

# 2019 MEMBERS MEETING

APRIL 14 – 16, 2019  
EDMONTON, ALBERTA, CANADA  
THE SUTTON PLACE HOTEL



ACADEMIC CONSORTIUM  
FOR **INTEGRATIVE**  
MEDICINE & HEALTH

[www.consortiummeeting.org](http://www.consortiummeeting.org) | [www.imconsortium.org](http://www.imconsortium.org)

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# SAVE THE DATE

## International Congress on Integrative Medicine & Health

The most comprehensive scientific congress in complementary and integrative medicine.

**April 28 – May 1** | **2020**  
Cleveland, Ohio, USA

### IMPORTANT DATES

APRIL 2019.....	Pre-Congress Workshop Application Period Begins
JUNE 2019.....	Deadline for Pre-Congress Workshop Application
JUNE 2019.....	Abstract & Call for Sessions Period Begins
OCTOBER 2019.....	Deadline for Abstracts & Call for Sessions
OCTOBER 2019.....	Registration Opens



[www.icimh.org](http://www.icimh.org)

Transforming Health Care Through Collaboration



2020 International Congress on  
**Integrative Medicine and Health**  
April 28 - May 1, 2020 | Cleveland, Ohio, USA  
Academic Consortium for Integrative Medicine and Health  
Transforming Health Care Through Collaboration

# WELCOME FROM CONSORTIUM CHAIRS

Dear Colleagues,

It is with great pleasure that we welcome you to the 2019 Members meeting. Each year we gather to share advances in research, clinical practice, and educational methodologies in the field of integrative medicine, and to connect with others working in this field, and each year we come away stronger. We are in an exciting time for our field and for the Consortium as we continue to transform healthcare. The Members Meeting is one of our favorite events because it showcases our shared values and commitment to collaboration.

Over the next two days we'll hear from leaders in the field, participate in round table discussions and working group meetings, and continue to strengthen our community. We also invite you to practice self-care by participating in our wellbeing activities each morning. One of the most exciting additions to this year's meeting is the work of 29 trainees from across North America showcased through poster and oral presentations. We are thrilled that these future leaders are joining us and thank the Samuelli Foundation for helping to make their participation possible.

We would like to thank the University of Albert for hosting this year's Members Meeting and providing an opportunity to visit Edmonton. We would also like to thank Amy Locke for leading the Planning Committee and all of the Planning Committee members for developing a wonderful program.

We are grateful for your participation and look forward to sharing the next two days with you.

Sincerely,



*R. Hecht*  
**Rick Hecht, MD**  
Consortium Chair



*Francoise Adan*  
**Francoise Adan, MD**  
Consortium Vice Chair

# ABOUT THE CONSORTIUM



ACADEMIC CONSORTIUM  
FOR **INTEGRATIVE**  
MEDICINE & HEALTH

## Who We Are

As an organization we are committed to sharing information and ideas, meeting challenges together in a process grounded by the values of integrative medicine, supporting member institutions, and providing a national voice for the advancement of integrative principles.

## What We Do

The mission of the Consortium is to advance integrative medicine and health through academic institutions and health systems.

### 2019 Consortium Board of Directors

Frederick Hecht, MD, Chair,  
University of California, San Francisco

Francoise Adan, MD, Vice Chair,  
UH Connor Integrative Health  
Network

Robert Saper, MD, MPH, Immediate  
Past Chair, Boston University School  
of Medicine

Susan Carter, MMHC,  
Secretary/Treasurer Vanderbilt  
University

Adi Haramati, PhD, Member-at-Large,  
Georgetown University

Amy Locke, MD, FAAFP,  
Member-at-Large, University of Utah

Scott Mist, Member-at-Large,  
Oregon Health & Science University

Dale West, CAE, Executive Director

### Consortium Members Meeting Organizing Committee

Amy Locke, MD, FAAFP,  
2019 Members Meeting Chair,  
University of Utah

Hilary McClafferty, MD, FAAP,  
University of Arizona

Darshan Mehta, MD, MPH,  
Harvard University

Monika Nuffer, PharmD,  
University of Colorado

Samantha Simmons, MPH,  
Oregon Collaborative for  
Integrative Medicine

Amy Wolgemuth,  
University of Alberta

Suzanna Zick, ND, MPH,  
University of Michigan



**Member Meeting Planning Partner**  
Conference Solutions  
[www.ConferenceSolutionsInc.com](http://www.ConferenceSolutionsInc.com)

## SPONSORS AND AWARD RECIPIENTS

The Consortium wishes to thank the Samueli Foundation for their generous support of the trainee investigators award presentation program at the 2019 Consortium Members Meeting.



Anna Balabanova, Osher Center for Integrative Medicine at Northwestern  
Jessica Barnhill, University of North Carolina at Chapel Hill  
Frank Conyers, Johns Hopkins Medical Institute  
Melvin Donaldson, University of Minnesota  
Gabrielle Farquhar, Boston Medical Center  
Ellen Goldstein, Department of Family Medicine and Community Health,  
University of Wisconsin-Madison  
Maliheh Hadizadeh, University of Alberta  
Carolita Heritage, Aurora Sinai Medical Center Department of Obstetrics and Gynecology  
Jacob Hill, University of North Carolina, Chapel Hill  
Naheed Hosan, University of Alberta  
Nadine Ijaz, University of Toronto  
Renee Kakareka, MedStar Health Institute for Innovation  
Samaneh Khanpour Ardestani, University of Alberta  
Anna Laucis, University of Michigan  
Brian Lee, Oakland University William Beaumont School of Medicine  
Keon Ma, University of Alberta  
Tyler Marshall, Department of Psychiatry, Faculty of Medicine & Dentistry,  
University of Alberta  
Danielle Mathersul, Veterans Affairs Palo Alto/Stanford University  
Ana Luisa Pedrosa de Menezes, UCLA/UFGM  
Kriti Prasad, Hennepin Healthcare  
Susan Ratay, University Hospitals  
Eric Roseen, Boston University  
Gunes Sevinc, Massachusetts General Hospital, Harvard Medical School  
Deborah Shears, University of California San Francisco Department of Social  
& Behavioral Sciences  
Arunima Sivanand, Department of Medicine, University of Alberta  
Megan Sweeney, Scripps Center for Integrative Medicine, UC San Diego  
School of Medicine  
Sydney Vo, Keck School of Medicine of USC

# VENUE INFORMATION

**All meeting events and registration will take place at:**

The Sutton Place Hotel Edmonton  
10235 101 St NW  
Edmonton, Alberta, T5J 3E9, Canada



**Hotel Floor Plan  
(Second Floor)**

## Fitness Center

The hotel fitness center and pool is currently closed. Hotel guests are welcome to use the Don Wheaton YMCA, which is accessible by pedway from the hotel and is complimentary to hotel guests. See the hotel front desk for hours and more details.

## Parking

Valet and self-parking are available for the following fees:  
Valet - \$39 CAD per day | Self - \$31 CAD per day

## Internet Access

Complimentary wireless internet access is available throughout the meeting space. Network Name: Sutton | Password: April

## Smoking Policy

The Sutton Place Hotel Edmonton is a smoke-free facility. Smoking is limited to designated areas. Please ask the hotel concierge for nearest designated smoking areas.

## Registration Desk Hours

The 2019 Consortium Members Meeting Registration and Information Desk is located in the Ballroom Foyer, and will be staffed during the following times:

Sunday, April 14	15:00 – 18:30
Monday, April 15	07:30 – 17:00
Tuesday, April 16	07:30 – 13:30

If you have questions outside of the above hours, please email [MembersMeeting@ConferenceSolutionsInc.com](mailto:MembersMeeting@ConferenceSolutionsInc.com).

## Online Materials

Visit [www.consortiummeeting.org](http://www.consortiummeeting.org) to access a PDF of the Program Book, and Certificate of Attendance.

Some items require a password: MM2019

## Scientific Data

Please note that some of the findings in presentations are being disclosed prior to publication. All information communicated by presenters should be considered “personal communication.” Please seek permission from the presenter before quoting unpublished research results or using data as a basis for further investigations.

## Photography

Each registrant grants the Consortium permission to photograph any session, and to use such photographs and the names of registrants in any materials which represent the proceedings of the meeting. Photographs of data, whether displayed on screens, in posters or elsewhere is forbidden.

## Mobile Phone Policy

Please ensure your mobile phone is turned off during all sessions so as not to disrupt the presenters and other meeting attendees.

## Insurance & Liability

The conference organizers cannot accept liability for injuries or losses arising from accidents or other situations during or as a consequence of the meeting.

## Evaluation

We value your feedback and invite you to complete the 2019 Consortium Members Meeting online evaluation by Friday, April 26, 2019:

<https://www.surveymonkey.com/r/Mem2019>

# SUNDAY, APRIL 14

**15:00 - 18:30**

**Registration & Information Desk**..... Ballroom Foyer

**15:00 - 18:00**

**Poster Presenter Install** ..... Ballroom Foyer

**16:00 - 17:00**

**New Member & First Time Attendee Orientation**..... Rowand

Come and learn about the Consortium and meet new friends and colleagues at this informative session. Consortium leadership will be there to meet and greet. All are welcome.

**17:00 - 18:00**

**Institution Ice Breaker**..... Ballroom

Come learn about the exciting work happening at other institutions while enjoying light refreshments at the Institution Ice Breaker. This year's modified Consortium Cafe will give you an opportunity to connect with your fellow Consortium members in an informal setting.

**18:00 - 19:00**

**Poster Session & Reception** ..... Ballroom Foyer

**Sponsored by:**



For the first time at a members meeting, join trainees from member institutions who will present and discuss their original implementation and results of an innovative educational, research or clinical program pertinent to integrative health. Light appetizers and a hosted bar will be available.



**06:45 - 07:45**

**Wellness Activity: Qigong** .....Rutherford  
Led by Steven Aung

**Wellness Activity: Bootcamp**..... Don Wheaton YMCA  
Led by Jeff Dusek, Alison Whitehead (Meet in Hotel Lobby to Walk Together)  
and Leslie Temple Mendoza

**07:30 - 17:00**

**Registration & Information Desk**..... Ballroom Foyer

**07:30 - 08:30**

**Breakfast**..... Ballroom Foyer

**08:30 - 09:45**

**Welcome & State of the Consortium** ..... Ballroom

**09:45 - 10:00**

**Refreshment Break**..... Ballroom Foyer

**10:00 - 10:45**

**Next Steps for the Consortium**..... Ballroom

**10:45 - 11:15**

**Institution Introductions & Member Highlights** ..... Ballroom

**11:15 - 11:30**

**Self-Care Break**



**11:30 - 12:15**

**Plenary 01: Academic Integrative Health  
in Canada:Two Leading Examples** ..... Ballroom

Sonita Vohra, MD, University of Alberta

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**12:15 - 14:00**

**Special Topics Lunch & Self-Care Break** ..... Ballroom  
Join colleagues at special topics tables for targeted networking opportunities. Tables will be marked with the topics to be discussed.

# MONDAY, APRIL 15

## 14:00 - 15:00

### Round Table Discussions | Session 1

Back by popular demand, the round table sessions allow participants to delve deeper into a topic of interest. Come and share wisdom, learn from others, and connect with those who have similar interests. A summary of each round table discussion will be presented on Tuesday morning.

Choose two topics as each session will be repeated.

**Round Table Topic 01: Student Wellbeing and Integrative Medicine** ..... Northcote  
Moderated by Sian Cotton and Adi Haramati

**Round Table Topic 02: Growing Scrutiny by the ACCME: Is Integrative Medicine Being Targeted and What Can We Do?**.....Rowand  
Moderated by Melinda Ring and Heather Tick

**Round Table Topic 03: Policy**.....Vintage  
Moderated by Alison Whitehead and Leslie Temple Mendoza

**Round Table Topic 04: Implementation Science**.....Vintage  
Moderated by Remy Coeytaux and Eric Roseen

**Round Table Topic 05: Billing Team-Based Care** .....Winter Lake  
Moderated by Amy Locke and Scott Mist

**Round Table Topic 06: Integrative Medicine for the Underserved ...** Winter Lake  
Moderated by Misha Kogan

## 15:00 - 15:15

### Self-Care Break

## 15:15 - 16:15

### Round Table Discussions | Session 2

**Round Table Topic 01: Student Wellbeing and Integrative Medicine** ..... Northcote  
Moderated by Sian Cotton and Adi Haramati

**Round Table Topic 02: Growing Scrutiny by the ACCME: Is Integrative Medicine Being Targeted and What Can We Do?**.....Rowand  
Moderated by Melinda Ring and Heather Tick

**Round Table Topic 03: Policy**.....Vintage  
Moderated by Alison Whitehead and Leslie Temple Mendoza

# MONDAY, APRIL 15

## 15:15 - 16:15 (continued)

**Round Table Topic 04: Implementation Science**..... Vintage  
Moderated by Remy Coeytaux and Eric Roseen

**Round Table Topic 05: Billing Team-Based Care**..... Winter Lake  
Moderated by Amy Locke and Scott Mist

**Round Table Topic 06: Integrative Medicine for the Underserved ...** Winter Lake  
Moderated by Misha Kogan

## 16:15 - 16:30

**Refreshment Break**..... Ballroom Foyer



## 16:30 - 17:15

**Plenary 02: The Present and Future of Evidence-Based Integrative Medicine**..... Ballroom  
Frederick Hecht, MD, University of California, San Francisco

## 18:00 - 20:15

**Reception and Dinner Event With Bravewell Lectureship** ..... Ballroom

**18:00** Reception and Dinner

**19:15** Lecture

**19:45** Award Recognition

## 2019 BRAVEWELL LECTURE



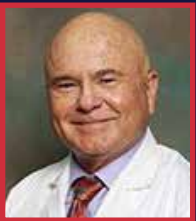
### **Dr. Verna Yiu, President and Chief Executive Officer, Alberta Health Services**

Dr. Yiu is guided by the principle that healthcare is a people business; built upon strong and collaborative relationships.

Since taking the reins of AHS in January 2016, she has strengthened relationships with AHS' many partners, including government, academic institutions, health foundations, the AHS workforce, patients, clients and families, and communities across Alberta.

By doing so, AHS has bolstered community engagement, collaborated on world-class research, led the country in many performance indicators and met budget targets—all with one of the leanest healthcare administrations in Canada and for 2018 and 2019, named one of Canada's Top 100 Employers. Dr. Yiu also continues to demonstrate her passion and dedication to teaching in her role as Professor of Pediatrics at the University of Alberta and caring for patients as a pediatric nephrologist.

## 2019 BRAVEWELL DISTINGUISHED SERVICE AWARD RECIPIENT



### **Victor S. Sierpina, MD, Professor, University of Texas Medical Branch**

Dr. Sierpina is a Professor of Family Medicine and currently holds the W.D. and Laura Nell Nicholson Family Professorship in Integrative Medicine. Dr. Sierpina currently serves as director of the department's Medical Student Education Program and of its Faculty Development Program. He is also

a UTMB Distinguished Teaching Professor.

Dr. Sierpina earned a Bachelor of Science from Arizona State University and a Doctor of Medicine from the Abraham Lincoln School of Medicine at the University of Illinois in Chicago. He completed a residency in family practice at the MacNeal Memorial Hospital in Berwyn, Illinois. Dr. Sierpina is certified by both the American Board of Family Medicine and the American Board of Integrative and Holistic Medicine. He was named one of Best Doctors® "Best Doctors in America" from 2005 to 2014, and was featured by the Houston Medical Journal as one of the "Best of the Best" in 2010. Dr. Sierpina was named Top Doc in both 2016 and 2017 as published in the Texas Monthly Magazine and is the winner of the 2017 Excellence in Clinical Teaching Award, awarded by UTMB Health.

Dr. Sierpina has conducted funded research numerous topics related to integrative medicine and curriculum development. His clinical and research interests are medical student education in family medicine, integrative medicine, and integrative oncology. His practice includes acupuncture, nutrition, botanical medicine and mind-body therapies.

**06:45 - 07:45**

**Wellness Activity: Qigong** .....Rutherford  
Led by Steven Aung

**Wellness Activity: Bootcamp**..... Don Wheaton YMCA  
Led by Jeff Dusek, Alison Whitehead (Meet in Hotel Lobby to Walk Together)  
and Leslie Temple Mendoza

**07:30 - 13:30**

**Registration & Information Desk**..... Ballroom Foyer

**07:30 - 08:30**

**Breakfast**..... Ballroom Foyer

**08:30 - 09:30**

**Round Table Rapporteur Session**..... Ballroom

**09:30 - 10:20**

**Oral Poster Presentations**..... Ballroom

**09:30** Implementation of Integrative Shared Medical Appointments  
Incorporating a Teaching Kitchen [01.01]

**09:40** Which Chronic Low Back Pain Patients Respond Favorably  
to Yoga, Physical Therapy, and a Self-Care Book? Responder  
Analysis of a Randomized Controlled Trial [03.01]

**09:50** Mindfulness and Emotional Wellbeing in Children: Strategies  
for Success from a Mixed-Methods Study [02.01]

**10:00** Brain Structure and Skin Conductance Predict Treatment-  
Related Improvements in Autonomic Dysfunction in Veterans  
with Gulf War Illness [03.02]

**10:10** Resisting (Mis)representation: Research Participation  
among Complementary Medicine Providers in a Canadian  
Policy Study [3.03]

**10:20 - 10:35**

**Refreshment Break**..... Ballroom Foyer



**10:35 - 11:20**

**Plenary 03: The History of Complementary  
and Integrative Medicine** ..... Ballroom  
John Weeks, The Integrator Blog

# TUESDAY, APRIL 16

**11:20 - 12:20**

**Working Group Breakout: Policy** ..... Northcote

**Working Group Breakout: Education** ..... Rowand

**Working Group Breakout: Research** ..... Vintage

**Working Group Breakout: Clinical**..... Winter Lake

**12:20 - 13:35**

**Lunch & Self-Care Break** ..... Ballroom

**13:35 - 15:15**

**Working Group Rapporteur Session  
& Consortium Program Highlights** ..... Ballroom

**15:15 - 17:00**

**Poster Presenter Dismantle** ..... Ballroom Foyer

**15:15 - 15:30**

**Refreshment Break** ..... Ballroom Foyer

**15:30 - 17:00**

**Institutional Representative Meeting** ..... Ballroom

**Experiential Session: Medical Music Therapy  
Workshop: An Introduction to Music for Healing** ..... Winter Lake

**17:00**

**Member Meeting Concludes**

# WORKING GROUPS SPOTLIGHT

## CLINICAL WORKING GROUP

The Clinical Working Group (CWG) shares best practices among member institutions regarding clinical and administrative structures, credentialing, privileging, marketing, business development, operations, and creative business models. We currently lead the Consortium's monthly continuing education calls. CWG members include those who have clinical, administrative, leadership, teaching and research roles, and may contribute across the other working groups: Policy, Education and Research.

We look forward to continuing our collaborations with the other working groups, on goals such as finding ways to electronically house information such as protocols for patient care, clinical models, handouts, etc. and surveying Consortium members to systematically collect relevant information to share with the rest of the membership.

Sonia Sosa, MD, Chair, 2018-2019  
Oregon Health & Science University  
sosaso@ohsu.edu

Marni Hillinger, MD, Chair, 2018-2019  
Scripps Center for Integrative Medicine  
marni.hillinger@vanderbilt.edu

Yan Zhang, PhD, Vice-Chair, 2018-2019  
Texas Tech University Health Sciences Center  
yan.zhang@ttuhsc.edu

## EDUCATION WORKING GROUP

The Education Working Group (EWG) serves as a resource for learners and teachers of integrative medicine and health. This year we plan to provide active support to the student and resident interest groups and create a solid network of education champions (ideally one per school) who will facilitate communication with, and mentorship of, learners across the country. We will collaborate with these education champions to identify, mentor and educate our learners about integrative clinical topics, professional development and self care. Via a Facebook Page, a listserv, and a Google Dashboard, our teachers and learners will network, disseminate helpful information and support each other. Through our networking, we will contribute speakers to Consortium Grand Rounds and communicate regularly with our EWG members to provide helpful resources for teachers of integrative medicine and health.

Pooja Amy Shah, MD, Chair, 2018-2019  
Columbia University Medical Center  
pas2176@cumc.columbia.edu

Noshene Ranjbar, MD, Vice Chair,  
2018-2019, University of Arizona  
noshene@psychiatry.arizona.edu

# WORKING GROUPS SPOTLIGHT

## POLICY WORKING GROUP

The Policy Working Group (PWG) is for those interested in learning about and influencing intra-hospital, local and national health policy with respect to evidence-based integrative healthcare. The PWG is focused on increasing access to care and disseminating evidence to support policies of inclusion, coverage and access. PWG holds a monthly web meeting with varying topics including but not limited to local member policy issues and/or best practices, guest presenters from other organizations that impact integrative health policy and/or are leaders in specific integrative health approaches. The PWG is interested in developing tools and guidance to help member institutions and others expand access to integrative health through policy change.

Arya Nielsen, PhD, Chair 2017-2018  
Icahn School of Medicine at Mount Sinai  
Arya.Nielsen@mountsinai.org

Alison Whitehead, MPH, Chair, 2018-2019  
Veterans Health Administration  
alison.whitehead@va.gov

Kristin Jerger, MD, LMBT, Vice Chair, 2018-2019  
University of North Carolina, Chapel Hill  
kristin\_jerger@med.unc.edu

## RESEARCH WORKING GROUP

The Research Clinical Working Group (RWG) is for those interested in cutting-edge advances in the evaluation of integrative medicine and health. The RWG includes individuals who have research roles in their institutions or who are interested in networking to build research collaborations with other Consortium members.

RWG conference calls are scheduled monthly.

This year, we are re-envisioning the RWG to focus on enhancing collaboration to pursue shared research interests. We will be working to update the RWG database to ensure accuracy and reflect the research expertise of RWG members. Should we find a critical mass of RWG members with a specific interest, a subgroup could be formed and spark a collaborative opportunity.

Ultimately these efforts will provide a forum for establishing national research collaborations to pursue large-scale studies of integrative therapies.

Eric Garland, PhD, LSCW, Chair, 2018-2019  
University of Utah  
eric.garland@socwk.utah.edu



# TRAINEE INVESTIGATOR CLINICAL ABSTRACTS

1.01

## Implementation of Integrative Shared Medical Appointments Incorporating a Teaching Kitchen

Renee Kakareka (1), Renee Kakareka, BS (1), Theresa Stone, MD (1), Anthony Imamura (1), Ellie Hwang, BSE, MHA (1), Paul Plsek, BS, MS (1)  
(1) MedStar Health Institute for Innovation, Washington, DC, United States

**Introduction:** In the fall of 2017, a Culinary and Lifestyle Medicine Teaching Kitchen (TK) program proved systematically feasible as a Shared Medical Appointment (SMA). A portable TK complemented physician consultations, didactic presentations, nutritious cooking, and holistic health exercises (e.g., mindfulness). A series of SMAs were launched to improve health markers with individuals' skills and knowledge and develop a system for physicians to address nutritional and lifestyle needs.

**Methods:** MedStar Health implemented three SMA programs in four cohorts at two facilities and presented personalized curriculum pertaining to patients' health, knowledge, and skill: Cohort 1 & 3 - Internal Medicine and Cardiology; eight-week program leveraging an adapted Lifestyle TK curriculum; Cohort 2 - Sports Performance; four-week program for amateur athlete nutrition and lifestyle; and Cohort 4 - Hospital Associates; six-week program incorporating integrative medicine modalities. Financial sustainability, patient demand, and implementation infrastructure were assessed.

**Results:** Over 70 unique patients attended SMA programs, 10-17 patients per weekly session; over 275 appointments billed. A 99213 E&M code was billed at \$157 and reimbursed, on average, at \$102 per patient encounter. During a four to eight-week SMA program, changes in patient vitals were statistically insignificant, yet reductions in weight and blood pressure were clinically significant. Qualitative data on behavior changes was inconclusive, however, patients noted increased knowledge of plant-based meals, importance of sleep, and adding meditation and exercise to their weekly routine.

**Conclusions:** This exploration investigated the implementation and sustainability of expanding TK SMA programs to different populations, locations, and experts. Developing financial and operational infrastructure for TK SMAs requires additional regulatory considerations. Successful TK SMAs prove patient demand for healthful eating and lifestyle skills for health management. Vital signs may not acutely improve therefore further exploration is required to assess longitudinal patient outcomes. Financially, SMAs suggest a sustainable and effective approach to integrative medicine in healthcare.

**Contact:** Renee Kakareka, renee.kak@gmail.com

1.02

## Mindfulness-Based Stress Reduction (MBSR) at Boston Medical Center: A Pilot Program for Stress Reduction, Vitality, and Professional Development

Gabrielle Farquhar, MPH (1), Scarlet Soriano, MD (1), Robert Saper, MD MPH (1)  
(1) Boston Medical Center, Boston, Massachusetts, United States

**Introduction/Rationale:** Boston Medical Center (BMC) is a private, not-for-profit, 487-bed academic medical center. It emphasizes community-based care, with a mission to provide consistently accessible health services to all in need, regardless of status or ability to pay. As the largest safety-net hospital in New England, 41% of clinicians and staff report burnout. The high incidence of burnout and stress are not only discouraging for caregivers and healthcare staff, but can threaten patient safety and patient experience. MBSR, an evidence-based 8-week mindfulness course, has been shown to be an antidote to physician stress and burnout. The aim of this pilot program is to test the feasibility and effectiveness of a MBSR course (adapted

# TRAINEE INVESTIGATOR CLINICAL ABSTRACTS

from Dr. Mick Krasner and Dr. Ronald Epstein's Mindful Practice program didactics (Krasner MS, Epstein RM, et al., JAMA, 2009) on provider burnout and vitality within a safety-net hospital setting.

**Methods:** The first phase of the implementation plan required garnering buy-in from senior leadership. We formed a multidisciplinary MBSR Advisory Council in order to maximize buy-in and engage key stakeholders to strategically plan the implementation of a MBSR course at BMC. BMC healthcare providers are eligible for the enrollment in the MBSR-variant course beginning in February 2019. The program consists of a series of 8-week sessions that combine the principles of mind-body techniques with facilitated group discussions on the applicability of mindfulness in healthcare provider-specific topics. The course will be co-facilitated by an MBSR-certified instructor and physician on staff. Participants will be asked to complete short questionnaires measuring Maslach Burnout Inventory and Profile of Mood States pre and post-intervention.

**Results and Conclusion:** Senior leadership strongly supported the pilot program. Participant and additional implementation data will be collected and presented.

**Contact:** Gabrielle Farquhar, [gabrielle.farquhar@bmc.org](mailto:gabrielle.farquhar@bmc.org)

# TRAINEE INVESTIGATOR EDUCATION ABSTRACTS

2.01

## Mindfulness and Emotional Wellbeing in Children: Strategies for Success from a Mixed-Methods Study

Naheed Hosan (1), Dayna Leskiw Der (1), Salima Punja (1), Veronica Smith (1), Jane Springett (1), Billy Streaan (1), Erica Sibinga (2), Sunita Vohra (1)  
(1) University of Alberta, Edmonton, Alberta, Canada  
(2) Johns Hopkins University, Baltimore, Maryland, United States

**Rationale:** In-school mindfulness-based interventions (MBIs) have demonstrated the potential to foster children's emotional wellbeing, and consequently their academic adjustment. However, whether and how particular mindfulness practices and strategies influence specific emotional and academic outcomes remains unclear. The current study uses a novel child-centered task and a mixed-methods design to examine how the characteristics of mindfulness strategies used by children influence their ability to self-regulate, their emotional adjustment, and their academic engagement.

**Methods:** Participants were 358 children in Kindergarten to grade 8 (M age = 9.21; SD = 2.15). Participants were equally represented by gender (52% girls) and ethnically diverse. The characteristics of mindfulness strategies used by children were assessed using a Draw-Write-and-Tell task. Participants drew and wrote about strategies that they used to "calm their minds and bodies." The drawing activity was followed by in-class discussion of the children's pictures and words using a structured, developmentally-tailored focus group protocol. Children's attentional control was assessed using a developmentally-tailored iPad-based flanker task. Children's emotion-regulation, emotional adjustment, and academic engagement were assessed using child-reports.

**Results:** Qualitative analysis of the Draw-Write-and-Tell data were conducted using content analysis and focused on identifying themes, settings, and situations for and within which participants used mindfulness strategies. Our analyses indicate that children use a wide-variety of mindfulness strategies both in school, at home, and during recreational time, the most common of which involves breathing practices. Our quantitative analyses will examine how the mindfulness strategies practiced by children and the intent and regularity of their strategies influence their self-regulation skills, emotional adjustment, and academic engagement.

# TRAINEE INVESTIGATOR EDUCATION ABSTRACTS

**Conclusions:** Findings from the current study will be used to inform policymakers and educators about which mindfulness practices have the greatest amount of buy-in from children, are effective, and can be implemented with ease as either a universal or targeted intervention strategy.

**Contact:** Naheed Hosan, hosan@ualberta.ca

## 2.02 Acupuncture Education Module: A Multimodal Approach

Keon Ma (1), Helly Goetz, MD FRCPC (1), Hsing Jou, MD FRCPC (1), Hollis Lai, PhD (1), Steven Aung, CM AOE MD PhD FAAFP (1), Paul Humphries, MD CCFP-LM FCFP (1) (1) University of Alberta, Edmonton, Alberta, Canada

**Introduction/Rationale:** Despite widespread use reported by patients, there is a paucity of integrative medicine education in medical schools. An educational module was developed to provide an opportunity for students to better understand evidence-based medicine as it relates to integrative medicine, using acupuncture as treatment for chronic pain as an example.

**Methods:** Second-year University of Alberta medical students attended a two hour multimodality session, which included a didactic overview providing background on acupuncture, a live demonstration of the technique, and a patient presentation of their experience using both conventional medicine and acupuncture. The session concluded with a panel discussion to address questions from the students. The efficacy and safety of acupuncture, as well as clinical practice guidelines and shared decision-making involving acupuncture and integrative medicine were explored in this module. A pre-post survey was administered to evaluate knowledge and attitude changes on acupuncture. There was also the opportunity to provide written comments to improve the session.

**Results:** Students were receptive to the interactive approach to the session, and in particular, appreciated the patient presentation and live demonstration. From the pre-post surveys, students indicated that they were more likely to recommend acupuncture for patients with chronic pain following the session.

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## 2.03 Reflections On The Experience Of Training Integrative Health For Medical Students And Residents In Brazil

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**Introduction/Rationale:** In Brazil there is increased use of Integrative Medicine (IM) approaches and therapies and thus a need of physicians competent of guiding patients in IM. There is no consensus about how IM should be incorporated into medical education. Little data on medical students' interest in IM or outcomes of IM education exists. The study evaluates medical students' attitude, interest, and comfort with use of integrative medicine therapies before and after an IM training.

**Methods:** 10h extension training course offered for medical students and residents from Belo Horizonte, Brazil in November 2018. Course introduced IM, discussed their evidence and clinical use, and provided IM hands-on experiences to students. Questionnaires before and after course assessed prior experiences with IM, comfort with personal use, comfort of discussing IM with patients, and attitudes and interests towards IM.

**Results:** 14/18 students completed questionnaire. 100% of students had used IM therapies

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for their own health, most commonly for anxiety, stress and health promotion. The most common used IM therapies were mindfulness and homeopathy. All students felt that their IM education in medical school had been inadequate. Students were highly interested in learning about IM therapies both before and after course. Upon completion of the course, students were significantly more comfortable using IM therapies for their own health and discussing IM therapies with future patients. Students showed very positive attitude towards IM.

**Conclusions:** Our experience report suggests a strong interest among medical students and residents towards IM education for personal use and care for their future patients. Participants in this course felt their training prior to the course was inadequate in IM content. Our 1 month IM training course showed significant increase in participants' comfort with using IM for personal use and discussing IM with their future patients.

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2.04

## A Pilot Wellness Initiative in a Radiation Oncology Residency Program

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**Introduction/Rationale:** Medical provider burnout is a huge issue facing practitioners in all specialties. Oncology providers in particular face the difficult challenge of absorbing the collective trauma and anxiety of our often very ill patients. There are limited outlets for debriefing these experiences and coping with our own illnesses, anxieties, hopes, and fears. Yet to optimally provide care for our patients, it is important to take care of ourselves through wellness activities. Trainees in particular suffer from fragmented teams and demanding clinic days that frequently leave little room for processing difficult patient experiences. Sometimes with long work hours there is barely time to take care of our own basic human or family needs. I started a pilot wellness initiative for residents in my Radiation Oncology training program to start to address some of these unmet needs, as we have a high clinical volume and resident well-being seemed to represent a potential area for further improvement.

**Methods:** To assess interest and feasibility of the wellness initiative, I started with a pre-assessment using a survey sent to all Radiation Oncology residents at my institution. I then put together and led an in-person wellness session with residents focusing on healthy eating, mindfulness, and a guided meditation exercise. To determine the impact of the wellness session, I distributed post-assessment surveys to residents who participated in the wellness session.

**Results:** I successfully led the pilot wellness session with Radiation Oncology residents and received positive feedback from this initial session. I plan to expand the program based on comments from post-assessment surveys. The next in-person wellness session with residents is scheduled for early February 2019.

**Conclusions:** To address residency burnout within my Radiation Oncology training program, I successfully started a new wellness initiative with positive feedback and plan to expand this initiative using feedback from all participants.

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# TRAINEE INVESTIGATOR EDUCATION ABSTRACTS

2.05

## Integrative Pain Management 2-Week Rotation: a First-Year Community Hospital Medical Resident Experience

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**Introduction/Rationale:** The integrative pain management 2-week rotation was deployed to address implications due to a rising opiate epidemic. Rooted in the need to safely improve patient outcomes, this program design provided hands-on educational resources for medical residents within the context of a functioning interdisciplinary team. Through integrative and non-pharmacologic therapies (specifically osteopathic manipulation, music therapy, massage therapy, acupuncture, chiropractic services and mindfulness training) learners gained firsthand experience into integrative approaches to pain management within the medical setting.

**Methods:** Residents completed a 2-week rotation titled "Integrative Pain Management". Learners participated in various clinical settings that offered evaluation and treatment of pain. Students experienced daily inpatient rounds with an interdisciplinary team comprised of expressive therapists, osteopathic physicians and nurses. Rounds focused on patients admitted with pain levels of 7 or greater on a self-reported numeric pain scale. Daily rotations included discussions with osteopathic faculty members regarding individualized pain management plans. Further, residents engaged in nonpharmacological pain management modalities. These experiences include acupuncture, chiropractic medicine, massage therapy, physical therapy and meditation. Additionally, residents learned the impact of pain management on patient satisfaction through interactions with the hospital chief medical officer, director of the Connor Integrative Health Network, and weekly patient experience meetings.

**Results:** Through this rotation, residents stated their perceived benefit of understanding interdisciplinary team rounds, pain management and the integration of complimentary services. Additionally, medical center leadership has recognized the positive impact of integrative resident education.

**Conclusions:** As integrative health strategies continue to incorporate the use of multi modal treatment modalities within the traditional medical treatment frameworks, resident education appears to be needed in order to meet changes in health care education and medical treatment cultures. This rotation appeared to offer a significant experience for these learners and may be a means of furthering the use and acceptance of non-pharmacological pain management treatments.

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2.06

## Historical Trauma Training as a First Step Toward Developing Trauma-Informed Care at an Urban Safety Net Hospital in Minnesota: A Qualitative Study

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**Introduction:** Trauma-informed care (TIC) is an integrative healthcare model that recognizes and responds to the effects of all trauma (physical, emotional, and historical), and actively prevents retraumatizing individuals. By disrupting neurological development, trauma affects the mind, body, and spirit, promoting health-risk behaviors and potentially leading to an early onset of disease and death. Hennepin Healthcare (HHC) began a cultural transformation toward TIC by offering educational training sessions for staff on the historical trauma of its two largest patient populations: African Americans and Native Americans. The purpose of this study was to evaluate preliminary results from these sessions.

# TRAINEE INVESTIGATOR EDUCATION ABSTRACTS

**Methods:** Hospital leaders, providers, and other staff at HHC were encouraged to sign up for one of 13 sessions from July to December 2018. Each 3-hour session consisted of a 2-hour presentation from an expert in historical trauma healing followed by facilitated group discussions. Narrative medicine techniques such as self-reflection and writing were used to facilitate learning. A survey was administered after each session.

**Results:** Of the 459 participants, 391 (85%) completed the survey. Thirteen percent were organizational leaders. On a five-point scale, the average level of understanding of historical trauma increased from 3.00 to 4.07. Over 90% of participants expressed interest in attending a future session on historical trauma and TIC, would recommend it to colleagues, and felt this information was important for their work. Common themes included increased awareness of how trauma manipulates the mind-body connection, appreciation for an organization prioritizing TIC and these conversations, and validation among staff of color with similar historical trauma experiences.

**Conclusion:** Participants in this training on historical trauma were positively impacted by the information presented, and were inspired to learn more about trauma-informed care. Training in historical trauma can lay the groundwork for introducing patient-centered, trauma-informed care in a hospital or healthcare setting.

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## 2.07

### Meaning from Distress: A Group Reflective Practice for Suicide Prevention

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**Introduction:** Suicide represents an important emotional burden on medical trainees. Medical student experiences from training may be useful to inform suicide prevention among trainees. We used a group reflective practice, grounded in Thomas Joiner's interpersonal-psychological theory of suicidal behavior, to create space for medical students to make sense of distressing experiences in training and to generate ideas for program-level interventions.

**Methods:** Participants were 209 3rd and 4th year medical students. Reflective sessions lasted a total of 90 minutes. Each participant attended 1 of 6 sessions. After an introduction to the theory, participants were guided through a one-hour reflective practice in small groups. Prompts for reflection were based on 2 components of the model: thwarted belongingness and perceived burdensomeness. Participants were also prompted to reflect on their positive experiences to generate ideas for intervention. Interactive polling was used to assess participants grasp of the discussion and share their meaningful experiences.

**Results:** Data were collected from 145 participants (69%). 92% of participants endorsed feelings of thwarted belongingness and isolation. Major discussion themes included short duration clinical teams and physical isolation from others. 84% of participants endorsed feelings of burdensomeness and/or low effectiveness. Major discussion themes of this topic included role ambiguity on the medical team and inter-role conflict. 83% of participants said that they would recommend this reflective practice to other medical students.

**Conclusions:** The reflective practice generated rich data about the distressing experiences of medical trainees. It was an efficient means of collecting diverse ideas for program-level interventions. Many of these could be implemented as quality improvement projects with minimal additional work. Additionally, this practice could be used by other institutions to generate their own interventions. Finally, further study could explore the role of this reflective practice in encouraging trainees to "pull together" and build community.

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# TRAINEE INVESTIGATOR EDUCATION ABSTRACTS

2.08

## Impact of 4th-Year Integrative Medicine Elective on Physician Self-Care and Clinical Practice

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**Introduction:** Symptoms of burnout and fatigue appear to peak during residency and fellowship and are also highly prevalent in medical students and early career physicians as well (Dyrbye et al., 2014). The purpose of this study is to determine how including IM in the last year of medical school benefits physician self-care practices, including physical, mental, and spiritual well-being, and clinical practice.

**Methods:** An anonymous, web-based survey was sent to the 127 KSOM graduates who took the IM Elective (IME) between 2013-2017. A follow-up email was sent after 3 weeks. The survey consisted of 14 questions, addressing demographics, the impact of the IME curriculum, prior IM experience, and current Complementary and Alternative Medicine (CAM) utilization in daily life and clinical practice. Descriptive statistics were used to analyze the data.

**Results:** The respondents (n=21), were predominantly female (85.71%) and white or Asian (76.19%). Most (61.90%) took the IME out of general curiosity. Most (95.24%) strongly agreed/agreed that the IME positively impacted general self-care habits, and that it introduced skills that helped them cope with residency stress (80.95%). The primary reasons for using CAM were for overall health maintenance and disease prevention (38.10%) and stress management (38.10%). Respondents utilized mind (27.86%) and body (21.01%) practices more after the IME.

**Conclusion:** Despite having little prior experience, students who took the course did so out of curiosity, suggesting that IM has broad appeal. The impact of this IM course during medical school on physician well-being was reportedly strongest on residents' general self-care habits and secondly on their stress coping.

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# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

3.01

## Which Chronic Low Back Pain Patients Respond Favorably to Yoga, Physical Therapy, and a Self-Care Book? Responder Analysis of a Randomized Controlled Trial

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**Purpose:** Identify baseline characteristics of adults with chronic low back pain (cLBP) that predict clinically significant improvement independent of treatment and/or modify treatment effect across three interventions.

**Methods:** 320 predominantly low-income ethnic-minority adults with cLBP were randomized to twelve weeks of yoga classes, PT sessions, or a self-care book. We characterized participants as 'responders' if they had at least 30% improvement in physical function by 12 weeks on the Roland Morris Disability Questionnaire. Using a priori set of sociodemographic and health-related characteristics, we identified independent predictors of response with logistic regression models. Additionally, we identified potential treatment effect modifiers using a formal test for statistical interaction.

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3.02

## Brain Structure and Skin Conductance Predict Treatment-Related Improvements in Autonomic Dysfunction in Veterans with Gulf War Illness

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**Introduction:** Gulf War Illness (GWI) is a poorly understood condition experienced by many veterans who served in the Gulf War in 1990-1991 and is characterized by a constellation of symptoms including mood disruption, cognitive complaints, chronic pain, chronic fatigue/fibromyalgia, and gastrointestinal problems such as irritable bowel syndrome. While the pathophysiology of GWI remains unknown, a growing body of evidence demonstrates autonomic nervous system dysfunction in individuals with GWI, including disruptions in cardiac function and structural abnormalities in subcortical brain regions such as the amygdala. Few published treatment studies exist for GWI. Cognitive behavioral therapy (CBT) is the standard evidence-based psychological treatment for many of the independent symptoms of GWI, yet, efficacy for GWI remains low. Yoga - an ancient mind-body practice that combines mindfulness meditation with controlled breathing and physical postures - is proposed to balance the autonomic nervous system.

**Methods:** We present pilot structural magnetic resonance imaging (voxel-based morphometry in FSL; n=10) and tonic autonomic activity (8-min resting-state skin conductance [SCL]; n=12) data from a small subset of veterans in a recently completed randomized controlled trial comparing CBT to yoga for veterans with GWI (ClinicalTrials.gov NCT02378025; N=75 randomized).

**Results:** Pre-treatment right amygdala volume ( $R^2=.43$ ,  $p=.038$ ) and pre-treatment minimum



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SCL ( $R^2=.47$ ,  $p=.014$ ) significantly predicted treatment-related changes in self-reported autonomic function.

**Conclusions:** These data provide preliminary support for the autonomic dysfunction theory of GWI and suggest that treatment (yoga, CBT) is associated with improvements in autonomic dysfunction in GWI.

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3.03

## Resisting (Mis)representation: Research Participation among Complementary Medicine Providers in a Canadian Policy Study

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**Introduction/Rationale:** Building research capacity in traditional, complementary and integrative medicine (TCIM) has been identified as a priority by scholars in the field, as has the development of research methods with model validity. To date, however, little research has addressed the willingness of TCIM providers to participate in scholarly investigations conducted by researchers working within a biomedically-dominant cultural context in which TCIM providers feel their work is often marginalized.

**Methods:** This study uses contextual recruitment data from an ongoing mixed-methods study, led by long-standing TCIM researchers, that investigates recent regulatory changes impacting naturopathic doctors and homeopathic practitioners in Ontario, Canada. These data include response rates, public statements by community leaders, and individual communications with practitioners. Using critical discourse analysis, the authors examine the rationale behind some hesitation within these practitioner communities to participate in qualitative interviews and an online survey.

**Results:** About one-third of homeopaths ( $n=183$ ) and a quarter of naturopathic doctors ( $n=366$ ) recruited for the study's online survey elected to participate, suggesting moderate research engagement within these communities. Some leaders from practitioner groups disseminated statements that implicitly or explicitly discouraged practitioners to participate. In response, several other practitioner leaders distributed public communications to support research participation. While articulating support for research in principle, the former expressed concern that study findings might be subsequently misrepresented (by persons outside the research team) to negatively construe an already-marginalized practitioner group. Several practitioners recruited for interviews expressed similar concerns, declining to participate. Others argued that some of the studied issues should best be discussed privately rather than in the public sphere, to prevent further professional misrepresentation.

**Conclusions:** Research teams studying TCIM providers may prudently consider the broader context of professional marginality in crafting study designs. Community alliance building, instrument pre-testing and member-checking strategies should be carefully balanced with research rigour and independence.

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# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

## 3.04 Physician FitBit Use For Patient Health

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**Objective:** Physical activity is a critical part of prevention and treatment of obesity and other serious health problems. This study aims to show whether physician monitoring of fitness tracker data results in a difference in exercise compliance and improved overall health and well-being, facilitates effective patient-physician communication, and allows physicians to provide personalized, data-driven fitness recommendations.

**Methods:** 28 adults, from 1 private and 1 federally qualified health clinic in the Chicago area, were enrolled in this prospective, randomized study. Participants received the FitBit Charge HR for 12 weeks, and counseling concerning the Centers for Disease Control exercise recommendations. The study included 3 follow-up visits. The experimental group received intervention in the form of weekly electronic medical record messages from their physician with feedback on their FitBit activity data.

**Results:** The Exercise Motivations Inventory indicated that top motivators for exercise are weight loss and improving overall health. On enrollment, the Perceived Stress Scale revealed the majority of participants report a "high" 7/10 level of stress (27.6%) and are exercising less than 30 minutes per day (46.7%). Among participants who exceeded CDC exercise guidelines, all but one were in the Experimental group. Motivation was maintained in the Experimental group & decreased in the Control group (0 vs. -0.5 change on scale of 0 to 10, 95% CI). On follow-up, the Intervention group experienced less average stress (5.1 vs. 7.2 on a scale of 0-10) & more average energy (6 vs. 5.1 on a scale of 1-9, Table 5). Further analyses pending.

**Conclusion:** Data reflects that physicians can utilize the FitBit tool to positively impact patients' exercise habits and overall quality of life. This research supports the shift toward personalized medicine by facilitating conversations and additional studies about fitness data, and how patients' health goals can be supported and advocated for by physicians.

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## 3.05 Concomitant Conventional Treatment and Traditional, Complementary, and Alternative Medicine (TCAM) Use by Cancer Patients in Malawi

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**Background:** Less developed countries (LDCs) experience the majority of the worldwide burden of cancer. Conventional cancer treatment is expanding in resource poor locations to address this public health concern. LDCs also have a high prevalence of traditional, complementary, and alternative medical practices (TCAM). Combination of conventional treatment and TCAM may support quality of life and symptom reduction, but also creates the potential for TCAM to cause a delay in seeking a clinical cancer diagnosis, and/or herb/drug interactions. There are limited published data on TCAM use among cancer patients in sub-Saharan Africa, and no such data from Malawi.

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**Methods:** We conducted cross-sectional surveys of adult cancer patients presenting to the Kamuzu Central Hospital in Lilongwe, Malawi. The survey documented types of providers seen for cancer care, modalities of TCAM used for cancer, names of herbs, vitamins, minerals, and spiritual practices, as well as any change in diet. We also documented time between symptom presentation, cancer diagnosis, and presentation to the hospital.

**Results:** A total of 263 cancer patients completed the survey. TCAM (including prayer) was used by 84.8% of cancer patients, and by 77.2% of patients when excluding prayer as a TCAM. A total of 40.3% of participants used only conventional cancer treatment, and 59.7% combined conventional treatment and TCAM. A wide variety of data was obtained regarding TCAM treatments used, satisfaction and type of providers seen, and satisfaction with modalities. After linear regression analysis, it was determined that neither using TCAM nor first seeking a TCAM provider for cancer symptoms caused a delay in receiving a cancer diagnosis.

**Conclusion:** This study is the first to document the traditional medicine use of a cancer population in the country of Malawi and provides foundational information on the type of TCAM used for cancer, and the impact of TCAM on conventional cancer treatment.

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3.06

## Whole Systems Research Methods in Health Care: A Scoping Review

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**Introduction/Rationale:** This scoping review evaluates two decades of methodological advances made by 'whole systems research' (WSR) pioneers in the fields of traditional, complementary and integrative medicine (TCIM). Rooted in critiques of the classical randomized controlled trial (RCT)'s suitability for evaluating holistic, complex TCIM interventions, WSR centralizes 'model validity', representing a 'fit' between research design and therapeutic paradigm.

**Methods:** In consultation with field experts, forty-one clinical research exemplars were reviewed from thirteen TCIM disciplines, to map the range and methodological characteristics of WSR studies. Using an analytic charting approach, these studies' primary and secondary features are characterized with reference to three focal areas: research method, intervention design, and outcome assessment.

**Results:** The reviewed WSR exemplars investigate a wide range of multimodal, multi-component and wellness-oriented TCIM interventions. Most studies include a behavioral focus, at times in multi-disciplinary or team-based contexts. Treatments are variously individualized, often with reference to 'dual' (biomedical and paradigm-specific) diagnoses. Prospective and retrospective study designs substantially reflect established biomedical research methods, though only two studies adopt a double-blind, placebo-controlled RCT format. Pragmatic, randomized, open label comparative effectiveness designs with 'usual care' comparators are most widely used. Some controlled trials engage non-randomized allocation strategies; other key designs include single-cohort pre-post studies, modified n-of-1 series, case series, case report and ethnography. Mixed methods designs (i.e., qualitative research, economic evaluations) are evident in about one-third of exemplars. Outcomes are predominantly assessed using patient-reported measures, at times alongside objective endpoints.

# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

**Conclusions:** Aligned with 'fit-for-purpose' research designs that study the 'real-world' effectiveness of complex, personalized clinical interventions, WSR has emerged as a maturing scholarly discipline. The field is distinguished by its patient-centred, salutogenic focus and engagement with non-biomedical diagnostic and treatment frameworks. Model validity may be further advanced by emphasizing complex analytic models, paradigm-specific outcome assessment, inter-rater reliability, and ethnographically-informed designs.

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3.07

## Strengthened Hippocampal Circuits Underlie Enhanced Retrieval of Extinguished Fear Memories Following Mindfulness Training

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**Background:** The role of hippocampus in context-dependent recall of extinction is well recognized. However, little is known about how intervention-induced changes in hippocampal networks relate to improvements in extinction learning. In this study, we hypothesized that mindfulness training creates an optimal exposure condition by heightening attention and awareness of present moment sensory experience and thus enhance extinction learning, improve emotion regulation, and reduce anxiety symptoms.

**Methods:** We tested this hypothesis in a randomized controlled longitudinal study design using a 2-day fear conditioning and extinction protocol. Mindfulness training group included 42 (28 female) and the control group included 25 participants (15 female). Results: We found enhanced engagement of the supramarginal gyrus, as well as increased connectivity between the hippocampus and the supramarginal gyrus during early phases of extinction recall. Providing further evidence for the neuroadaptive changes associated with the mindfulness training, we found increased connectivity between the hippocampus and primary somatosensory cortex, specifically in the area of SI that corresponds to where the shock electrodes had been placed.

**Conclusion:** These findings suggest hippocampal dependent changes in contextual retrieval as one plausible neural mechanism through which mindfulness-based interventions enhance fear extinction and foster stress resilience.

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3.08

## Addressing Adverse Childhood Experiences and Health Risk Behaviors Among Low-Income, Black Primary Care Patients: Testing Feasibility of a Motivation

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# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

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**Objective:** This pilot study tests the feasibility of implementing a two-session intervention that addresses adverse childhood experiences (ACEs), post-traumatic stress symptoms, and health risk behaviors (HRBs) among Black primary care patients. African Americans are disproportionately exposed to stressful and traumatic events and are at greater risk for PTSD than the general population.

**Method:** A prospective cohort, experimental (pre-post) design with 2 post-intervention assessments were used to evaluate the feasibility of a motivation-based intervention for Black primary care patients with one or more ACEs. Indicators of feasibility implementation outcomes were assessed by participant adherence to treatment; suitability, satisfaction, and acceptability of the intervention; in addition to clinical outcomes of stress, HRBs, and behavioral health referral acceptance.

**Results:** Out of 40 intervention participants, 36 completed the intervention. Of the patients with one or more ACEs who participated in the intervention, 65% reported 4 or more ACEs and 58% had positive PTSD screens, and nearly two-thirds of those had at least one HRB. Satisfaction with the program was high, with 94% of participants endorsing "moderately" or "extremely" satisfied. The sample showed significant post-intervention improvements in stress, alcohol use, risky sex, and nutrition habits. Although stress reduction continued through 2-month follow-up, unhealthy behaviors rebounded. Almost one-third of participants were connected to behavioral health services.

**Conclusions:** Brief motivational treatment for ACEs is feasible in underserved primary care patients and could help individuals develop healthier ways of coping with stress and improve health.

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3.09

## Biofeedback for Prophylaxis of Chronic Headache and Migraine in Children: A Rapid Review

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**Introduction:** In North America, headache is a common disorder in children often leading to disruptions in daily activities and lower quality of life. Biofeedback is used to train individuals to regulate physiological functions (e.g., heart rate, vascular activity). Systematic reviews have demonstrated that biofeedback is a promising technique for preventing headache in adults, but its effectiveness has not yet been clearly established in children. **Methods:** We searched Medline, EMBASE, Cochrane Database of Systematic Reviews, and Google Scholar in English language for randomized controlled trials (RCTs) and non-randomized controlled clinical trials (CCTs) that evaluated the safety and efficacy of biofeedback for prevention of chronic headache in children. Screening, data extraction and risk of bias were conducted by a single reviewer.

**Results:** 60 relevant publications were identified. Nine prospective clinical trials (eight non-blinded RCTs and one CCT) met inclusion criteria, and approximately 138 participants

# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

received biofeedback therapy. Hand-warming biofeedback and EMG-biofeedback were most commonly employed types of biofeedback. Only one RCT was found that compared biofeedback to pharmacotherapy. Reductions in headache frequency and duration were observed on the self-reported headache diaries compared to wait-list controls; however, it is inconclusive if biofeedback is more effective than sham treatment, or other psychological therapies. Biofeedback had no significant effect on reducing headache intensity. Mild fatigue was the most commonly reported adverse event.

**Conclusions:** Biofeedback may be effective for preventing headaches in children; however, numerous methodological limitations found in the included studies posed challenges to the interpretation of the results. Biofeedback appears to have few side effects and may be used as an adjunct to conventional treatments. This review was unable to determine if biofeedback is more effective than conventional pharmacotherapy.

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3.11

## A Survey of Boston Primary Care Physicians: Do Healthcare Providers Utilize Integrative Therapies in Management of Lower Back Pain?

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**Introduction:** Low back pain (LBP) is the fifth most common reason for all physician visits in the United States. In 2017, the American College of Physicians (ACP) put forth an evidence-based clinical guideline for initial presentations of acute/subacute and chronic nonradicular LBP. This work aims to assess physician compliance to these guidelines in three Boston neighborhoods, determine the frequency of integrative therapeutic strategies in provider plans and identify barriers to guideline compliance.

**Methods:** 72 healthcare providers were surveyed from the Boston neighborhoods. Physicians were asked 1) familiarity with the 2017 ACP guidelines for low back pain management, 2) patient management strategies for low back pain, 3) comfortable level referring integrative services, 4) barriers to integrative referrals. Differences in responses between neighborhoods were analyzed using chi-square tests.

**Results:** Mean years of practice was 14 years. There were statistically significant differences across neighborhoods in the (1) proportion of providers that included integrative services in their management plans of chronic LBP (chi-squared,  $p=0.001$ ): 43, 50, 12% of providers in Roxbury, Jamaica Plain and Back Bay, respectively; and (2) the proportion of providers that felt comfortable referring patients to integrative services for chronic LBP management (chi-squared,  $p=0.011$ ); 48, 38, 72%. The proportion of physicians providing treatment plans for initial presentation of chronic LBP that differ from ACP Guidelines did not differ significantly (Chi-squared test,  $p=0.456$ ). Reasons for non-referrals did not differ significantly across neighborhoods (chi-squared,  $p=0.253$ ) with most frequent reasons being related to 1) "Lack of data", 2) "High cost" and 3) "unfamiliar with local integrative practices".

**Conclusions:** The marked contrast in management of chronic low back pain underscores the

# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

need for improved implementation strategies of clinical practice guidelines. Continued efforts to increase awareness of the many integrative strategies is important if we hope to encourage the most up-to-date practice.

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3.12

## Whole Health at the Center for Rehabilitation Care: An Integrative Health Model

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**Introduction/Rationale:** The Veteran's Administration (VA) has developed an innovative integrative health model called "Whole Health for Life." The cornerstone of the model, the Personal Health Inventory (PHI), introduces patients to a holistic framework of health and wellness while encouraging them to identify personal health goals. The study's goal is to learn whether the VA's model is a feasible and acceptable model for patients at a Center for Rehabilitation Care (CRC). Participant feedback will inform the development of integrative health services at the CRC.

**Methods:** Thirty participants are being recruited to complete and evaluate the PHI, with thirteen participants recruited to date. Recruitment is ongoing and updated results will be presented. A subset of participants will attend classes on the Whole Health model and provide feedback on the curriculum. Participants will be trained to teach the curriculum.

**Results:** All thirteen participants thought the PHI was easy to understand. When asked whether they thought that the PHI could help improve their health, 53.8% answered "definitely yes", 38.5% "probably yes", and 7.7% "might or might not". 76.9% of patients said they would "definitely" share the PHI with their doctor, therapist or provider, 15.4% said "probably", and 7.7% said "might or might not". When asked whether they were interested in joining the Whole Health class, 61.5% of participants responded "definitely yes", 30.8% "probably yes", 7.7% "might or might not."

**Conclusion:** Initial results indicate that patients find the Whole Health model and specifically the PHI easy to understand, with potential to improve their health. Respondents expressed desire to share their PHI with their care provider and to attend Whole Health classes. These preliminary findings support the use of the Whole Health model as a feasible and acceptable method of integrating a holistic health framework in a clinical setting outside the VA.

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## Acupuncture: An Alternative Treatment for Pain, Influenced by Provider Referral

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# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

**Introduction/Rationale:** Acupuncture, an alternative and complementary treatment, is used by a variety of patients and providers for multiple conditions. However, limited studies have evaluated the population that utilizes acupuncture. We explored associations between patient characteristics and utilization of acupuncture services, in addition to outcomes associated with acupuncture use.

**Methods:** We conducted an exploratory retrospective study of adults in a large, integrated, eastern Wisconsin medical system between 1/2005 and 6/2016 that either (1) received acupuncture referral and treatment, (2) received referral only, or (3) received treatment only. Basic descriptive statistics were performed; Chi-square and T-tests were used as appropriate.

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3.14

## Exercise for Headache Management in Postural Orthostatic Tachycardia Syndrome: A Systematic Review

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**Background:** Postural Orthostatic Tachycardia Syndrome (POTS) is a complex condition characterized by excessive tachycardia upon standing, regularly accompanied by dizziness, fatigue, syncope, nausea, pain, and low quality of life. Studies suggest over 2/3 of POTS patients report headaches often described as sub-occipital muscular pain radiating to form 'coat-hanger headaches'. The pathogenesis of POTS is unknown, but may include sympathetic imbalance, denervation, or physical deconditioning. POTS patients face challenges with exercise, and deconditioning consequential of pain-related inactivity can worsen autonomic dysfunction. Although integrative therapies may reduce burdensome symptoms in dually afflicted individuals, evidence-based guidelines need developed and disseminated.

**Objective:** First-line recommendations for POTS include lifestyle-based treatments, which also support pain management. Given inconsistencies in non-pharmacological approaches to both conditions, we sought to synthesize reports of exercise interventions and subsequent outcomes for POTS patients with comorbid headache. **Methods:** Electronic searches of MEDLINE, EMBASE, Web of Science, and CINAHL were conducted using MeSH terms related to POTS, headache, and exercise through January 2019. Studies comprised of movement/exercise-based therapies for patients with headache secondary to POTS were included. Quality was assessed by 3 reviewers, data was extracted, and results were summarized.

**Results:** 10 studies were included, representing 92 patients (48 [52%] females) in programs based on physical, occupational, vestibular, aquatic, yoga, balance and breath therapies. In 9 studies (90%), patients experienced reduced headache symptoms (decreased severity, frequency, pain catastrophizing) via qualitative interviews, pain scales, disability indices, and self-report surveys. Positive increases in aerobic capacity, blood volume, and quality of life were also described. All interventions encouraged supplemental salt, fluids, and compression garments.

**Conclusion:** Physical activity and exercise may be promising techniques for ameliorating headache disorders in patients with POTS. Additional investigations of therapeutic efficacy and treatment tolerability are warranted, as findings were constrained by small sample sizes, methodological limitations, and sparse long-term follow-up.

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3.15

## Mixed-up Mindfulness: Using Convergent Mixed Methods to Investigate Combined Patient/Physician Mindfulness Classes

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**Introduction:** Mindfulness meditation has become an increasingly popular means for addressing stress and burnout in healthcare. Mindfulness-Based Stress Reduction (MBSR) is an eight-week curriculum successful in patient and physician populations; however, current literature lacks research on combined populations. The primary goal is to investigate the effectiveness and feasibility of an integrated course for both physicians and oncology patients. A secondary goal is to use convergent mixed methods to better explain the underpinnings of our outcomes.

**Methods:** Between January and May 2017, 17 attending physicians and 23 non-physicians participated in the MBSR course taught by a certified instructor at Beaumont Hospitals. The course involved 29+ contact hours in eight weekly classes, an all-day class, and 45-60 minutes of daily home practice. Participants completed a pre/post course Perceived Stress Scale (PSS) and a post-course narrative evaluation. Physicians also completed pre/post course Maslach Burnout Inventory (MBI). A convergent, mixed methods study design separated the narrative evaluations into five distinct themes using grounded theory to incorporate this qualitative data into our PSS and MBI quantitative data.

**Results:** 13 physicians and 22 patients completed the course and submitted complete data. The average PSS score decreased by 5.2 points ( $P=0.0010$ ) and 6.2 points ( $P=0.0012$ ) for patients and physicians respectively. For physicians, the average exhaustion and emotional exhaustion dimension scores decreased by 7.0 points ( $P=0.0073$ ) and 8.5 points ( $P=0.0121$ ) respectively. Physicians in the "perspectives" themes had the biggest improvements in PSS and MBI while those in "no difference" had no improvements.

**Conclusion:** Results support the hypothesis that a patient/physician MBSR course effectively decreases stress levels. Furthermore, deeper understanding of these results was obtained using mixed methods; physicians who found the class to increase their perspectives showed greatest reduction in stress and burnout. This study provides the groundwork for more rigorous investigation of this unique and promising intervention.

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3.16

## Weight Loss and Dietary Interventions for Hidradenitis Suppurativa: A Systematic Review

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**Introduction & Rationale:** Hidradenitis suppurativa (HS) is a common inflammatory disorder characterized by recurrent, painful, and malodorous abscesses and nodules predominantly

# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

in skin folds. It is associated with substantial morbidity and poor quality of life. There are no curative therapies, and the only approved biologic drug has variable efficacy and requires high doses, making adjunct treatments crucial. An important risk factor for disease severity is obesity. Our objective was to conduct a systematic review to examine weight loss and dietary interventions, in HS. Our secondary objective was to examine nutritional supplements in HS.

**Methods:** A systematic literature search was conducted using Medline, EMBASE and the Cochrane Database. We included all study types in adults (>18 years), with a minimum sample size of 5, examining any dietary or weight loss intervention. Two authors screened n=1279 articles of which nine met inclusion criteria.

**Results:** All included studies were observational. Weight loss interventions described patient controlled weight loss, or bariatric surgery. Although weight loss was associated with regression of HS lesions, there was also evidence that subsequent increase in skin folds may exacerbate symptoms and necessitate excision of excess skin. Other dietary interventions involved eliminating dairy and brewer's yeast. Nutritional supplements included zinc gluconate, vitamin D and riboflavin. All interventions were associated with various measures of decreased HS severity, such as reduction in the number of nodules and decreased frequency of flares.

**Conclusions:** HS symptoms improve with weight loss, and dietary restriction of dairy or brewer's yeast. Although weight loss may initially improve symptoms, substantial weight reduction can increase panniculus, thereby potentially exacerbating underlying HS. Supplementation with oral zinc gluconate, vitamin D, and riboflavin have a suppressive, rather than curative, effect on HS lesions in single studies. Prospective randomized controlled trials are required to validate these findings.

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3.17

## The Effect of Intervention Sequences in Patients with Persistent Low Back Pain: A Proposed Study Protocol for a Randomized Control Trial

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**Introduction:** Low back pain (LBP) is a heterogeneous condition that has an enormous economic burden for the healthcare system, individuals and society. In treating LBP, clinicians are taught to rely on clinical practice guidelines (CPGs). Unfortunately, LBP CPGs recommend several first-line interventions without providing tools for clinicians to prioritize these choices. As a result, clinicians have little guidance as to which intervention to offer their patients, or in what sequence to optimize efficacy, cost and access. In this study, we aim to describe a novel research protocol in which LBP patients will receive CPG interventions in unique sequences to determine if those sequences have unique benefits.

**Methods:** Adult participants having persistent LBP for > 4 weeks and an Oswestry Disability Index (ODI) of at least 20% will be randomized to one of six intervention sequences or a control group. Each of the six intervention sequences are comprised of a unique order of three CPG recommended interventions including spinal manipulative therapy (SMT), a patient education intervention (PEI) and a supervised exercise program (SEP) while a self-care program (GLA:D Back) acts as the control group. At the completion of an intervention, participants having a 50% improvement on the ODI will be classified as responders and dismissed from the study. Those remaining as non-responders will continue in their assigned sequence. The duration of SMT, PEI and SEP will be 2, 2 and 4 weeks respectively. Blinded evaluations will occur at baseline, after each intervention of the sequence (or end of the control intervention) and at 3 months following each participant's endpoint. The primary outcome measure will be responder rate while secondary outcomes will include disability, pain, and cost.

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**Conclusions:** The results of this project will be a novel clinical trial design approach that may illuminate efficient ways of providing care to LBP populations.

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3.18

## Systematic Review of Mind-Body Interventions to Treat Myalgic Encephalomyelitis /Chronic Fatigue Syndrome

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**Introduction:** Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) is a chronic condition distinguished by disabling fatigue associated with post exertional malaise, sleep, autonomic and cognitive changes. Mind-body interventions (MBIs) utilize the constant interaction between the mind and body to improve health and wellbeing. No systematic reviews have evaluated the effectiveness of mind-body interventions on patients with ME/CFS.

**Objectives:** To systematically review studies of mind-body interventions for treating ME/CFS.

**Methods:** We searched MEDLINE, EMBASE, CINAHL, PsycINFO, and Cochrane Register of Controlled Trials (CENTRAL). The population of interest was adult patients who were diagnosed with ME/CFS. Included studies had one of the mind-body methods as intervention and any placebo, standard of care treatment or waiting list as control group. All the outcomes relevant to the signs and symptoms of ME/CFS patients and quality of life were considered. Study designs included interventional and cohort studies. Study selection and data extraction were conducted independently by two investigators.

**Results:** Search results yielded a total of 310 references. Six studies were finally included. Four Studies used Centers for Disease Control and Prevention criteria (CDC) for the diagnosis of ME/CFS. Mind-body interventions included mindfulness-based stress reductions (MBSR), mindfulness based cognitive therapy (MBCT), relaxation, Qigong, Baduanjin Qigong and isometric yoga. The most commonly measured outcomes were fatigue severity, anxiety/depression, and quality of life. No meta-analysis was performed due to heterogeneous interventions and outcomes used. Fatigue severity and anxiety/depression improved significantly in 4 included studies and quality of life improved in one study in patients receiving MBIs as compared to the controls. Two studies identified minor adverse events.

**Conclusion:** Fatigue severity and anxiety/depression improved in studies using different MBIs for treating ME/CFS. Further research employing similar interventions in larger populations using standard outcomes are needed to make definitive conclusions.

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3.19

## Therapeutic Touch & Wellbeing - A Qualitative Exploration Embedded in the Acupressure for Children in Treatment for Childhood Cancer (ACT-CC) Trial

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# TRAINEE INVESTIGATOR RESEARCH ABSTRACTS

**Introduction:** Research on therapeutic touch interventions (e.g. acupressure, massage) has focused primarily on adults. Few studies have included pediatric populations, and these focused on reducing physical discomfort and negative affect. We aim to explore how therapeutic touch influences the experience of well-being during childhood cancer treatment.

**Methods:** This qualitative study is embedded in a randomized control trial in which children receive professional and caregiver delivered acupressure. Data are collected through purposive sampling of providers and caregivers/parents. Professional acupressure providers (N=2) are interviewed in depth at two timepoints. Caregivers of childhood cancer patients (N=15) are individually interviewed. Data will be analyzed using grounded theory methods, in which data collection and analysis are done simultaneously with emerging codes from one interview informing the next.

**Results:** 90-minute in-depth interviews with professional acupressure providers (N=2) yielded several themes: Balance between standardizing protocol and individualizing care, child empowerment, and incorporating play ["in the case of younger kinds, the treatment is fun, so often I would have to incorporate humor and play with getting access to the points so that the children will continue to agree"], well-being as physical experience ["Well, the one that I saw was relaxation. They would unwind. They would calm down. They would start breathing deeper. They would just go into that kind of, 'ahhh.....[breathes deeply]' place."], immediate relief, and positive experiences for providers ["It was rewarding in the sense that I saw relief in people immediately. That relief came across many different ways."] Preliminary analysis has yielded additional themes such as parent empowerment, which will be explored further in interviews with parents/caregivers.

**Conclusions:** Initial interviews revealed multi-faceted conceptual and experiential understandings of healing and suggested the versatile benefits of acupressure during childhood cancer treatment to uniquely promote well-being. Qualitative data will continue to be collected through semi-structured interviews.

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# CONSORTIUM MEMBER LIST AS OF APRIL 1, 2019

Albert Einstein College of Medicine  
of Yeshiva University

Allina Health, Abbott Northwestern Hospital

Aurora Health Care

Beaumont Health

Boston University School of Medicine

Cedars-Sinai Medical Network

Central Maine Healthcare

Cleveland Clinic

Columbia University Medical Center

Duke University

Emory University School of Medicine

George Washington University

Georgetown University School of Medicine

Hackensack Meridian Health

Harvard Medical School

Icahn School of Medicine at Mount Sinai

Inova Health

Johns Hopkins University School of Medicine

Mayo Clinic

McMaster University

MedStar Health

Memorial Sloan Kettering

Milton S. Hershey Medical Center

Northwestern University Feinberg  
School of Medicine

NYU Langone Health

Oregon Health & Science University

Rutgers Biomedical and Health Sciences

Scripps Center for Integrative Medicine

Stanford University School of Medicine

Sutter Health, Institute for Health & Healing

Tecnológico de Monterrey School of Medicine

Temple University School of Medicine

Texas Tech University Health Sciences Center

The Ohio State University

The University of Texas MD  
Anderson Cancer Center

Thomas Jefferson University:  
Marcus Institute of Integrative Health

Tufts University School of Medicine

UH Connor Integrative Health Network

University of Alberta

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University of Vermont Larner College of Medicine

University of Washington:  
UW Integrative Health Program

University of Wisconsin-Madison

Vanderbilt University

Veterans Health Administration

Wake Forest University School of Medicine

Weill Cornell Medicine

Yale University School of Medicine

# SCHEDULE AT-A-GLANCE

## Sunday, April 14

- 15:00 - 18:30 Registration & Information Desk
- 15:00 - 18:00 Poster Presenter Install
- 16:00 - 17:00 New Member & First Time Attendee Orientation
- 17:00 - 18:00 Institution Ice Breaker
- 18:00 - 19:00 Poster Session & Reception

## Monday, April 15

- 06:45 - 07:45 Wellness Activities
- 07:30 - 17:00 Registration & Information Desk
- 07:30 - 08:30 Breakfast
- 08:30 - 09:45 Welcome & State of the Consortium
- 09:45 - 10:00 Refreshment Break
- 10:00 - 10:45 Next Steps for the Consortium
- 10:45 - 11:15 Institution Introductions & Member Highlights
- 11:15 - 11:30 Self-Care Break
- 11:30 - 12:15 Plenary 01:  
Academic Integrative Health in Canada: Two Leading Examples
- 12:15 - 14:00 Lunch & Self-Care Break
- 14:00 - 15:00 Round Table Discussions
- 15:00 - 15:15 Break
- 15:15 - 16:15 Round Table Discussions
- 16:15 - 16:30 Refreshment Break
- 16:30 - 17:15 Plenary 02:  
The Present and Future of Evidence-Based Integrative Medicine
- 18:00 - 20:15 Dinner Event with Bravewell Lectureship

## Tuesday, April 16

- 06:45 - 07:45 Wellness Activities
- 07:30 - 13:30 Registration & Information Desk
- 07:30 - 08:30 Breakfast
- 08:30 - 09:30 Round Table Rapporteur Session
- 09:30 - 10:20 Oral Poster Presentations
- 10:20 - 10:35 Refreshment Break
- 10:35 - 11:20 Plenary 03:  
The History of Complementary and Integrative Medicine
- 11:20 - 12:20 Working Group Breakouts
- 12:20 - 13:35 Lunch & Self-Care Break
- 15:15 - 15:30 Refreshment Break
- 15:15 - 17:00 Poster Presenter Dismantle
- 15:30 - 17:00 Institutional Representative Meeting
- 15:30 - 17:00 Experiential Session: Medical Music Therapy Workshop:  
An Introduction to Music for Healing
- 17:00 Member Meeting Concludes