A compelling focus of The TMJ Association is on improving the understanding and treatment of Temporomandibular Disorders (TMD). One major project in 2022 involved educating both dental and medical students on the complexities of TMDs, ensuring that they become better-informed practitioners. We reached out to the Medical College of Wisconsin to share the recommendations of the National Academies of Sciences, Engineering and Medicine on their report on TMD. The result was a collaboration between the Medical College of Wisconsin and Marquette University School of Dentistry and us. Together we developed a TMD education program offered to first-year medical students and second-year dental students. Included was a TMJA video in which a caregiver describes her experiences and advocates for interprofessional education. We hope this initial project will serve as a model for other academic institutions to emulate in coming years.

The TMJ Association also dedicated much time in 2022 working with government officials and TMJ stakeholders to develop patient-reported outcome measures and common data elements which will be included in the first international patient-powered TMJ registry. The registry will provide a more comprehensive picture of what TMD patients experience in their journey from initial treatment to their present physical condition.

The TMJ Association continues its essential role of advocating for patients with policy makers and research funding agencies while providing indirect support and guidance to patients and their loved ones. As well, through our e-newsletters, our website, news articles, and social media posts we have been able to extend our reach to a wider range of professional and non-professional contacts who can be enlisted to help “change the face of TMJ”.

Sincerely,

Terrie Cowley
President & Co-Founder
The TMJ Association is the ONLY patient advocacy organization fighting for the best science that will lead to a greater understanding of Temporomandibular and related disorders, which will result in treatments that will help and not harm patients.

We pursue this mission by:

- Providing Support and Guidance to Patients
- Serving as a Source of Current Research and Related Findings
- Educating Multiple Audiences: Patients, Professionals, Decision-Makers and the Public
- Promoting and Advocating for Biomedical Research
SERVING TMJ PATIENTS

Providing Support & Guidance

The TMJ Association (TMJA) serves as a central source to collect and share information with patients, government agencies, elected officials, and the health care and research communities. In addition to communicating through its website and publications, TMJA carries out its role through one-on-one telephone and email patient support. Inspire, Facebook, X, YouTube, and LinkedIn accounts provide forums where the TMJA can share urgent news, as well as invite members to share personal experiences.

TMJA has partnered with Inspire to provide TMJ patients with a free, anonymous, online support network/discussion community. Over 3,800 patients have joined TMJ Café.

Our website, www.tmj.org, is always available for those seeking information and support. We keep it updated with the latest research findings, alerts, and patient questions and concerns. Here are some examples of messages we received:

This patient wrote to us following a special issue of News Bites:

“I pray and hope that someday there will be a cure or a definitive answer for treatment. Until then, we suffer, often in silence, with recognition that no one will truly understand the distress and suffering, unless, unfortunately, they live with it as well.” Norine

And, from a dental professional:

“To my mind, the NASEM TMD Report is an exceptionally good and accurate statement of the problem, and your summary very nicely captures the impact this condition has on patients”.

From another patient, seeking advice on the website:

“I just wanted to thank you for the information on your website regarding various TMJ treatments. I was better prepared for my appointment with a “TMJ specialist” as a result and was able to ask the right questions, which made me realize I needed to continue seeking opinions before deciding which route to take. Thank you for providing this resource to patients trying to figure out the best path for treatment. It’s much appreciated.” Jennifer
Listing Opportunities to Volunteer for Clinical Studies

- **Erenumab** as a therapeutic approach for the management of painful chronic temporomandibular disorders. The Brotman Facial Pain Clinic at the University of Maryland School of Dentistry is conducting a study comparing a new medication to a placebo in reducing temporomandibular disorder pain.

- **TMD Online Study:** The Herman Darrow Lab at the University of Minnesota invites those diagnosed with TMD to participate in understanding how TMD affects brain circuitry. [hdlab@umn.edu](mailto:hdlab@umn.edu)

Serving as a Source of Current Research and Related Findings

Some of the topics covered in the TMJA’s publications in 2022 included:

- Analysis of Prosthetic Joint Infection Following Invasive Dental Procedure
- Ehlers Danlos Syndrome & TMD
- Mayo Clinic Expert Offers Tips on Headaches
- NIAMS Director’s Letter on Re-JOIN Consortium
- Moving TMJ Research – NIDCR Council Meeting Summary
EDUCATING MULTIPLE AUDIENCES – PATIENTS, PROFESSIONALS & THE PUBLIC

Articles & Alerts of Concern to Patients

- Anti-Inflammatory Drugs Associated with Increased Risk of Persistent Pain: a recent research article in *Science Translational Medicine* by an international team of researchers.
- *The National Academies of Sciences, Engineering, and Medicine Consensus Study Report on Temporomandibular Disorders – Priorities for Research and Care*. The report explored a broad range of issues relevant to improving the health and well-being of individuals with TMD.
- The TMJA encourages patients to share all of their conditions, including TMD, and symptoms with their primary care physician or internist, even if they don’t think they are relevant or related. Doing so will help rule out any conditions that mimic TMD symptoms, such as giant cell arteritis, which can be a missed diagnosis. An article published by MedPage Today, *Giant Cell Arteritis Growing More Lethal*, described this condition.
- An article on TMD was published in a bulletin of The American Academy of Otolaryngology- Head and Neck Surgery. “Many patients seek care from otolaryngologists for TMD-related symptoms. The skilled otolaryngologist must rule out more concerning diagnoses, verify that the TMD diagnosis is correct and educate the patient on both the cause and treatment options for their symptoms.”
Promoting and Advocating for Scientific Research

• For over 30 years TMJA’s advocacy efforts have resulted in congressional report language in which funding committees communicate to federal agencies, such as the National Institutes of Health, that our elected officials are concerned about the plight of TMD patients and propose initiatives needed to improve their health care and lives.

• TMJA encourages the National Institute of Dental and Craniofacial Research to increase funding to expand the science base for the project: Temporomandibular Disorders: From Research Discoveries to Clinical Treatment.

• Temporomandibular Disorders was one of the topics discussed at the September 13, 2022 National Institute of Dental and Craniofacial Research Council Meeting. The TMJ Association highlights three major research topics discussed at that meeting:
  - An up-date on the TMD-IMPACT proposal (see below), presented by Dr. Rena D’Souza, Director of NIDCR
  - Approaches to Complex Diseases, presented by Dr. Robert Carter, Deputy Director of the National Institute of Arthritis and Musculoskeletal and Skin Diseases
  - Multidisciplinary Care, integrating dental and medical research, presented by Dr. R. Bruce Donoff, former Dean of Harvard School of Dental Medicine

• The TMD IMPACT Concept Proposal. On January 25, 2022, the National Advisory Dental & Craniofacial Research Council met to review a series of “Concept Clearances”, research initiatives deemed to be of high priority to the Institute. A proposal to establish a TMD Collaborative for Improving Patient-Centered Translational Research (TMD IMPACT) was presented by Melissa Ghim, PhD, Director of the Institute’s Extramural Neuroscience, Orofacial Pain and Temporomandibular Disorders Program. She emphasized the multidisciplinary nature of the Collaborative, as well as the multidisciplinary composition of the teams that would carry out the research, which would include consideration of co-occurring pain and non-pain conditions associated with TMDs. Implicit in that statement is the Institute’s recognition that TMDs are complex multifactorial disorders, not dental conditions, mainly treated by dentists.
  o The Council voted unanimously to approve the Concept and supports the creation of an NIH inter-institute TMD working group
The TMJ Association continues to lead the first-ever TMJ Patient-Led RoundTable project, working with the FDA, bringing together all stakeholders concerned not only with TMJ implants, but all therapies. TMD patients are members of the steering committee, the working groups, and are also co-chairs of the working groups. The project began in 2016 and continues its critical work.

- The RoundTable is developing a framework for the first-ever TMJ patient registry in collaboration with the FDA, other federal agencies and stakeholders. The goal of the registry is to establish a scientifically valid compendium of data that can reliably predict treatment outcomes for individual patients.
- Other RoundTable projects include developing Patient Reported Outcomes for the TMJ registry using patient focus groups and Core Data Elements:
  - a list of specific data collected from patients, health care providers, and electronic health records.
  - a new treatment model of care for TMJ patients

The TMJ Association’s International Scientific Advisory Council (TMJA-ISAC) was established in August 2022. ISAC’s major goal is to advocate for high-quality biomedical research directed toward Temporomandibular Disorders and comorbidities that overlap with TMD. To address this goal, TMJA-ISAC will provide advice and strategic direction to enhance this mission by creating and implementing an overall agenda for biomedical research. TMJA-ISAC will assist the TMJA in identifying resources among governmental, academic, industry, professional organizations and charitable foundations to support activities that will lead to scientifically based precision treatments for TMJ patients. Advisors are listed at: https://tmj.org/about-the-tmj-association/our-team/scientific-advisors/

Cutting Edge: the Chronic Pain Research Alliance, an initiative of the TMJ Association publishes COPCs Research Advances, an electronic newsletter It was developed to keep the medical-scientific community abreast of recent research advances.

- The TMJA promoted TMJ Awareness month and kicked off a social media campaign to bring awareness and education to this issue during the entire month of November.

NIH Funding Announcements and Research Grant Opportunities

- Notice of Special Interest (NOSI): Research on the Health of Women of Understudied, Underrepresented and Underreported (U3) Populations
- Dr. Hai Yao, a long-time supporter of the efforts of the TMJA, received an NIH grant to study how the TM joint functions.
- Feasibility Studies that Explore Healthy and Diseased Temporomandibular Joints (TMJ) using Single Cell Multi-Omic Analyses
- Trans-NIH Strategic Plan for Women’s Health Research “Advancing Science for the Health of Women”
- The US Department of Defense Chronic Pain Management Research Program invites scientists to submit pain research applications under three targeted areas:
Clinical Exploration Award, Investigator-Initiated Research Award, and Translational Research Award

- In October, 2022, the National Institutes of Arthritis and Musculoskeletal and Skin Diseases (NIAMS), announced its support for a new Consortium whose goal is to be able to restore joint health. The Restoring Joint Health and Function to Reduce Pain (RE-JOIN) Consortium is part of the Helping to End Addiction Long-term Initiative, or NIH HEAL Initiative. The TMJ joint is one of those joints being studied. 2022 RE-JOIN Awardees focused on the TMJ are:
  - **University of Texas Health Science Center** – Project Title: *Comprehensive Functional Phenotyping of Trigeminal Neurons Innervating Temporomandibular Joint (TMJ) Tissues in Male, Female and Aged Mice, Primates, and Humans With and Without TMJ Disorders (TMJD)*
  - **Duke University** - Project Title: *Neural Architecture of the Murine and Human Temporomandibular Joint*
  - **University of Florida** - Project Title: *Innervation of the Knee and TMJ*

- **Funding Opportunity Announcement:** The Intersection of Sex and Gender Influences on Health and Disease, made available through the Office of Research on Women’s Health and the scientific partnering Institutes and Centers across NIH.

- The TMJA welcomes the announcement by the NIH Office of Research on Women’s Health of the availability of Administrative Supplements to support research on the health of women in understudied, underrepresented, and underreported populations in biomedical research, specifically targeted on sex and gender topics.

- The scientific journal, *Frontiers in Dental Medicine*, accepted manuscripts for review in a special Research Topic focus area, *Temporomandibular Disorder: New Directions in Research and Patient Care*.

**Promoting The TMJ Association**

The TMJ Association staff and their presentations at meetings, in addition to the involvement of the Scientific Advisory Board members, increases awareness of the needs of TMJ patients and creates opportunities to draw attention to the necessity for more research and funding.

**Representations**

- Participation in University of Minnesota study recruitment project. Lisa Schmidt serving as the TMJA’s patient representative.
- Global Learning Conference – Ehlers Danlos Syndrome, August 6, 2022. Presentation by Lisa Schmidt on living with TMD and EDS.
- Northwestern Medicine, Center for Chronic Pain and Drug Abuse. Terrie Cowley and Christin Veasley patient representatives.
- International Association for the Study of Pain, Canada, October 2022. Attended by Christin Veasley.
- Partnership with iMD Health, October 2022.
- Kern National Network Meeting in Milwaukee, September 2022. Terrie Cowley, Deanne Clare, and Allen Cowley attended the meeting representing the TMJA
The TMJA is Grateful for our Many Contributors in 2022

$10,000+
Alexandra Alger
Heidi and Kevin Clark
Terrie and Allen W. Cowley, Jr.
Stanford University School of Medicine
Yale University School of Medicine

$1,000-$5,000
Carl Altenburg in memory of Joanne E. Altenburg
Stan Arner & Nancy Arner Charitable Foundation in honor of Christopher Arner
John Benjamin in memory of Jack and Mary Lemann
Karen Berkley in honor of Terrie Cowley
Martha and John Burkhalter
Facebook (numerous individual donors)
Independent Charities of America
Catherine Lemann in memory of Mary Lemann
Stanley and Robin Mendenhall
Sheila Moore
Michelle and Patrick Reardon in honor of Alexandra Reardon
John Rideout
The Schmidt Family Fund
Merideth Skelton in honor of Terrie Cowley
Louise and Bill Symington
Carol Tift in memory of Jennifer Anne Williams
Christin and Melvin Veasley

$500-$999
Anonymous
AmazonSmile
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Kay and Fred Austermann in honor of Terrie Cowley
Kathy Barrett in honor of Barbara Olson and Jerry Woolstrum
Susan Celia
Deanne and Markus Clare
Etienne and Marianne Clare
Combined Federal Campaign
Kumar Family Charitable Fund
Barbara Laboski
Felecia McBride
Greg and Karen McQuestion
Charles Sturm
Joseph Thumann in memory of Frank Deutsch and Family
United Way of Greater Milwaukee & Waukesha
Joan Wilentz

$250-$499
Herbert and Noreen Bernet
William and Gayle Fairchild
James Farina III
Richard Hack and Suzan Ben-Poorat in honor of Terrie Cowley
Ipsos Mori Uk Review
Robert Kerns
Sean Mackey
Beverly and Gary Nyhuis in honor of Marsha Love
Kumar Family Charitable Foundation
Cornelia van Ineveld in honor of Adriana van Ineveld

$100-$249
Janice and Robert Agnew in memory of Dianne Agnew
Laurie and David Brown
David Brownlee
Sandra and Jeffrey Canfield
Norine and Jeffrey Cave
Kristina Youso Connoy
Candee Doneiko
Mark Drangsholt
Barbara Drexler
Doris and Ed Heiser in honor of Terrie Cowley
David Hilker and Lisa Walter
Tricia Kalinowski
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Ruth Knapp
Diana Kovjack
Fanny and Jean-Francois Liard
Dianne Lerner
Suzi and Scott Lustgarten Family Foundation
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Jill McGuire
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Karen Morin
Megan Murray
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Marie and Connon Odom
Paypal Giving Fund
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Gilman Thompson
RY Charitable
Adriana van Ineveld
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Hai Yao
Diana Zuckerman

$50-$99
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Peggy Dale
Christina Dawson in memory of George Hughes
Linda Dittamo
Tracy Downey
Joanne and Robert Eckert
Benni Eustace
Paul Flagg
Jennifer Green in memory of Fran Schoen
Dana Hawkins-Simmons
Kristine Hengel
Shelley Hildebrandt
IBM Employee Services Center
IGive
Susan Logue
Sister Renee’ Mauser
David McCarthy in memory of George M Hughes
Anaum Naz
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Peter Stasko
Oscar Suh-Rodriguez
William Swislow
Carol and Dennis Weinhoff
Gina Wetten
Adele Yessenow

$1-$49
Anonymous
America's Charities
Justin Allen
Gregory Andreozzi
Nicole Beier
Jeff Boissoneault
Gary Brodsky
Tabitha Brunt
Edward Burkhard
Joan Chapp
Ronald Cwikla
Ann-Marie DePalma
Louise Haick
Joan Hemming
Leslie Jaspersen
William Katseres
Emania Kingery
Elaine Kohn
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Lucille Long
Lisa Lutz
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Diane Mongiardo
Vickie Mullins
Denise Orrico
Matthew Overlan
Vasja Petkovska
Emily Rastl
Susan Reale
Maggie Reyes in honor of Mabel Lewis
Paul Ruth
Jessica Shannon
Kristin Shepherd
Joan Siok
Michael Snegur
Christine Steele
Nancy Swinyard
Jodi Trop
Karen and Richard Turpin
Anne Valenti in honor of Mary Valenti Bloom
Ramachandra Yellapragada

Combined Federal Campaign (Amount not disclosed)
Garris Green
Statement of Activities and Changes in Net Assets  
For the Year Ended December 31, 2022

Summary of Revenue & Support

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<th>Description</th>
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<td>Contributions</td>
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<td>Dividend and interest</td>
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<td>Program earned income</td>
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<td><strong>Total revenue and support</strong></td>
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Summary of Expenses

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<td>Fundraising &amp; Related Expenses</td>
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<td><strong>Net assets, end of year</strong></td>
<td><strong>$166,583</strong></td>
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*The TMJ Association is a non-profit tax exempt organization. A copy of the annual financial report of The TMJ Association can be obtained by contacting: Krause & Associates, SC, 1214 Bridge Street, Grafton, WI 53024*