Greetings:

It has been a very productive year for the Division of TMD and Orofacial Pain. Our division contributes significantly to all the missions of the University of Minnesota, School of Dentistry including clinical care, teaching, and research. We continue to have a very busy clinic with our current focus on managing patients with TMD, orofacial pain, and sleep apnea. The addition of Dr. Shanti Kaimal allows for augmented clinical coverage. Since Dr. Mariona Mulet is focusing on graduate education and no longer in clinic, we have suspended managing oral medicine patients. However, we hope that we will be successful in getting a new faculty position in oral medicine as no other clinic provides care for these patients. A board certified Oral Medicine Specialist will allow us to develop a dual certificate program in orofacial pain and oral medicine since this is the national trend. The addition of new faculty will enhance our 2-year graduate Orofacial Pain Training Program and provide more time to expand our involvement in the undergraduate education mission.

This year we have an exponential growth in research funding which is the focus of this newsletter. I am fortunate to receive funding to follow-up subjects from my previous multi-site study to answer the question whether different TMJ intra-articular disorders have varying effects on jaw pain, function and disability. Preliminary data suggests that this is the case. Drs. Gary Anderson, Mike John, John Look, Mansur Ahmad, and others are co-investigators working with teams at the University at Buffalo (The State University of New York) and University of Washington. This collaboration has resulted in many publications including the latest manuscript “Diagnostic Criteria for Headache Attributed to TMD”. This manuscript was recently published in Cephalalgia to inform our neurology colleagues of our collaborative role in headache management.

(continued on next page)
Meanwhile, Dr. Mike John received significant NIH funding for a multi-site study to further study Oral Health Quality of Life that complements a study he is currently doing with HealthPartners. Both Dr. John and I are on another grant with the University at Buffalo investigating the application of ontological principles (a logical system for classification of disorders/diseases) to TMD diagnoses. Dr. John is also waiting for the review of his latest grant proposal to allow for characterization of pain-related TMD patients into simple, intermediate, and complex patients to facilitate triaging by clinicians and ultimately, to differentiate management of patients. Finally, Dr. John is in the early stages of becoming involved in the “CARDIA” (Coronary Artery Risk Development in Young Adults) project, an ongoing 30 year-prospective study by our colleagues from epidemiology, that for the first time, would include a dental component to assess the relationship between general health and oral health. This study investigates the feasibility of dental screening for medical conditions including hypertension and diabetes. Integration with medicine is vital to dentistry’s future.

Dr. Don Nixdorf is heavily involved, and funded, in the new $67 million NIDCR National Dental Practice-Based Network (NDPBRN) as the Deputy Director of the Midwest Region. His responsibilities include recruitment of dentists, including specialists, into the network as well as the facilitation of the development and implementation of research activities. TMD and Orofacial Pain may be one of the expert-based areas that will be organized to promote research in participating clinicians’ offices. With Dr. Nixdorf’s early recognition of the importance of practice-based research networks, I became involved. Now I am in line to do a clinical trial to assess the effectiveness of self-care versus self-care with a splint in the treatment of pain-related TMD. Finally, Dr. Nixdorf is on the “cusp” of innovation with the development of MRI for dental applications including the hard tissues of dentin and enamel.

It is our intent to continue to collaborate within and across disciplines with clinicians and researchers locally, nationally, and internationally. Examples are the workshops and symposiums that we have sponsored and participated through IADR as well as Dr. Nixdorf’s previous PBRN studies focused on persistent pain after endodontic treatment. These combined and intertwined research, teaching, and clinical care efforts allow us to provide better evidence-based management for the patients we serve...........and that is the bottom line.

Sincerely,

Eric Schiffman, DDS, MS
Director

University of Minnesota alumni, faculty, and residents who attended the 2012 annual meeting of the American Academy of Orofacial Pain.

First row (left to right): Drs. Mariona Mulet, Shanti Kaimal, Pathamas Chantaracherd, Eric Schiffman, Subha Giri, Catalina Morarasu, Mary Karkow.

Second row: Drs. Cory Herman, Jeff Shaffer, Barbara Fonseca, Joao Ferreira, James Fricton.
Not pictured: Drs. Kevin Reid, Dan Tylka, Ed Wright, and Ksenija Rener Sitar.
KEVIN I. REID, D.M.D. completed his Master’s Degree in 1990 in the University of Minnesota’s ‘TMJ and Craniofacial Pain Program,’ as it was called at that time. He became interested in this program after graduating from the University of Kentucky, College of Dentistry. He described an intriguing and circuitous path to his decision and to his present career at the Mayo Clinic in Rochester. He stated that when he completed dental school, he knew that he was not going to practice dentistry in any of the more traditional ways, and he even considered medical school. Prior to his dental education, Dr. Reid’s exposure to medicine included graduate school in clinical psychology and work in hospital settings. While attending dental school, he met and was influenced by Dr. Jeffrey Okeson, renowned educator in the field of TMD. This exposure inspired his interest in the University of Minnesota’s program. To the young dental professional, it sounded like an extraordinarily good fit. He felt that this program would be unique, and it had the potential to draw upon his interests as well as his aptitude.

Reflecting on his decision to apply for the program, he realizes now that he had limited insight regarding the career that would follow, but he does realize how grateful he is for the extraordinary education, and how the University of Minnesota experience created a number of opportunities he would not have had otherwise. Dr. Reid is still humbled by how well prepared he was for his future calling after he completing the program. He described intense and hefty doses of critical analysis of the literature under the guidance of Eric Schiffman. He remembers this two year program as a wide range of both didactic elements as well as clinical exposure that developed and prepared him for his career. He recalls the integration of physiology, anatomy, psychology, pharmacology, physical medicine, and other elements of the residency as collectively, a perfect fit for him. He realized ‘early on’ that the management of patients with chronic pain required a great deal of empathy, compassion, and counseling skill that inherently are his strongest clinical capabilities. Dr. Reid credits his unsurpassed career preparation to the diversity of the TMD faculty and his exposure to each of them individually and collectively as a group. He credits Dr. Eric Schiffman for his ability to abstract a comprehensive history from complicated patients as well as his insights for critical review of the literature. He credits Dr. Gary Anderson for modeling the skills of integrating a wide range of information and data to derive a diagnosis and treatment plan as well as an ability to integrate a broad range of skills from the nuances of occlusal problems to neuropathology. Dr. James Fricton reinforced Dr. Reid’s attraction to creativity and novelty and to thinking in “nonconformist, if not rebellious ways.” Finally Dr. Reid credits Dr. Kate Hathaway for giving him opportunities to study, discuss, and understand the psychological and behavioral literature as it relates to chronic pain. On a personal note, he is forever grateful to have met Dr. Hathaway’s sister who became his wife. Dr. Reid believes the faculty was ahead of their time. He described his University of Minnesota education as a solid didactic and clinical program with a balance of literature reviews and exposure to a number of university-based courses like anatomy, statistics, and genetics in conjunction with a fantastic clinical focus. He remembers a great training experience.

Upon graduation, Dr. Reid was awarded a three-year pain fellowship at the National Institutes of Health with Dr. Ron Dubner, Dr. Ray Dionne, Dr. Rick Gracely and others. Afterward, he joined his mentor, Dr. Jeff Okeson, at the University of Kentucky where he became responsible for assisting with the residency program, administering journal clubs, teaching residents, seeing patients, and running a psychophysiology pain laboratory. Dr. Reid found it a stimulating and wonderful experience. On the very day his second son was born he received a call from the Mayo Clinic regarding an employment opportunity. Preoccupied and attentive to his young family, it wasn’t until later, Dr. Reid interviewed for the position, felt the fit was good, and the Reid family moved to Rochester. Dr. Reid was not simply interested in the Mayo Clinic position, but he recognized the global opportunities within the Mayo Foundation. He liked the numbers of remarkable clinicians and researchers and found it to be a wonderful opportunity to be a part of a world-renowned institution.
At the Mayo Clinic, Dr. Reid is a sole practitioner in TMD and orofacial pain. He has a demanding five day a week clinical schedule that has evolved into one that is heavily weighted towards patients with challenging and often complex TMD and neuropathic pain conditions. He believes his expertise is empathetic and compassionate management of extraordinarily difficult and challenging pain conditions. He relies on his strong pharmacologic background and wealth of experience, but he defines his greatest strength as his devotion to the primacy of patient welfare and attention to a professional ethical obligation of respect for patient autonomy. He sees his primary role as engaging patients in meaningful discussions about the rationale, risks, benefits, alternatives, and goals of a variety of approaches in attempts to address pain that may seem devastating to the patient. Dr. Reid works with the entire team at the Mayo Clinic where there is a resource of professionals ranging from highly sub-specialized neurologists to behavior medicine, psychiatry, physical medicine, physical therapists, and a wealth of other medical and dental consultants. Besides his education in TMD and Orofacial Pain, Dr. Reid recently earned a graduate degree in bioethics at the Medical College of Wisconsin. He teaches in the biomedical ethics curriculum in the Medical School at Mayo. He also has a number of fellows from neurology and sleep medicine that observe and work with him evaluating and treating patients. His research is almost exclusively oriented toward the ethics enterprise within the Mayo Clinic of Rochester. He is the Chair of the Transplant Ethics Committee, and he serves on the Mayo Clinic Ethics Council and on the Program in Professionalism and Bioethics. He also serves on the Ethics Consultation Service in the hospital and clinics throughout the Mayo Clinic in Rochester.

Dr. Reid is a member of the American Academy of Orofacial Pain. At the annual AAOP conference in Pasadena, California, Dr. Reid lectured on the convergence of ethics and evidence-based medicine. He strongly believes that patients are well served by attempting to integrate the best available evidence with patient preferences and values as well as with the clinician’s expertise in judgment. His belief is that the most crucial component of an evidence-based practice is rooted in ethical principles of respect for patient autonomy, nonmaleficence, and beneficence. Dr. Reid belongs to other organizations that include pain societies and a number of ethics-related societies.

When asked about hobbies and talents, Dr. Reid volunteered that he has a painting studio where he paints abstract and whimsical art. In fact, he has had several exhibitions and has sold some of his work. He laughed, “….so in my own mind I have become a fantastic artist…… I suspect in the minds of most others, that is a bit of an over statement!” Besides painting, Dr. Reid enjoys biking across southern Minnesota. He also has enjoyed 18 years of cheering for his sons, Ian and Liam, as they competed in baseball, basketball and soccer games.

In conclusion, Dr. Reid wrote, “I will forever be grateful for the opportunity to have studied at the University of Minnesota. There is no question that the exposure defined my professional life and created a trajectory for me which has allowed my family and me opportunities that clearly would never have existed previously. My good fortune in having been taught by Drs. Fricton, Schiffman, Anderson, Schulte, and Hathaway in addition to the good support from the clinical staff and physical therapists is something for which I will always be grateful.”

Shanti Kaimal, BDS, MDS, joined the clinical faculty of the Division of TMD and Orofacial Pain. Dr. Kaimal completed the University of Minnesota TMD and Orofacial Pain program June 2011. Since that time, she worked to complete her Master’s thesis analyzing the efficacy of panoramic radiographs in diagnosing TM joint degenerative joint disease. Dr. Kaimal also continues to collaborate with both Drs. James Fricton and Sandra Myers in data research and writing. We are very pleased to have Dr. Kaimal join the faculty and TMD Clinic team. She is a great asset to our division, our clinic, and our patients.

What is oral health-related quality of life?
Quality of life (QOL) is a multidimensional concept that includes personal freedom, jobs, housing, and environment. Aspects of culture and values add to the complexity of this concept. When QOL relates specifically to health, the term health-related quality of life (HRQoL) is used. The Centers of Disease Control and Prevention (CDC) emphasize that this is a broad concept, including physical, mental and social aspects. Health-related quality of life instruments which assess whether the individual is able to perform very general activities such as climbing a flight of stairs or dressing him or herself, are not sensitive to the more subtle effects of the most common oral diseases such as caries or periodontitis. To measure the effects of oral diseases, oral health-related quality of life instruments (OHRQoL) are necessary. The most often used OHRQoL instrument is the Oral Health Impact Profile (OHIP). The OHIP contains 49 questions which ask individuals about the impact of oral diseases. Shorter versions with 14 and 5 questions are also available. These questionnaires can be used in research settings and in clinical practice as well. Use of these questionnaires is free of charge.
Orofacial Pain Research With The Dental Practice-Based Research Network

Dr. Donald Nixdorf has completed a prospective observational study assessing pain-related variables in patients receiving initial root canal therapy within the Dental Practice-Based Research Network (DPBRN). This research was supported by NIDCR and seeks to determine the proportion of patients experiencing pain, both severe post-operative pain and persistent pain, and the interference on daily life this pain has for them. A total of 708 patients receiving root canals were enrolled within the 5 regions of this network, involving 62 dentists in 3 countries. 92% of these patients were followed for the 6-month duration of the study. Currently, Dr. Nixdorf is working on data analyses and will be publishing the results within the coming year.

GRANT AWARD

Dr. Mike T. John has a longstanding interest in oral health-related quality of life research. In collaboration with other researchers from the University of Minnesota Department of Psychology, HealthPartners, University of North Carolina, and University of California, Los Angeles, Dr. John is the primary investigator and will manage a project funded by NIDCR to revise and improve the existing OHIP. This 4-year grant has a substantial international component also. Researchers will analyze OHIP data from over 10,000 general-population subjects and dental patients from 6 countries. Collaborators from the University of Pécs (Hungary), University of Hamburg (Germany), Showa University (Japan), Malmö University (Sweden), University of Ljubljana (Slovenia) and University of Zagreb (Croatia) will participate in data collection and analysis. Dr. Ksenija Rener, who completed a research fellowship in TMD and Orofacial Pain Division last year, will participate on behalf of the University of Ljubljana, Slovenia. Dr. Daniel Reißmann, who visited the TMD Division in 2010, will participate from the University of Hamburg, Germany.

The team focus will be to analyze and select the OHIP questions that represent significant, measurable patient responses that reflect quality of life. During the second phase of the grant, Drs. Brad Rindal and Bill Rush, Health Partners researchers, will have a leading role in applying the revised OHIP. A new sample of 2,000 Health Partners’ dental patients will be asked to complete the tentative, revised OHIP questionnaire based on phase 1 analysis. After critical review of the data and upon completion of the grant, the research team’s goal is to produce a revised, concise, and validated Oral Health Impact Profile that will become dentistry’s standard tool for assessing oral health and treatment effects from the patient’s perspective. Using this validated instrument will allow effects from all oral interventions to become comparable, aiding dentists and patients in their evaluation of treatment alternatives and informing health care systems for setting resource priorities.

This project is an important step for the TMD and Orofacial Pain Division faculty and their collaborators. It will extend current research interests in TMD, orofacial pain, and TMD-related headache into methodological work applicable across dental disciplines.
Besides the official name change, the biggest difference in the graduate program is that Dr. Donald Nixdorf was selected to succeed Dr. Mariona Mulet as the director of the University of Minnesota Orofacial Pain Training Program. Dr. Mulet continues to contribute her talents to the program by providing guidance and academic instruction to the residents. Secondly, the TMD and Orofacial Pain Division completed the self-study document in preparation for application to the Council of Dental Accreditation (CODA). Dr. Mulet spearheaded the application process and dedicated hours organizing and preparing existing data for the final document. Dr. Mulet worked tirelessly documenting policy and procedures, academic coursework, collecting data from the clinic and the research arm of the program, and working with faculty in analyzing program strengths and weaknesses. The critical analysis is groundwork for acknowledging accomplishments and identifying areas that need improvement. Dr. Nixdorf states, “Dr. Mulet did a wonderful job and any success our application may have is largely due to her efforts.” The site visit is scheduled for October 2012.

Dr. Daniel Reißmann from the University of Hamburg, Germany, was selected for the 1-year fellowship with the Division of TMD and Orofacial Pain. The Orofacial Pain Training Program fellowship is offered to dentists who are interested in clinical exposure to the diagnosis and management of TMD and orofacial pain patients and/or research opportunities including using current databases from research projects completed by TMD faculty.

**Residents**

Dr. Pathamas Chantaracherd is a second year resident from Thailand. She received her dental degree and post-doc training in periodontology from Srinakrinwirot University, Bangkok, Thailand. After graduation, her research paper was published in Thai Journal of Periodontology. She has eight years of work experience and was chosen by the graduate director of the Periodontology Program to teach dental students the fundamental clinical periodontal course. In 2011 she moved to Minnesota to begin her education in the Orofacial Pain Training Program. She is currently conducting research with Drs. Schiffman and John on cross-sectional analyses pertaining to the impact of TMJ intra-articular disorders (i.e. disc displacement and degenerative joint disease) on jaw pain, function, and disability.

Dr. Barbara Fonseca Alonso obtained her dental degree at University Alfonso X el Sabio in Spain in 2002. Before coming to Minnesota, she did her General Practice Master’s Degree at University Rey Juan Carlos in Spain in 2007. She worked as a general dentist in her mother’s clinic. Drs. Marta Alonso Porteco and Fonseca Alonso focused on prosthodontics and dental implants. In early 2012 she joined the Orofacial Pain Training Program. She is currently working with Drs. Donald Nixdorf and Justin Durham (United Kingdom) in the development of a screening questionnaire for persistent dentoalveolar pain.

Dr. Sarah Shueb received her dental degree from Garyounis University in Libya 2006 and completed a one year internship in 2007. Dr. Shueb worked as a teaching assistant in the medical school in the Department of Histology in Omar Almokhtar University. She was granted a scholarship in 2008 from the Libyan government to pursue graduate studies in the United States. Dr. Shueb joined the Orofacial Pain Training Program in June 2012.

Dr. Hina Mittal, one of the first year residents, is from India. She received her dental degree from Modern Dental College and Research Center in Indore, India. After graduating from dental school, she worked as an assistant dentist in two hospitals. She joined the Orofacial Pain Training Program in June 2012.

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Drs. Chantaracherd, Mittal, and Fonseca, were granted an opportunity to attend the neuroscience course: PAIN MECHANISMS: FROM MOLECULES TO TREATMENT in Stockholm, Sweden. This course is offered every 2 years in coordination with the Neuroscience Department, University of Minnesota and Karolinska Institute, Sweden. School of Dentistry faculty lecturing in this course were Drs. David Berieter and Donald Nixdorf. The course was taught by more than twenty internationally recognized experts who study ‘pain’. Topics included the neurobiology of pain transmission, the pathophysiology of chronic pain, human and animal models of chronic pain, translational pain research, common human pain syndromes and current information on treatment options and outcomes. The scope and depth of this course is invaluable. In two years the course will be held here at the University of Minnesota.

On May 22 we celebrated the graduation of Dr. Vladimir Leon Salazar. He has completed his formal Orofacial Pain Training Program and met all the clinical requirements for a certificate from the Orofacial Pain Training Program. Besides participating in our program, Dr. Leon has also worked with faculty in the Cleft Palate and Craniofacial Clinics and will also complete the Orthodontic Training Program this academic year. Dentistry has always been his passion, but Dr. Leon is also an accomplished photographer and desktop publisher. We are indebted to him for the photography, design and publishing of the TMD newsletter. Dr. Leon has published the newsletter for the past four years, and we would like to formally thank him for his time and dedication.

On July 15 Dr. Priscilla Rodriguez resigned from the TMD, Orofacial Pain, Oral Medicine and Dental Sleep Medicine Clinic. Dr. Rodriguez completed all requirements for the TMD and Orofacial Pain certificate last year, but was selected to serve this past year as chief resident to provide leadership for the present first and second year residents. Dr. Rodriguez has developed into a well-respected colleague, and the faculty and staff wish to thank her for her service.
The University of Minnesota TMD, Orofacial Pain, and Dental Sleep Medicine Clinic is available to serve you and your patients. We provide the standard of care to patients with jaw, neck, ear and tooth pain. Additional symptoms include headaches, and locking or loss of jaw mobility. We also address patient’s concerns related to difficulty eating and occlusal changes. Finally, we provide Dental Sleep Medicine evaluation and treatment for patients with sleep apnea using customized orthotics. Our comprehensive program includes an interdisciplinary team of dentists, physical therapists and health psychologists to assist patients in reducing pain, improving function and promoting healthy behaviors. During the initial consultation your patients will be carefully evaluated and a comprehensive treatment plan will be designed. You will receive a copy of the evaluation, diagnosis and treatment plan.

All care is provided under medical insurance. We have contracts with most major medical insurance companies to minimize the out-of-pocket expenses for your patients. Our staff has almost 100 years of combined experience working in the field of TMD and orofacial pain and can answer any questions you may have about a referral. We are including a copy of the referral here for your convenience.

The success of our clinic is a direct result of the continuous support and referrals from practicing professionals in the community. These referrals are essential to our clinical training, research endeavors and our professional goals. In turn, we want to assure you that we take our role in the care of your patients very seriously. Thank you.

University of Minnesota Referral

TMD, Orofacial Pain, and Dental Sleep Medicine Clinic

Dentists

Gary Anderson, DDS, MS
Cory Herman, DDS, M.S
Mike John, DDS, PhD
Shanti Kaimal, DDS, MS
Donald Nixdorf, DDS, MS
Eric Schiffman, DDS, MS

Dental Sleep Medicine

Health Psychologist
Leesa Morrow, PhD, JD, LP

Physical Therapists
Karen Decker, PT
Patricia Weber, PT

Teledentistry

Patient name:___________________________________________________________
Telephone #:____________________________________________________________
Referring Dr. (first & last name):____________________________________________
Office Mailing Address/Telephone/E-mail Address:_____________________________

Primary Concerns:_________________________________________________________

Please forward any relevant patient records to us, including x-rays.       Thank you.

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E-mail: kieck001@umn.edu
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University of Minnesota TMD, Orofacial Pain, and Dental Sleep Medicine Clinic

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2011—2012: List of Publications

2011


5. John MT. Whiplash is likely to be associated with temporomandibular disorder symptoms, but the magnitude of this association is not known. J Evid Based Dent Pract. 2011 Sep; 11(3):127-8.


2012


11. Leon-Salazar V, Morrow L, Schiffman E. Pain patients’ perceived need for occlusal therapy: When referral is indicated. JADA. 2012 Sep; 143(9):989-91.