The Journal of the Michigan Dental Association

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Journal
OF THE MICHIGAN DENTAL ASSOCIATION
November 2020

Inside: Your 2021 Guide to MDA Member Benefits

Learn About All the Money-Saving, Extra-Value MDA Services Programs

Providing Dental Records to Patients with Past-Due Accounts

ENVIRONMENTAL LEAD

THE INTERFACE OF LEAD, DENTAL CARIES, AND DENTISTRY

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CONTENTS

Breaking News Updates
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Journal eNews
Nov. *Journal eNews* mails Nov. 20 — watch for it!

FEATURES

DEPARTMENTS

SPECIAL FEATURES

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MDA VISION STATEMENT: The MDA is Michigan's oral health authority dedicated to the public and the profession.

MDA VALUES: We are guided by integrity and ethics; committed to the improvement of the public's overall health; we believe oral health is integral to overall health; in an inclusive environment that embraces diversity; that the profession of dentistry and the oral health team must be led by dentists to ensure the safety of the public; and that lifelong learning is critical to excellence in patient care.

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ELECTION '20

Election Analysis Coming Next Month

As we all know, Michigan citizens went to the polls Nov. 3 or voted by mail to cast their ballots in federal, state, and local elections.

As this issue goes to press (in late October) the outcome of the election is not yet known.

Lansing observers are carefully watching this year's Michigan House of Representatives races. There is a chance that Democrats may gain control of the chamber after many years of Republican domination. A change in control of the lower chamber could have a significant impact on state government in 2021 and 2022. The Michigan Senate was not up for election this year.

Look for a state legislative election wrap-up in your December *Journal.*

COVID-19 LEGISLATION

COVID-19 Legislation Protecting Dental Offices Passes

MDA-supported legislation that adds COVID-19 liability protections for employers passed last month after a successful compromise between Gov. Gretchen Whitmer and legislative leaders.

The legislation states that an employer who acts in compliance with all federal, state, and local statutes, rules, regulations, executive orders and agency orders related to COVID-19 in effect at the time of the conduct or risk that allegedly caused harm is immune from liability for a COVID-19 claim. The bills also prohibit discharge, discipline, or retaliation against employees who stay home because they test positive, display the principal symptoms, or have had close contact with an individual who tests positive or displays the principal symptoms.

The compromise also includes legislation that will continue "non-charging" employers for COVID-19-related UI benefits, authorizes increased flexibility for employers participating in the WorkShare program, and ensures individuals filing an initial state claim for UI benefits could receive up to 26 weeks of benefits. These provisions would apply through Dec. 31, 2020, but could be extended.

At press time Whitmer has not yet signed the bills into law, but is expected to do so.

The MDA is also supporting House Bills 6033, 6034, and 6035, sponsored by State Reps. Mike Weber (R-Rochester), Jim Lilly (R-Park Township), and Joe Tate (D-Detroit) respectively. These bills would exempt certain infection control expenses from sales and use tax and create a tax credit for infection control expenses for eligible businesses.

STATE BUDGET

Budget Signed into Law; Fiscal Year Starts Oct. 1

The roller coaster ride that was the fiscal year 2020-21 budget finally came to an end in September. On Sept. 30, Gov. Gretchen Whitmer signed the state's 2020-21 fiscal year budget into law.

From the time the pandemic began until late August budget revenue projections were forecasting a revenue shortfall of more than a billion dollars. Fortunately, federal stimulus dollars delivered through unemployment benefits and directly to the state filled the gap and allowed policymakers to avoid major budget cuts.

As previously reported, throughout the budget negotiation process the MDA lobbied hard for the continued funding of dental-related budget items, including Healthy Kids Dental, the Healthy Michigan Plan, adult dental Medicaid, and Michigan Donated Dental Services (DDS). All of these items are now fully funded through September 2021.

A special "thank you" goes to all of the MDA advocates who helped educate policymakers on the importance of these programs. Your advocacy made a difference!

LEGISLATIVE ADVOCACY

Grassroots Meetings Taking Place via Zoom

Making your voice heard is just as important now than ever, and the MDA grassroots program is making it even easier for members to get involved.


Aronoff

Throughout the fall the MDA grassroots program has facilitated meetings between member dentists and their state elected officials via Zoom. These meetings have been an effective and convenient way to communicate the MDA's legislative message to elected officials.

In addition, the MDA grassroots program has helped component districts transition their legislative events to Zoom, and in one case helped a component host its first-ever legislative event, also via Zoom. Legislative events typically include members of the component district and a handful of their elected officials. Member dentists and the elected officials take part in a meet-and-greet and a conversation about legislative priorities.

If you're interested in getting involved, contact grassroots coordinator Lynn Aronoff at lynn@actionstrat.com.

Compiled by MDA legislative staff. Questions? Contact Josh Kluzak at jkluzak@michigandental.org. Sign up for MDA Legislative text alerts by texting MDA to 52886.

2021 Dues Contest Underway — Win Free Membership for 2022, Other Prizes; Renew by Dec. 31

MDA/ADA/local society dues statements for 2021 have now been mailed — and when you renew your membership by the end of this year you'll automatically be entered into a drawing and be eligible to win some great prizes.

This year the MDA is again offering a very special prize — one lucky winner will receive his or her ADA, MDA, and local society dues for 2022 paid by the MDA! Be sure to renew your membership by Dec. 31 in order to qualify.

Other dues contest prizes include:

- $250 cash, courtesy of MDA Insurance.
- An e-copy of the *Staff Matters Human Resource System* (a $149 value).
- A $100 certificate good towards any MDA continuing education course.
- A copy of the MDA's book, *Most-Asked Human Resources Questions*.
- MDA Services apparel.

Contest winners will be selected by random drawing in early 2021.

Membership cards: Your American Dental Association membership card can now be accessed anytime, from anywhere — online. Traditional membership cards are no longer being sent. Instead, you can park it in your smartphone's virtual wallet or print it out. To access it, login at ada.org/myada. Then click on My Membership Card, and download or print your card.

Renew online! You can renew membership online at www.michigandental.org/membership. It's quick and easy. If you have questions about your statement, contact the MDA at 800-589-2632.

New! MDA Connection Smartphone App Now Available

In response to member requests, the MDA has developed an exciting new smartphone app to help you access MDA services and programs more easily and conveniently than ever before.

It's ready now — the new Michigan Dental Association "MDA Connection" app is available for Apple or Android devices on the Apple App Store and on Google Play. To access it, just search for "MDA Connection" and download the app to your smartphone. And when setting up on your phone, be sure to allow push notifications as well.

The MDA app is made up of 12 sections. They include:

- Your Membership.
- ADA Member Card.
- Continuing Education.
- Legislative Center.
- News/MDA *Journal*.
- Practice Resources.
- Job Board/Classifieds.
- MDA Insurance, MDA Services.
- MDA Foundation.
- Annual Session.
- Contact Us.

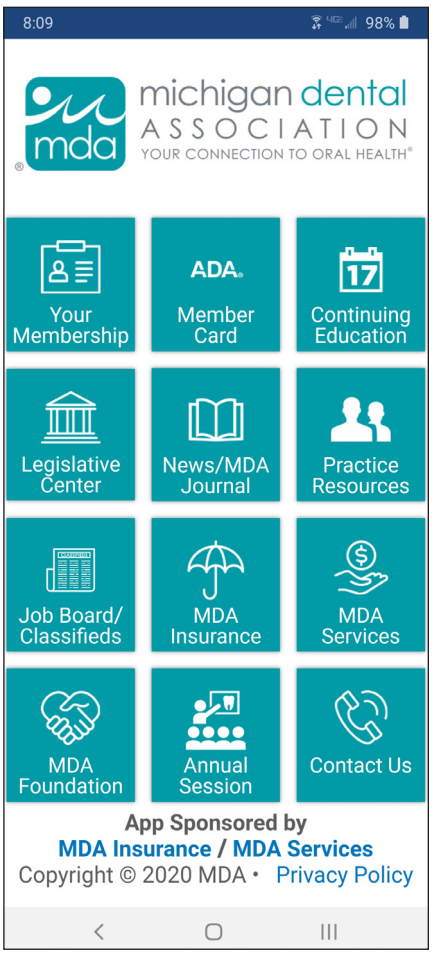
You can catch up on the latest classifieds, select a CE course, access the MDA Job Board, learn more about MDA-endorsed insurance and services programs, get practice management help, and much more — easily and quickly from your smartphone. Navigation is easy, too — when you enter a particular section, you can return to the main page by pressing the "home" icon at top left.

The push notifications feature allows the MDA to send special alerts and valuable information directly to your smartphone. It's another way to stay connected with the MDA — without checking your email.

Former MDA President Dr. Margaret Gingrich appointed an App Workgroup last year, chaired by Dr. Tom Lambert, of Grand Rapids, to evaluate proposals for an MDA app. Staff presented several proposals to the workgroup, and the winning app proposal was chosen because of its simplicity and low development cost, Lambert said.

Funding for the MDA app was provided by MDA Insurance & Financial Group.

Download the MDA Connection App today!



Now available — MDA Connection App

MDA Board Discusses Administrative Rules, COVID Help, More


Meraw

The MDA Board of Trustees met virtually via Zoom on Friday, Sept. 18, discussing issues ranging from legislation pertaining to the COVID-19 pandemic, to proposed changes in dentistry's Administrative Rules, to ways to increase membership engagement with new dentists. The day-long meeting followed the joint MDA-Wisconsin Dental Association 9th District caucus prior to October's ADA House of Delegates and was chaired by MDA President Dr. Steve Meraw.

COVID tax relief supported

Bills recently introduced into the Michigan Legislature would help alleviate the financial impact the COVID-19 crisis is having on small businesses. The bills would exempt certain infection control expenses from sales and use tax and create a tax credit for infection control expenses for eligible businesses. The MDA Board approved policy supporting tax relief for purchases and costs related to government mandates.

COVID-19 and employer liability

Three bills also were recently introduced in the Michigan Legislature that would add to state statute employer liability protections related to COVID-19 exposure. The Board supports two bills that provide COVID-19 employer liability protection when the employer operates in substantial compliance with a federal or state statute or regulation, executive order, or public health guidance. The third bill would make some employment practices related to COVID-19 required by law. However, the Board did not believe that these types of practices should be included in the statute due to the evolving nature of the COVID-19 protocols.

Dental therapist delegation discussed

The Board evaluated proposed Administrative Rules changes by the Michigan Department of Licensure and Regulatory Affairs. Existing MDA policy addresses most of the rules changes, but one significant proposal — delegation of duties for dental therapists — was not covered by existing policy. The Board recommended to LARA that dental therapists not be allowed to perform any procedure that a dentist would not be allowed to delegate.

Board supports implicit bias training

LARA also will be developing rules to establish implicit bias training standards for most health providers in Michigan, including dentists. The directive states that implicit bias training must be taken in order to obtain or renew a health profession license. The Board agreed that such training is important, but recommended that the training be no more than three hours per licensure cycle, noting ever-increasing demands on dentists' time.

Reporting of possible criminal sexual misconduct

The Board reviewed a bill that would amend the Public Health Code to require LARA to report the name of a licensee or registrant to law enforcement if LARA determined that there was a reasonable basis to believe that the licensee or registrant had committed sexual misconduct. The Board was supportive of the concept, but recommended that the report to law enforcement be submitted only if LARA has issued a formal complaint again the licensee or registrant for violation.

New dentist engagement strategized

Several new dentists and LEAD (Leadership Exploration And Development) program participants joined the Board for a discussion on engaging new dentists and demonstrating the value of membership. New dentists (out of dental school less than 10 years) are a growing segment of membership as baby boomers retire. These dentists have a higher membership participation rate than dentists overall, and are more diverse than the membership overall in terms of gender, racial/ethnic background, and occupation. This generation also demonstrates a greater reliance on technology and social media.

The discussion identified numerous opportunities to engage new dentists, including mentoring, small-group social events, the new MDA app, hands-on CE courses, virtual study clubs, new dues payment options, Facebook groups, and enhanced connectedness.

Dentistry as essential health care

The Board adopted an interim ADA policy stating that dentistry is an "essential" health care service. The main purpose of this new policy is to declare to policymakers that dental practices should be allowed to stay open as an essential service if a resurgence of COVID-19 occurs and states go back to closing parts of the economy. It is also intended to help dentists obtain PPE, because they would qualify as an essential service.

Other reports

The Board also heard yearly updates from Dr. Mert Aksu and Dr. Laurie McCauley, deans of the University of Detroit Mercy and University of Michigan Schools of Dentistry.

For the complete unofficial actions from the September MDA Board meeting, contact the MDA's Michelle Cruz at mcruz@michigandental.org.

Did You Miss an Issue? Catch Up on these COVID-19 Articles

As the COVID-19 pandemic evolved, your editorial team at the *Journal of the Michigan Dental Association* has worked feverishly to provide MDA members with meaningful content to address emerging practice needs.

The April 2020 issue had already gone to print when the governor announced on March 20 that dental offices should cease providing nonessential services. We set aside planned content for the next several issues and quickly solicited authors to provide information to protect the health of patients, team members, and dentists in the COVID-19 environment.

The following issues were full of information, but frustratingly, we later learned that several post offices chose not to deliver periodicals during the pandemic, while others had slowed service considerably. Moreover, many dental offices were closed, and issues delivered to those locations often went unnoticed. But, you can catch up on this valuable content through the *Journal* online, where you can find current and past issues at michigandental.org/digital-issues.

The following is COVID-19 content you may have missed, along with the month in which it appeared:

May 2020

- Severe Acute Respiratory Syndrome and Caronavirus-2: What Dental Professionals Need to Know
- Keep the Lights On: Protecting the Health of Your Practice During the Economic Downturn
- The CARES Act and Relief to Dentists Affected by COVID-19 Business Interruption
- Navigating Covid-19 with Your Humanity, Sanity and Team Still Intact
- MDA Health Plan Helps Ease COVID-19 Disruption
- 10-Minute EBD: Surgical Masks vs. N95 Respirators

June 2020

- Implementing Teledentistry: The Why and How
- Key Tips to Communicating Evidence in the Clinical Setting

July 2020

- Infection Control Checklist — A Guide for Complying with COVID Guidance.
- Minimizing Aerosols with Non-Surgical Approaches to Caries Management
- Early Childhood Caries Intervention and Management Strategies
- Silver Diamine Fluoride and Caries in Adults (Reducing Aerosol Generation)

August 2020

- Antibiotic Guidelines for Dentistry
- Is Dental Treatment Safe for Pregnant Women?

September

- Coronavirus in the Workplace: Frequently Asked Questions, along with a protocol flowchart on when to quarantine
- Pre-Procedural Mouth Rinses and Mitigating Aerosol Transmission of COVID-19

October

- The Mask Ask: Understanding and Addressing Mask Resistance
- Employee Travel Restrictions and Quarantine Requirements

During this time, we continued with our EBD tutorial feature articles to assist our readers in honing their appraisal skills in this environment of ever-changing guidance and expert opinion. We further featured information from MDA *Journal* departments and association staff to keep readers current.

We hope the *Journal*'s COVID-19-focused content allowed successful implementation of needed changes. We welcome your feedback. Email Editor-in-Chief Chris Smiley, DDS, at csmiley@michigandental.org.

—The Editors

Nominations Sought for MDA Insurance & Financial Group Board of Directors

MDA Insurance & Financial Group Inc., an affiliate of the Michigan Dental Association, is now taking nominations from members of the association to serve on its board of directors.

MDA Insurance & Financial Group exists to provide insurance products, practice management resources, and dental supplies. The MDA Insurance & Financial Group bylaws state that the affairs of the corporation shall be managed by a board of not less than seven nor more than 13 directors. The term of office is for one year, beginning on May 1, and until their successors have been elected, unless sooner displaced. A director may serve more than one term, but must stand for election each year. Board members are required to attend four or five full-day meetings per year. Board members are not required to serve on committees, but many do.

Detailed information on the duties and responsibilities of a director and how to apply are available on the MDA Leadership Central website at michigandental.org/leadership-central (click on the "Get Involved" section). The deadline to apply is Feb. 1, 2021. For more information, contact MDA Insurance & Financial Group President Craig Start at 517-346-9441 or email cstart@mdaifg.com.

Chicago Dental Society Announces Midwinter Meeting to Go Virtual in 2021

The Chicago Dental Society announced Aug. 27 that its 156th Midwinter Meeting, previously scheduled to be held at McCormick Place in Chicago, will be a virtual event. The meeting will be hosted Feb. 25-27, 2021.

CDS President-elect Dean P. Nicholas, DDS, said, "While the camaraderie and connection afforded by an in-person event will be missed, our first and foremost concern is the health and safety of our attendees. In an abundance of caution, our Board of Directors determined that the 2021 Midwinter Meeting, 'Heart of Dentistry,' will be moved to a virtual format.

"At this time, it is difficult to predict whether a vaccine or treatment for COVID-19 will be widely available. A virtual meeting will still allow for important education and scientific exchange. We are disappointed that we cannot be together in-person, but look forward to a robust meeting," Nicholas said.

Are You Interested in Serving on the Board of Dentistry?

Each year the MDA Board of Trustees recommends names to the governor's office for consideration for appointment to the Michigan Board of Dentistry. Two positions for general dentists will be open on the Michigan Board of Dentistry in June 2021.

If you are interested in submitting your name as a candidate, forward a letter of interest and a current curricula vitae (no longer than two pages) prior to Feb. 1, 2021, to the MDA's Michelle Cruz via email at mcruz@michigandental.org. Or, you may fax a CV to 517-372-0008, attention Michelle Cruz.

The names of all nominees will be reviewed and approved by the MDA Board of Trustees at its Feb. 19, 2021, meeting. The Board will approve two endorsements for each open position. The names and CVs of the individuals endorsed by the Board will be forwarded to the governor for consideration.

Members having questions regarding the Michigan Board of Dentistry may contact the MDA's Bill Sullivan at bsullivan@michigandental.org or by calling 517-346-9405.

NEWS FROM THE ADA

Many Products Updated in ADA Catalog

Many products in the ADA Catalog have recently been updated with the latest in research to help dental professionals stay on the cutting edge of dentistry and communicate more effectively with patients.

Some new offerings include:

- The CDT 2021 Kit.
- Periodontal Disease: Don't Wait Until It Hurts.
- Children's Airways (brochure).
- Managing Pregnancy: Best Practices and Policies for Pregnant Dentists and Pregnant Dental Team Members.
- Your Smile (booklet).
- Oral Health and the HPV Vaccine.
- Root Canal Therapy (brochure).
- Your Child's Teeth from Birth to Age 6 (brochure).

To see all the many products available at the ADA Store, visit ADAcatalog.org or call 800-947-4746 from 8 a.m. until 7 p.m.

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America's leading advocate for oral health

Component Publications Win Awards

Two Michigan local dental society publications, the *Bulletin of the West Michigan Dental Society* and the *Macomb Dental Society Journal*, are winners in this year's International College of Dentists/USA Section Journalism Awards competition.

The *Bulletin* received a Silver Scroll ICD award as "Most Improved" publication. The *Bulletin* also won an ICD award as best Leadership Editorial or Article for "Female Representation in the Workforce and in Dental Leadership," published in the Summer 2019 issue, by Rachel Sinacola, DDS. Sinacola is also the editor of the *Bulletin*.

Sinacola

The Macomb *Journal* received an Honorable Mention award in the Leadership Editorial/Article category for "What Does It Really Mean to Be a Servant Leader?" published in the Spring 2019 issue, by Macomb Executive Director Chris Gorecki, DDS. Dr. Michelle Dziurgot, herself a past ICD award-winner, is the editor of the Macomb *Journal*.

Dziurgot

The awards were to have been given out at the now-canceled American Association of Dental Editors and Journalists annual meeting in Orlando, which was scheduled for last month. The AADEJ meeting was canceled due to the pandemic.

Congratulations to both these excellent Michigan dental journalists!

NAMES IN THE NEWS

Dr. Romesh Nalliah, a clinical professor and associate dean for patient services at the University of Michigan School of Dentistry, began serving as associate editor of the *Journal of Dental Education* in May. He replaces Dr. Marita Inglehart, a professor of dentistry at the school, who served as the *Journal*'s associate editor for eight years from 2011 through the end of 2019. The JDE publishes a wide variety of educational and scientific research in dental, allied dental, and advanced dental education. Nalliah will work with the JDE editor, Dr. Michael Reddy, dean of the University of California, San Francisco, School of Dental Medicine, in selecting and guiding manuscripts through the review process on a wide range of topics related to dental education.

Nalliah

Congratulations to **Shawn Hallett**, a joint DDS-PhD student at the University of Michigan School of Dentistry, who has received the Dr. David Whiston Leadership Award from the American Dental Association Foundation. The award recognizes a promising leader who is a member of a diverse group that has been traditionally underrepresented in leadership and whose research excellence has made a substantial contribution to improve the oral health of the public. The award's $5,000 stipend will cover the cost of Hallett's participation in a leadership program offered by the ADA Institute for Diversity and Leadership. Hallett is a Romanian-born adoptee and a first-generation college student.

Hallett

Also at the U-M School of Dentistry, **Dr. Renée Duff** has been promoted to associate dean of students. The five-year appointment was effective Sept. 1. In announcing the promotion, U-M Dean **Dr. Laurie McCauley** cited several achievements by Duff, including helping to grow student numbers across the school's programs and developing new student support services, with a strong emphasis on student wellness. The position oversees the Office of Student Services.

Duff

2021 MDA Membership Dues Waivers: What You Should Know

Are you facing circumstances beyond your control that are forcing you to decide whether you can afford to renew your MDA/ADA/local society membership in 2021? If so, you may be eligible for a membership dues waiver.

Membership dues waivers are based on one of five different criteria:

- Physical disability/illness.
- Family obligation.
- Service to country.
- Disaster recovery.
- Financial hardship.

Membership dues waivers are acts of charitable relief, and are intended to be short-term in nature. Also, waivers are not granted for hardship as a result of poor financial management.

Upon request, the MDA will send you an MDA/ADA Membership Waiver Packet for review and completion. The information you provide will be kept confidential. All dues waiver requests are reviewed by the MDA Membership Committee and the local dental society. After the local society makes its decision, the request is sent to the ADA for final review. This process may take several weeks to ensure thoroughness, accuracy, and a fair review.

Coleman

If you are interested in a waiver application, or need more information, contact the MDA's Iesha Coleman, membership concierge specialist, at icoleman@michigandental.org, or call 517-346-9424.

KEEPING CURRENT

Events and Such

To publicize a local meeting or dental event in this space, contact Jackie Hammond at jhammond@michigandental.org. Continuing education courses are listed in the *Journal* Continuing Education department.

Nov. 10 — MDA President's Visit via Zoom. Kalamazoo Valley/Southwestern Districts, 6 p.m.

Nov. 13 — Nominating Committee via Zoom, 9 a.m.

Nov. 13 — New Dentist Committee via Zoom, 2 p.m.

Nov. 19 — Executive Committee via Zoom, 9 a.m.

Nov. 20 — MDA Foundation Board via Zoom, 9 a.m.

Nov. 20 — Committee on Public Relations via Zoom, 9 a.m.

Nov. 26 – 27 — MDA office closed in observance of Thanksgiving.

Welcome, New Members!

The MDA is pleased to officially welcome the following individuals into membership:

Detroit: Kamil Abraham, Kamille Brown, Reem Hamade, Kurt Hofner; **Macomb:** James Skoney; **Oakland County:** Jared Gibby, Wei Yao; **Sault Sainte Marie:** Jillian Perry.

In Memoriam

Dr. Harvey Martin Zalesin, Birmingham. Oakland County District. Died July 6, 2020. Age, 83.

BHS Disciplinary Report

Visit www.michigan.gov/lara to access the latest disciplinary reports for dentists, registered dental hygienists, and registered dental assistants. You may also check any licensee for disciplinary actions at the same web address.

Self-Reporting of Criminal Convictions and Disciplinary Licensing Actions

Section 16222(3) of Michigan's Public Health Code requires any licensee or registrant to self-report to the Department of Community Health a criminal conviction or a disciplinary licensing or registration action taken by the state of Michigan or by another state against the licensee or registrant. The report must be made within 30 days after the date of the conviction or action. Convictions and/or disciplinary actions that have been stayed pending appeal must still be reported.

Should the licensee or registrant fail to report, and the Department becomes aware of the conviction or action, an allegation will be filed against the licensee or registrant. Sanctions for failing to report can include reprimand, probation, suspension, restitution, community service, denial or fine. For more information contact the MDA's Ginger Fernandez at 800-589-2632, ext. 430.

Membership Benefits Guide Included Inside this Issue

In this issue of the *Journal* you'll find your *2021 MDA Membership Benefits Guide*. Be sure to carefully remove it from the *Journal*, then share it with your staff and keep it handy for future reference all year long.

The theme of this year's booklet is "Think MDA First!" When you or your staff have a question or need help, always think MDA first! Chances are, a member of the MDA staff will have an answer for you on the spot. If not, the staff member can get an answer for you, or point you in the right direction.

The *2021 Membership Benefits Guide* contains a listing of MDA officers and trustees, as well as handy "Who to Contact" pages. You'll also find updated information about legislative advocacy, public education, practice management, member communication, dental student services, MDA-endorsed insurance and services, and more.

The Michigan Dental Association is your resource for everything about Michigan dentistry. Turn to the MDA *first* and always. The MDA will be there to meet your needs!

Mail List Opt-out Notice

The MDA occasionally provides mailing lists with the addresses of MDA members to outside organizations seeking to contact dentists in Michigan. Email addresses are not provided.

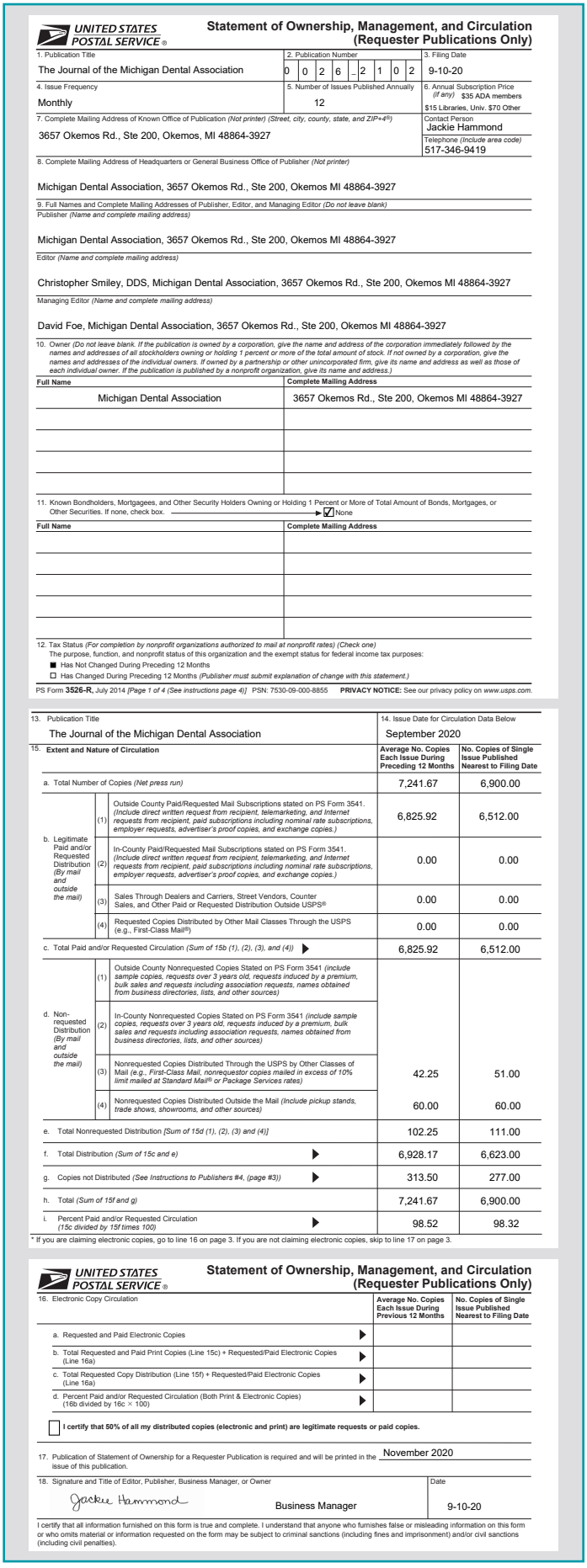
If you do not wish to have your name included in such lists, contact Joanne Floyd, membership coordinator and data specialist, at the MDA office. Email jfloyd@michigandental.org.

Free MDA e-Books Available

Check out these great MDA Practice Management Series e-books — they're available free on the MDA website.

Titles include *Dentist's Guide to Michigan Law*, edited by MDA Legal Counsel Dan Schulte, JD; *Most-Asked Legal Questions*, a compendium of past "Dentistry and the Law" columns by Schulte; *Most-Asked Human Resource Questions*, edited by HR expert Jodi Schafer, SPHR; and *Most-Asked Ethics Questions* by Dr. Michael Maihofer, former chair of the MDA Committee on Peer Review/Ethics.

Each title is also available in a print edition at $29 each. Order at the MDA Web Store.



UNITED STATES POSTAL SERVICE®

Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title	2. Publication Number	3. Filing Date
The Journal of the Michigan Dental Association	0026-2102	9-10-20
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Editor (Name and complete mailing address): Christopher Smiley, DDS, Michigan Dental Association, 3657 Okemos Rd., Ste 200, Okemos MI 48864-3927

Managing Editor (Name and complete mailing address): David Foe, Michigan Dental Association, 3657 Okemos Rd., Ste 200, Okemos MI 48864-3927

10. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as those of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)

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Full Name	Complete Mailing Address

12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates) (Check one)
The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes:
■ Has Not Changed During Preceding 12 Months
☐ Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement.)

PS Form **3526-R**, July 2014 [Page 1 of 4 (See instructions page 4)] PSN: 7530-09-000-8855 **PRIVACY NOTICE:** See our privacy policy on www.usps.com.

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15. Extent and Nature of Circulation			Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)			7,241.67	6,900.00
b. Legitimate Paid and/or Requested Distribution (By mail and outside the mail)	(1)	Outside County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	6,825.92	6,512.00
	(2)	In-County Paid/Requested Mail Subscriptions stated on PS Form 3541. (Include direct written request from recipient, telemarketing, and Internet requests from recipient, paid subscriptions including nominal rate subscriptions, employer requests, advertiser's proof copies, and exchange copies.)	0.00	0.00
	(3)	Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid or Requested Distribution Outside USPS®	0.00	0.00
	(4)	Requested Copies Distributed by Other Mail Classes Through the USPS (e.g., First-Class Mail®)	0.00	0.00
c. Total Paid and/or Requested Circulation (Sum of 15b (1), (2), (3), and (4)) ▶			6,825.92	6,512.00
d. Non-requested Distribution (By mail and outside the mail)	(1)	Outside County Nonrequested Copies Stated on PS Form 3541 (include sample copies, requests over 3 years old, requests induced by a premium, bulk sales and requests including association requests, names obtained from business directories, lists, and other sources)		
	(2)	In-County Nonrequested Copies Stated on PS Form 3541 (include sample copies, requests over 3 years old, requests induced by a premium, bulk sales and requests including association requests, names obtained from business directories, lists, and other sources)		
	(3)	Nonrequested Copies Distributed Through the USPS by Other Classes of Mail (e.g., First-Class Mail, nonrequestor copies mailed in excess of 10% limit mailed at Standard Mail® or Package Services rates)	42.25	51.00
	(4)	Nonrequested Copies Distributed Outside the Mail (Include pickup stands, trade shows, showrooms, and other sources)	60.00	60.00
e. Total Nonrequested Distribution [Sum of 15d (1), (2), (3) and (4)]			102.25	111.00
f. Total Distribution (Sum of 15c and e) ▶			6,928.17	6,623.00
g. Copies not Distributed (See Instructions to Publishers #4, (page #3)) ▶			313.50	277.00
h. Total (Sum of 15f and g)			7,241.67	6,900.00
i. Percent Paid and/or Requested Circulation (15c divided by 15f times 100) ▶			98.52	98.32

* If you are claiming electronic copies, go to line 16 on page 3. If you are not claiming electronic copies, skip to line 17 on page 3.

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c. Total Requested Copy Distribution (Line 15f) + Requested/Paid Electronic Copies (Line 16a) ▶		
d. Percent Paid and/or Requested Circulation (Both Print & Electronic Copies) (16b divided by 16c × 100) ▶		

☐ **I certify that 50% of all my distributed copies (electronic and print) are legitimate requests or paid copies.**

17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the November 2020 issue of this publication.

18. Signature and Title of Editor, Publisher, Business Manager, or Owner	Date
Jackie Hammond — Business Manager	9-10-20

I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

Be Aware: Federal Enforcement Is Still in Place for Many Areas of HIPAA Compliance Despite the COVID-19 Pandemic

By Jennifer Cosey
Eagle Associates

Although temporary enforcement discretion remains in place for the use of non-secure telehealth applications during the COVID-19 pandemic, you should be aware that enforcement activity for other areas of HIPAA compliance has *not* been suspended.

Several recent enforcement actions are outlined below to give you a clear picture of recent federal Office for Civil Rights (OCR) emphasis and actions.

'Right of Access' enforcement

Patient right of access has been the frequent subject of guidance, interpretation, and enforcement action by OCR. OCR had announced the Right of Access initiative as an enforcement priority in 2019 to support individuals' right to timely access to their health records at a reasonable cost under the HIPAA Privacy Rule. The five recent instances outlined below included both monetary penalties and the adoption of corrective action plans.

$38,000 fine: Housing Works Inc. recently agreed to pay $38,000 to OCR and to adopt a corrective action plan to settle a potential violation of the HIPAA Privacy Rule's right of access provision. OCR had received a complaint alleging that Housing Works failed to provide the complainant with a copy of his medical records.

$15,000 fine: All Inclusive Medical Services Inc. agreed to pay $15,000 to OCR and to adopt a corrective action plan to settle a potential violation of the HIPAA Privacy Rule's right of access provision. OCR had received a complaint alleging that in AIMS refused to give a patient access to her medical records when it denied her requests to inspect and receive a copy of her records.

$70,000 fine: Beth Israel Lahey Health Behavioral Services agreed to pay $70,000 to OCR and to adopt a corrective action plan to settle a potential violation of the HIPAA Privacy Rule's right of access provision.

$3,500 fine: King MD agreed to pay $3,500 to OCR and to adopt a corrective action plan to settle a potential violation of the HIPAA Privacy Rule's right of access provision. King MD is a small health care provider of psychiatric services in Virginia.

$10,000 fine: Wise Psychiatry, PC, agreed to pay $10,000 to OCR and to adopt a corrective action plan to settle a potential violation of the HIPAA Privacy Rule's right of access provision. Wise Psychiatry is a small health care provider in Colorado.

'Systematic noncompliance' brings big fine

A Sept. 21, 2020, press release from OCR announced that Athens Orthopedic Clinic PA agreed to pay $1,500,000 to OCR and to adopt a corrective action plan to settle potential violations of the HIPAA Privacy and Security Rules. Athens Orthopedic is located in Georgia and provides orthopedic services to approximately 138,000 patients annually.


Cosey

In June 2016, a journalist had notified Athens Orthopedic that a database of its patient records may have been posted online for sale. Later that month a hacker contacted Athens Orthopedic and demanded money in return for a complete copy of the database it stole. Athens Orthopedic subsequently determined that the hacker used a vendor's credentials on June 14, 2016, to access its electronic medical record system and exfiltrate patient health data. The hacker continued to access protected health information (PHI) for more than a month

On July 29, 2016, Athens Orthopedic filed a breach report informing OCR that 208,557 individuals were affected by this breach, and that the PHI disclosed included patients' names, dates of birth, Social Security numbers, medical procedures, test results, and health insurance information.

OCR's investigation discovered longstanding, systemic noncompliance with the HIPAA Privacy and Security Rules by Athens Orthopedic, including failures to conduct a risk analysis, implement risk management and audit controls, maintain HIPAA policies and procedures, secure business associate agreements with multiple business associates, and provide HIPAA Privacy Rule training to workforce members.

"Hacking is the No. 1 source of large health care data breaches," said OCR Director Roger Severino. "Health care providers that fail to follow the HIPAA Security Rule make their patients' health data a tempting target for hackers."

HIPAA compliance crucial

Although there's no way to prevent every attack, conducting a Security Risk Analysis and implementing corrective actions are critical components of a HIPAA compliance program. Failure to implement basic security mechanisms can result in costly breaches, investigations, and enforcement.

The OCR considers a variety of factors in determining the amount of a settlement, including the nature and

HIPAA Compliance (Cont'd)

extent of the potential HIPAA violation; the nature and extent of the harm resulting; the entity's history with respect to compliance with the HIPAA Rules; the financial condition of the entity, including its size and the impact of the COVID-19 public health emergency; and other matters.

Eagle Associates has found that a "good faith effort" toward compliance goes a long way with most surveyors/investigators. When an entity can demonstrate a commitment to working diligently on compliance, fines are not always imposed for a single or small area of non-compliance. The agency often asks only for a plan of corrective action in such cases.

Jennifer Cosey is president of Eagle Associates Inc., endorsed by the MDA for OSHA, HIPAA, and OIG compliance services. For more information, visit mdaprograms.com. Click on "MDA Services Programs," then "Regulatory Compliance," then "HIPAA, OSHA, and OIG Compliance."

MDA's Smiley Wins 2020 EBD Award

Smiley

Dr. Chris Smiley, editor and editor-in-chief of the MDA *Journal*, has been awarded the 2020 Evidence-Based Dentistry Practice Award from the American Dental Association and the American Association for Dental Research. The award was announced at the ADA's virtual House of Delegates last month.

"I'm honored to receive this award on behalf of our MDA *Journal* and our efforts to promote the EBD process. As a past moderator of ADA- EBD Champions conferences, I have come to know many of the past recipients of this award, and I am humbled to be included in their ranks," Smiley said.

During his editorship, the *Journal* has presented EBD tutorials and begun a monthly "10-Minute EBD" column to demonstrate how evidence-based dentistry can improve decision-making across various clinical topics. Smiley said that evidence-based content continues to be a focus for the *Journal* and the articles it presents.

Dental Contract Resources Available

Confused about dental benefit contracts? Here's help from the MDA and ADA to help you better-understand dental plan contracts:

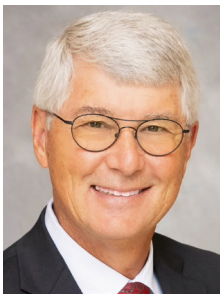
- The MDA Guide to Dental Contracts is a free resource containing what you need to know about dental benefit plans, with a helpful FAQ section and glossary of dental plan terminology. You can order at the MDA Web Store.
- The ADA Contract Analysis Service helps you make informed decisions before you sign a contract with a dental benefit plan. To learn more, contact the MDA's Kesha Dixon at kdixon@michigandental.org.

NEWS FROM THE MDA FOUNDATION

Fundraising Campaign Going on Now

This year's MDA Foundation year-end fundraising campaign is in full swing, and the Foundation and those it helps need your support.

This year's fundraising goal is $40,000. The MDA Foundation uses the proceeds from this annual campaign to help improve the quality of life in your local communities through improved dental health.



Palm

"The Michigan Dental Association Foundation is grateful for the many generous donations from MDA members and others in Michigan's dental community," said Dr. Norm Palm, Foundation president. "Your support means so much, and it helps so many.

"We've been working hard to ensure your dollars are used in Michigan communities helping vulnerable people. We pledge to keep that commitment as we move into 2021 and beyond," Palm said.

Please give — for more information, visit https://foundation.michigandental.org.

Foundation Provides $154,695 in Grants

The MDA Foundation recently approved 16 grant requests totaling $154,695 — the largest amount given by the MDA Foundation in its history.

Grant recipients included a joint program of the Victors for Veterans program and the VINA Clinic in Brighton to provide services to veterans at no cost.

The Foundation also awarded a grant to fund the MDA Member Assistance Program, or MAP. The program is accessible to MDA members and their families 24/7 for issues covering a large spectrum including mental health and well-being, financial concerns, caring for family members, and life coaching. You can find more information about the program at michigandental.org/assistance.

mda foundation
IMPROVING DENTAL HEALTH

MDA WINTER VIRTUAL SEMINAR SERIES

FRIDAY, NOV. 13, 2020

Cutting-Edge Dental Products for Clinical Excellence
Derek Hein
10 a.m. – 3 p.m. • AGD Code: 010

The products you use every day can make or break your clinical results. It is self-evident to clinicians that some products simply work better than others. The challenge is to know *which* products truly are superior. This course is about dental products and will inform the entire dental team of the best dental products, compared and tested in actual dental offices worldwide.

Learning objectives:
- Identify the most-produced crown type and how it differs from PFM.
- Determine the most appropriate resin curing light for your needs.
- Compare zirconia crown types and identify acceptable brands.

FRIDAY, DEC. 4, 2020

How to Increase Collections without Adding New Patients
Matthew Krieger, DDS
10 a.m. – 3 p.m. • AGD Code: 550

How would you spend an extra $120k net income? This workshop will show you the exact process any dental practice can use to increase collections by 30% or more by selling more without working more. This workshop is for any dentist and dental team wanting to learn how to sell more dentistry without changing your hours.

Learning objectives:
- Define how to grow your practice without the need for big cases.
- Learn the proper case presentation and why sequence matters.
- Create urgency so the patient pays now instead of waiting.

Counts toward the Dental Business Professional Certification, office finances category, for four credits.

Information for all courses

A one-hour break for lunch and sponsor demonstrations.

Four CE credits.

Cost: $99 for member dentists, $59 staff, $199 for non-member dentists

Co-sponsored by MDA Insurance, MDA Services, Crest Oral B, and Surgically Clean Air.

Register now at michigandental.org/CE-Courses

FRIDAY JAN. 8, 2021

Personalized Periodontal Medicine — A New Approach to Total Body Health
Doug Thompson, DDS
10 a.m. – 3 p.m. • AGD Code: 490

Personalized Periodontal Medicine is a course designed for general practitioners, their lead hygienist and/or their entire team who are serious about advancing the periodontal health of their patients, the health of their team, and the health of their practice. A thorough understanding of the most important relationships with the oral systemic link, complemented with the use of salivary diagnostics, provides an opportunity for significant professional and financial growth for your entire office. Featuring a series of case studies, you will see that practicing this way is 21st century periodontal care. Utilizing a comprehensive approach, and adding organized structure, you can radically transform your practice and demonstrate to your patients your true concern for their overall wellness.

Learning objectives:
- Learn how to develop an office-wide high-quality periodontal policy.
- Learn awareness about how the bacterial profile may affect vascular disease concerns and heart attack risk.
- Show the use of clinical adjuncts to control inflammation and the rate of clinical attachment loss.

FRIDAY, FEB. 5, 2021

Roll Out the Red Carpet and Let's Get Social
Carrie Jameson Webber
10 a.m. – 3 p.m. • AGD Code: 550

The purpose of this session is to provide dental professionals a better understanding of how exceptional customer service influences the entire patient experience. This course will include maximizing the telephone as a customer service tool, discussion on the team approach to service, and the importance of effective communication skills.

Social media seems to be the new "it" marketing medium. In reality, social media is a fundamental shift in the way people communicate, taking existing patient referrals to a whole new level. And if you are not part of the conversation, you will find your practice left out in the cold. Start communicating today with your patients in a way that is engaging, fun, and valuable.

Learning objectives:
- Identify five "hot spots" for customer service in each practice.
- Recognize the impact each role in the practice serves in the patient relationship.
- Deliver exceptional customer service throughout each practice
- How to implement social media into your practice, existing marketing, and digital tools.
- Tips on content creation for social media.
- How to announce to the world that you are part of social media.
- How to measure and monitor the effectiveness of your social media strategy.

Counts toward the Dental Business Professional Certification, marketing category, for two credits and customer service/ communication category, for two credits.

LIVE 'IN-PERSON' CE CREDITS

FRIDAY, MARCH 19, 2021

Sleep-related Breathing Disorders and Care for Patients with Pain — Morning Session

Dentists Can Care for Patients with Pain — Afternoon Session

Mayoor Patel, DDS

10 a.m. – 3 p.m. • AGD Code: 550

Morning Session — Dentists and dental hygienists play an integral role in identifying potential patients with a sleep breathing disorder (SBD). Together, dentists and dental hygienists are well-positioned to also identify patients at a greater risk for an SBD.

In fact, after a 2015 resolution called for action, the House of Delegates approved an American Dental Association policy statement that addressed dentistry's role in sleep-related breathing disorders. The statement outlines the role of dentists in treating these disorders, including assessing a patient's risk, referring patients to appropriate physicians, evaluating the appropriateness of oral appliance therapy, and more.

However, the lack of understanding of what some of the intraoral and extraoral signs are prevented us from clearly identifying these patients. Getting patients educated, diagnosed, and, if necessary, managed with continuous positive airway pressure (CPAP) or oral appliance therapy (OAT) can help in preventing other comorbidities that are associated with SBD.

Learning objectives:
- Screening for obstructive sleep apnea in your dental practice.
- Understanding dental sleep examination and appointment workflows.
- Identifying and understanding oral appliance mechanics.

Afternoon Session — If a patient is experiencing pain on one side of the face, it may be caused by a temporomandibular disorder. This is especially true if it involves the patient's chewing muscles. TMDs are part of a group of disabling conditions that are characterized by dysfunctions in the jaw muscles and/or the temporomandibular joint. To add to that, chronic orofacial pain is also a typical feature of TMD. Muscles of the face can also cause unexplained toothaches that lead to unnecessary dental treatment.

This is where dentistry comes into play. These conditions are often misdiagnosed or overlooked, but as a dentist you can step in and provide the guidance, diagnosis, and resources your patients need to live pain-free or with minimal discomfort. As a dentist, you can successfully treat patients' pain, but it is important to properly understand TMDs, what to look for, and how to provide treatment, such as with oral appliance therapy.

Learning objectives:
- Taking a pain history and what it means.
- Understanding how to diagnose common TMJ disorders.
- Identifying and understanding common orofacial pain symptoms.

Counts toward the Michigan Board of Dentistry's pain management requirement.

Save the date for the Summer Scientific Session

Friday - Saturday, Aug. 13-15, 2021
Treetops Resort — Gaylord

Friday, Aug. 13, 2021

Golf Outing
10 a.m. shotgun start

Saturday, Aug. 14, 2021

"HPV: Elevating Our Care in Dentistry"
8 – 11 a.m.
Speaker:
Charlotte Cortis, DDS

Sunday, Aug. 15, 2021

"Medical Billing"
8 – 11 a.m.
Speaker:
Jeff Burton, RN

Counts toward the Dental Business Professional Certification, insurance benefits/coding category, for three credits.

For complete information on all MDA CE courses, visit michigandental.org/CE-Courses

ADA C·E·R·P® | Continuing Education Recognition Program

6 Digital Marketing Tips for Dentists to Engage Patients, Increase Satisfaction

One of the best ways to increase patient satisfaction and retention is to invest in your digital marketing. Here are six tips you can use to get started:

1. Update all your digital patient communication marketing channels at least once a week, including your website, Facebook page, Yelp page, and Google business page.

2. Ask your patients if they have a preference between email, phone, or text communications. When your patients get helpful updates from you via their preferred method, it increases satisfaction and engagement.

3. Create a communication plan calendar so you know what information you will share, and when. Topics to schedule could include new safety practices, staff birthdays, specials, or interesting facts about new dental technology.

4. Keep your website updated. Help your patients understand your updated safety protocols and any new office procedures.

5. Add live chat to your current website. Live chat is a convenient way to engage new patients without additional in-office risk exposure. You can track commonly asked patient questions and answer them on your website and in your regular communications.

6. Get creative and add your own personal touch. The most successful dental practices will find ways to make dental care fun, informative, and personal with consistent online communications.

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To get started, please visit www.prosites.com/michigandental or call account representative Shane Bennett at 951-395-8335, or email him at shane.bennett@prosites.com. Be sure you identify yourself as an MDA member to get the special MDA price structure!

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Bank of America Practice Solutions is now offering 1.00% interest for the first 18 months for qualifying loans for practice acquisition, debt consolidation, practice expansion, remodeling, relocations, and additional locations. All applications must be received by Dec. 1; other restrictions apply. Owner-occupied commercial real estate loans are also available, applications must be submitted by Dec. 31, 2020, and close by April 30, 2021; other restrictions apply.

The lender is also offering 0% for the first six months on equipment and software purchases up to $250,000. Apply by Dec. 1 and close by Jan. 31, 2021. There are potential tax benefits along with the Section 179 tax allowance that could make this the right time to purchase equipment. Call Nick Rulli at 614-381-8888 or Jeff Cormell at 614-949-4496 for personal assistance.

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Get Your 10% Discount on Liability Insurance

When you're insured by the Professional Protector Plan and complete the online risk management training course, you'll receive a 10% discount on your liability coverage for three years! The training is self-paced and can be completed online at your leisure. Contact MDA Insurance at 800-860-2272 for information on how to start your online training. If you do not have the PPP, contact MDA Insurance at commins@mdaifg.com for a quote.

There's Still Time to Enroll in a Health Plan for 2021

- **Individual health plans:** Enroll in new plans such as MyBlue or subsidized health plans by Dec. 15 for a Jan. 1 effective date. It's the only time you can start a new individual plan unless you experience a qualifying event.
- **MDA Health Plan:** New plans can be started at any time during the year! The deadline for adding new participants or making changes to existing plans is Nov. 30 for a Jan. 1 effective date.
- **Small group plans:** Small group plans can be started any time during the year! The window for adding new participants or making changes to existing plans is during the month of the enrollment anniversary.
- **Medicare Supplement plans, Medicare Advantage, and Medigap plans:** The deadline for changes to new Medicare plans is Dec. 7 for a Jan. 1 effective date.

Plan Now for Your Aging-in-Place Needs

It often seems that just when the kids are done with college and off on their own, parents often are confronted with being the primary caregivers for elderly relatives in failing health.

Why are so many people being sandwiched between the needs of their own families and the needs of parents or other relatives? People fail to plan to meet their physical needs as they age, and then they discover the cost of assisted living, extended care facilities, and nursing homes can be astronomical. According to Genworth, the median annual cost of in-home care and assisted living facilities in 2019 was about $50,000. For nursing homes, it was between $90,000 and $100,000 per year. If funds are not available to pay for such services, and if a long-term care insurance policy is not in place, aging people must rely on relatives to provide the assistance they need to live.

Depending upon your family history and current health, the right time to invest in long-term care insurance is typically between ages 50 and 65. You can be declined coverage, and like most insurance products, premiums are higher when you are older. That argues for enrolling in LTC at a younger age. Talk to a financial planner and an MDA Insurance agent to understand more about LTC insurance and the best time to buy it. Investing in LTC insurance will help you protect your savings and investments by paying for care that Medicare and other insurance will not provide.

Call MDA Insurance at 800-860-2272 to speak with Rick Seely about long-term care insurance.

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At a Glance

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Lead Contamination: Awareness Provides Opportunities to Serve our Patients

By Christopher J. Smiley DDS
Editor-in-Chief

When the Dental Quality Alliance began developing performance measures for oral health plans, I struggled with the notion that factors such as a patient's ZIP code were included to identify populations at risk for dental caries. Why should where a child lives increase the risk of developing decay?

I soon learned that socioeconomic factors related to a patient's neighborhood, such as poverty and its impact on diet and access to health care, were reliable surrogate markers to identify populations at risk for decay. This month's *Journal* features articles on lead contamination that provide additional insight into the relationship between a patient's ZIP code and the risk for decay. Our authors discuss the association between caries rate and blood lead levels from a prenatal presence in expectant mothers through childhood growth and development. A geographic association for the exposure to lead is not surprising to Michiganders, given the history of Flint's water crisis. However, it may be surprising for some to learn that statistics from lead screening and testing are available by ZIP code across the state and the nation.

Efforts to curtail environmental lead contamination date back to the late 1970s, when lead was removed from house paint and, later, from automobile gasoline. Chipping paint and dust in deteriorating older homes and declining infrastructure has resulted in increased lead contamination through water service lines. Such factors have elevated exposure to environmental lead disproportionately by impacting the most vulnerable, the poor, and the very young. For example, data from 2015 shows that the 49507 ZIP code in southeast Grand Rapids ranks among the highest in the state. This is a problem seen in practically every town, village, and city.

Michigan's Childhood Lead Poisoning Prevention Program provides effective screening and testing programs to identify and address lead exposure cases. Information on these efforts and resources for patient communication are available at www.michigan.gov/lead.

Oral health providers hold a unique opportunity to support efforts to identify and treat those impacted by lead exposure. This is because dentists connect with patients beginning at the age-1 dental visit and continue with biannual visits throughout the critical ages of development. Periodic dental visits allow for evaluation of oral conditions and assessment of risk levels, while additionally providing opportunities to counsel patients and their caregivers.

In this month's *Journal*, Mayberry et al. note that lead passes through the placenta freely to the fetal brain and teeth beginning at 13 and 14 weeks of gestation. Armed with this knowledge, the dental team can reinforce prenatal care instructions with expectant mothers, urging them to discuss with their obstetrician the use of calcium supplements to reduce the release of lead from the maternal bone, which is shown to be a source of lead in fetal blood. Information on local health department availability of tap water lead testing services can also be shared.

The authors further assert that BLL data for children begins at age 1-5. This creates a gap in identifying patients with lead contamination in the first year of life. The *Journal*'s article by Dr. Babich asserts that dentists can play a valuable role in identifying an increased caries rate at the age-1 visit as a potential indicator of lead contamination to allow for earlier interception.

Dentists typically consider multiple contributing factors for an increased caries rate or an odd decay pattern. Such considerations should include determining a patient's risk of environmental lead contamination. Although the treatment of the decay will involve the standard protocols of surgical, non-surgical, and preventive services, such findings should be communicated to the patient's caregivers and medical providers to alert them to concerns of lead contamination as a possible contributing factor.

Awareness of the impact of environmental lead contamination on dental patients can provide us with opportunities to communicate with the medical team to promote early identification of afflicted patients. Integrating oral health care in this way will reinforce its value as a component of overall health care. ●

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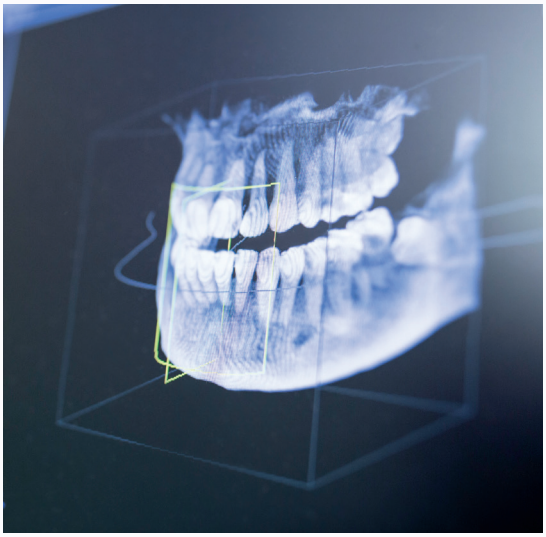

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Help in Closing a Practice

Compiled by MDA Staff with Basam Shamo, DDS
Chair, MDA Committee on Membership

Question: I'm considering closing my practice, but I'm not sure where to start. Does the MDA have resources to help?

Answer: There's much to consider when closing a practice, such as informing patients, dismissing staff, disposing of dental equipment, what to do with patient records, and much more. The MDA and ADA have a number of resources available to help navigate this process, including the ADA's *Guide to Closing a Dental Practice*, which is free to members and available through the ADA Catalog (it's item number CPS-PR017). It includes a number of points to consider, as well as sample letters and checklists. Also, you'll want to consult your attorney and other advisers of course, and the MDA can help with human resources questions you may have. Contact membership@michigandental.org for these resources and more information.

Question: I'd like to recognize my associate, who is doing some pretty incredible things for organized dentistry and does a lot of work to help underinsured and homeless patients. Is there a way I could recognize her to her peers?

Answer: You might consider nominating her for the ADA 10 Under 10 award. Developed by the ADA New Dentist Committee in 2017, this award recognizes 10 amazing dentists who graduated from dental school less than 10 years ago. The award celebrates dentists who demonstrate excellence and inspire others in science, research and education, practice excellence, philanthropy, leadership, and advocacy. Nominations are open now until Dec. 31, 2020, and winners will be recognized in spring 2021. You can get more details at ada.org/10under10.

Also, the MDA each year recognizes outstanding new dentists and other dentists who have contributed to organized dentistry and their communities through the MDA awards program. The deadline for submissions for 2021 MDA awards has passed, but you can get more information on the various awards and the nomination process at michigandental.org/awards. So, think about making a nomination for next year. MDA awards are presented during the MDA House of Delegates each spring.

Question: I'm retiring in 2021 and haven't set an official date yet, but want to keep my MDA membership. Should I pay my 2021 dues now and then call the MDA when I retire, or should I wait to pay my dues after I retire?

Answer: This is the time of year when the MDA receives a lot of calls and questions about retirement. Whenever you have any life change that could affect your membership, such as retirement, be sure to call the MDA as soon as you know. For example, if you are planning to retire before March 31, 2021, and you've informed the MDA of this change in status, then your 2021 dues will reflect the retired discount. If you're retiring after March 31, then your dues for 2022 and beyond would be discounted. As this is written, dues statements for 2020 were scheduled to be sent in late October. If you're retiring before March 31, 2020, but haven't yet contacted the MDA, contact Joanne Floyd at the MDA by email at jfloyd@michigandental.org or by phone at 517-346-9451.

Question: I'm working to balance and simplify my finances. Is there a way to automatically renew my MDA membership, similar to my streaming subscriptions?

Answer: Yes. The MDA offers an auto-renewal option to pay your annual dues. Select Auto-Renew on the dues statement that was mailed to you or online during dues payment. You can set up a one-time payment or payment plan options, and you'll receive email reminders before dues are charged, as well as a receipt after payment, and when your credit card is going to expire. ●

Have a question? Think MDA first! Contact the MDA staff using the directory on Page 5 of this issue, or email membership@michigandental.org. Questions and answers of general interest are published in this space each month.

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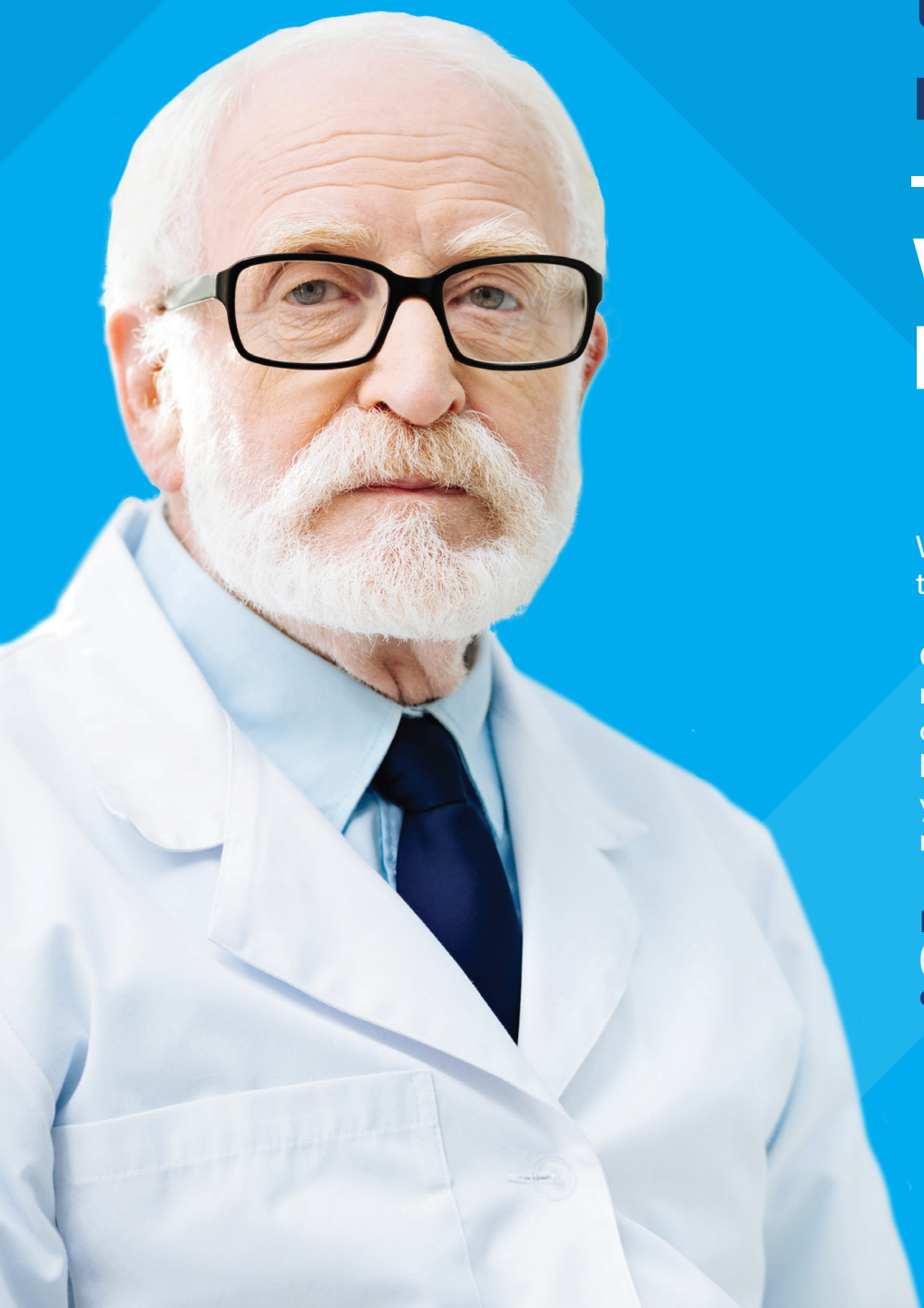

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Providing Dental Records to Patients with Past-Due Accounts

By Dan Schulte, JD
MDA Legal Counsel

Question: I have a patient owing me a large balance that I have unsuccessfully been attempting to collect. The patient is now requesting that I provide a copy of her records to another dentist. Can I require her to pay the copy fee in advance? Would it be illegal to have an office policy providing patients free copies of their records if their account is paid in full, charging only those patients who have past due balances for their copies?

Answer: Michigan's Medical Records Access Act, MCL 333.26261 et seq., requires that patients and their authorized representatives (e.g., someone the patient has given written authorization to receive information, a personal representative, or heir at law of a deceased patient, etc.) the right to examine or obtain a copy of their dental record as promptly as reasonably possible under the circumstances but generally not more than 30 days following the request. Therefore, a patient or an authorized representative who makes a proper request is entitled to examine and copy his or her dental record. You may not refuse to comply with this requirement due to the patient having a past-due balance. The age of the past-due balance, its amount, and other factors are irrelevant.

However, you may refuse to make the copy yourself and instead only make the record available for copying. This would require the patient to hire his own copying service to appear at your office and make the copy pursuant to a contractual arrangement directly between the patient and the copying service. Alternatively, Section 9 of the Medical Records Access Act allows you to refuse to copy all or part of the dental record for a patient until and unless the entire copying fee is paid up-front.

Therefore, under no circumstances are you required, nor should you allow, a patient to become further indebted to you as a result of complying with Michigan's Medical Records Access Act.

Section 9 governs the amount of the fee that may be charged to make the copy. The current fees are as follows:

- Initial fee — $25.38;
- First 20 pages — $1.27 per page;
- Pages 21–50 — $.63 per page;
- Pages 51+ — $.25 per page.

Section 9 does not *require* you to collect this copying fee. Instead, it provides that you *may* charge up to these amounts. Having an office policy whereby you do not charge patients for a copy of records who have paid in full would be legal even if you charge a copying fee to those who have an outstanding balance.

Question: I can only assume that a patient with an outstanding balance requesting a copy of her records is doing so because she is seeking treatment from another dentist. Can I inform the other dentist that this patient has not paid me for my services?

Answer: The best practice would be to not make such a disclosure. There has been no ruling that the existence of or amount of a patient's past-due balance, standing alone, is "protected health information" such that HIPAA would prevent its disclosure. However, until such a ruling has been made it is simply not worth taking the chance that you may be making an illegal disclosure.

It is hoped that the new dentist will protect himself/herself from an uncollectible patient balance by insisting on being paid up-front, or obtaining a valid credit card to charge, or by other means.

The preceding article has been previously published in the MDA Journal. The fees cited are current as of 2020.

Submit questions to MDA Journal, 3657 Okemos Road, Suite 200, Okemos, MI 48864, or email Journal Managing Editor Dave Foe at dfoe@michigandental.org.

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Practical Implications of DOL's New 'Health Care Provider' Definition

By Jodi Schafer, SPHR, SHRM-SCP

Question: When the Families First Coronavirus Response Act (FFCRA) first became effective, I chose to exempt my practice from offering this type of leave because health care providers and first responders were given this option. Now I see that I might have to re-evaluate my policy in light of the Department of Labor's revised guidance. My question is, how do I determine which employees are eligible for FFCRA leave and which ones are not? Even if I can continue to exempt certain positions from FFCRA, should I?

Answer: Let me start by reviewing the recent changes to the DOL's guidance. On Sept. 16, 2020, the U.S. Department of Labor revised and clarified workers' rights and employers' responsibilities under the FFCRA, including the definition of "health care provider" for the purposes of exempting a business from complying with paid leave provisions under the act. As a result of this change, an employer can no longer apply the definition of "health care provider" to their place of business as a whole, but rather, must evaluate the specific job duties of the employee requesting the leave when determining whether or not to provide FFCRA benefits.

In the Frequently Asked Questions section of the DOL's website, the new guidance defines "health care provider" as "Anyone who is a licensed doctor of medicine, nurse practitioner, or other health care provider permitted to issue a certification for purposes of the FMLA" or "Any other person who is employed to provide diagnostic services, preventive services, treatment services, or other services that are integrated with and necessary to the provision of patient care and, if not provided, would adversely impact patient care."

The first category is fairly straightforward and would include the licensed providers in your practice. The second category is more ambiguous. It would certainly include your dental hygienists, dental assistants, laboratory and surgical technicians — positions that are clinical in nature and whose primary job functions include diagnosis, treatment, and/or prevention. However, it would no longer include the clerical, administrative, and ancillary staff on your team. Even though you could make the argument that your scheduler, for example, is "integrated with and necessary to the provision of patient care," they would mostly likely be viewed as similar to those specifically excluded under this revised definition, i.e., "records managers, billers, IT professionals, HR personnel, consultants," etc.

The real impact of this new definition of "health care provider" is that employers need to evaluate the essential functions of the employee's job before deciding if the exemption applies — which leads to the second part of your question. Just because you can exclude some employees from utilizing FFCRA leave, should you?

You need to weigh to pros and cons of this decision very carefully. What is the likelihood of your employees all needing to take leave at the same time? Unless there has been an exposure incident in the practice, the chances of this are slim. Even if employees are not eligible for paid FFCRA leave, it doesn't prevent them from being out of work for a COVID-related reason. Do you want to give employees an incentive to lie on their health screening form if they knew that admitting to symptoms would cause them to be off (possibly with no pay)? Could you cover an employee's shift if she needed to be out unexpectedly? Does it make a difference if they were clinical or clerical employees?

If you are required to offer paid FFCRA leave to some employees and could manage offering it to all — knowing that you will recoup the wages paid out in the form of a tax credit — then you should consider just making it available to all, regardless of job duties. The goal is to protect your employees, your patients, and your reputation in the community. So, while you can continue to exempt some positions from FFCRA, it may not make good business sense to do so going forward. ●

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[2] For the limited time beginning with applications submitted on September 1st, 2020 and ending with applications submitted on or before December 1st, 2020, take advantage of a 1.00% interest rate for the first 18 months on qualifying approved Practice Solutions secured term Practice Sales and Acquisitions, Debt Consolidation, Remodels, Relocation, Expansions and Additional Locations closed by or booked by January 31st, 2021. Loan approval amounts must total a minimum of $250,000 on eligible product types in order to qualify. Payoff prohibited in the first year of the loan, and a prepayment fee will apply for each of the following four years of the loan term. Excludes Practice Solutions startup loans, lines of credit, refinances of existing Practice Solutions loans, and commercial real estate loans, equipment loans and any product that contains a variable rate. To be eligible for the interest rate offer of 1.00% the borrower before loan closing must have a demand deposit account with Bank of America that is the primary business operating account of the borrower. Promotional rate is not applicable during the project phase of the loan. Subject to credit approval. Other restrictions may apply.

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Your Go-to Source for Health Insurance Open Enrollment

By Craig Start, MBA
President, MDA Insurance

It's open enrollment season now for all kinds of health plans for the 2021 plan year. And remember, as always, your go-to resource for help with selecting your coverage is MDA Insurance. As an MDA member, you are our No. 1 priority. We can help streamline your health insurance selection experience with customer service you will not find anywhere else.

Whether you want a group health plan, an individual health plan, Medicare, or other supplemental coverage to bridge your insurance, MDA Insurance has the solutions you need and the advice you can rely on. MDA Insurance has access to plans available in the commercial market, provides exclusive access to the MDA Health Plan, and is licensed to assist with online Marketplace plan selection. There truly is no reason to call any insurance company or any other insurance agency. MDA Insurance was founded to cater to our members' needs, so let us provide the service that is part of your MDA member experience.

Current MDA Health Plan participants: Open enrollment ends Nov. 15 for a Jan. 1 effective date for MDA members who now participate in the MDA Health Plan. This is the deadline for your employees to join the plan and subscribers to add dependents or change plans. Employers can change the plans offered, perhaps by adding another plan option, or change their eligibility rules, termination rules or contribution levels.

Join the MDA Health Plan — your exclusive MDA membership benefit.

With thousands of participants, the self-insured MDA Health Plan continues to surpass expectations. Plans are now even more appealing and more affordable for a wider variety of members and staff. Our Family Focus and Living Fit health plans are extremely popular. The MDA Health Plan is available only from MDA Insurance.

Small Group Health Plans: Enroll any time. In addition to the MDA Health Plan, there are many other health insurance options available to you as well. Choose from any of the Blue Cross Blue Shield of Michigan and Blue Care Network small group plans. MDA Insurance can help you

2021 Open Enrollment Dates at a Glance

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MDA Health Plan: Start NEW group	**Start any time!**
MDA Health Plan: Adding/changes*	**Ends Nov. 15**
Small group plans: Start NEW group	**Start any time!**
Small group plans: Plan changes	**During the month of enrollment anniversary**
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Low-level Laser Therapy in the Prevention and Treatment of Oral Mucositis

By Manas Dave

Oral mucositis refers to the cytotoxic effects of therapies for malignancy such as chemotherapy and/or radiotherapy that cause erythematous and ulcerative lesions of the oral mucosa.[1] This results in dysphagia, reduces nutritional intake, causes pain, and reduces patient quality of life.[2] The incidence of oral mucositis ranges from 20-40% in patients receiving chemotherapy; 60-85% in patients undergoing allogenic hematopoietic stem cell transplantation with myeloablative conditioning; and almost 100% of patients with head and neck squamous cell carcinoma who are receiving radiotherapy.

Low-level laser therapy involves applying light energy that is absorbed by cytochromes and porphyrins in mitochondria. The light activates cells and promotes proliferation and differentiation, accelerating a regenerative process. LLLT has been shown to have anti-inflammatory and analgesic effects.[3]

PICO question

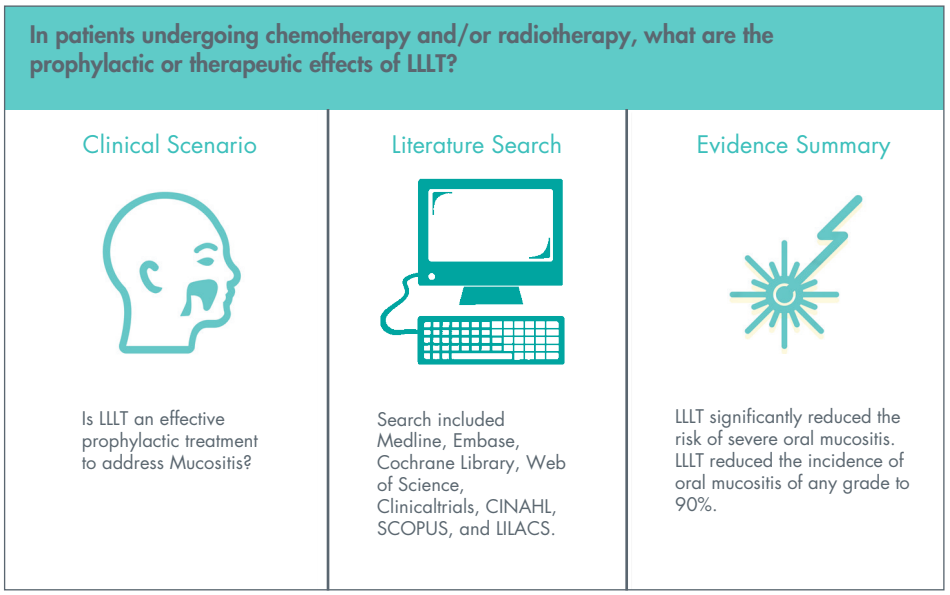
In patients undergoing chemotherapy and/or radiotherapy, what are the prophylactic or therapeutic effects of LLLT?

P = Patient: Patients undergoing chemotherapy and/or radiotherapy.

I = Intervention: Low-level laser therapy (LLLT)

C = Control: N/A.

O = Outcome: Reduction of mucositis effects.



Literature search pathway

Database searches were conducted in Medline, Embase, Cochrane Library, Web of Science, Clinicaltrials, CINAHL, SCOPUS and LILACS. There were a sufficient number of databases searched; however, the authors did not report if MeSH indexing words were used that would have yielded improved results. Moreover, the search terms were not provided and so cannot be appraised.

Only studies published in English were selected. Articles without full-texts or relevant data were excluded. The risk of bias was assessed using the Jadad scale and allocation concealment assessed separately. The Jadad score for quality assessment is not recommended by Cochrane as it fails to account for allocation concealment and places emphasis on reporting rather than conduct. This review included 29 papers reporting 30 trials with a total of 1,616 patients with research conducted in eight countries. Prophylactic LLLT was used in 26 studies and therapeutic LLLT in six studies.

For the incidence of severe oral mucositis, the meta-analysis indicated that LLLT significantly reduced the risk of severe oral mucositis (risk ratio = 0.40 (95% CI; 0.28-0.57). Intervention groups that received red laser, infrared laser, laser of high ener-

(Continued on Page 32)

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(Continued from Page 30)

gy dentistry, or low energy density and intraoral laser irradiation had a lower risk of severe oral mucositis compared with the control groups (all P values <0.01).

Patients receiving LLLT daily were also at low risk of severe oral mucositis (P<0.01); however, patients who received LLLT every two days did not have a significantly reduced risk of severe oral mucositis.

LLLT reduced the incidence of oral mucositis of any grade to 90% (95% CI 0.81-1.00; P=0.06). Subgroup analysis indicated significance in the chemotherapy group (RR 0.73; 95% CI 0.55-0.96; P = 0.03) but not in the radiotherapy or chemoradiotherapy groups.

For therapeutic outcomes, the LLLT-treated group (175 patients) showed a significant reduction in the duration of severe oral mucositis, weighted mean difference (WMD) = -5.81 days (95%CI; -9.34 to -2.28).

Evidence summary

This systematic review and meta-analysis provides insight into the role of LLLT in the treatment and prophylaxis of oral mucositis. This meta-analysis undertook a range of statistical subgroup analyses for each of their research questions, enabling them to determine the effect of LLLT on oral mucositis across a range of parameters such as different cancer treatments and patient ages. There must be caution on the interpretation of the results with the small number of high-quality studies included and the individual studies being small in patient cohort numbers.

Paper appraised: Peng J, Shi Y, Wang J, Wang F, Dan H, Xu H, Zeng X. Low-level laser therapy in the prevention and treatment of oral mucositis: a systematic review and meta-analysis. Oral Surg Oral Med Oral Pathol Oral Radiol. 2020 Jun 5:S2212-4403(20)31021-X. doi: 10.1016/j.oooo.2020.05.014. Epub ahead of print. PMID: 32624448.

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For information on submitting a Journal "10-Minute EBD" feature, contact Journal Editor-in-Chief Chris Smiley, DDS, at csmiley@michigandental.org.

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ADA House Addresses Critical Issues, Virtually

By Karen Burgess, MBA, CAE
MDA CEO/Executive Director

In June, the ADA made the call to conduct 2020 ADA House of Delegates online. Even for us in Michigan, where we have experience with this, the challenge seemed daunting, with 100-plus resolutions, four reference committees, and 17 caucuses. Plus, the ADA schedule had to accommodate delegations across the time zones from Hawaii to New York, a six-hour time difference.

Our 9th District district delegation, headed by MDA President-elect Michael Maihofer and his counterpart from the Wisconsin Dental Association, Paula Crum, met the challenge with ease. In this report I'd like to give you a flavor for the meeting and highlight some key resolutions.

Election: Like the MDA, the ADA has been using electronic voting, and this year was smooth and efficient, with Dr. Cesar Sabates of Florida elected president-elect on the first ballot.

Referral Consent Calendar: The ADA House speaker set aside 56 of the 110 resolutions received in a "Special Order of Referral Consent Calendar." These "non-urgent" resolutions were referred to the appropriate ADA agencies for reporting to the 2021 House of Delegates, greatly reducing this year's work.

9th District strategy development: As always, the 9th District assigned delegates and alternates to each of the four reference committees to identify priorities and make recommendations. After review and discussion by the entire delegation in our caucus via Zoom, positions were adopted and plans put in place. Even with a District position, delegates are free to vote their conscience.

Budget/dues: The ADA budget generated many questions in reference committee, but at the end of the day, passed with little fanfare. The ADA was hard hit by the pandemic, and presented a conservative budget; there had been staff reductions and other cuts this year to position the ADA for 2021. Fortunately, ADA reserves are strong, and the House felt comfortable approving a deficit budget. Full active dues increased $8 to $573 for 2021.

Comprehensive policy on teledentistry: Critical aspects of this much-debated policy update included: teledentistry care must be consistent with in-person care; dental benefits coverage should be equivalent to in-person encounters; a dentist providing care must be licensed in the state where a patient is located; and teledentistry cannot be used to expand the scope of practice or change permissible duties of dental auxiliaries.

Diagnostic testing by dentists: The House approved policy to facilitate dentists' ability to provide diagnostic testing in the dental office.

Special needs dentistry: The purpose of the resolution was to expand the number of dentists with adequate training to treat special needs populations, and the House heard extended testimony on ways to accomplish this. The approved resolution directs the Council on Dental Education and Licensure to address actionable strategies for pre-doc and post-doc education programs and continuing education, with a report back to the 2021 House.

Policy on financing oral health care for adults age 65 and older: This was the "hottest" issue for the House and generated a great deal of testimony and amendments. The resolution initiated with the Eldercare Workgroup. The approved resolution set proactive policy regarding any future taxpayer-funded dental benefits program. Such a program should include people up to 300% of the federal poverty level; the range of services to achieve and maintain oral health; it should be funded by the federal government and not states; with a reimbursement rate so that at least 50% of dentists in each geographic area receive their full fee; and freedom of choice to choose any dentist. The resolution further stated that the ADA should urge passage of legislation to enable dental offices to offer in-office membership plans for seniors.

All in all, the 2020 ADA House of Delegates stretched over five days, from the first meeting of the House at 10:30 a.m. on Thursday, Oct. 15 through its closing on the following Monday at 8:30 p.m. The 9th District Delegation was active, engaged, and influential. At this time of year, especially, I'm very proud to be a part of the Michigan Dental Association!

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The Interface of Environmental Lead, Dental Caries, and Pediatric Dentistry

By Sara Babich, DDS

Abstract

Only recently, high blood lead levels were detected in children living in New York City neighborhoods typically not associated with lead pollution. These findings, coupled with cognitive neurotoxicity in children below the NYC acceptable BLL of 10 µg/dL, ignited public health concerns. Noted also was a positive correlation between elevated BLLs and the prevalence of dental caries in children. The pediatric dentist may be the initial health care professional to observe all predictors of an elevated BLL in the patient: residence in a neighborhood with known elevated lead levels; subtle abnormalities in neurobehavioral performance; and numerous dental caries.

The intent of this article is to interconnect environmental lead pollution, the hypersensitivity of children to this neurotoxic heavy metal, and the increased risk of dental caries in children with elevated blood levels of lead. The prompt for this article was a Reuters report that identified 69 New York City census tracts in which at least 10% of the small children had elevated blood lead levels, and that included neighborhoods previously not known to be hot spots for lead. Two tracts of particular interest included an affluent area near Riverside Park in Manhattan's Upper West Side and the Satamar Hasidic Jewish community in Williamsburg, Brooklyn, an area with the city's highest concentration of small children, with 25% of the population age 5 years or younger.[1] Until this report, lead poisoning in residents of New York City was found almost exclusively among African-American and Hispanic children.[2]

Lead has no biological function, is not a required micronutrient, and, apparently, there is no safe level of exposure in humans. The most susceptible populations to lead toxicity are fetuses, infants in the neonatal stage, toddlers, and young children.[2] Teeth accumulate lead and provide a history of lead exposure since intrauterine life. As the hard dental tissues are relatively stable and the lead deposited in teeth during mineralization is retained, deciduous teeth are bioindicators of lead exposure during early life.[3]

The accumulation of lead in children can result in neurological impairment, as manifested by a shortening of attention span, a reduced intelligence quotient, decreased attention and working memory, deficit/hyperactivity disorder, reading problems, school failure, and delinquency.[2,4] It is not surprising that early childhood lead poisoning has been linked with delinquent behavior and official arrest in late adolescence.[5] Lead exposure in childhood is a predictor of intellectual functioning in young adulthood.[6] The neurological damaging effects of lead are lifelong and cannot be ameliorated by current medical treatment.[2]

Children at risk

Environmental sources of lead are manifold. The most common source of highly concentrated lead is lead-based paint. The deterioration of lead-based paints into chips, flakes, or fine dust is easily ingested or inhaled by small children. Children aged 6 years and younger are at the highest risk of lead exposure because of their proclivity for oral-exploratory, hand-to-mouth activity, and their tendency to exhibit pica. Other sources of exposure to lead include ingestion of imported lead-contaminated candy, use of lead-containing cosmetics, and mouthing of lead-based painted toys.[2,7] When compared to adults, the physiological hypersensitivity of children to lead toxicity is due to their increased gastrointestinal absorption of lead, their increased sensitivity to neurological damage, their rapidly growing bodies, and high metabolism.[7,8]

The realization of the long-lasting neurological damage to children upon exposure to environmental lead ignited many public health initiatives to reduce childhood exposure to lead. Removal of lead from gasoline resulted in a 90% reduction in lead poisoning.[2] Another significant initiative was the banning, in 1978, of lead from domestic paints. Yet, approximately 80% of houses built before the 1960s contain lead-based paint and deteriorating paint chips, and lead dusts still continue to contaminate home surfaces.[7] This mode of exposure accounts for much of the lead

poisoning in poor minority communities in the United States, as the older (pre-1978) housing units are in poor repair and are disproportionately concentrated in these neighborhoods.[2]

While recognizing that no safe blood lead level has been identified in children, the Centers for Disease Control and Prevention established a reference blood lead level of 5 µg/dL, above which public health initiatives are recommended, including that public health officials conduct home inspections to determine the source of the lead contamination. Many researchers have suggested that even a blood lead level of 5 µg/dL is unsafe. The New York City Department of Health and Mental Hygiene considers a child's blood lead level to be high only if it was at or above 10 µg/dL.[8,9]

Based on the Centers for Disease Control and Prevention recommendation of a safe blood lead level of ≤5 µg/dL, the data in the Reuters report underestimated the risk for lead exposure to New York City children.[9] In a recent follow-up report, the NYC Housing Authority noted between 2012 to 2016 that 820 children younger than 6 years and living in public housing were found to have blood lead levels of 5 to 9 µg/dL.[10] Exposure of children to lead is not limited to NYC. Elevated levels of lead were detected in school drinking water in several states, including Indiana, Colorado, Michigan, Florida, and Maryland. The elevated levels of lead in water were traced to leaching from old plumbing rather than to lead-contaminated municipal water. As there is no national standard for an acceptable level of lead in school drinking water, many school districts are replacing old water fountains, installing water filters, and/or providing bottled water.[11]

Strong association

Epidemiological studies of children have identified a positive correlation between the body burden of lead and the prevalence of dental caries. In a study of 251 children aged 9 to 12 years, Brudevold et al.[12] found that children with high levels of enamel lead had higher incidences of dental caries than children with low levels of enamel lead. Moss et al.[13] analyzed data from 24,903 children, aged 2 years and older, who participated in the Third National Health and Nutrition Examination Survey. The researchers noted an association between blood lead level and the risk of dental caries on permanent teeth for a cohort of children aged 5 to 17 years. In studies of 6- to 10-year-old children from the Boston/Cambridge, Mass., region, Gemmel et al.[14] showed the blood lead level of school-age children was positively associated with their number of dental caries. Youravong et al.[15] studied a cohort of 292 children aged 6 to 11 years from schools around a shipyard area known to be contaminated with lead. The researchers showed the children's blood lead level was positively correlated with the incidence of dental caries in their deciduous teeth.

Pradeep Kumar and Hegde[3] stud-

(Continued on Page 38)

Environmental Lead

(Continued from Page 37)

ied the levels of lead in enamel, saliva, and dental caries in 90 5-year-old children, divided into three groups as control, early childhood caries (ECC) and severe-early childhood caries (S-ECC). Mean enamel lead levels in the control, ECC and ECC-S groups were 47.7, 85.45, and 90.43 ppm, respectively, and the mean salivary lead levels were 0.23, 1.7, and 1.77, respectively. The enamel and the saliva of all the children had amounts of lead that increased with an increase in severity of dental caries, demonstrating the cariogenic potential of lead. A positive correlation was seen between tooth enamel lead levels and lead levels in saliva. Increased enamel lead levels were associated with an increased incidence of caries.

Epidemiological studies by Kim et al.[16] on a cohort of 7,059 children with low blood lead levels of <5 µg/dL found a significantly increased risk of dental caries, particularly for deciduous teeth, with increasing blood lead levels. The relationship between blood lead level and the development of dental caries followed a linear dose-response association.

Lead and dental caries

The action of lead in promoting the risk of dental caries may involve various mechanisms of action.[13,16,17] The most prevalent thought is that teeth with defective enamel associated with lead absorption are susceptible to dental caries. The incidence of enamel hypoplasia was shown to increase in children exposed to elevated levels of lead. Once absorbed, lead delays calcification of these structures, as lead ions (Pb2+) compete with/replace calcium ions (Ca2+) and liberate phosphorus from the crystal lattice of dentin. Tooth analyses of teeth burdened with lead have revealed irregular tubular structures and uneven mineralization in the dentin as lead, apparently, adversely affected odontoblast activity and impeded dentin formation.

A second thought focused on the effect of lead on proper functioning of the salivary glands and of the formation of saliva. Through its negative interaction with cellular Ca2+ metabolism, lead (as, Pb2+) diminishes saliva formation and salivary flow, leading to reduced clearance of cariogenic bacteria from the oral cavity and interference with tooth demineralization and remineralization.

A third thought was directed to the interaction between lead and fluoride. Water fluoridation and regular brushing are preventive procedures to control dental caries. However, the binding of lead to fluoride ions in saliva and in plaque reduces the bioavailability of fluoride to remineralize enamel upon challenge with bacterial-generated acidic metabolic end-products. Elevated lead levels in plaque have also been associated with an increased occurrence of dental caries.

A few studies noted only a weak association between childhood lead exposure and the prevalence of dental caries in deciduous teeth.[18,19]

Tort et al.[20] studied 351 children (aged 7 to 15 years) regarding their blood lead levels and oral health parameters, other than risk of dental caries; the parameters evaluated included community periodontal index, gingival index and plaque index. Only children with low blood lead levels (ranging from 0.36 to 2.90 µg/dL) were studied. They found higher blood lead levels positively correlated with poorer oral gingival health measurements and plaque deposition. An earlier study by Youravong et al.[21] showed a correlation between high blood lead levels and periodontal problems in children, including the presence of deep pockets and increased

prevalence of subgingival levels of *Aggregatibacter actinomycetemcomitans*, a bacterial pathogen associated with juvenile periodontal disease.

Recognizing that about 25% of U.S. children live in housing with deteriorated lead-based paint and that children are a hypersensitive population at risk for lead neurotoxicity, resulting in cognitive impairment, the American Academy of Pediatrics[22,23] recommended that most U.S. children should have their blood lead level measured at least once. There is a preponderance of evidence relating childhood lead exposure and susceptibility to dental caries. The pediatric dentist, indeed, may be the first health care professional to suspect an elevated blood lead level in a child.

It is, therefore, imperative for the pediatric dentist to be cognizant of this correlation. He or she likely already has a professional relationship with the child's pediatrician and could, therefore, suggest early, potentially interceptive blood analysis to make a definitive diagnosis. ●

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MDA Addendum

A July 2020 report by UNICEF and Pure Earth[24] found that 1 in 3 children, or approximately 800 million globally, have blood lead levels at or above 5 µg/dL, Henrietta Fore, UNICEF executive director, stressing the irreparable harm of lead to children's brains, noted that, "with few early symptoms, lead silently wreaks havoc on children's health and development." Multiple dental caries in a child may serve as a red flag of overexposure to lead, alerting the pediatric dentist to recommend analysis of blood lead level in such a patient.

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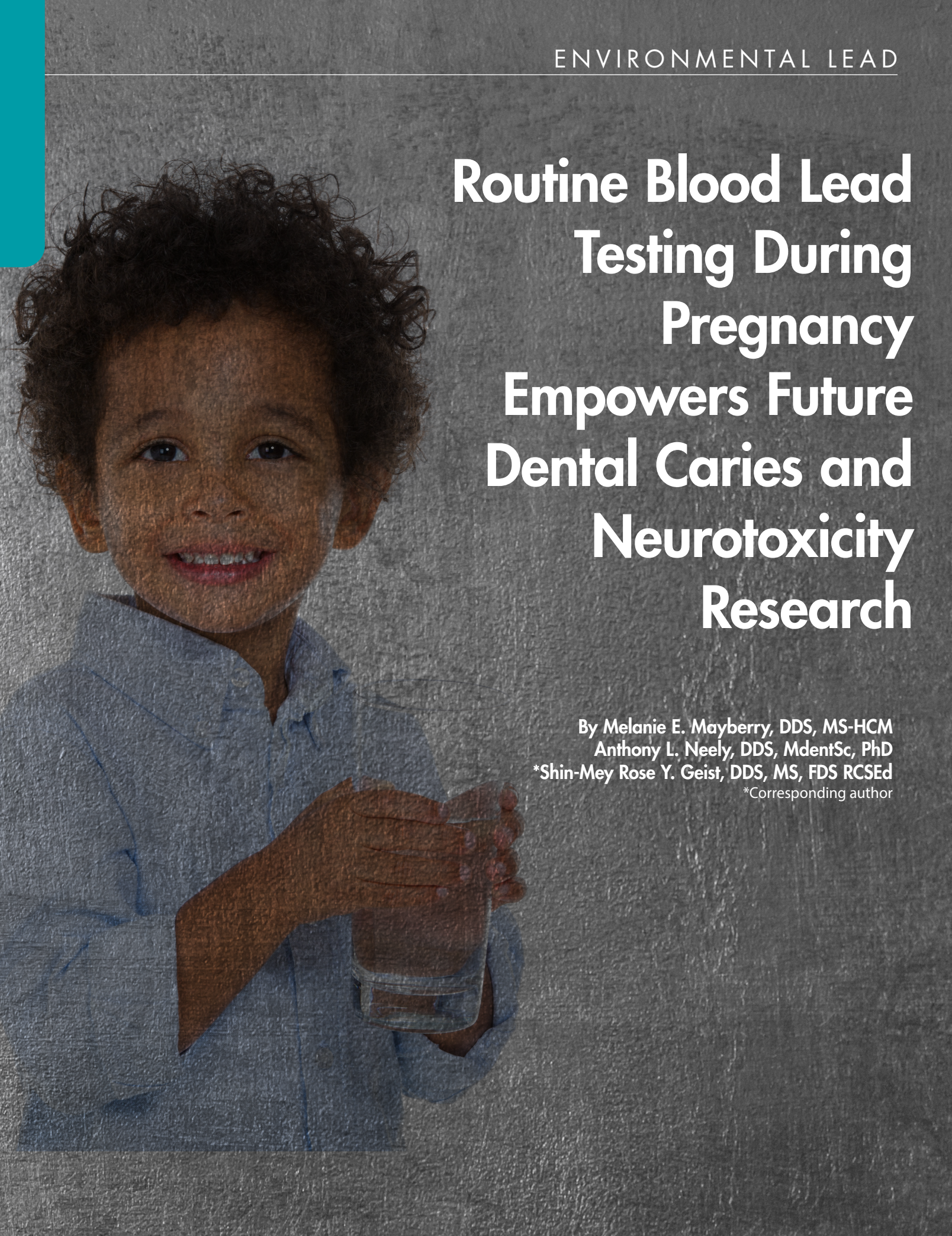

Routine Blood Lead Testing During Pregnancy Empowers Future Dental Caries and Neurotoxicity Research

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Abstract

The discovery of lead contamination in the Flint, Michigan water supply in 2014 has drawn attention to the risk of lead-contaminated drinking water in aging city water systems. This can result in low level lead exposures to the most susceptible populations (developing fetuses and young children), who may suffer irreversible long-term physical and mental disorders.

This issue also has refocused interest on the effect of LLL exposure on oral health. Lead enters the brain and teeth at the same developmental period of fetal life. If LLL exposure damages tooth structure it could cause increased dental caries rates in children. This review will present the current state of lead exposure and the gaps in government strategies to identify exposure prior to its occurrence. It will also present the progress and limitations of neurologic and dental caries research.

Lead is a toxic metal element and environmental pollutant. It is ubiquitous in the environment, found in soil, dust, water, and many man-made products. It is toxic to almost every system and organ of the human body, especially the nervous system. In the United States, the phasing out of leaded gasoline from 1973 to 1996, banning lead-containing paint in 1978, and replacing the lead water piping over the last half century have substantially lowered the geometric mean blood lead level in children and adults in the U.S. population.[1] Although acute lead poisoning cases are rare in the modern United States, chronic low-level exposure through air, dust, and water remains a public health concern.

The 2014 Flint water issue[2] is an example of modern U.S. environmental lead contamination. A retrospective study[3] by Gómez et al. revealed that there had been a continuous decrease in BLL in Flint children < 5 years old from 2.33 µg/dl in 2006 to 1.15 µg/dl in 2016, compared to the national level of 0.758 µg/dl in 2016.[1] There was an increase from 1.19 µg/dl in 2014 to 1.30 µg/dl in 2015 during the change in Flint's water source, which occurred over 18 months between April 2014 and October 2015. There was no mention of BLL in pregnant or breastfeeding women. Among tested children 5 years old and younger, only 5% of them were aged <1 year.

The contaminated drinking water in Flint, Michigan reminds us that safeguards for lead exposure from drinking water are vulnerable due to aging water service lines. It also reminds us of the gap that exists in monitoring lead exposure

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during fetal life and infancy. Lead passes through the placenta freely to the fetal brain and teeth beginning at 13 and 14 weeks of gestation, respectively.[4-6] Federal regulations mandate that Medicaid-enrolled children be tested for lead at the age of 1 and 2 years or at 3 through 5 years of age if not previously tested. Current measures and the mechanisms to identify lead exposure prenatally are not effective.[7] In the absence of a safe level of lead exposure[8-11] children < 5 years old, especially fetuses and infants, continue to be exposed to low levels of lead through maternal transfer. Exposure threatens nervous system development with neurocognitive impairments and neurobehavioral disorders as well as dental development, with possible increased risk of tooth decay. Neurologic disorders and dental caries are two major public health burdens. Brain and tooth development begin in early fetal life and are subject to lead toxicity. Lead-related dental caries research can provide valuable information on prevention of lead exposure at the critical time. This is because lead deposited in teeth provides a time-line record of lead exposure.[6]

Since 1970, primary prevention strategies have been proposed by the Advisory Committee of Childhood Lead Poisoning Prevention of the Centers for Disease Control and Prevention and adopted by the CDC to identify high-risk children prior to exposure.[12] The CDC also released guidelines in 2010 for the identification and management of lead exposure in pregnant and lactating women,[13] indicating the strong determination to implement it. However, there are missing exposure levels in the National Health and Nutrition Examination Survey database for children less than 1-year-old and women during pregnancy. Were there implementation barriers?[14] This also raised a question of the validity of dental caries and lead exposure studies if they were based on NHANES data because the data only provide BLL for children 1-5 years and older, but deciduous teeth complete enamel and primary dentin mineralization before 1 year of age.

This review will present 1) the progress of lead exposure primary prevention strategies and their challenges; 2) the possible reasons for failing to identify high-risk children at the critical exposure time; 3) the limitations and challenges of both neurotoxicity research and dental caries studies; and 4) a reliable dentin lead level-based biomarker that will lend assistance in every aspect of lead exposure-related research and implementation of primary prevention strategies.

Progress of lead exposure primary prevention strategies and their challenges

Environmental lead exposure sources. The major

Table I: Progress of BLL† Reduction in the U.S. Population

NHANES*	General population age 1-74	Children age 1-5
	GM BLL (µg/dl)	GM BLL (µg/dl)
1976-1980	12.8	15
1981-1991	2.8	3.6
1999-2002	1.44	1.9
2003-2006	1.29	1.6
2007-2010	1.12	1.3
2015-2016	0.82	0.758

Compiled from information from reference #18, #19, and #20
†BLL Blood Lead Level
*NHANES National Health and Nutrition Examination Survey

environmental lead exposure sources (LES) in the United States are ingestion or inhalation of lead-contaminated dust from soil with remnants of lead-based paint (banned since 1978), leaded gasoline used by on-road vehicles (the phase-out of leaded gasoline started in 1973 and was completed on Jan. 1, 1996), airborne lead particles from aviation fuel (avgas), and drinking water contaminated from soil or leaded pipelines. Other LES can be food grown in soil that contains lead, stored in lead-containing glass or ceramic containers, or imported in cans with lead seams; unregulated cosmetics and medicines; imported toys and toy jewelry; and imported vinyl mini-blinds made prior to 1997.[15]

The National Health and Nutrition Examination Surveys have shown that there has been a continued decrease in BLL in Americans.[16-20] The BLL of the general population fell from 12.8 µg/dl in 1976-80 to 0.82 µg/dl in 2015-16. In children aged 1-5, the BLL decreased from 15 µg/dl in 1976-80 to 0.758 µg/dl in 2015-16 (Table I).

The CDC has repeatedly lowered the reference value for blood lead tests from 10 µg/dl in 1991, when the term was changed from the "level requiring intervention" to the "level of concern," to 5 µg/dl in 2012, using the term "reference value." Recently it has been proposed to lower the reference value to 3.5 µg/dl based on the 97.5th percentile of the estimated blood lead distribution in children age 1-5 years old in the 2011–14 NHANES.[21] However, this proposal does not change the CDC's 2012[12] statement that "no safe blood lead level in children has been identified," and the stated need to focus on primary prevention of lead exposure in children before it occurs.

Endogenous lead exposure sources. More than 90% of accumulated lead in the body is stored in bone.[22] Lead is incorporated into the hydroxyapatite and collagen matrix of the bones. During pregnancy and lactation, periods of heightened bone turnover, the lead in bone can be mobilized and released into maternal blood and transferred through the placenta to the fetus or released in the milk to breast-fed babies.[4-6,13,23-32] Studies have demonstrated the correlation between BLL and bone lead level.[29,30] The amount of bone lead contributing to the blood lead depends on the exposure history of the individuals. An increase of approximately 20% in blood lead during pregnancy could be attributed to bone lead[25] and the increase can be blunted by calcium supplements during pregnancy.[25] It was estimated that approximately 80% of lead in the cord blood could be contributed by maternal skeletal lead mobilized during pregnancy.[26]

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Recent research has shown that maternal BLL is higher in the 3rd trimester, and postpartum compared to earlier pregnancy periods.[27] One study of maternal bone lead contribution to blood lead levels during pregnancy and 1-2 months postpartum has shown that the BLL (µg/dl) is approximately one-third of the bone lead concentration (µg/g).[29] Placental lead transfer begins at the end of the first trimester (around 12-14 weeks of gestation) and continues throughout pregnancy.[4] Lead is released from bone at the same time, and for nursing mothers it continues until 6-8 months postpartum. The magnitude of lead in breast milk can be as high as 1 to 4 µg/dl in breastfeeding mothers with pre-pregnancy blood lead concentrations lower than 2 µg/dL.[28]

Based on the above evidence, it is important to identify the critical time of fetal lead exposure if primary prevention is the goal. This goal can only be achieved by testing pregnant women's lead levels at specific times during pregnancy due to the dynamic lead concentration in maternal circulation.

Possible reasons for failing to identify high-risk children at the critical time of exposure

The current protocol of screening and identification of pregnant women and young children for lead exposure is based on sets of questionnaire screenings. The blood test is given only after questionnaire answers indicate the possibility of lead exposure.

In April 2019, the U.S. Preventive Service Task Force, an organization that provides evidence and recommendations for the CDC, issued a statement confirming that the currently used protocol for screening and identification of elevated blood lead levels in pregnant women and children lacks evidence of benefits.[14] This statement included the following:

(Continued on Page 44)

1. The evidence of using questionnaires and other clinical prediction tools to identify asymptomatic children with elevated blood lead levels is inadequate. This judgment was based on a systematic review finding[7] that the CDC 1991 version of the questionnaire had pooled sensitivity of 48% and pooled specificity of 58% for identifying children with BLL greater than 10µg/dl. The current adapted version of the questionnaire does not demonstrate improved accuracy.

2. Evidence of effectiveness of using questionnaires for identifying pregnant women with elevated BLL is inadequate. It is based on a systematic review finding that had sensitivity of 75.7% and specificity of 46.2%.

3. The USPSTF concluded that the benefit/risk ratio of current mechanisms of screening for elevated blood lead levels in asymptomatic children 5 years and younger and in pregnant women cannot be determined due to insufficient evidence.

This statement by the USPSTF can be interpreted as saying that new mechanisms of screening, including routine testing, are needed.

Limitations and challenges of both neurotoxicity research and dental caries studies

Neurotoxicity research. Lead has long been recognized as a neurotoxin. Children are most vulnerable because their nervous systems are undergoing rapid development. Chronic low level exposure has been linked to psychological, cognitive, neurobehavioral, and other neurologic impairments.[23,33-35] Evidence indicates that low BLLs in children are associated with IQ deficits, attention deficit, low academic achievement, and other problems. This prompted the CDC to release a renewed call for primary prevention in 2012, emphasizing that no safe level for lead exposure has been identified.[12]

Neurodevelopmental disorders, based on the current concept, irreversibly affect people for the rest of their lives. This indicates the great magnitude of the public health burden both in achieving zero tolerance for lead levels[11] as well as managing the adverse neural effects of low level exposure. Proponents of the concept that low BLL has a cause-and-effect relationship to neurocognitive deficits have had influence in formulating public health policy. However, this does not mean their work and beliefs go unchallenged.[36-38] Sources of uncertainty include the following:

1. An extensive list of variables (confounders). Any study that links prenatal and childhood lead exposure to the adverse effect of lead on their neurodevelopment must consider the degree of bias from the potential covariates and confounders. In general, these confounders include maternal age at delivery, maternal education level, maternal smoking or drinking history (especially during pregnancy), delivery conditions, gestational age, child-raising environment, and socioeconomic status of the household. Taking the examples of the most-studied IQ (intelligence quotient) reduction and low BLL, socio-demographic factors account for more than 50% of the variance in childhood cognitive ability; lead accounts for only 1-2%[39,40] These confounders extend to parental education, occupation, and IQ; family size; single parent family status; minority group status; bilingualism; number of stressful life events; maternal anxiety; maternal mental health; gender; poverty; adequacy of prenatal and postnatal care; nutrition status; parental drug abuse; frequent relocation; insufficient intellectual stimulation; and history of medical problems such as anemia and recurrent otitis media.[36-38]

2. Lack of standardized outcomes measurements. The literature has pointed out that intelligence test score scales used in lead-related intelligence or cognitive development studies varied widely and the test administration skills, test result interpretation, and test targets are not standardized. For example, one commentary[40] revealed that among prospective studies conducted before 2000, at least four different intelligence test score scales were used in an attempt to find correlations between lead exposure of children and their cognitive impairment among 11 studies. These test score scales are: Full Scale IQ (Wechsler Intelligence Scale for Children), suitable for ages 6-16; General Cognitive Index (McCarthy Scales for Children's Ability), suitable for ages 2-8; Mental Processing Composite (Kaufman Assessment Battery for Children or Kaufman ABC), suitable for ages 3-8; and Mental Development Index (Bayley Scales of Infant Development), suitable for 1 to 42 months. Five of the 11 cited studies employed Full Scale IQ, which is composed of the verbal IQ and performance IQ in equal parts. However, the verbal IQ component was not consistently measured

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(Continued on Page 46)

Table II: Characteristics of Lead-Associated Dental Caries Studies

Authors	Reference #	Year of publication	Biomarker	Subjects age and tooth type	Conclusion
Moss ME, et al.	52	1999	NHANES BLL 1988-1994	2 years old and older	Environmental lead exposure a 5μg/dl change in BLL is associated with increased dental caries
Campbell JR, et al.	53	2000	Retrospectively match the BLL City records	Second and fifth graders; deciduous and permanent teeth	No association between lead exposure >10μg/dl and caries
Gemmel A, et al.	54	2002	Project conducted BLT*	6 to 10 years old, old, deciduous and permanent teeth	Weak association of BLL and caries, especially in deciduous teeth of urban dwellers
Nriagu J, et al.	55	2006	Project conducted BLT* Project conducted SLT†	Adults, permanent teeth	Weak but significant association of lead in blood and saliva with dental caries in adults
Martin MD, et al.	56	2007	Project conducted BLT* Neurobehavioral tests	8-12 years old, primary and permanent teeth	Weak association between lead exposure and dental caries in deciduous teeth of males only. If there is association it is not related to neurobehavioral effect of lead.
Wiener RC, et al.	57	2015	NHANES BLL 1988-1994	2-5 years old, primary teeth	Strong association of BLL with caries
Sanders AE, et al.	58	2018	NHANES BLL 2005-2014	2-19 years old, primary and permanent teeth	Children and adolescents who did not drink tap water had lower BLL and higher dental caries compared to those who drank tap water. However, the fluoridation status of the participants' tap water is not known.
Wu Y, et al.	60	2019	Maternal BLL, early childhood BLL (1-4 years old) and peri-pubertal BLL (10-18 years old)	10-18 years old Permanent teeth	Lead and caries not significantly associated, but may be associated in children with high sugar-sweetened beverage intake
Foxman B, et al	61	2019	Enamel microhardness Overall Pb concentration of teeth	Primary teeth	Lead in the deciduous teeth does not affect the tooth microhardness

***BLT: blood lead test**
†SLT: saliva lead level

or reported. The scales for other developmental neural functions that are believed to be affected by low levels of exposure to lead, such as attention-deficit/hyperactivity disorder (ADHA), and other neurobehavioral assessments including teacher rating scales, parent rating scales, and questionnaires, have also presented measurement challenges.

3. Lack of specific effects that correlate to lead timing and dose exposure. Brain development is a complex, dynamic, and self-coordinated long process spanning from the early gestation period throughout life, with the most active period of time during fetal life and early childhood.[41-43] The process includes changes in brain structure such as neurons and supporting cells' migration, proliferation, differentiation, connectivity, myelination, and synaptic pruning. These changes cause volume growth and specific region development as well as function organization such as motor, sensory, language, cognition, behavior, and others. Each specific regional or functional development has its own growth rate, growth curves, and windows of vulnerability.[44] Until brain morphometric (structural) and functional development mapping with chronology are achieved, it will be difficult to identify the specific neurotoxic effects of lead and the critical lead exposure timing and dose.

4. Lack of valid and accurate biomarkers. Skeptics have focused mainly on the lack of reliable markers that can pinpoint the critical timing and dose of lead exposure. Studies on lead exposure-related neurocognitive deficits or neurobehavioral disorders are based on lead levels either by single or serial blood measurements, tooth lead concentrations, or a combination of both.[36] Single or serial blood levels can only represent lead exposure approximately 30 to 40 days around the time the blood is drawn. Therefore, endogenous lead such as bone lead mobilized back into the blood may not represent the timing of specific neurologic developmental deficits caused by lead.[45,46] Recent studies have suggested that there may be unique windows of vulnerability for different neurotoxin exposure outcomes during childhood, a period of rapid brain development with high variability.[47-49] Measurement of lead in blood drawn at the study time may miss this association.

Tooth lead concentration depends on the assessment method and tooth structure. Either enamel and dentin or dentin alone were used as overall lead level markers for prenatal through 6 years postnatal exposure and neurocognitive or neurobehavioral studies.[36] Specific locations within dentin, e.g. secondary dentin, can serve as postnatal exposure markers.[49] Most neurologic development studies used overall lead concentration, which presented the same limitation of imprecision or irrelevance. There have been limitations in measurements of lead concentration of prenatal exposure.

Dental caries studies

Dental caries is the most common chronic disease of childhood and a major public health burden. The interest in the association between lead and dental caries probably comes from the fact that lead, like fluoride and calcium, is incorporated into the hydroxyapatite of enamel and dentin during tooth development.[50] Whether the presence of lead in teeth prevents or promotes caries development has been the topic of oral health research for the last two decades.

The most widely cited basis for research on lead and dental caries was an animal study of prenatal and perinatal lead exposure and the prevalence of caries in rat pups. The results of this study showed an approximate 40% increase in the prevalence of caries and a decrease in stimulated parotid function of nearly 30%.[51] Many studies of lead and dental caries in children have been conducted using different biomarkers (cross-sectional, one-time blood lead level; lead concentration in tooth structure; maternal bone lead; maternal blood lead level during pregnancy) and parameters (age of the subjects, primary teeth, permanent teeth) with focus on different mechanisms (tooth structure changes vs. saliva quality and quantity change, or lead influence on the protective effects of fluoride).

Results of this research usually indicated either a weak association or no association.[52-61] Studies of dental caries in humans have always been challenged with various traditional confounding factors such as cariogenic bacteria, diet, oral hygiene practice, socioeconomic status,[62] fluoridation,[59] accessibility of prevention, and dental care. In the natural environment any study that links lead exposure and dental caries must consider these confounding factors. However, other lead exposure-related factors, such as how lead affects tooth structure during tooth development in utero and the neurocognitive and neurobehavioral effects of lead[63] must also be considered with regard to their impact on oral hygiene practice.[56] To date, none of these studies directly links prenatal and perinatal lead exposure levels to caries. Studies of lead and dental caries are summarized in Table II, see Page 45.

Lead exposure is cumulative throughout tooth development. Mineralization of deciduous central incisors begins at 13-14 weeks of gestation. By one year of age, coronal mineralization of deciduous teeth is completed.[64] A cross-sectional measurement of blood lead levels such as NHANES is not adequate to study the association between dental caries and lead. A recent study used prenatal and perinatal exposure records in a follow-up investigation of children's caries prevalence in a Mexican population.[60] The study revealed a positive association of blood lead levels with peri-pubertal caries rates in unadjusted data.

However, after adjustment for confounding factors it was found that prenatal and childhood lead exposure is not associated with dental caries. The researchers found an association of lead and caries in children with high levels of sugar-sweetened beverage intake. Another study of the association of lead and dental caries examined lead levels and the microhardness of deciduous teeth to test the hypothesis that lead incorporated in dental tissues makes the teeth more susceptible to caries. The result was negative. Since the authors only measured overall lead levels, the results cannot reflect prenatal lead exposure and tooth hardness.[61]

A reliable dentin lead level-based biomarker

Dentin formation is a continuous process throughout the life of the tooth. Dentin is formed incrementally at a daily rate of approximately 4 µm for the primary dentin and at a slower rate for the secondary and tertiary dentin. Every 5 days the dentinal tubules change orientation and produce the incremental line of von Ebner, with 20 µm between the lines. Each type of dentin can be distinguished microscopically by a subtle demarcation line and a less regular organization of dentinal tubules. There is a wider contour line, the neonatal line, which separates the dentin formed before birth from dentin produced after birth.[64] It is based on these characteristics that a chronological map of dentin formation can be made.

Deciduous tooth dentin mineralization begins at 13-19 weeks *in utero*. The coronal dentin is completed at a time frame ranging from 1.5 months after birth for the incisors to 11 months after birth for the molars. Eruption of the teeth occurs from 6 to 24 months after birth. Incisors are the first teeth to complete the process from mineralization to eruption, followed by first primary molars, canines, and second primary molars. Secondary dentin forms after completion of the root. In the deciduous central incisor, this is 1.5 to 2 years of age. Lead is deposited in the mineralized dentin as dentin formation proceeds. [64] If lead exposure occurs during the process of dentin mineralization, it is integrated into hydroxyapatite and remains there throughout the life of the tooth. Therefore, dentin lead in deciduous teeth represents a chronological record of lead exposure from the 13th gestational week to childhood. Lead concentrations in deciduous incisors would be ideal records to reconstruct a chronological lead exposure map from the prenatal period of primary dentin formation until the teeth are shed, which is approximately at age 6 to 7.

A new research method named "micro-spatial analysis" or laser ablation-inductively coupled plasma-mass spectrometry has been developed recently and applied to ground sections of the teeth.[65-69] This technique allows micro-spatial measurement of multiple metals including lead in teeth. It enables researchers to make a chronological map of lead deposits in enamel and dentin by taking sample disks of 20-40 µm from the DEJ inward. Each disk follows the incremental lines for dentin sampling and outward for enamel sampling. Each sample represents the specific timing of the exposure. Using the neonatal line as a guide,[70] prenatal and postnatal lead exposure can be distinctively identified to an accuracy of within 7-10 days. In this study, lead levels in dentin formed at approximately 3 months after birth was significantly correlated to the BLL at the same age, suggesting that finding a critical window of susceptibility is feasible with this technique.

A recent study[44] utilized LA-ICP-MS measurement of primary tooth dentin to study prenatal exposure of lead, manganese, and zinc and their relationship with neurobehavioral developmental deficits. For all 133 study subjects between ages 8-11 years, a chronological record of met-

(Continued on Page 48)

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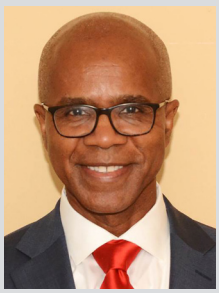
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al exposure was structured by sampling deciduous tooth dentin from the second trimester to 1 years old, measuring every 7-10 days' increment for a total of 50 time points. Various behavioral scores of these children were retrospectively matched to their sampled lead concentrations.

Hyperactivity was strongly associated with 8-11 months postnatal lead exposure and demonstrated a dosage correlation. A linear association was also observed between anxiety scores and postnatal lead dosage beginning at birth and extending beyond 12 months. Different metals have their own window of susceptibility and may have protective or synergistic effects. Although further studies are warranted for the validation of the results, this study demonstrated two important factors in low-level lead exposure and neurodevelopmental effects: critical exposure time (windows of susceptibility) and dosage.

Conclusion

The impact of lead contamination in Flint drinking water is multifaceted and profound. It challenges the scientific evidence generated through research. It also challenges the public policies established based on solid research-generated evidence.

The literature review in this article has revealed that the evidence for the effects of low-level lead exposure to neurological development and caries rate is insufficient. All studies on these subjects lack important time-specific data on lead dose exposure *in utero* and one year after birth when neurodevelopment and deciduous tooth dentin formation occur. This article also presents the evolution of governmental strategies and policies on the prevention of low level lead exposure and their gaps in implementation effectiveness.

The new technology of micro-spatial analysis or laser ablation-inductively coupled plasma-mass spectrometry provides quantifiable dentin lead levels at the specific time that the dosage of lead is integrated during dentin formation. The utilization of this study method and chronologic data of lead dose exposure *in utero* and one year after birth will generate new evidence on low level lead exposure effects on children's neurological development and dental caries vulnerability.

A policy of routine blood lead testing during pregnancy will provide a full record of lead exposure during pregnancy and establish the relationship between dentin lead level and BLL. These data will empower future studies in this field and may help to determine some of the effects of lead exposure on children's health in communities like Flint. ●

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Recoup Your Dues and More with MDA-Endorsed Programs

By Cindy Hoogasian
Director, MDA Services and Marketing

Your dental association membership delivers a lot of value, from continuing education and advocacy to professional networking, publications, and human resources assistance. Your membership also gives you *exclusive* access to money-saving products and services that are essential to successfully operating a modern dental practice.

These perks of your MDA membership are commonly referred to as MDA-endorsed programs, and they include access to special insurance products from MDA Insurance, as well as resources to meet the five biggest challenges you face in operating your businesses. Meeting those five categories of needs is the job of MDA Services, under the guidance of your peers who serve on the MDA Insurance & Financial Group Committee on Endorsed Services.

By using our endorsed vendors, you can help yourself in several ways. First, you save money. MDA Services leverages the buying power of our members to negotiate reduced prices or fees for services that individual members could not obtain for themselves. In short, we get you the best deal possible. Then, when you purchase the products or services of endorsed vendors, the MDA receives royalties on your purchase. Those royalties are used by the MDA to supplement its income from dues and deliver the services and programs that members value. This helps keep the cost of MDA dues at a consistent level. In a sense, you're really paying yourself when you use our endorsed programs, because you save money on the product or service itself, and you save on your dues expense.

How important is the contribution from MDA Insurance and MDA Services to MDA operations? Well, the MDA's income from MDA Insurance and MDA Services via royalties, dividends, and expense reimbursements totaled $1.76 million in 2019. That's roughly equal to the dues of 3,247 members. Without this revenue, the MDA would have to increase dues or decrease services. So, with that in mind, consider MDA Services vendors when you need solutions to meet the following five basic needs of any dental office:

Need #1: Personal and business financial solutions

When it comes to providing solutions for your financial needs, be assured MDA Services has done the legwork by comparing vendors and services for you. The MDA endorses 11 vendors that will save you money on services and goods that fall under this category. Let's look at the most significant ways you can save, as well as at our newest endorsements in this category.

Bank of America Practice Solutions is your resource for practice acquisitions, start-ups, expansions, remodels and owner-occupied commercial real estate loans. This company also provides lines of credit for equipment purchases. Bank of America Practice Solutions is an arm of the national bank that specializes in working with dentists and physicians.

BANK OF AMERICA

It's true . . . you can save more than your yearly dues when you take advantage of the extra-value, money-saving programs and services from MDA Services. And in these times, *extra value* and *cost savings* are critical to your success. You get more of both with MDA Services.

MDA members receive a *50% reduction* in loan administration fees when they provide their association name and ADA membership number at the time of approval. Right now, Bank of America Practice Solutions is offering a practice acquisition and debt consolidation promotion of 1% interest for the first 18 months, and 0% for the first six months on equipment loans. Terms and conditions apply, of course. So call 800-428-2847 to apply and get all the details.

DBS Investment Advisers will help you build and manage your wealth. DBS Investment Advisers is an arm of the DBS Companies, which specializes in serving dentists' accounting and business consulting needs. The advising arm understands dentists' business and financial challenges and eagerly works with dentists to help them start investing for their future. Look to DBS Investment Advisers if you want to establish any kind of an IRA or a 401(K) plan for your practice, or if you wish to build an individual investment portfolio. MDA members receive a discount on assets under management. Call 800-327-2377 or email Ted Schumann II at ted.schumann@dbsia.net.

DMMEX EasyRefine is the company to turn to if you want to turn your precious metals from dental scrap into cash. You can also send jewelry to EasyRefine to obtain payment for the precious metal. You'll receive high-value compensation from EasyRefine: 97% on the value of gold, 90% for platinum and silver, and 85% for palladium. In addition, EasyRefine will pay you a 5% bonus on the total value of all your metals. Watch the MDA *Journal* for periodic coupons to receive an extra 2% on the total metal value. And with this company, you receive a scientific analysis of your metal submission, so you will know the basis of your compensation. Visit easyrefine.com or call 800-741-3174 and request an insured shipping kit to send your metals in for refining. So far in 2020,

(Continued on Page 54)

EasyRefine has paid participating MDA members well in excess of $150,000 for their refined precious metals.

Choose **US Bank Credit Card** for your personal use. This is co-endorsed with the ADA. The US Bank credit card has great cash-back rewards, and you earn points on purchases from the MDA and the ADA! Go to adavisa.com/36991 or call 888-327-2265, ext. 36991, for full terms and conditions or to apply.

Toner and ink jet cartridges are surprisingly expensive. But not when you buy from **Dailey Solutions**, where you can *save up to 40%* on the cost of a private-label cartridge guaranteed to work with your equipment. The private-label alternative to a popular HP cartridge with a MSRP of $100.99 costs just $59.99 from Dailey Solutions. Create an account at dsofficeusa.com and call 800-601-4505 from 8 a.m. to 5 p.m. Central time. Tell them you're an MDA member to see our special menu of products.

Need #2: Patient recruitment and retention

Keeping your current patients and recruiting new ones is a top priority for every dentist who wants to be successful. MDA Services has assembled some excellent products to help you achieve this goal.

ProSites website design and internet marketing should be your go-to solution for recruitment and retention purposes. ProSites has five levels of websites for you to choose from, including completely custom sites. All are offered at a *70% discount* for MDA members! On a standard website alone, you would save about $894 in fees in one year. Turn to ProSites for your SEO needs, pay-per-click advertising, social media and customer review management needs, patient education content, and online patient intake forms. Now more than ever, dentists need superior electronic communication with their existing patients and new patients, and ProSites delivers on that with Practice MoJo. Discounts on ancillary services such as those listed are extended to MDA members as well. Call ProSites' Shane Bennet at 951-395-8335 or email him at shane.bennet@prosites.com for more information.

Offering an in-office dental plan to your uninsured and underinsured patients helps you build a loyal patient base by making dentistry more affordable. You can create completely customized plan offerings for your practice, and market them to the public and to your existing patient base using the most cost-effective third-party platform: **Quality Dental Plans**. You'll get all the tools you need to launch and administer effective in-office dental plans from QDP for just *75 cents* per patient, per month. Other services with comparable tools charge as much as $4 per patient per month! You won't find a better-priced product or program anywhere. If you have 100 patients enrolled in an in-office dental plan, you'll pay QDP just $900 annually, compared to $3,000 or more with competitors. Are you using a different administrative platform and paying too much? Now's the time to switch! Get started with QDP by calling Luis De Hoyos at 855-796-9765 or email him at enroll@QualityDentalPlan.com, or visit QDPdentist.com/mda.

Advertising to your patients that your office purifies the air can be a strong recruitment and retention tool during this pandemic period. **Surgically Clean Air** sells various models of air purifying equipment, all of which remove 99% of in-air particulates such as airborne viruses, chemicals, toxins, germs, and odors to help reduce the spread of disease. Surgically Clean Air equipment has been tested on and proved to reduce by 99% the MS2 Bacteriophage, a commonly used surrogate for SARS-COV (coronavirus). MDA member discounts begin at 7% and go up depending upon the combination and quantity of units purchased. Call Rob Ruzinsky at 616-279-1964 or Samantha Davis at 231-288-6538 for assistance.

Need #3: Managing patient payments and accounts receivable

Every dentist wants to get paid for services provided to patients. Providing ways to help dentists get

paid faster and to stop financing services to patients is vitally important. Several MDA-endorsed products answer that need.

CareCredit is a healthcare credit card that patients can apply for in your office. Using CareCredit, patients can keep their dental expenses off their personal credit cards and consolidate them on this credit card. Transactions on the CareCredit card are in your bank account within 48 hours. Getting paid by the patient becomes CareCredit's responsibility. This removes you from extending credit to your patient, and all the unpleasantness that comes along with slow-pay or delinquent accounts. Get started with CareCredit for just $30 by calling 866-247-0158.

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The average dentist who switches from his or her current credit card processing method to MDA-endorsed **Best Card** saves *$3,256 per year* on processing fees! That's about 24% on average. Best Card will do a cost comparison for you. Call 877-739-3952 about a cost comparison and get a $5 Amazon gift card when

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(Continued on Page 56)

How Using MDA Services Vendors Saves You Big Money

The chart below illustrates the MDA member savings compared to what the company would charge a dentist who isn't an MDA member. And, your savings may be even greater when comparing the MDA member fee to what you are paying using a vendor who is not endorsed. It pays to be an MDA member!

Program	Member Cost Per Year	Vendor's Standard Cost	Savings/Earnings
DMMEX *EasyRefine*	$0	N/A	$3,729 average submission payment
Quality Dental Plans	$900 for 100 patients	$1,250 for 100 patients	$350
ProSites	$1,325	$2,219	$894
Dailey Solutions	$119.98	$201.98	$82
iCoreRx	$648	$1,140.00	$492 *plus* Lexicomp subscription fee
iCoreExchange	$270 stand-alone or $202.50 bundled with iCoreRx	$431	$161 stand-alone or $228.50 bundled
Eagle Associates HIPAA, Customer Safety Program (OSHA) and OIG Level 1 service package	$1,650 HIPAA/OSHA & OIG Compliance with 1 hour phone consultation	$2,315; service bundle not not available	$665
Best Card	Average monthly credit card sales $30,833.33. Average effective rate 2.18% Average monthly fee: $672.16	Average monthly credit card sales $30,833.33. Average effective rate 3.06% Average monthly fee: $943.49	Average savings of $271.33 per month or $3,255.96 annually

you submit your credit card processing statement.

Motivate your slow-paying customers by using the **TSI Accelerator** diplomatic collections system. Typically, 75% of your slow pays will get caught up by the time the Accelerator process completes, and you keep 100% of what they pay. Those who do not pay can be turned over to TSI's Profit Recovery collection service. Let TSI help you get paid by calling them at 877-377-5378.

In-office dental plans also help dentists get paid on time for services rendered. See details in Challenge #2, above.

Challenge #4: Complying with government mandates

As any business person knows, especially those in health care services, complying with state and federal regulations is time-consuming and expensive, and noncompliance has the potential for fines and penalties. Get the compliance monkey off your back with our MDA-endorsed solutions.

Beginning in October 2021, every prescription written in Michigan must be transmitted to a pharmacy via a secure electronic transmission method. MDA-endorsed **iCoreRx** provides that service to MDA members at a *43% discount*. Pay just $45 per month for antibiotics and other medications and an additional $9 per month for Schedule II-IV drugs/controlled substances. Prescriptions for controlled substances is an opt-in service because many general dentists do not prescribe them. Nonmembers pay $95 per month for the complete service. Also, iCoreRx automatically connects with MAPS and eliminates the need for a Lexicomp subscription! Call 888-810-7706 to get started.

HIPAA mandates the use of secure, encrypted email transmission of protected health information, such as radiographs. To meet this need, the MDA endorses **iCoreExchange**. It offers HIPAA-compliant encrypted email at a special MDA member price of just $22.50 per dentist per month, a *36% savings*. Through Nov. 30, subscribe to both iCore Rx and iCoreExchange and get three months of iCoreExchange free. Call 888-810-7706 to learn more.

MDA-endorsed HIPAA, OSHA, and Office of Inspector General compliance solutions are provided by **Eagle Associates**. Eagle Associates offers you three levels of support services to get into — and stay in — compliance with any of the above three regulations. Choose the level that works best for you, and enjoy your MDA discount. Call 800-777-2337, or email info@eagleassociates.net.

Challenge #5: Reducing supply expenses

Dental supplies cost a *lot* of money. Reducing the cost of dental supplies for MDA members continues to be a priority for MDA Services. We recommend that dentists purchase supplies from The Dentists Supply Company (TDSC.com), where you can save about 20% off MSRP on the same products you're buying from other suppliers. Recent changes to this program are revitalizing it and putting it on an even footing with other major dental supply companies. Stay tuned for more information on the new TDSC coming soon!

Even more: These are just a few of the great extra-value, money-saving products and services available from MDA Services. You'll find even more endorsed programs and services in the *2021 MDA Member Benefits Guidebook* enclosed in this issue of the MDA *Journal*. And, don't forget about all the great MDA-endorsed insurance products from MDA Insurance, too. Remember, for extra value, superior customer service, and real cost savings that make your membership even more valuable, think MDA and MDA Services *first*!

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Near Grand Rapids — Strong practice! Located for large draw. Income $420K-plus. Growth opportunity, 24 years established, five ops, digital, Softdent. Real estate available. Contact Denise Bouwhuis, 734-765-7080, denise.bouwhuis@henryschein.com. #MI178.

Wayne County, Mich. — General practice grossing $1.8M, nine ops, high tech, digital, CBCT, CAD-CAM, in desirable location. Real estate available. For details contact Sara Marterella, 734-765-0770, sara.marterella@henryschein.com. #MI176.

Mid-Michigan — Fantastic opportunity in growing community. Large, seven-op, highly successful practice with high-tech equipment.

Great cash flow and a flexible transition plan. Multi-use real estate available. Contact denise.bouwhuis@henryschein.com. #MI170.

Southeast Michigan — Orthodontic practice and building to purchase; excellent location! Average gross $890K, digital X-ray, paper charting. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB20S300.

Greater Lansing, Mich. — Beautiful, four op expandable practice. Excellent location. Digital, pano, 50% overhead to earn $300K after debt service. Real estate available. Contact Sara Marterella, 734-765-0770, sara.marterella@henryschein.com. #MI1244.

Million dollar practice? = Million dollar answers! Service rich, higher value, the right buyer, collaboration with your professional advisers, let DBS Dental Sales take the guess work out of your greatest life transition. Call Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570.

Mid-Michigan perio practice — Lease space, five operatories, Eaglesoft, digital X-Ray, open three days. Average gross $400K. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB17S287.

Western Michigan — Average gross $560K. Nicely remodeled four-operatory leased space with potential to purchase building, Softdent software. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB18S293.

Midland, Bay, Saginaw area — Pending sale. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB19S295.

Northern Michigan County (HDR1) — Two-doctor general practice with $1.7M-plus annual revenue. Traditional and PPO insurance, no adult Medicaid, 10 ops, digital X-rays, Eaglesoft, and Windows 10. Associate to own opportunity. Real estate, including property providing rental income, is available in a separate transaction. Contact Steve Schrems, Peak Practice Transitions, 888-477-7325.

Washtenaw County (ART2) — Small part-time general dental practice, in

(Continued on Page 64)

a prime area. More than $400K revenue per year. Three operatories with four days per week scheduled. The current owner provides the hygiene services. Contact Phil Stark to discuss in detail, 888-477-7325.

General practice northwest Michigan — Grand Traverse area (LDGT1) $800K-plus general dental practice, in a premier low COVID-19 city. Solo practice with outstanding history, staff, and net. This is a once-in-a-career opportunity to buy a practice in a town known for its quality of life. The office runs four days per week with great expansion potential. Contact Phil Stark at Peak Practice Transitions, to discuss in detail; 888-477-7325, www.peaktransitions.com.

Upcoming Classified Deadlines

December 1 ..... January 2021
January 1 ..... February 2021
February 1 ..... March 2021
March 1 ..... April 2021

Mid-Michigan — Stand-alone brick building with high traffic area! Average gross $360K, four operatories, digital X-ray. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB20RS302.

Mid-Michigan — Great merger potential! Average gross $600K, four operatories, leased space. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB19S296.

Midland, Bay, Saginaw area — Average gross $540K. Room to expand in the beautiful brick condo suite with Dentrix and four operatories. Contact DBS Professional Practice Brokers, Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB18S288.

Northern Michigan — Pending sale. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB17S285.

Mid-Michigan — Lease space in a stand-alone building with excellent access to I-69! Average gross $760K, six operatories, digital X-ray with Eaglesoft software. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB20RS303.

Practices for sale! Wayne County — five ops, collects $1.4M, 3,000-plus active patients, beautiful turnkey office. Real estate also for sale. Dearborn — five ops, collects $300K, great for merger, satellite or build-up. Building also for sale. Southeast

Oakland County — four ops, doctor retiring, 500 patients, start-up plus! Building also for sale. Alpena — coming soon, merger, chart sale or build-up. Real estate also for sale. Contact Jessica Gaul, DDS, Total Transitions — practice sales/real estate — jgpracticesales@gmail.com.

Mid-Michigan — Stand-alone brick building with excellent access to downtown! Average gross $845K, six operatories, digital X-ray with Dentrix software. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB20S298.

Midland, Bay, Saginaw area — Lease or purchase building suite; excellent location! Average gross $355K on three days per week, most specialty work referred, four operatories, Dentrix software. Contact DBS Dental Sales Sarah Pajot at 989-450-0287 or Rob Ballard at 810-252-2570. Reference: PPB20RS301.

A dental clinic for sale in Dearborn — If interested, please call 313-384-6858.

Upper Peninsula — Long-established practice offering high production, stability, great staff, in a prime city, with year-round recreational and educational activities, and fabulous lifestyle. Contact Mark Breit, 906-250-9666; mbreit@paragon.us.com.

49%-plus profit margin — West Michigan practice for sale. Five ops, digital pan, film I/O, 1,600 sq. ft. suite in hospital-built brick building. Low competition! Four-year average gross $545K, net $270K, averaging 21 NP per month as well. Professional broker valued at $375K, due to medical issues I am offering it at $275K. Reply to roxilla58@yahoo.com.

General practice for sale, Adrian, Mich. — Four operatories with room to expand two more operatories, with collections of $650K on three days a week 1,600 active patients and growing. Please contact Dr. Katba at 734-747-0020.

Back on the market! Established orthodontic practice located in the upscale community of beautiful downtown Northville, Mich., with dedicated covered parking. There are four orthodontic chairs, three are plumbed, one is for records, digital ceph, and pan. This is a paperless office with great potential. Please email stephanie@pureorthodontics.com with any questions.

Toledo, Ohio — Excellent general practice for sale. Five operatories with collections of $770K. Adjusted EBITDA of $180K and 1,600 active patients. Doctor willing to stay on with partnership or open to straight buy-out. Contact Kaile Vierstra with Professional Transition Strategies to learn more at kaile@professionaltransition.com or 719-694-8320.

Gaylord area practice and building for sale — Established for 37 years, the practice collects $700K a year. The office has seven days of hygiene per week with four operatories, and the free-standing building is 2,000 sq. ft. Contact Brian Goldman, 248-841-3997, or goldmangroup2000@aol.com.

PC1103MI — This practice is located in the most beautiful area of northwest Michigan. This is a 4,000 sq. ft., six-op office with room to expand. The practice has 1,100 active patients. The practice is grossing more than $800K a year. Contact Phil Cole at KLAS Solutions, phil@klassolutions.com or 989-233-4200.

Northeastern Michigan resort town — Beautiful. Established general practice located on Lake Huron shore with a river in the backyard.

(Continued on Page 66)

Five ops with room for a sixth. Digital radiography. All updated computers, Eaglesoft, in all ops, strong hygiene program. $1.1M production, practice continues to grow with more than 4,000 patients. Enough room for two doctors. Some specialties referred out. Building for sale also, 2,300 sq. ft. with finished second level. Good public and parochial schools, hospital, biking, hunting, fishing, boating, relaxing lifestyle. Call 989-362-7133.

Profitable multi-site perio and implant practice for sale — Highly desirable, fee-for-service perio and implant practice in affluent suburban communities producing $1M revenue annually. Owner has been in practice for 40 years and is ready to transition fully trained staff and updated facility to a new dentist. Real estate available in location one. Proforma with after-tax cash flow available once NDA is in place. Contact michigandentist2018@gmail.com.

Amazing Macomb County — 40-year, private, six-op dental practice with consisted gross of $2.4M annually, 4,000-plus active patient base, more than 100 NP/m adjusted EBITDA of 31% selling practice and three office building complex with great net cash flows. Ideal package for private dentist with two to five years experience to settle down and knock the competition out with impeccably warm and kind dental care. Will entertain all forms of buying configurations. Contact 248-980-0376 or aragonadentistry@msn.com.

Greater Kalamazoo area — Six-op, general practice for sale grossing $600K on four days with growth potential! Building available. Neighboring practice also for sale. Contact Veritas Transition Group, info@veritastg.com, 844-283-7482.

Beautiful northern Michigan — Live and work with four seasons of recreation right outside your door. Busy practice with $1M gross and low overhead. Four ops. Great staff. No HMOs, PPOs, or Medicaid. Are you looking for a safe, unhurried lifestyle? Contact the practice business consultant for the detailed practice prospectus at 602-752-4706 or allisonwilliamsmba@gmail.com.

Mid-Michigan tri-cities practice for sale with real estate — Stand-alone brick building available with $750K collected in a modern, well-equipped GP practice. Strong profit, comprehensive treatment planning, and ready to expand to eight total operatories. Visit www.crossroadstransitions.com to learn more about CHTMI-0320 or email steve@crossroadstax.com.

Marquette, Mich. — Regional medical center. New $300M hospital; 150 physicians. Major university city; $550K gross. Three and one half days a week. Gross can be doubled! Great location. See marquettesmiles.com. Contact mbreit@paragon.us.com, 906-250-9666.

Livonia, Michigan general practice — Great location and community. Six operatories (four plumbed) and lab, all fully equipped. Digital X-ray, using Eaglesoft software with computer stations in each room. Productive, strong hygiene program. Seven-figure production on a four-day work week. Collections over 98%. Owner willing to help with transition. Real estate available. For details contact Mr. Daniel Pierce at 313-570-0274 or email danieljpiercelaw@comcast.net.

Buying a practice? Peak Transitions will be your objective third party. We provide valuation, due diligence, and closing documents. Call 888-477-7325 or visit www.peaktransitions.com.

Thinking about buying or selling a dental practice? Statewide service available. Experienced, professional consultants for all of your business needs. Curt Nurenberg, CHBC, Rehmann Dental Management Advisors; 800-349-2644 or 517-316-2400.

Don't make a mistake selling or buying. We have buyers. Your own buyer? We can help. We offer assistance you can't get anywhere else. More dentists use us than anyone else. Call the Goldman Group, broker, 248-333-0500.

PRACTICE WANTED

General dentist qualified for financing seeks a practice to purchase. No brokers. Contact michigandds1979@gmail.com or call 586-991-1598.

MISCELLANEOUS

Feeling anxious? On edge? Struggling with life in 2020? Talk therapy not helping? Bethany Piziks, DDS, is a certified equine gestalt coach, partnering with horses to help you reduce anxiety, overcome challenges, and get un-stuck. Individual — couples — team retreats. Call today and find out how you can benefit from this very effective coaching method! Contact 231-633-7373 or braveheartgestaltcoaching.com.

Troubled by addiction, stress, or other practice or personal problems? Many dentists and dental team members are. But you don't have to go it alone. The MDA Member Assistance Program can help you, or your family, with personalized, 24/7 service. For complete details visit michigandental.org/Assistance, or email care@michigandental.org.

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Think MDA First!

Have a question? Need help? Think MDA first — email membership@michigandental.org.

MDA COURSES

Make the MDA your first choice for continuing dental education! Due to the COVID-19 pandemic, the MDA currently is offering live virtual seminars and recorded webinars only. You can find details and registration information at michigandental.org/CE-Courses.

The MDA is an ADA CERP Recognized Provider. ADA CERP is a service of the ADA to assist dental professionals in identifying quality providers of continuing dental education. The Michigan Board of Dentistry recognizes ADA CERP for CE credits toward dental license renewal.

MDA Fall and Winter Virtual Seminar Series: Courses taking place Nov. 13, Dec. 4, Jan 8, 2021, Feb. 5, 2021, and March 19, 2021, with speakers including Rhonda Savage, Derek Hein, Glenn DuPont, Doug Thompson, Carrie Jameson Webber, Mayoor Patel, and more. Visit michigandental.org/CE-Courses for details.

Recorded webinars: See the MDA website at michigandental.org/CE-Courses for the full listing of recorded MDA webinars.

DETROIT MERCY DENTAL

These partial listings are provided by the University of Detroit Mercy Institute for Advanced Continuing Education. Contact Detroit Mercy Dental at 313-494-6626 or online at dental.udmercy.edu/ce for full listings and additional information.

Friday, Nov. 13: Live Webinar — Review of Local Anesthesia Techniques: Helping to Better Manage Your Patients' Pain. Speakers: Ana Janic, DDS, MS; Lynne Morgan, RDH, MS, MA; and Carl Stone, DDS, MA, MBA, MA. Three CE credits.

Thursday, Nov. 19: Live Webinar — Managing the Emotional and Mental Weight of 2020. Speaker: Bailey Andersen, LMSW. Two CE credits.

Friday, Nov. 20: Advancing Digital Radiology and Diagnosis: From Novice to Beyond. Speakers: Tenzin Dadul, MDS, BDS, MS; and Kristina Okolisan-Mulligan, RDH, MA. Where: School of Dentistry. Six CE credits.

Journal CE Listings Policy

The *Journal* lists continuing education courses by accredited Michigan dental schools and dental societies in Michigan in this section at no charge. To place a listing, see the online CE Course Submission Form at michigandental.org/CE-Courses.

CE SPOTLIGHT

Learn about 'Personalized Periodontal Medicine: A New Approach to Total Body Health'

On Friday, Jan. 8, 2021, the MDA will present another in its series of live virtual seminars: "Personalized Periodontal Medicine: A New Approach to Total Body Health," with speaker Doug Thompson, DDS. The four-credit online course will run from 10 a.m. until 3 p.m., with a break for lunch.

This course is designed for general practitioners, their lead hygienist, and/or their entire team, who are serious about advancing the periodontal health of their patients, the health of their team, and the health of their practice. A thorough understanding of the most important relationships with the oral/systemic link, complemented with the use of salivary diagnostics, will provide an opportunity for significant professional and financial growth for your entire office.

Thompson

A series of case studies will demonstrate why practicing this way is 21st century periodontal care. Utilizing a comprehensive approach, and adding organized structure, you can radically transform your practice and demonstrate to your patients your true concern for their overall wellness.

Learning objectives:

- Learn how to develop an office-wide high-quality periodontal policy.
- Learn awareness about how the bacterial profile may affect vascular disease concerns and heart attack risk.
- Show the use of clinical adjuncts to control inflammation and the rate of clinical attachment loss.

The cost for this webinar is $159 for member dentists, $89 staff, and $259 for non-member dentists.

The program is co-sponsored by MDA Insurance, MDA Services, Crest Oral B, and Surgically Clean Air.

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Friday-Saturday, May 14-15, 2021: Treating Pediatric Tongue and Lip Ties with Lasers: A Hands-On Experience. Speakers: Martin Kaplan, DMD, Annette Skowronski, DDS, and Peter Vitruk, PhD. Where: School of Dentistry. Twelve CE credits.

Friday, May 21, 2021: A Hands-On Review of Local Anesthesia Techniques: Helping to Better Manage Your Patients' Pain. Speakers: Lynne Morgan, RDH, MS, MA, and Carl Stone, DDS, MA, MBA, MA. Where: School of Dentistry. Five CE credits.

Friday, July 16, 2021: Nitrous Oxide/Oxygen Sedation for the Dental Hygienist. Speakers: Lynne Morgan, RDH, MS, MA, Claudine Sordyl, RN, MS, and Tamika Thompson, DDS, MS. Where: School of Dentistry. Nine CE credits.

Friday, July 16, 2021: Nitrous Oxide/Oxygen Sedation for the Dental Assistant. Speakers: Lynne Morgan, RDH, MS, MA, Claudine Sordyl, RN, MS, and Tamika Thompson, DDS, MS. Where: School of Dentistry. Six CE credits.

UNIVERSITY OF MICHIGAN

Please contact the school at 734-763-5070 or online at https://dent.umich.edu/education/continuing-dental-education for updated listings and additional information.

Pre-recorded course: Failures and Complications in Implant Supported Prostheses: How to Manage these Situations. Speaker: Gustavo Mendonça, DDS, MSc, PhD. Where: Online course. Three CE credits.

Pre-recorded course: Human Trafficking for Dental Professionals. Speaker: Danielle Kalil, JD. Where: Online course. Two CE credits.

Friday, Nov. 13: Live Webinar — Full-Mouth Rehabilitation with Digital Workflow with Gustavo Mendonça, DDS, MSc, PhD; and Surgical Considerations When Planning Full-Mouth Rehabilitation with Albert Chan, DDS, MS. Two and one half CE credits.

Friday, Jan. 15, 2021: Live Webinar — Interim Restoration Design, Export, and Printing and Invest in Digital Workflow: Advantages and Challenges. Speaker: Gustavo Mendonça, DDS, MSc, PhD. Two and one half CE credits.

Friday, May 28, 2021: The Jarabak Lecture. Speaker: Won Moon, DMD, MS. Where: School of Dentistry. Six CE credits.

Wednesday-Saturday, June 9-12, 2021: Ramfjord Symposium. Speakers: William Giannobile, DDS; and Hom-Lay Wang, DDS, MS, PhD. Where: The Michigan League and Lydia Mendelssohn Theatre, Ann Arbor. Thirteen CE credits.

Tuesday – Saturday, July 20-24, 2021: Advanced Periodontal Surgery: A Practical Training Course. Speaker: Hom-Lay Wang, DDS, MSD, PhD. Where: School of Dentistry. Twenty-nine CE credits.

LOCAL SOCIETIES

The MDA encourages local dental societies to publicize courses and speakers online and in the MDA *Journal* continuing education listings. These listings are published when submitted and should not be considered a definitive list or master calendar of all local CE courses offered in the state of Michigan. Local societies planning CE events are urged to check with other components when scheduling courses.

Monday, Nov. 9: Live Webinar — An Algorithmic Approach to TMJ Disorders. Speaker: Sharon Aronovich, DMD, FRCD(C). Sponsored by: Washtenaw District Dental Society. Contact: Barb Kolling at bcfkolling@gmail.com. One CE credit. ●

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Newest Group of LEADers 'Keeping Connected' During Pandemic

The newest MDA Leadership Exploration And Development (LEAD) Program class kicked off in March of this year, just prior to the pandemic and subsequent shutdown. The group is shown here in the lobby of MDA headquarters during a break in their first meeting. At the meeting, the LEADers learned about DiSC® personality profiles with MDA Director of Human Resources Brandy Ryan, and explored organized dentistry's structure and governance with MDA CEO/Executive Director Karen Burgess.

Due to the pandemic, the LEAD program's usual spring and summer activities were paused. As a result, this year's class will be extended in order for participants to complete those activities. To keep the group connected and learning, the LEADers participated in a leadership book study at the end of summer. They're also attending virtual MDA Board of Trustees and committee meetings until they can meet again in person.

Shown (from left): Camille Secor, DMD; Michelle Szewczyk, DDS; Daniel Miller, DDS; Kerri Gustafson, DDS; Aida Rosenthal, DDS; Alexandra Hylen, DDS.

— Photo by Angie Kanazeh

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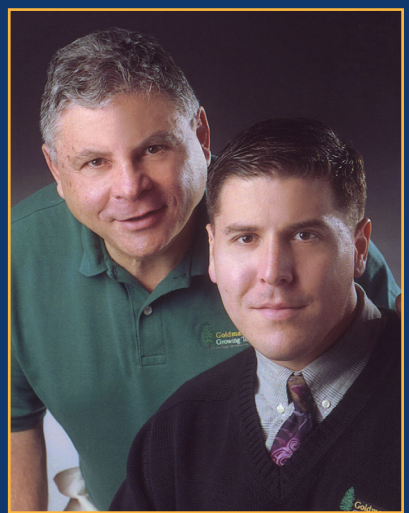

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