

# the MIRROR

WISCONSIN ACADEMY OF GENERAL DENTISTRY



Fall 2009

## PRESIDENT'S MESSAGE

**P**ride and Frustration. These two words best describe my feelings as I complete the last four months of my two year term as president of your Wisconsin Academy of General Dentistry (WIAGD).

I am proud of the reputation the WIAGD enjoys at the national level. Several WIAGD board members serve in key positions, including Dr. Lou Boryc who serves as our regional trustee. Dr. Stephen Sevenich serves on the Examination Council and the Examination Item Bank Committee; Dr. John Olsen serves on the Examination Council, the Fellowship Exam Committee and the Futures Committee; Dr. Leonard Machi served as an expert member for one of the Reference Committees at this year's annual meeting. And again this year your delegation did an excellent job of representing the WIAGD at the 2009 annual meeting in Baltimore.

I am proud of the relationship the WIAGD has with our fellow regional member, the Michigan AGD. Although different in membership numbers and many other ways, the two constituents have always worked well with each other for the mutual benefit of our Region. I am also very proud and thankful for the partnership we have with the Illinois AGD Master Track Program. This relationship has benefitted many of our members and the WIAGD in many ways.

At the state level we can be proud of the work Dr. Pete Muehleis has done with this publication, the Mirror. It won the national award for excellence two years ago and has been in the running for the award every year since then. Dr. John Olsen has done a great job as membership chair, keeping our membership numbers stable or slightly higher while many other constituents are losing members. We have an active PACE Approval Program. Our treasurer, Dr. Ed Batchelor, has done an excellent job of overseeing the day-to-day financial operations of the organization. And the WIAGD continues to see its members achieve Fellowship and Mastership awards each year. We indeed have much to be proud of.

But all of these successes are tempered with frustration at what we have not accomplished. Our CE programs for the last three years have been poorly attended and lost money for the organization. Our advocacy within the state has been almost nonexistent. Student membership needs improvement. The WIAGD board has not been able to move beyond the current status quo. The reason for these frustrations? We don't have enough active members on the board to move forward.

I am completing my term of office in January. As of now, I don't believe we have a full slate of candidates to fill all of the offices in January. We need your help. We need more members to assist the board, either as committee members or as board members. The WIAGD cannot continue to function with only the existing board members. There are too few, trying to do too much. And that can only lead to stagnation or decline of the organization.

The Board of your WIAGD will have its annual winter meeting on January 22, 2010. It will be held in Green Bay. It is a dinner meeting that follows the Lord's Dental CE program. The location of our meeting is yet to be determined. If you are seriously interested in helping the board or becoming a board member, we'd love to have you attend. Just let me know that you are coming so reservations can be made. If you cannot attend, I always look forward to hearing from you at [richard.hagner@marquette.edu](mailto:richard.hagner@marquette.edu).



**Rick**

Dr. Richard J. Hagner, DDS, MAGD, ABGD

## EDITORIAL

*To The Point*

By Peter M. Muehleis D.D.S., FAGD

*Editor***Over the Edge**

When it comes to good judgment, you'll have to excuse our neighbors in Minnesota. A few years ago they entrusted their whole state to a governor whose previous claim to fame was as a professional wrestler and whose nickname was "The Body".

One would think that if you're going to select a governor from a pool of Neanderthals you might pick someone with a name like "The Brain" instead. So, it should come as no surprise that Minnesotans looked upon the opportunity of electing a comedian to be their next US senator, as a bit of good fortune.

An outsider might conclude that Minnesota is either on the cutting edge or has already gone over the edge.

When it comes to the practice of dentistry, Minnesota is rapidly becoming a leader in innovative modes of delivery as well as licensure. In June, Minnesota passed the Dental Therapist legislation, and next year the dental school will have in place a curriculum leading to a four-year degree. The intent here is to bring a level of service to a population that currently is underserved at fees that are more affordable than those of traditional dentists. In fact, the Minnesota Dental Association was instrumental in joining lawmakers and the University in getting this legislation passed.



The question that remains unanswered is; precisely how will the creation of dental therapists create more access to care at reduced fees given the requirements that the therapists must work under the direct supervision of a licensed dentists? My guess is, this new category of provider will do nothing to address either problem. This of course won't be an impediment to lawmakers since their reasoning simply will be that "we didn't go far enough", and so, we'll see a new string of legislation permitting independent practice thus furthering the erosion of the dentist/patient relationship.

Continuing in their groundbreaking tradition, Minnesota is now the first state in the country to offer non-patient based clinical licensure exams. The exam features interview questions based on models, radiographs, and case histories. University of Minnesota's dean is quoted as saying the decision was in the "best interest of the public".

While many states, including Wisconsin, are struggling with ways to license foreign trained dentists, Minnesota has extended this license by "interview" to Canadian trained dentists.

Only time will tell if Minnesota is behind or ahead of the curve but one thing is certain, Minnesotans are not afraid to take a chance..... somewhat like Brett Favre playing for the Vikings.

*The opinions expressed by the editor are his and do not necessarily reflect those of the A.G.D.*

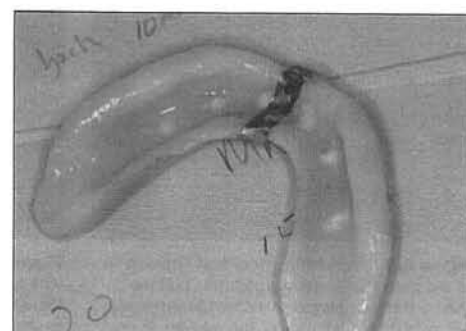
## UPGRADEABLE DENTISTRY, PART 2



**Figure 1.** The patient presented with an upper and lower immediate denture with a "gummy smile."



**Figure 2.** A Lang Duplicate of her denture fabricated in office, with tissue conditioner for diagnostic purposes.



**Figure 3.** A lead foil wrapped circumferentially for a cephalometric analysis of her ridge.

In our current economic climate, we have to ask ourselves what our patients are going through in their personal financial lives. While many people may put off vacations or other creature comforts, they often arrive at the realization that they must do something about their oral health. Unfortunately, if we are dogmatic with our treatment planning options, or are too zealous with our plans, then these patients may be lost as "long-term" dental patients. They may even resolve themselves to long-term denture use.

"Upgradeable Dentistry" is a concept that allows people the dignity to choose options that will improve their oral health in a sequential fashion; based on their emotional, financial, and personal readiness. If a patient is only given the option of "denture dentistry," they will lose bone, experience greater mouth discomfort, lose ability to masticate properly, and experience digestive problems. As a result of denture wear, bite force is decreased from 200 psi to 50 psi, and may go down to 6 psi after 15 years of denture use. According to Millennium Research Group report and Misch, 34.9 million people were older than 65 years of age in 2000 and 86 million people will be older than 65 years of age by the year 2050. The average rate of total edentulism is 20% at age 60 years for the United States. The percentage of edentulism in one or both arches totals more than 30 million people. These numbers highlight the vast dental disease that we need to address in our practices.

As presented in Part 1 of this article series, dentistry is a dynamic process, not a static event. So the ability of the dentist to help patients within acceptable parameters will allow patients to continually choose an "upgrade path" that will result in complete dentistry being performed at a time frame and cost that is agreeable to the patient.

### CASE REPORT

A 36-year-old female presented to our office with upper and lower immediate dentures. She could not retain them in her mouth without gagging, had constant pain when they were in place, and was severely depressed over the poor aesthetics and unsatisfactory outcome she had experienced. Her reason for the placement of immediate dentures had been the presence of significant decay. She had no history of periodontal disease. Since extractions were done without alveolar modification, the denture flanges and tooth placement precluded an ideal aesthetic result. The patient made the remark, "If I had known how miserable this was going to be, I would have never let that dentist pull my teeth." This underscores the importance of educating our patients as to all aspects of edentulism *before* we pick up the forceps.

This patient was in good general health, without any medical problems. She was financially challenged since she had to pay for the extractions and dentures, and very concerned about her financial situation. In order to allow our patient to afford treatment, we phased her treatment, utilized CareCredit (a nonrecourse payment plan) to allow her to spread out payments "interest free." This took care of her financial concerns before we began her treatment.

In Figure 1, the "gummy" smile of our patient's dentures is apparent. What you cannot see is the lack of retention that she experienced with the denture, and the palatal overextension of the prosthesis.

Upon discussion of the advantages, disadvantages, benefits, risks, and alternatives, we decided to begin her treatment with mini-implant supported overdentures. Typically, a discussion of "Upgradeable Dentistry" will involve traditional implants first with overdentures, hybrid prostheses, or fixed

bridgework. The use of mini-implants is another "tool in the shed," for rehabilitation. They have been approved by the US FDA for long-term use, and are very useful for establishing retentive elements in denture prostheses. In Figure 2 one can see the Lang Duplicate denture that was fabricated to aid in evaluating the bone and creating a barium sulfate stent for radiographic evaluation. In addition, these duplicate dentures were used as a tool for creating functionally generated impressions, a technique for achieving a superior-fitting prosthesis. An integral foundation for ideal full-mouth rehabilitation is to understand complete-denture dentistry. Dr. Jack Turbyfill, one of my mentors, always used to say, "a great dentist should never go through life with a cold spatula."

The establishment of proper occlusal vertical dimension, aesthetics, phonetics, and function are essential to establishing long-term success. Holes approximating the position for the desired implant placement were drilled using a No.6 round bur (KOMET USA). Then, clear Triad Gel (DENTSPLY Trubyte) was mixed with BaSO<sub>4</sub> 2- powder in a ratio of 3 to 1. This was put into a used flowable composite syringe, injected into the intaglio of the denture to the desired pilot depth, and light-cured to establish an optimal A-P spread. Figure 3 shows a lead foil (from a radiographic film), that was wrapped around the lower duplicated denture. This was used to check the angle of the mandibular bone, undercuts, and shape of the ridge with a cephalometric radiograph. (An occlusal film on a tongue depressor blade held across the lower mandible is a suitable replacement.)

Figures 4 and 5 show the functionally generated impressions that were made with a tissue conditioning material (Hydrocast [Kay See Dental]). The barium sulfate markers are seen as white dots through the tissue conditioner. A panoramic x-ray (or a CAT scan) can then be taken to evaluate the barium sulfate markers in relation to anatomic landmarks (Figure 6). Notes can be made as to the need to move an implant forward or back in relation to these markers, in the process of determining ideal implant placement positions. Palpation of the mental nerve with a ball burnisher prior to anesthesia helps confirm this important landmark (Figure 7). Indelible marker (or marking sticks) can be used to transfer all of this information intraorally at the time of surgery.

Patients are anxious to receive dentistry that will help solve their problems. This patient was extremely nervous and distrustful at the onset of treatment. Denture fabrication began with bite blocks, rims, and tooth set up and was approved before any surgical intervention, to ensure that her aesthetic desires could be met. Furthermore, by using Lang Duplicate dentures, we were able to trim extensions, add a tissue conditioner, and to insure that she could in fact tolerate wearing a denture. As I was confident she would have implants and bridges later in her life, I was extremely reticent to remove bone. Alveoplasty may have made denture get up easier but that bone would be difficult to regenerate at a later date, so we went ahead and it wasn't until we had full approval or denture aesthetics that surgery was accomplished.

A finger driver was used to deliver the mini-implant after perforation of the cortical plate with the 1.2 mm pilot burr (Figure 8). A thumb driver was used to further advance the implant (Figure 9) and a ratchet wrench was then used to finish implant placement (Figure 10). Ideal mandibular and maxillary arch mini-implant placement was achieved (Figures 11 and 12) as verified in panoramic radiographs that were taken after implant placement (Figures 13 and 14). Parallelism and a great anterior-posterior spread for the implants

*Reprinted with permission from Dr. Richard Winter*

achieved. Since mini-implants are used as retentive elements and not meant to support the load of the masticatory forces, the large spread allows the dentures to sit evenly with less of a propensity to rock.

While the protocol for mini-implants allows for immediate loading of the implants at the time of surgery, I prefer to use tissue conditioning material for 4 to 6 weeks to decrease immediate load forces. This also allows for evaluation of the health of the implants and to ensure patient, comfort prior to completion of the final prosthesis completion (Figures 15 and 16). It is very easy to finalize the denture by modifying the tissue conditioner until it is even, to verify that the borders are of adequate size and width, and to make sure the "neutral zone" of tooth and gum placement is acceptable prior to final prostheses completion.

My protocol for denture fabrication includes the use of metal bases in order to create thinner and more comfortable prostheses, improve temperature differentiation and tactile sensation, and to increase the strength of the dentures. Metal is used judiciously (Figure 17 and 18) so that relines can be accomplished

in the future as peripheries remain in acrylic. In addition, acrylic is left around all keeper caps so that they can be removed in the event an implant is lost in the future. The retentive elements can be picked up directly in the mouth, or fabricated indirectly at the lab.

I removed the palatal vault of the denture and used a metallic U-shaped partial denture design to satisfy the patients' desires and eliminate her fear of gagging from the dentures. In an article by Tarnow, small diameter implants that are unsplinted can be successful in retaining a maxillary overdenture with partial palatal coverage.

The patient's final smile and full-face photos (Figure 19) show the improved cosmetic outcome. The patient has expressed no desire to continue with further implant dentistry.

**DISCUSSION**

While some might not feel comfortable with utilization of mini-implants, it is clear the patient treated in this case had her needs met and was happy with the results. This is a case where we have "done no harm" and have improved a patient's life.

In a personal communication with Dr. Charles English before he passed away, I asked him if he ever felt the need to offer traditional implants to patients after they have worn mini-implants. He said that he never had to take mini-implants out to offer a different option as his patients were primarily denture patients who loved their outcomes. With baby boomers and younger patients, however, the need to "upgrade" should never be overlooked.

**CONCLUSION**

The key to success in these difficult economic times is to help patients move forward. The tools we have to do this involve mini-implants, small diameter 3.0 mm traditional implants, Locator attachments, ERA's, or other implant retentive devices with or without the use of bars. We can use screw-retained or cementable hybrid prostheses, or fabricate implant-supported bridges, bringing us full circle from edentulism. Our denture patients can become dental patients and eat with chewing forces approaching what they had when they were fully dentate. In future articles, I will expand on these concepts and highlight the need in this economic climate to help patients achieve the dentistry they can afford and desire in sequential fashion.

**ACKNOWLEDGEMENT**

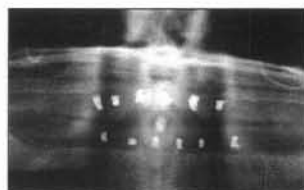
Dr. Winter would like to thank Ara Nazarian, DDS, for his mentorship and guidance in providing the proper training needed to implement mini-implants in his practice.



**Figure 4.** A functionally generated impression of the mandibular denture. Barium sulfate markers are employed to locate the proposed A-P spread and location of the mini-implants.



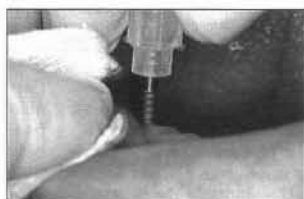
**Figure 5.** The maxillary functional impression with barium sulfate markers and a build-out of the labial neutral zone. The markers are used to visualize anticipated mini-implant location.



**Figure 6.** Panoramic x-ray showing the barium sulfate markers and their proximity to anatomic landmarks (ie, sinus, mental foramina).



**Figure 7.** A ball burnisher was used to identify the mental foramina via palpation with subsequent marking prior to anesthesia.



**Figure 8.** A finger driver was used to carry and initiate placement of the mini-implants.



**Figure 9.** A thumb driver was used to further deliver the mini-implants.



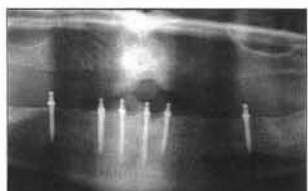
**Figure 10.** A ratchet wrench was used to finalize placement with respect to the bone and gingival landmarks.



**Figure 11.** Six mini-implants in the mandibular arch, after 3 years in service.



**Figure 12.** Six mini-implants in the maxillary arch, after 3 years in service.



**Figure 13.** Panoramic radiograph showing the patient immediately post-surgery for mandibular mini-implants.



**Figure 14.** Panoramic radiograph showing all 12 mini-implants. Note their parallelism.



**Figure 15.** The maxillary denture was delivered with hydrocast tissue conditioner at the time of surgery.



**Figure 16.** The mandibular denture was delivered with a tissue conditioner at the time of surgery.



**Figure 17.** The mandibular mini-implant supported, metal-reinforced overdenture.



**Figure 18.** The maxillary mini-implant supported, metal-reinforced overdenture.



**Figure 19.** Postoperative smile photo of the final prostheses.

## BALTIMORE 2009

## Annual Meeting Highlights



The Wisconsin Academy of General Dentistry (WIAGD) was well represented at the Annual Meeting in Baltimore this summer. Members received awards, gave continuing education courses, served in the House of Delegates (HOD) and on various committees of the Academy.

Dr. Stephen Sevenich of Green Bay received the AGD's 2009 Distinguished Service Award for his many years of leadership on the AGD Fellowship Exam Committee and as Chair of the Examination Council. Dr. Frederick J. Jaeger of Madison received his Mastership Award. Dr. Niles S. Thakkar of Ladysmith received his Fellowship Award. It was an honor to see these distinguished dentists from Wisconsin receive their awards and to congratulate them and their families at the Region IX Reception.

Others representing the WIAGD at the meeting included Dr. John Olsen of Franklin who gave a continuing education course on "Oral Facial Cancer: Diagnosing Capability" and served as a delegate to the HOD; Dr. Leonard Machi of Wauwatosa who served as a delegate to the HOD and a subject matter expert on the Reference Committee on Advocacy and Other Priorities; Dr. Lou Boryc of Muskego who serves as our Region IX Trustee and served as an alternate delegate to the HOD; and Dr. Stephen Sevenich who served on the Fellowship exam review committee and as an alternate delegate to the HOD. My thanks to all of them for their dedicated service to the Academy.

**Rick**



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## Region IX Trustee Report

I was extremely proud to present the Life Long Learning and Service award to Dr. Steve Sevenich ,Wisconsin ; Dr. Sam Shamoon, Michigan and Dr. Tim Kosinski, Michigan.

It was a rare honor indeed for three members of one region to receive this award in the same year.

I was also happy to welcome the AGDs new Executive Director, Charles "Chuck" Macfarlane. I am expecting a renewed vigor at the national office. Chuck brings a wealth of association experience and will bring out the best in our hard working staff. The coming year should be a very positive one for the general dentist with David F. Halpern ,DMD, FAGD as president of the AGD. He is an "in the trenches" dentist like most of us. Dave already has been expanding our influence and collaboration with other dental groups. Great things are coming, built on the hard work of our current and former officers. Please feel free to contact me with any concerns in the coming year.

Sincerely,

**Lou Boryc, DDS, FAGD**



*Region 9 Lifelong Learning Award recipients shown with AGD President elect Fares Elias.*

*From left, Dr. Sam Shamoon, Dr. Fares Elias, Dr. Stephen Sevenich, Dr. Timothy Kosinski*

## WISCONSIN AGD CONTINUES TO GROW! Welcome, New Members!

Douglas L. Cook, D.D.S. *Suring*

Nicole M. Andersen D.D. S. *Madison*

Megan L. Noll, D.M.D. *Madison*

Jared J. Harding, Marquette Student *Marinette*