance of optimum oral health and hygiene may reduce the incidence of bacteremia from daily activities and is more important than prophylactic antibiotics for a dental procedure to reduce the risk of infective endocarditis”. I applaud their efforts.

AHA GUIDELINES FOR PREVENTION OF INFECTIVE ENDOCARDITIS, APRIL 2007

TABLE 1: Cardiac conditions associated with high risk of adverse outcomes from endocarditis for which prophylaxis with dental procedures is recommended

- **Prosthetic cardiac valve**
- **Previous infective endocarditis**
- **Congenital heart disease (CHD)**
 1. Unrepaired cyanotic CHD, including shunts and conduits
 2. Completely repaired CHD with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first six months after the procedure
 3. Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device
- **Cardiac transplantation patients who develop cardiac valvulopathy**

TABLE 2: Dental procedures for which endocarditis prophylaxis is recommended for patients in Table 1:

- **All dental procedures that involve manipulation of gingival tissue or the periapical region of teeth or perforation of the oral mucosa.***

*The following procedures do not need prophylaxis: routine anesthetic injections through noninfected tissue, taking dental radiographs, placement of removable prosthodontic or orthodontic appliances, adjustment of orthodontic appliances, placement of orthodontic brackets, shedding of deciduous teeth and bleeding from trauma to the lips and oral mucosa

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TABLE 3: Regimens for antibiotic prophylaxis

| Situation | Agent | Regimen | |
|---|---|--|-------------------|
| | | Single Dose 30-60 min before procedure | |
| | | Adults | Children |
| Oral | Amoxicillin | 2 g | 50 mg/kg |
| Unable to take oral medication | Ampicillin OR | 2 g IM or IV* | 50 mg/kg IM or IV |
| | Cefazolin or Ceftriaxone | 1 g IM or IV | 50 mg/kg IM or IV |
| Allergic to penicillins or ampicillin Oral | Cephalexin**† | 2 g | 50 mg/kg |
| | OR Clindamycin | 600 mg | 20 mg/kg |
| | OR Azithromycin or Clarithromycin | 500 mg | 15mg/kg |
| Allergic to penicillins or ampicillin and unable to take oral medication | Cefazolin or ceftriaxone† | 1 g IM or IV | 50 mg/kg IM or IV |
| | OR Clindamycin | 600 mg IM or IV | 20 mg/kg IM or IV |

* IM – intramuscular; IV – intravenous

** or other first or second generation oral cephalosporin in equivalent adult or pediatric dosage

† Cephalosporins should not be used in an individual with a history of anaphylaxis, angioedema, or urticaria with penicillins or ampicillins

If you would like to contribute a Tip of the Month, please contact Dr. Sonia Makhija at smakhija@uab.edu

News Items

DPBRN Presentation at the Alabama Dental Society Meeting

Dr. Sonia Makhija, DPBRN Director of Communications, presented the latest DPBRN information at the Alabama Dental Society Meeting in Sandestin, FL, June 8th, 2007 at the Sandestin Golf and Beach Resort. The Alabama Dental Society is the Alabama chapter of the National Dental Association (<http://www.ndaonline.org/>). A total of 27 dentists from across Alabama were in attendance.

Dr. Makhija presented the latest results from the DPBRN Enrollment Questionnaire and DPBRN Study 1 ("Assessment of Caries Diagnosis and Caries Treatment"). These findings generated a lot of interest and discussion. The attendees were particularly interested in differences in treatment between the Alabama and Scandinavian practitioners, as well as across all of DPBRN's five regions. Clearly, this was an excellent topic for the network's first study.

DPBRN presents poster at PBRN National Research Conference

Dr. Gregg Gilbert, DPBRN Network Chair, presented a poster about DPBRN's experiences with the Institutional Review Board process at the 2007 Practice-Based Research Networks National Research Conference May 16-18, 2007, in Bethesda, Maryland. This is an annual research conference of PBRNs. Mainly in attendance are persons involved in medical primary care PBRNs.

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A DPBRN representative has attended this annual meeting each year for the past four years. Also in attendance this year were Dr. Donald DeNucci, NIDCR Program Director for the three NIDCR-funded PBRNs, and Dr. Frederick Curro, Executive Management Team member of the PEARL network (www.pearlnetwork.org/). Our collective assessment is that since their funding period began in April 2005, the three NIDCR-funded dental PBRNs have clearly "caught up" with the medical PBRNs and are breaking new ground for the entire field of PBRN research.

DPBRN presents to the NIDCR PBRN National Monitoring Committee

When it funded three dental PBRNs in 2005, NIDCR formed the PBRN National Monitoring Committee. This committee meets twice each year to review progress of the PBRNs and to provide feedback to the Principal Investigators (Network Chair and Coordinating Center) and the NIDCR PBRN Program Director. The Committee includes representatives from several stakeholder groups, including professional organizations (e.g., the American Dental Association), a public advocacy member, and specific content experts, such as two directors of medical PBRNs and an expert in dental informatics. For DPBRN, the Monitoring Committee functions as an external advisory board.

DPBRN submitted a 25-page progress report to the committee before the meeting. The committee meeting was held April 27, 2007 at the National Institutes of Health in Bethesda, Maryland. DPBRN was represented by Dr. Paul Benjamin, practitioner-investigator representative, Dr. Gregg Gilbert, DPBRN Network Chair, and Dr. Dale Williams, Principal Investigator of the DPBRN Coordinating Center. Dr. Benjamin is in full-time private practice in Miami, Florida and is a member of the DPBRN Executive Committee. Dr. Gilbert gave a presentation entitled "Update on overall DPBRN progress". Dr. Williams gave a presentation on "The DPBRN practitioner-investigator training and IRB process". Dr. Benjamin gave a presentation on "The DPBRN Executive Committee".

The Monitoring Committee was pleased with the progress of all the PBRNs and made some specific recommendations to maximize the long-term impact of this initiative.

DPBRN Study 11 will be presented at Minnesota Association of Endodontists meeting on August 22, 2007

Dr. Don Nixdorf is speaking about the proposed DPBRN Study 11 at the Minnesota Association of Endodontists meeting on August 22. He was invited by the association's president, Dr. Kim Linqvist, and his talk entitled "Potential Role in Research for Practicing Endodontists" will discuss:

- Background including rationale for the study, which is aligned with the AAE Foundation's priorities
- Brief overview of the study design
- Why performing such a study within the DPBRN 'makes sense'
- What the individual dentists' role would be within this study
- Time commitment involved
- Benefits to dentists, the profession of dentistry, and the society at large

Second annual meeting for practitioners in the HealthPartners/Minnesota Region is October 25, 2008

Mark your calendars for this important event!