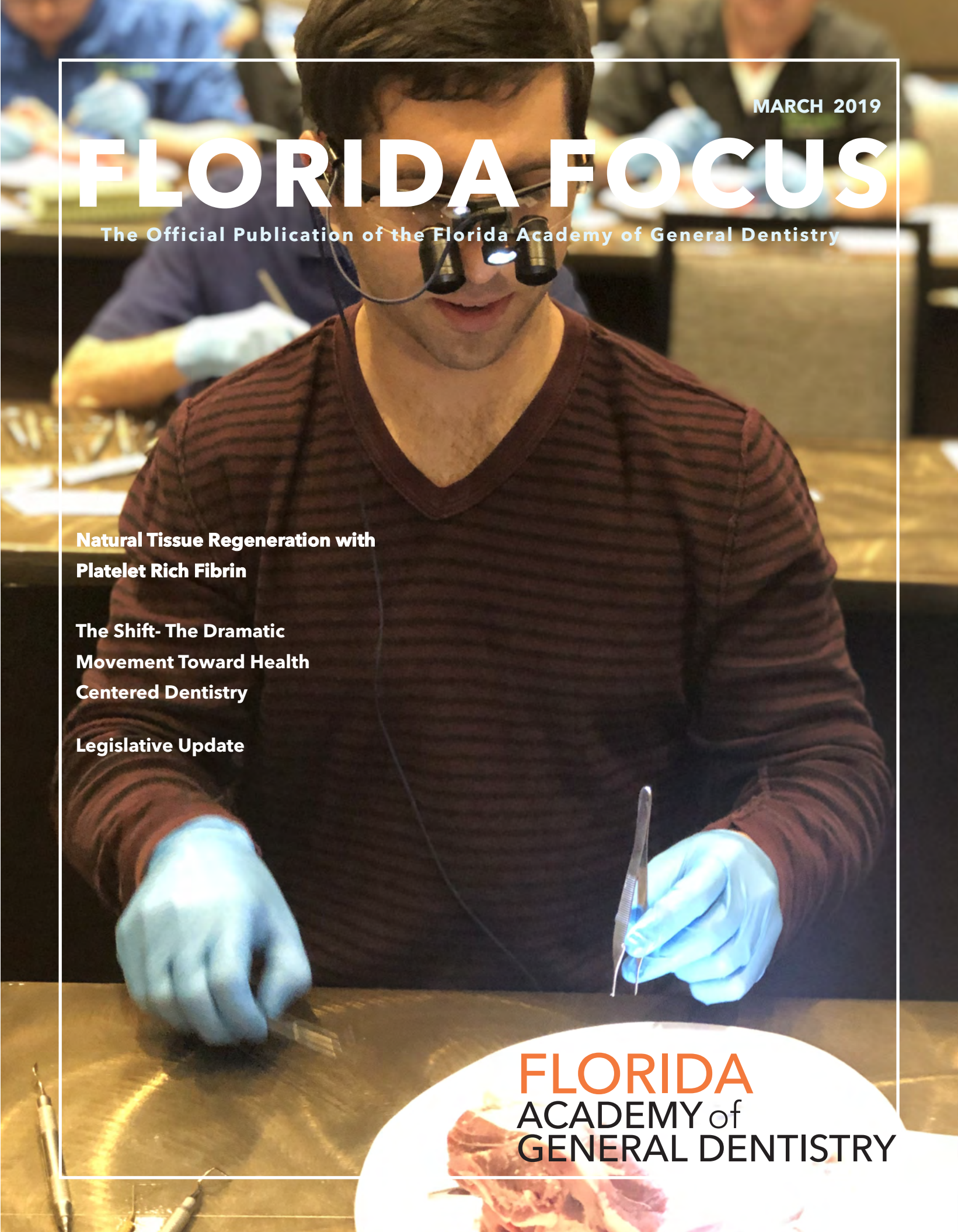

MARCH 2019

FLORIDA FOCUS

The Official Publication of the Florida Academy of General Dentistry

Natural Tissue Regeneration with Platelet Rich Fibrin

The Shift- The Dramatic Movement Toward Health Centered Dentistry

Legislative Update

FLORIDA
ACADEMY of
GENERAL DENTISTRY

Well, thats interesting.....

George Washington's Teeth: His first tooth was pulled in 1756, when he was just 24. By 1781, Washington was wearing partial dentures, and by 1789, he had only one tooth left in his mouth. That year, he started wearing full sets of dentures made from ivory and human teeth.

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2018/2019 OFFICERS AND DIRECTORS AT-LARGE

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PRESIDENT'S MESSAGE

Merlin Ohmer DDS, MAGD

Welcome to 2019. Christmas and New Year's Day seem like a distant memory already. Time marches on and so does the Florida AGD. We have hosted successful CE programs with the best to come this year. For those who have attended our CE programs, please tell your colleagues how valuable they were. To those who have not, don't miss out on the best CE values in the state! My desire is for the Florida AGD to become THE premiere CE source for Florida General Dentists.

Our members are our lifeblood. I strive to ensure the Florida AGD is a value-added organization to you and provides quality CE and representation for every General Dentist in the State. We grew our membership last year slightly, but not enough. We need each and every one of you to recruit new members. We have more strength together than apart. We are the voice of the General Dentist!

Dentist's Day on the Hill will be March 11-12 in Tallahassee. We received great recognition last year from our state legislators and we plan to have greater numbers this year. Our representatives notice and respond to faces and numbers. I encourage all of our members, including student members, to attend. If you cannot, please contact your Congressman and Senator and let your voice be heard.

Our organization needs help, your help! Let us know where your passion lies. We need Board members to govern and members to help with Committees. I know there are passionate members out there, please volunteer! I hope to see all of you at one of our events.

Merlin Ohmer, DDS, MAGD

The man, the myth, the legend! Dr. Merlin Ohmer, our President and CE Chair (left) alongside our executive director, Ms. Patricia Jenkins

Editor's Note

Oral –Systemic Health: A Shift from Teeth Centered Dental Health to Total Wellness Dentistry.

I am excited to help bring this edition to print. There is a shift happening in Dentistry that will make huge influences on healthcare as we know it. Five years ago, I attended a lecture by a leading KOL (Key Opinion Leader) in dentistry. He stated to a room full of general dentists in his lecture on the State of Affairs within Dentistry, "50% of what we do in dentistry is elective." As a mature dentist of 28 years, I felt very uncomfortable because I disagreed with his statement. "Not in my practice," I thought silently. I believed that 98% of the services that I recommended to my patients were oriented toward their overall health and wellness. I believed it then and now I know it! I guess I am what Simon Sinek labels the 13% "Early Adopters".

Fast forward to 2019, and we find meta-analysis research validating that oral health has direct impacts on systemic health. Oral diseases caused by inflammation and microbes, such as dental caries and periodontal disease, are demonstrating strong associations to Heart Disease, Stroke, Diabetes, Alzheimer's Disease, Kidney Disease, Premature Birth issues, Erectile Dysfunction and various forms of Cancer.

In this edition of the Florida Focus we hope to expand your educational horizons. We are honored to publish Dr. DeWitt Wilkerson of the Dawson Education Academy. He outlines the paradigm shift toward health centered dentistry. Dr. Richard Morin, a leading expert on regenerative dental medicine, introduces us to Natural Tissue Regeneration with Platelet Rich Fibrin (PRF). This exciting area of healthcare encompasses all disciplines of dentistry and medicine.

Yes, our world as we know it is changing. We were once "just dentists". As we grow in our educational journey, we will become equals in universal healthcare as "Physicians of the Stomatognathic System.

Randy Weisel DDS, MPS, FAGD
Editor

AGD News

Advocacy

AGD HOD Adopts Medicare Resolution

By Jeanie Kennedy

In 2018, the AGD Legislative Governmental Affairs (LGA) and Dental Practice (DP) councils were engaged in the development of policy positions on dental benefits for the Medicare population. Currently, there are many dental-affiliated organizations calling for the inclusion of dental benefits into the Medicare program.

In November 2018, the AGD House of Delegates (HOD) adopted the following Medicare-related positions:

1. General dentists are committed to delivering quality dental care to patients of all ages and to advocating for optimal oral health.
2. AGD believes that the Medicare Part B program cannot sustain the inclusion of dental benefits.
3. AGD supports enhanced benefits and reimbursement in private sector initiatives for dental benefits.
4. AGD believes that it is the responsibility of every person to exercise good oral health habits that will provide them with a foundation for optimal oral and systemic health throughout their lifetime, and that resources directed toward increasing oral health literacy will support this effort.

The AGD HOD vote was nearly unanimous. During the next few years, AGD members should expect to hear about proposed federal Medicare legislation. Some of the bills may include dental Benefits in Medicare.

Since the midterm elections concluded, candidates for the 2020 election will offer their healthcare platforms. Many bills introduced into the 116th U.S. Congress will likely be sponsored by members of the Congressional Medicare for All Caucus. This particular caucus Includes more than 70 members of the U.S. House of Representatives. Some bills will endorse "Medicare for all," which would likely outlaw employment-based coverage in favor of a governmentsponsored plan. Other bills will propose a Medicare buy-in for 50-64 year olds. Since Democrats are the majority in the House of Representatives, and Republicans hold the majority in the Senate, consensus on these types of Medicare bills is not anticipated.

Polling on future Medicare issues is variable. Some surveys report positive data on proposed Medicare plans, but their survey question phrasing may cause response bias. The Kaiser Family Foundation found that responses vary according to specific words used. Similar phrases yield different levels of support. For example,
"Medicare for all" generates a 62 percent positive response rate, "national health plan" generates a 57 percent positive response rate and "single-payer" generates a 48 percent positive response rate.1

While the AGD HOD has weighed in on the issue of dental benefits for the Medicare population, the positions are likely to be an opening stance on an ever-evolving issue.

AGD's Medicare positions, in addition to a background paper on dental benefits for the Medicare population, are posted on the AGD Advocacy website. Two Medicare primers are also posted for those unfamiliar with Medicare programs. Visit agd.org/dental-practice advocacy-resources/advocacy-resources/key-federal-issues/medicare to read these documents.

Jeanie Kennedy is the AGD manager of dental practice & policy and can be reached at practice@agd.org.

Reference

1. Altman, Drew. "Medicare for All is a double-edged sword for Democrats." Axios. 3 Dec. 2018. axios.com/medicare-for-all-democrats-politics-f74cfbcb-96dd-42da-948ab50a633a44c2.html.

LEGISLATIVE REPORT

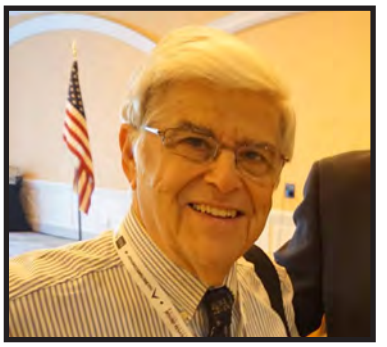
Melvin "Mel" Kessler, DMD, FAGD

SPECIAL ALERT – 2/4/19

Sen. Jeff Brandes and Rep. Juan Fernandez-Barquin have filed SB 684 and 686 and HB 471. Both would create Dental Therapists in Florida. So the time is NOW. Please write your legislators to tell them you are opposed to these bills, as there is a better way to address a shortage of dentists in rural communities. We will send more information as these bills come before the subcommittees. Please read the rest of this report to see how you can help. To see what the public is seeing, go to:

health.wusf.usf.edu/post/florida-lawmakers-drill-competing-dental-bills#stream/0

This article was published 1/28/19 regarding DT's. Please tell legislators that you support Rep. Mike Grant's HB 465 and SB 716, by Sen. Ed Hooper instead. These bills would reinstate financial assistance to dentists and can provide dentists to work in underserved communities within 6 months, rather than DT's, taking between 5 – 6 years. Please go to the FDA Legislative Action Center to contact your legislator.



This issue is essentially to deal with DDOH (Dentist Day on the Hill). This is what legislation is all about. Getting anywhere can take years and we may or may not get what we want. To make the case for our preferred legislation takes time, money and a passionate group of members helping to inform members of the legislature that ours is the right solution for a given problem.

On 12/11/18 President Trump signed The Action for Dental Health Act. It has taken a number of years since 2014 to pass this act, but we are finally there. The Act supports activities that improve oral health education, promote dental disease prevention and reduce use of emergency rooms. It will also enable groups to develop and expand outreach programs that facilitate establishing dental homes for children and adults, including elderly, the blind and disabled. (ADA News, 12/11/18)

Just as the national program has finally been passed, Florida has its own comprehensive program, Florida Action for Dental Health. The major keys to our plan are this year's legislative issues. Just as the federal government, we have been working on these issues for many years. They are:

1. Reinstating dental student loan repayment program – HB 465 & SB 716, Florida is only one of five states that does not have a student repayment program. Aim is to have 10 students eligible to receive up to $50,000 per year, for up to 5 years, and can be up and running within 6 months. They would be required to work full-time as Medicaid providers in rural areas and underserved communities. If this form of bill would have been approved four years ago, when first introduced, and then the next year passed by 100% of the legislature (but vetoed), we would have already had 30 dentists treating patients. Our adversaries solution, that being DT's (dental therapists), would take from 5 - 6 years to have any care provided to patients.
2. Funding for two coordinators for Donated Dental Services to provide free care to patients with handicaps and health limitations.
3. Increased funding for community water fluoridation. Current funding of $200,000 can only support 2 -3 communities in implementing the necessary equipment, now asking for $1,000,000.
4. Support for CDHC program (Community Dental Health Coordinator) serving as navigators for the complicated healthcare system.
5. Support funding for Mission of Mercy (New request). By treating patients in need it would reduce the number of patients going to hospitals for emergency room treatment. One group states that in 2016, 167,000 patients were seen in hospital emergency rooms for non-traumatic dental emergencies. Only palliative treatment was provided, costing $322,000,000, much of it paid by the taxpayers through Medicaid. There have got to be better solutions, such as over time preventing much of this. In 1954, 45% of the population smoked cigarettes and many were dying from lung diseases. Of course we tried to have more pulmonologists but the solution that worked was prevention, a campaign against smoking, not a new pulmonary provider of PT's (pulmonary therapists). (Yes, I know there are respiratory therapists, hang on a moment). Through the campaign to reduce smoking, in 2016 only 15.5% were smoking. This week I heard only 14% smoke. Should we have only relied on more and more providers, or tried to reduce the problem?

Legislative Report continued from page 4

I have already mentioned the main issue we are opposing this year, that is dental therapy.
There are sufficient dentists and hygienists in the state to treat even more patients. The urban areas have an excess of practitioners, as up to 80% of practices say they can treat more patients. Many practices have open time. In addition, as our dental team duties have been expanded, our practices are more efficient in handling patients. This allows a dentist to perform more treatment without the need of having to hire an additional $80,000 employee.

The problem with DT's is mainly that they are compared to nurse practitioners and physicians assistants, but that is a false comparison. Their training can be only 3 years after only a high school education, while the other providers require a 4 year undergraduate degree, additional patient care experience, and then a 3 year program. Even at that, nurse practitioners and physicians assistants are not doing irreversible surgical procedures. Also, although CODA approved a program in 2015, none of the practicing DT's have as yet graduated from a CODA approved program. While Alaska's model is unique, most are trying to cite the programs in Minnesota. Since 2009 there are only slightly more than 80 DT's, and most are practicing in urban areas. They are not addressing the access to care issue. In fact the state had a problem providing adequate care to children of low-income families in 2017, and was in jeopardy of losing federal funding. This only brings up the point, is it the right solution or are there better solutions? Oregon only has a pilot program and Washington is restricted to only tribal communities. Arizona, Maine and Vermont have no CODA approved programs as yet. In the case of Arizona the opposition did a "strike everything" stunt. While the DT bill failed in committee, the legislature took a different bill, struck all and inserted their DT legislation and then passed it in the House and Senate.

We will have to be careful in Florida as they will stop at nothing.

Proponents cite worldwide success of different forms of therapists. The better programs cited were limited to working on children only and only under a publicly funded setting. Of course there would be diverse forms of programs to solve an extreme need for providers as worldwide. According to the WHO, (World Health Organization), dentist to patient ratio worldwide is only 1:7,500. With a ratio such as this, any form of provider is better than none. In the US we do not suffer from the extreme shortages of dentists, as we are a more developed nation. In the US that ratio is 1:1,640, but even here there is variation, depending on income levels in the various states. Simply put, higher income states have more dentists, as lower income states tend to have fewer dentists per 100,000.

So now we come back to the issue of DT's in Florida. We have very strong proponents of dental therapy in this state, so maybe it is thought that if they can win here, they can then easily win elsewhere. We are fortunate to have an ADA component, the FDA, which is strongly opposed to DT's. They feel it does not serve the best interests of the citizens of the state. As there is no shortage of practitioners, only a maldistribution of dentists, there are better solutions than a new provider. Hence, Florida's Action for Dental Health. Last year, with about 120 participants at DDOH, we were able to stop the dental therapist's bill. It was a very poor bill, as it did not address the rural underserved communities and did not limit care to those in most need. It also did not limit it to public settings. It would have allowed DT's to work in urban areas unrestricted and would have been most beneficial to DSO's. Urban areas are not where we have a shortage of dentists.

This year we will need many more dentists in Tallahassee advocating for better dental health for the public. We must tell our legislators that our programs and prevention of dental disease is a better solution. We must inform them that DT's are not the best course of action. Prevention ultimately in the case of smoking and lung disease, drastically reduced the numbers of those afflicted. Also Action for Dental Health, passed 12/11/18, will continue to lead us in the right direction. We must explain to our legislators that ours is the better approach.

DDOH is March 11, Orientation 6:00 PM. March 12, Legislative Visits. You must make your own appointments with your legislators. Also plan to see committee chairs, committee members from your area and all other members from your area that you are able to see. Please plan to spend as much time as you can to visit with legislators.

Once again, WE DO NOT SUPPORT LICENSING A NEW PROVIDER. To help in this effort, please contact FDA Chief Legislative Officer Joe Anne Hart at jahart@floridadental.org or call 850-350-7205.

Melvin Kessler, Legislative Chair

ATTENTION MEMBERS!

Our General Assembly 2020 meeting will not be held in conjuction with the FDC for 2020.

Please stay tuned for a new location and date.
Thank you!!

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Natural Tissue Regeneration

INTRODUCTION

Tissue regeneration is a complex biological process that involves several key components including cells, growth factors, and a regenerative scaffold. Today, many clinicians utilize a variety of biomaterials to help facilitate this task including allografts, xenografts and a variety of synthetic materials. Noteworthy however, each of these materials is considered 'foreign' to the human body where the immune response dictates whether these biomaterials will integrate or not into the body. For these reasons, autogenous tissues (autogenous bone, connective tissue grafts) have always been considered the gold-standard owing to their natural sources. One more recent autogenous tissue that has more frequently been utilized in recent years is that of platelet rich fibrin (PRF). PRF is derived from peripheral blood via centrifugation to reach supra-physiological concentration of blood-derived regenerative growth factors, cells (platelets and leukocytes), both contained within a 3-dimensional fibrin scaffold. This scaffold serves to increase angiogenesis and provide growth factors that promote the regeneration of many tissues. This article provides an overview of this new technology, discusses its uses in regenerative dentistry, provides case reports and clinical recommendations, as well as touches on its use in facial esthetics as a natural approach to skin

rejuvenation.

Brief history of platelet concentrates

The use of platelet concentrates have gained tremendous momentum as a regenerative autologous source of growth factors utilized in various fields of medicine.1, 2 It was originally proposed that concentrated platelets derived from autologous sources could be collected in plasma solutions later to be utilized in surgical sites with the potential to release 6 to 8 times supra-physiological doses of growth factors responsible for promoting local healing.1, 2 Further work in the 1990s by Marx et al. led to the popular working name 'platelet rich plasma' (PRP). The goal of PRP was to collect the largest and highest quantities of growth factors from platelets to be later utilized for regenerative purposes. The PRP protocol required over 30 minutes of centrifugation cycles and the use of anticoagulants to prevent clotting. The final composition of PRP contains over 95% platelets, known cells responsible for the active secretion of growth factors involved in initiating wound healing of various cell types including osteoblasts, epithelial cells and connective tissue cells.3, 4

One of the reported limitations to PRP technique apart from its longer centrifugation protocols was the fact it included the additional use of bovine thrombin or CaCl2 in addition to coagulation factors. These drastically reduce the healing process during the regenerative phase by preventing coagulation and fibrin clot formation; something necessary for wound healing of all tissues. This limitation has led to the emergence of a second generation of platelet concentrates which takes advantage of the fact that without anti-coagulants, a fibrin matrix that incorporates the full set of growth factors trapped within its matrix and slowly released over time could be achieved.5

From PRP to PRF

Research in the later 90s and early 2000s led to the development of a second-generation platelet concentrate without utilizing anti-coagulations. This protocol is instead produced using a single-step centrifugation protocol; 12 minutes at 2700 rpm (750g) (Figure 1).

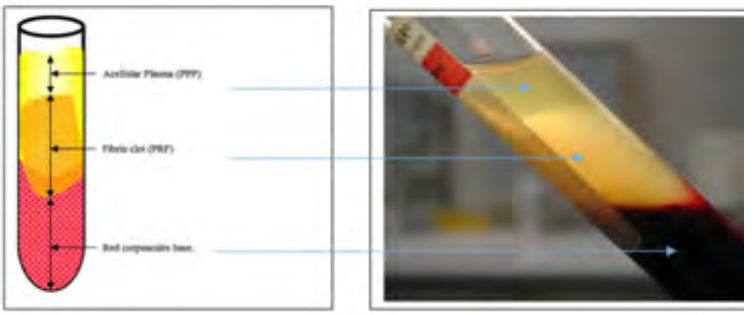


Figure 1: Fibrin clot in the tube after centrifugation. After the spin cycle, a PRF membrane can be found within the tube with entrapment of platelets and leukocytes. (Top Photo)

This formulation was termed platelet rich fibrin (PRF) owing to the fact it produced a fibrin matrix following centrifugation. PRF (often named leukocyte-PRF or L-PRF) additionally contains white blood cells (WBCs); necessary cells involved in the wound healing process by improving defense immunity and secreting a large quantity of growth factors. As depicted in Figure 2, macrophages and leukocytes are key cells found in blood and secrete a wide range of growth factors including transforming growth factor beta (TGF-beta), PDGF and vascular endothelial growth factor (VEGF) (Fig. 2). These cells, in combination with neutrophils and platelets, are the main cell-types found in PRF that further serve to enhance new blood vessel formation (angiogenesis), which subsequently leads to new tissue regeneration.6

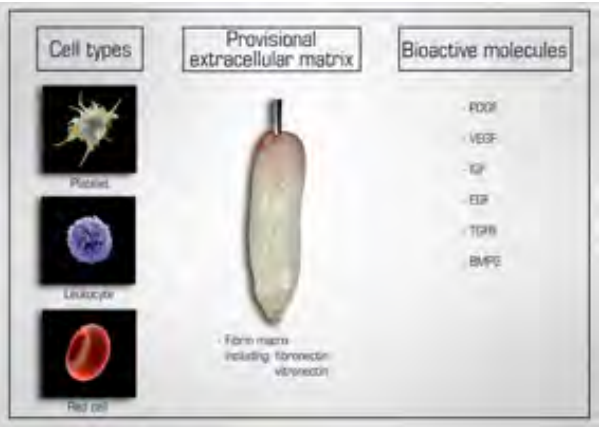


Figure 2: Natural components of PRF include 1) cell types (platelets, leukocytes and red blood cells), 2) a provisional extracellular matrix 3-dimensional scaffold fabricated from autologous fibrin (including fibronectin and vitronectin) as well as 3) a wide array of over 100 bioactive molecules including most notably PDGF, VEGF, IGF, EGF, TGF-beta and BMP2 (reprinted with permission from Miron et al. 2017). (Bottom photo)

Three components are essential to improve tissue repair including 1) a 3-dimensional matrix capable of supporting tissue ingrowth, 2) locally harvested cells capable of influencing tissue growth and 3) bioactive growth factors capable of enhancing cell recruitment and differentiation within the biomaterial surface. PRF presents a regenerative modality with each of these 3 properties whereby 1) fibrin serves as the scaffold surface material, 2) cells including leukocytes, macrophages, neutrophils and platelets attract and recruit future regenerative cells to the defect sites and 3) fibrin serves as a reservoir of growth factors that may be released over time from 10 to 14 days.7

WITH PLATELET RICH FIBRIN

Platelet Rich Fibrin–PRF- A natural fibrin matrix and its biological properties

PRF was developed as a platelet concentrate with anticoagulant removal to favour more rapid wound healing. Speaking logically, the first step when a human is subject to a bleeding wound is blood clotting. Upon clot formation, cells and growth factors entrap in the clot, and thereafter wound healing may take place. PRF is a biological way to create a super-clot with supra-physiological concentrations of wound healing cells and growth factors in an entirely biological approach (Often referred to as Bio-PRF). Naturally this technology requires a centrifuge (Figure 3) and a collection system present within the office since anti-coagulants are not utilized, clotting forms rapidly. Therefore, centrifugation must take place within seconds after blood harvesting. The protocol is simple: A blood sample is taken from a peripheral vein of a patient without anticoagulant in 10-mL tubes which is then immediately centrifuged at a specific protocol (Figure 3). The absence of anticoagulant implies the activation in a few minutes of most platelets of the blood sample in contact with the tube walls and the release of the coagulation cascades.

Fibrinogen is initially concentrated in the upper layer of the tube, before the circulating thrombin transforms it into fibrin. A fibrin clot is then obtained in the middle of the tube, just between the red corpuscles at the bottom of the tube and the acellular plasma at the top (PPP) (Figure 1).

Figure 3: Clinical centrifugation (A) and equipment (B) for the production of Platelet Rich Fibrin (Bio-PRF).

Without anticoagulants, the blood samples start to coagulate almost immediately upon contact with the tube glass, and it takes a minimum of a few minutes of centrifugation to concentrate fibrinogen in the middle and upper part of the tube. Quick handling is the only way to obtain a clinically relevant PRF. If the duration required to collect blood and launch centrifugation is overly long, failure will occur and proper separation of the blood layers based on density will not be possible.

Development of a liquid Platelet Rich Fibrin.

With the same concept of non-additive platelet derivatives, a liquid PRF was developed to fulfil the goal of acting as a regenerative agent that could be delivered in liquid formulation by drawing blood rapidly in a specific centrifugation tube at a very low speed (60-200g) for a short centrifugation time (3-5 minutes) (Figure 4).

In a study titled: “Injectable platelet rich fibrin (i-PRF): opportunities in regenerative dentistry?”, Miron and colleagues demonstrated the ability for liquid PRF to act as a small but highly concentrated layer of PRF that remains liquid for approximately 15-20 minutes during which time fibrinogen and thrombin have not yet converted to a fibrin matrix. It has since been utilized for a variety of clinical procedures in medicine and dentistry including injecting into joins and other defects, mixing with bone grafts to improve graft stability, application onto wounds, facial rejuvenation, etc.

Figure 4 : The newer formulation of liquid-PRF is a liquid formulation of PRF found in the top 1ml layer of centrifugation tubes following a 3-5 minute protocol at 60-200g.

This liquid can be collected in a syringe and re-injected into defect sites or mixed with biomaterials to improve their bioactive properties.

MEET THE AUTHORS

Dr. Richard Miron, dr. med. dent. BMSC, MSc, PhD, DDS, is the lead investigator at the Miron Research Lab (www.themironlab.com) focused on novel regenerative agents utilized for bone and periodontal regeneration. He spent 7 years living in Switzerland where he completed a PhD in Molecular and Cell Biology at the University of Bern, Switzerland. He has recently been named the youngest member of the Top 100 Dental CE providers in USA (2018), and has been awarded many internationally recognized top young investigators awards. He has authored over 150 peer-reviewed international research articles in the top ranking dental and biomaterial journals and written 3 textbooks including one on Platelet Rich Fibrin. He is also the head educator at Advanced PRF Education (www.prfedu.com).

Dr. Yen Nguyen, DDS earned her doctorate from The University of Florida (UF) College of Dentistry in 2005 and has been in private practice for more than 10 years in Lutz, Florida. She chose a career in dentistry to help others achieve healthy beautiful smiles. Dr. Nguyen has participated in many extra-curricular research and educational activities related to platelet rich fibrin (PRF) and continues to provide various volunteering services within the community. She is involved in supporting Girl Scouts activities, charity events for veterans, Big Brother and Sister, and the Florida Donated Dental Services Program.

CONTINUED ON PAGE 9

CLINICAL USE OF PRF AND INDICATIONS

When it comes to soft tissue management and maturation, PRF is able to support the development of angiogenesis, immunity and epithelial coverage. Fibrin has been shown to act as the natural scaffold guiding angiogenesis, which consists of the formation of new blood vessels inside the wound.

Regarding the clinic use of PRF in daily dental practice, PRF may be utilized as both a tissue matrix/scaffold (provisional ECM) with the ability to simultaneously release growth factors over a 10-14 day period. The clots are prepared in a PRF metallic box which allows the slight compression of their clots into membranes or plugs to be later utilized as depicted in Figure 5.

These can be utilized for a variety of clinical procedures including acting as autologous barrier membranes, extraction socket healing (Figure 6), sinus lifting procedures (Figure 7), implant dentistry as well as for the treatment of intrabony defects and gingival recessions (Figure 8) amongst others. Research is continuously ongoing in this field and patient satisfaction has been considered high due to the use of regenerative materials from autologous sources (patient's own blood).

Figure 5: PRF clots formed to either make membranes or PRF plugs

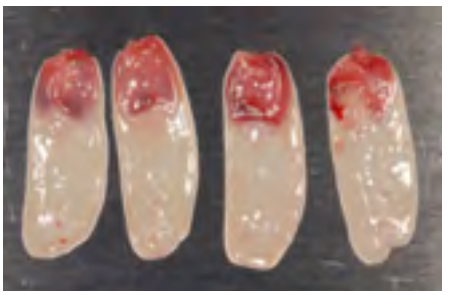
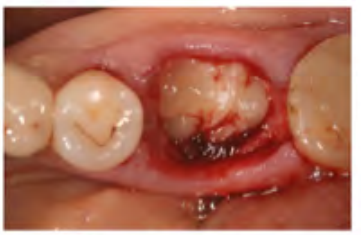
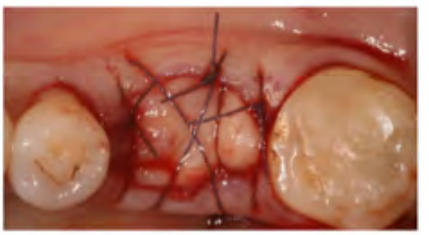
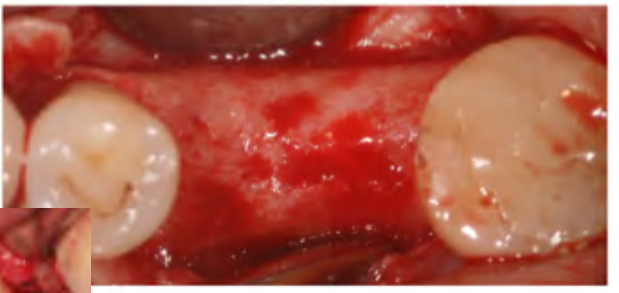
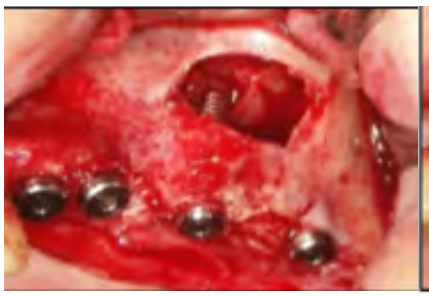


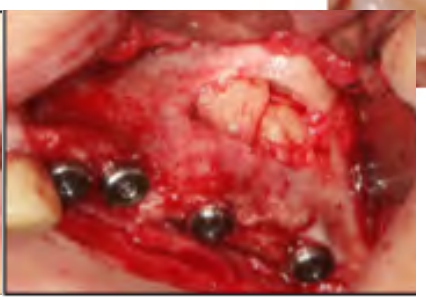
Figure 6: (Right) One of the main uses of PRF has been for the management of extraction socket healing. Above a demonstration of an extraction socket filled with multiple PRF plugs utilizing alone. After 3 months of healing, substantial bone regeneration observed without use of a bone grafting material. Note here, the indication for PRF without a bone grafting material is primarily indicated only when the buccal wall is entirely present (ideally > 2mm).

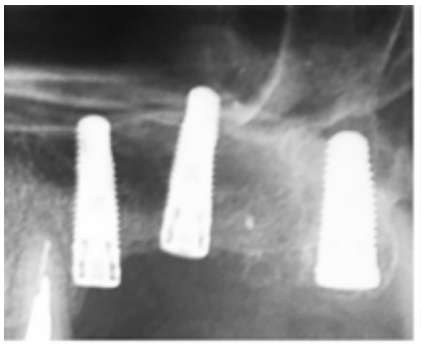












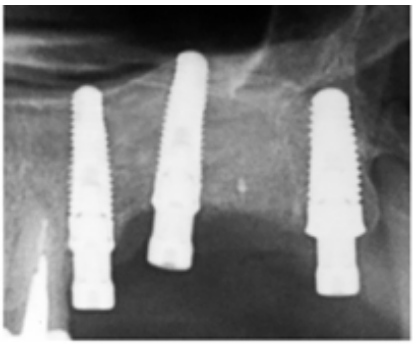


Figure 7: (Left) Lateral window sinus augmentation procedures utilizing PRF alone. Notice the bone gain occurring in the bottom right image. Today PRF is utilized more frequently with a bone grafting material and acts as a natural growth factor capable of speeding the revascularizing the sinus cavity.

Figure 8: Lateral window sinus augmentation procedures utilizing PRF alone. Notice the bone gain occurring in the bottom right image. Today PRF is utilized more frequently with a bone grafting material and acts as a natural growth factor capable of speeding the revascularizing the sinus cavity

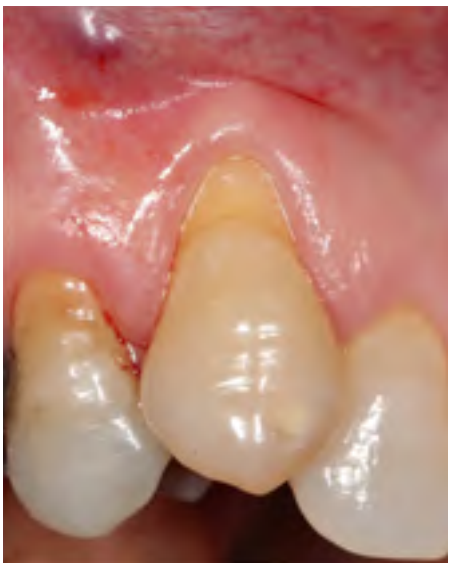
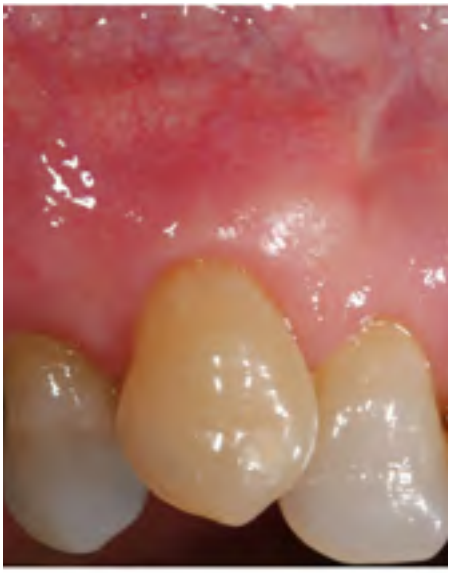


Figure 9: Use of PRF alone for the treatment of gingival recessions. Notice the soft tissue wound healing observed when PRF is utilized alone. Due to the use of the blood-derived collection of growth factors, PRF alone can be utilized for the regeneration of simple Miller Class I and II gingival recessions.



Facial Aesthetics and Rejuvenation

Another booming area with lots of growth (especially in the states of Florida, California and New York) is the use of platelet concentrates for facial aesthetics. This was popularized across the country when a number of celebrities began to reveal their regimens for skin care which included the Vampire Facelift technique – a protocol that utilized PRP with micro-needling. This approach to facial rejuvenation has also further been enhanced over the past years with PRF. Additionally, since liquid PRF can be injected followed by clotting, it is substantially more effective when compared to PRP for the regeneration of naso-labial folds and other troublesome areas of the face (Figure 10). Figure 11 demonstrates a few before and after pics of cases utilizing the regenerative properties of PRF. This facial rejuvenation technique is substantially much healthier for patients when compared to other foreign body materials including fillers and Botox.

Figure 10: Injection of PRF into nasolabial folds. Reprinted from Miron and Choukroun 2017. (Top)

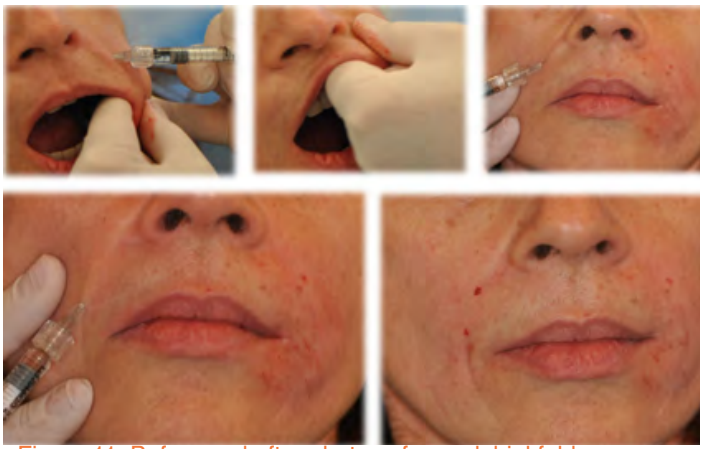
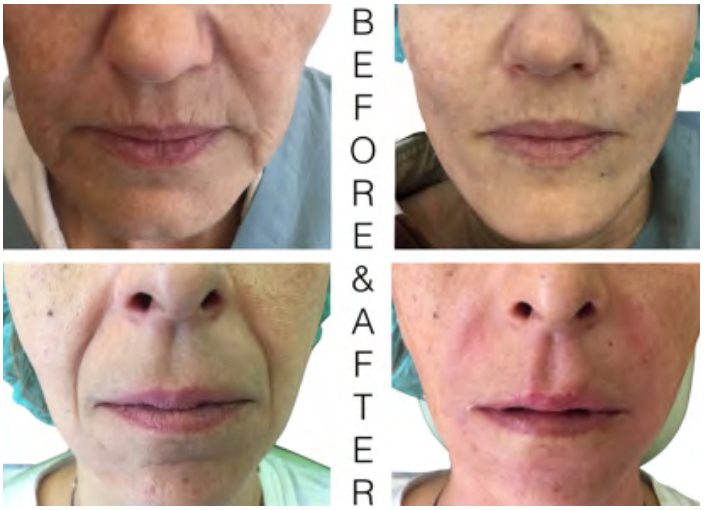


Figure 11: Before and after photos of naso-labial folds regenerated with PRF (Reprinted with permission from Miron and Choukroun). (Bottom)



CONCLUSION

The use of PRF in regenerative medicine has now seen a huge increase in its use across many fields of medicine due to its ease of use and low costs while providing a completely autologous source of growth factor delivery. Recent modifications to the centrifugation protocols (both speeds and times) have further enhance its regenerative potential and bring to clinical practice a liquid formulation. Future strategies are continuously being developed to further improve the clinical outcomes following regenerative procedures utilizing platelet concentrates.

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The Shift- The Dramatic Movement Toward Health Centered Dentistry

DeWitt C. Wilkerson, DMD

We face a major crisis in the United States, with the incidence of serious health issues including cardiovascular disease, heart attacks, strokes, diabetes, obesity, sleep apnea, gastric reflux, Alzheimer's, and various cancers such as throat and esophageal, growing exponentially each year.

In the midst of this health crisis we also are experiencing a health care crisis. The western medical model emphasis is on "sick care" for a patient's specific chief complaint, often resulting in targeted treatment, primarily through prescription drugs. As a nation, we lack an effective "wellness care" model. Physicians are often trapped in an insurance system that severely limits the time spent with patients while rationing health care services and dollars. Ironically, many wonderful medical breakthroughs now show that most chronic disorders are readily preventable and even reversible. Where will much needed help come from?

The time is right for The Shift (paradigm shift)- the dramatic movement toward health centered
Dentistry. No other health providers build stronger relationships or spend more time with the
public than does the dental team. We have a golden opportunity to significantly elevate our profession, as highly valued gatekeepers of complete health, by implementing an Integrative Dental Medicine(IDM) Model.

DeWitt Wilkerson DMD is a graduate of the UF College of Dentistry and serves as the Director of Dental Medicine/Senior Faculty for the Dawson Academy in St. Petersburg. He is the current President of the American Academy for Oral Systemic Health (AAOSH) and Past-President of the American Equilibration Society(AES). He serves as an Adjunct Professor at UF College of Dentistry and is a former Associate Faculty member at the L.D. Pankey Institute. He is the author of The Shift, the Dramatic Movement Toward Health Centered Dentistry (Amazon, January 2019)

Three major areas of focus are readily identified within the IDM Model:

Oral & Systemic Inflammation
Airway, Breathing & Sleep Disorders
TMD & Occlusion Disorder

Let's review several majors points.

Oral & Systemic Inflammation is the link often described as the "oral-systemic connection".
Oral bacterial pathogens gain access to the bloodstream through bleeding periodontal tissues and periapical abcesses. Research now validates the elevated presence of oral pathogens both in arterial plaque (atheroma) and in the blood clot (thrombus) that produces heart attacks. The dental team, managing oral pathogens, is a big dog in the cardiovascular arena. Systemic inflammation is now understood to be a major driver in many chronic health concerns. Lifestyle choices are major drivers of systemic inflammation. Dental teams can serve as
gatekeepers of inflammation for their patients, both periodontally and systemically. Screening, testing, education and treatment of oral pathogens (salivary testing), blood sugar levels (HbA1c fingerstick), gastric reflux (Koufman Reflux Symptom Index), nutrition, physical activity, and smoking, are examples of easily implemented services.

Airway, Breathing & Sleep Disorders will be a major focus in Dentistry in the future. For example, a child who suffers from allergies may develop nasal congestion. If this forces conversion to mouth breathing, the child not only loses the proper filtration of dirty air that the
nose provides, but also changes the tongue's posturing, and may develop a narrow maxilla, crowding of the dental arches, malocclusion, inflamed tonsils, poor sleep, and ADHD-like symptoms. Young adults with a similar history may describe TMD-like symptoms of sore
muscles, chronic fatigue and headaches. Middle aged adults may describe brain fog, fibromyalgia, bruxism, and demonstrate severe dental wear. This is a huge subject in IDM.

TMD & Occlusion Disorders represent a unique area of complete health for Dentistry. We now understand that there is a strong link between systemic inflammation, airway-breathing- sleep disorders, and TMD-occlusion disorders. Dentistry is the specialty in medicine that can best understand and address these relationships.
The Shift train is pulling out of the station. You are encouraged to jump aboard!

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DeWitt C. Wilkerson graduated from the University of Florida College of Dentistry in 1982, the same year he joined the private practice of Dr. Peter Dawson in St. Petersburg, Florida. He has lectured internationally for 25+ years on the topics of Restorative Dentistry, TMD, Breathing Disordered Sleep & Integrative Dental Medicine. He has taught over 600 hours of hands-on instruction, to over 4,000 students through Dawson Academy programs.

Course Description

Integrative Dental Medicine emphasizes the golden opportunity for dental teams to learn the knowledge and skills to begin addressing the dental patient's complete health.

For example, the most immediate essential of complete health is an open airway, proper breathing, and oxygen delivery to every cell. It has become apparent in recent years that this is a very important subject in dentistry. Not only is it possible to evaluate for breathing dysfunction that affects systemic health, but also understand the key relationship between breathing dysfunction and dental malocclusion, tongue thrusting habits, clenching & bruxism, abrasion & erosion dental wear, gastric reflux, and TMD symptoms - including sore muscles & joints, headaches, and cervical neck discomfort. This covers many of the common issues confronted by every dentist. It is imperative to be well versed in airway and breathing to excel as a problem solver in dentistry, and to produce predictably stable results in restorative dentistry.

Course Objectives

- This program is focused on helping dentists identify the major risk factors of complete health and utilize a practical clinical model for evaluation, diagnosis and treatment.
- A comprehensive "Integrative Dental Medicine Checklist" will be provided to simplify the learning of this subject and guide the clinical implementation on an individual patient basis.
- The checklist will allow the whole dental team to feel confident in incorporating this new information into the patient evaluation process
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Submitted to CE Broker and AGD

Subject code: 070

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Dr. Donnie Luper is in a group private practice with offices in New Bern, Kinston and Greenville, NC. Dr. Luper received his undergraduate degree from North Carolina State University in 1979 and his dental degree from the University of North Carolina School of Dentistry in 1982. He practiced general dentistry in the US Navy from 1982-1998. Dr. Luper received his Certificate in Endodontics from the National Naval Dental Center, Bethesda, MD, in 1990. He is a member of the American Dental Association, American Association of Endodontists, Tar Heel Endo Society, Southern Endo, and the North Carolina Dental Society. While in the Navy, he lived in Jacksonville, FL; Subic Bay, Philippines; Charleston, SC; Bethesda, MD; and Bremerton, WA. He has lectured in many countries including the USA, Philippines, Malaysia, Thailand, and Kenya.

Course Description

This comprehensive hands-on course will take you through all the aspects needed to take your practice to the next level by utilizing the latest and most efficient endodontic techniques. In just one day, you will gain practical skills that can be immediately incorporated into your day to day work flow. With these fresh techniques, you will build confidence in your endodontic outcomes and trust that they will be consistently successful.

Upon successful completion of this program, participants will:

- Learn key indicators for endodontic diagnosis and case selection
- Gain a greater appreciation for access and canal preparation
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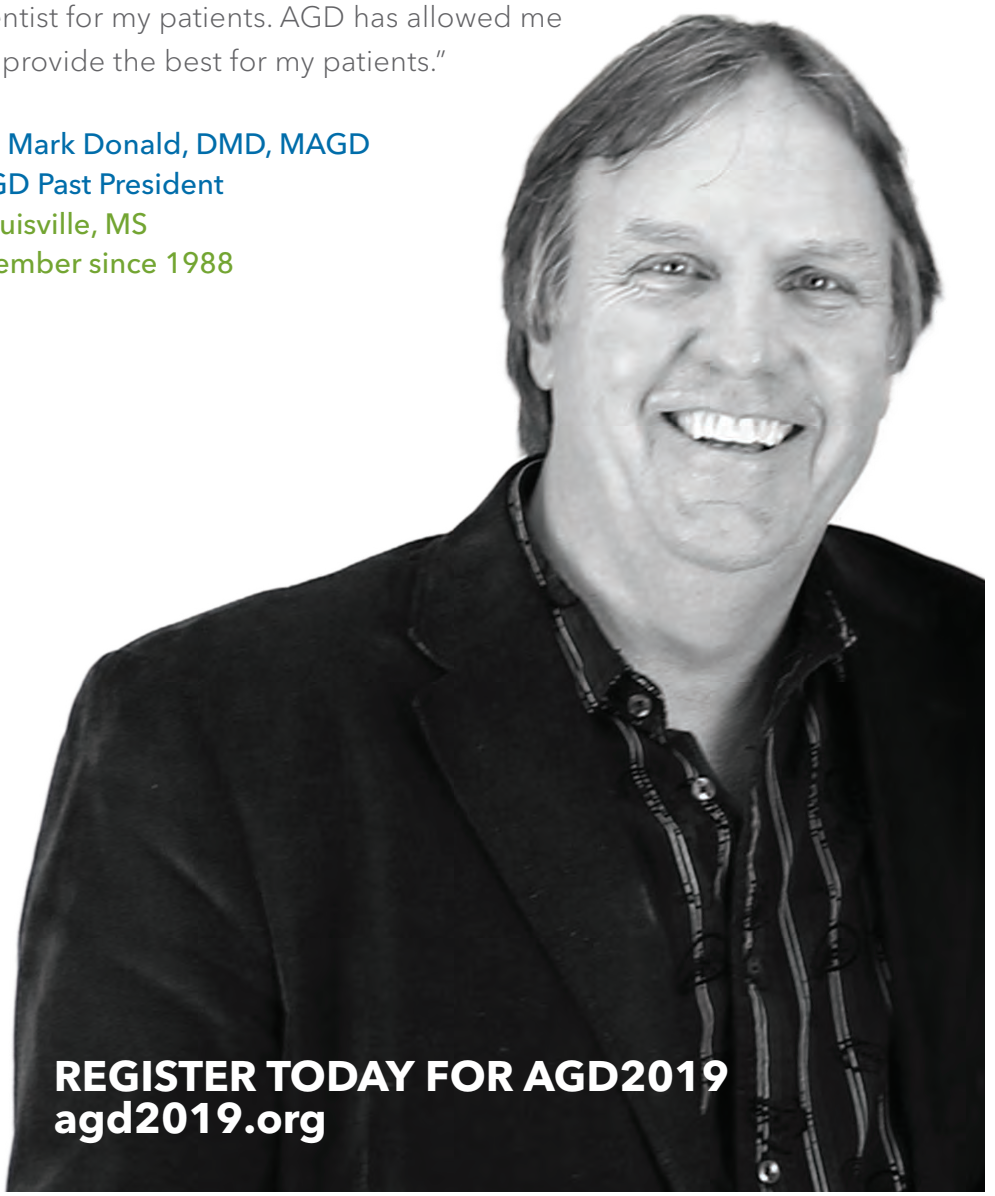

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