



ORAL ABSTRACTS

Oral Abstract 01: Clinical Practice Guidelines and Best Practices

OA01.01

Society for Integrative Oncology Clinical Practice Guidelines – Process and Update

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Objectives: A key priority of the Society for Integrative Oncology (SIO) is to develop disseminable and actionable clinical practice guidelines on the evidence-based use of integrative medicine in oncology settings. Here we describe this process and our first published guideline on integrative approaches to pain management.

Method(s): A grant from the Samueli Foundation was awarded to the SIO to develop a series of clinical practice guidelines. SIO has developed a collaboration with the American Society of Clinical Oncology (ASCO) to extend the reach of these guidelines. To date, SIO and ASCO have partnered in developing three joint guidelines on the following topics: treatment of pain, anxiety/depression, and fatigue for people with cancer. The guidelines follow the ASCO guideline development processes and are based upon data from randomized, controlled clinical trials. SIO has assembled diverse panelist representation across professional disciplines, geography, institution type, race and ethnicity, gender, and career stage for each guideline.

Outcomes: The current status of the guidelines are as follows: The pain guideline was published in September 2022 in the Journal of Clinical Oncology. The anxiety and depression guideline co-chairs and panelists have been identified, evidence reviewed and recommendations have been drafted. The guidelines are due to be published in Mid-2023. The fatigue guidelines are also underway and anticipating a similar publication date. In this session we will review the guidelines process, and share the specific recommendations from the pain guideline. Key knowledge translation products for the pain guidelines will also be shared with the audience.

Conclusions: Developing and disseminating evidence-based clinical practice guidelines for integrative medicine modalities has the potential to improve uptake and implementation of these approaches across many settings.

OA01.02

Integrative Medicine Approach for Non-alcoholic Fatty Liver Disease

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Objectives: Non-alcoholic fatty liver disease (NAFLD) is a leading cause of chronic liver disease and affects 24% of the U.S. adult population. NAFLD is associated with obesity and metabolic syndrome; weight loss is the primary therapy. Currently no drugs are approved, so integrative approaches for NAFLD should be considered.

Method(s): Starting January 2022, NAFLD patients were seen jointly by providers in Departments of Gastroenterology/Hepatology and Integrative Medicine (IM). Detailed diet advice, emotional eating management, vitamins/supplements counseling, referrals to holistic psychotherapy, chiropractic/massage therapy, acupuncture or yoga were provided. We assessed 3-month weight loss effectiveness, and how well the combined Hepatology/IM approach was perceived.

Outcomes: Overall, 73 NAFLD patients (32M/41F) received IM consultation (mean age: 52.4; range 18-79), with average BMI of 35 (range: 18.5-60) at baseline. After 3 month follow-up, 22 out of 31 (71%) patients reported decreased BMI (-0.8; range -5.2 to 1.9). Combined Hepatology/IM approach was perceived well by all patients, and 60% (39 out of 65) considered IM to be beneficial. Many felt holistic psychotherapy were helpful to manage emotional eating and/or sugar addiction. 10% were able to resume exercise after receiving chiropractic and/or acupuncture and/or for back pain. 20% had multiple conditions such as irritable bowel syndrome and/or small intestinal bacterial overgrowth, fibromyalgia, autoimmune disorders, chronic fatigue or migraine and were suspected to have underlying issues of microbiome imbalance and intestinal hyperpermeability ("leaky gut").

Conclusions: Combined Hepatology/Integrative Medicine intervention has demonstrated a very promising outcome by providing "holistically tailor-made" lifestyle interventions possibly due to individual differences in patient clinical profiles. Additional studies that include long-term follow up may be necessary before incorporating into standard clinical practice.

OA01.03

Integrative Oncology Referrals to Health Psychology: Frequencies, Predictors, and Patient-Reported Outcomes

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Objectives: Health psychology (HP) plays a critical role within a multidisciplinary, integrative oncology team. HP provides patients with tools to cope with emotional distress, engage in health-supporting lifestyle changes, and support overall well-being. This study aims to determine predictors of HP referral within an Integrative Medicine Clinic (IMC) in a large cancer center.

Method(s): We completed a retrospective chart review of 1827 patients seen for consult in the IMC. Questionnaires included the Edmonton Symptom Assessment Scale, Measure Yourself Concerns and Well-being, Patient Reported Outcomes Measurement of Information System, demographics, and clinical characteristics. Chi-square tests were used to compare categorical variables, Mann-Whitney test for non-normally distributed continuous variables, and t-tests for normally distributed continuous variables.

Outcomes: Patients referred (n =316) were mostly female (85.4%), White (67.1%), married/partnered (67.7%), obese (42.1%), with breast cancer (52.2%). When comparing the two groups, patients referred to HP and patients not referred to HP, patients referred had a higher proportion of female and Black patients than expected (p ? .01); patients referred were also younger and had higher BMIs (p ? .01). Referred patients reported worse fatigue, sleep, depression, anxiety, well-being, spiritual pain, financial distress, memory, overall mental health, physical health, and global health (p ? .01). Most common concerns of referrals were diet/nutrition, overall health, and stress/anxiety. Compared to non-referred, HP referrals were more likely to prioritize depression, spirituality, and stress/anxiety (p ? .01).

Conclusions: Patient characteristics are well-suited treatment targets for HP, including addressing emotional distress, healthy lifestyle, and quality of life. Cancer centers can use these findings to identify appropriate referrals to psychology and develop strategies to facilitate engagement with HP.

OA01.04

Boston Cognitive Assessment (BOCA) a Comprehensive Self-administered at-home Test for Longitudinal Tracking of Cognitive Performance

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Objectives: Current cognitive assessment tools have number of critical limitations. The most common tool MOCA - Montreal Cognitive Assessment requires a trained evaluator administering the test to a patient and takes at least 10 and most of the time 15 or more mins of valuable clinician's time. More complex computerized tests such as CNS Vitals administered directly to consumer but take over 30min. To address this gap Boston Cognitive Assessment (BOCA) test was created and tested in variety of patients with different stage of cognitive decline against MOCA test. Here we report a result of our published study and provide additional practical information to assist clinicians in adapting this test for screening and longitudinal follow up of patients with cognitive impairment.

Method(s): Boston Cognitive Assessment or BOCA is a 10-min, self-administered online test that uses randomly selected non-repeating tasks to minimize practice effects. BOCA includes eight subscales: Memory/Immediate Recall, Memory/Delayed Recall, Executive function/Clock Test, Visuospatial Reasoning/Mental rotation, Attention, Mental math, Language/Prefrontal Synthesis, and Orientation The maximum total score is 30, with higher scores indicating better cognitive performance.

Outcomes: All participants completed both MOCA and BOCA test. The average total MoCA score was 26.80 (95% Confidence Interval: 26.26; 27.34) in controls and 18.16 (CI: 16.56; 19.75) in patients. There was strong positive statistically significant correlation between the BOCA total score and the MOCA total score with R = 0.90 (CI: 0.86, 0.93), p < 0.001.

Conclusions: BOCA test performs as well as MOCA test in at all levels of cognitive impairment but offers major advantage of being direct to consumer, fast, and with no chance of memorizing prior test. Clinicians encouraged to start utilizing it sending patients directly to BOCA website at <https://boca.alz.life/> free of charges.

Oral Abstract 02: Lifestyle-related Interventions: Clinical and Translational Research

OA02.01

Effect of OLAVE on Chronic Insomnia in Adult Dayworkers with Normal Sleep Duration (> 6h)

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Objectives: Chronic insomnia is one of the most common sleep disorders among adults, including day workers, with difficulties initiating (latency) and/or maintaining sleep (fragmentation) as well as early morning awakening commonly reported, which can result in daytime impairment. No safe, self-administered intervention has been found to treat chronic insomniac adults with normal sleep duration (> 6h). Previous studies have found that open-loop audio-visual entrainment (OLAVE) potentially reduces excessive hyperarousal that is thought to contribute to difficulties with impairment at daytime and initiating and maintaining sleep at nighttime. This randomized placebo-controlled trial examined the effects of OLAVE on insomnia symptoms, sleep quality, and emotional reactivity.

Method(s): Fifteen middle-aged day workers were randomly assigned to one of two intervention groups: OLAVE (n = 8) or CONTROL (n = 7) (placebo group) for a period of 6 weeks. Both groups attended six, weekly sessions, during the day, at the same time and day of the week. During the 10-week trial, participants completed three self-assessment questionnaires for insomnia symptoms, sleep quality and emotional reactivity, and a sleep diary. Actigraph, heart rate and heart rate variability readings were also recorded throughout the trial.

Outcomes: Between-group differences were found in sleep fragmentation (WASO, $p = .04$) and sleep quality (PSQI, $p < .0001$; CSD, $p = .004$) in the OLAVE group. Improvement in sleep quality (PSQI, $p < .001$, CSD, $p < .01$), WASO ($p < .01$) and sleep efficiency ($p < .05$) in the OLAVE group were reported at post- and 2-week post-intervention periods. Noteworthy, both groups reported significant improvements in insomnia symptoms (ISI, $p < .05$) and emotional reactivity ($p < .05$).

Conclusions: Results suggest that OLAVE technology used during the daytime may be efficacious in improving chronic insomnia in adult dayworkers. Further exploration of this technology for reducing chronic insomnia in adult dayworkers is warranted.

OA02.02

MIND and Mediterranean Diet Adherence in Parkinson's Disease

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Objectives: The Mediterranean (MEDI) and Mediterranean-DASH Intervention for Neurodegenerative Delay (MIND) diets have been associated with reduced risk and slowed progression of Parkinson's disease (PD); however, studies on symptom severity are lacking. The objective of this study was to evaluate distribution of adherence to the MEDI and MIND dietary patterns, to evaluate whether adherence was associated with improved patient-reported outcomes over time, and to explore which of the questions on the MEDI and MIND scales were more strongly predictive of PD symptom severity in a cohort of patients with PD.

Method(s): A cross-sectional analysis of participants in the ongoing Modifiable Variables in Parkinsonism (MVP) Study. Patient-Reported Outcomes in Parkinson's Disease (PRO-PD), a 33-item questionnaire on common motor and nonmotor PD symptoms, was the primary measure of PD severity, and validated scales were used to quantify MIND and MEDI adherence. Regression analysis adjusted for age, gender, income, and years since diagnosis.

Outcomes: MEDI had a normal distribution, MIND was skewed toward higher adherence. After adjusting for age, gender, income, and years since diagnosis for each 1-point increase in the MEDI score, the mean PRO-PD score was -25.6 points lower (fewer symptoms) (95% CI: -37.2, -14.0; $p < 0.001$). For each 1-point increase in the MIND diet, the mean PRO-PD score was -52.9 points lower (95% CI: -66.4, -39.4, $p < 0.001$).

Conclusions: This observational study suggests MIND and MEDI diet adherence is associated with fewer patient-reported PD symptoms over time, with each MIND point being twice as strong as MEDI point. If these data are reproducible in more diverse populations, dietary intervention studies should focus on increasing MIND adherence as a therapeutic strategy for PD.

OA02.03

A Culturally-Tailored, Virtual Shared Medical Program for Adult Hispanics With Obesity: A Bi-Phasic, Collaborative Care Approach

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Objectives: Hispanics have a higher prevalence of various chronic diseases including obesity compared to Non-Hispanic whites resulting in health disparities. A culturally-tailored, virtual shared medical appointment (SMA) program for Hispanics with obesity was developed through a collaboration between Cleveland Clinic's Center for Functional Medicine (Induction phase; 10-weeks) and the Endocrinology and Metabolism Institute (Maintenance phase: Monthly up to 1 year) to provide longitudinal education and support around nutrition and lifestyle. Our objective was to evaluate changes in biomedical and patient-

reported outcomes for the induction phase of the program.

Method(s): A retrospective study was performed on the induction phase from February-May 2022. REDCap was used to collect demographic, nutrition health literacy (NLit Survey), biometrics (remote monitoring), health-related quality of life (PROMIS Global Physical Health (GPH) and Global Mental Health (GMH), and nutrition and lifestyle adherence. Data was collected as part of clinical operations or as part of an IRB-approved registry. Results were summarized using frequency count with percentage, mean (SD) or mean (95% CI). Significance was established at $p < 0.05$.

Outcomes: Participants ($n=19$) had a mean age of 51.1 years, 79% were female. At 10 weeks, participants significantly improved weight by -4.5 pounds (-8.38 to -0.61; $p=0.03$), equating to a -1.5 (2.9) change in % body weight, and improved systolic blood pressure by -7.5 points (-14.97 to -0.03; $p=0.05$). Participants significantly improved mean PROMIS GPH by 2.83 T-Score points (0.4 to 5.26; $p=0.03$) with 41% experiencing a clinically meaningful improvement (similar for PROMIS GMH). Participants also significantly improved their nutrition literacy and nutrition and lifestyle behaviors.

Conclusions: A culturally-tailored, virtual SMA focused on nutrition and lifestyle improves outcomes for Hispanics with obesity. Future research will evaluate the maintenance phase and longitudinal outcomes.

OA02.04

Effect of Tibetan Herbal Formulas on Symptom Length and Reduction Among Ambulatory Patients with SARS-CoV-2 Infection: A Retrospective Cohort Study

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Objectives: To examine if complex Tibetan herbal formula regimens reduce symptom duration compared with usual care among ambulatory patients with native SARS-CoV-2 infection.

Method(s): This multi-center, single health system retrospective cohort study assessed deidentified data from patients with a diagnosis of a laboratory-confirmed SARS-CoV-2 infection who received treatment at outpatient care sites across fifteen Tibetan medical clinics in North America. The study assessed cases incident from March 12, 2020, to May 5, 2021, and followed STROBE reporting requirements. Since vaccinations were not available for cases assessed at time of study, all cases reported comprise native infections.

Outcomes: Of 145 patient cases of deidentified data assessed for eligibility, 86 (59.3%) met inclusion criteria, and 67 (46.2%) had documented symptom resolution. Included cases had a mean (SD) age of 44.7 (12.7) years comprising 33 (49.3%) women and 34 men (50.7%). Symptom duration and severity of cases were compared against available baseline data. Comparatively, the retrospective cases in our study under Tibetan medicine therapeutic standard of care returned to their usual state of health within a median of 11.7 (IQR 10.1-13.5) days, in 55.7% to 78.0% of the median 15-21 days under supportive management by public health recommendations as reported previously.

Conclusions: In this retrospective cohort study of ambulatory patients diagnosed with SARS-CoV-2

infection, treatment with Tibetan herbal formulas significantly decreased the duration of symptoms compared with standard of care comprising home rest and isolation at the time of the study.

OA02.05

Effects of Omega-3 Fatty Acids on Systemic Inflammatory Responses and Plasma Concentrations of Pro-Resolving Lipid Mediators Provoked by Endotoxin

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Objectives: Pre-clinical evidence for the anti-inflammatory effects of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) has not translated to consistent results in clinical intervention studies—potentially due to the lack of a controlled inflammatory stimulus, which is a key component in cell and animal models. The objective of these studies was to assess effects of n-3 supplementation on provoked inflammatory responses in healthy human subjects.

Method(s): A series of three studies was conducted to determine the effect of n-3 fatty acid supplementation on the inflammatory and pro-resolving response to induced endotoxemia.

Outcomes: Study 1, a pilot study of healthy men (n = 6), established the inflammatory response to low-dose endotoxemia (intravenous 0.6 ng/kg purified lipopolysaccharide). In Study 2, supplementation with 600-1800 mg/d EPA+DHA for 5 months had no effect on peak tumor necrosis factor (TNF)-alpha or interleukin (IL)-6 concentrations (p = 0.9) in healthy adults (n = 17) compared to 0-300 mg/d; however, C-reactive protein (CRP) was 2 mg/L lower over at 8-120 hours post-challenge (p = 0.01). In Study 3, supplementation with 3.4 g/d EPA+DHA for 8 weeks had no effect on the acute inflammatory response in healthy men (n = 20) compared to placebo (p > 0.05), but specialized pro-resolving mediators were significantly elevated.

Conclusions: Supplementation with n-3 fatty acids did not suppress the acute cytokine response to low-dose endotoxemia in healthy adults but may enhance the resolution of inflammation via enhanced production of specialized pro-resolving mediators.

Oral Abstract 03: Pain: Clinical and Translational Research

OA03.01

First-Seen Provider and Pharmacotherapy Patterns Among Patients with New-onset Neck Pain

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Objectives: Neck pain is a common problem and is less well-understood than back pain. We compared pharmacotherapy among patients diagnosed with new-onset neck pain, based on whether their initial encounter was with chiropractor (DC), physician (MD), or physiotherapist (PT).

Method(s): We obtained 2016-19 deidentified data from OptumLabs Data Warehouse, which contains medical and pharmacy claims and eligibility information for commercial and Medicare Advantage enrollees across all adult ages and regions. Initial providers were categorized as primary care (PC), emergency medicine (EM), neurologist, orthopedist, DC, PT, or rehabilitation; patients who only saw other providers or both DC and MD on the index date were excluded. We excluded patients with visits for neck pain or injury in the preceding year, or prescriptions for chronic/current opioid analgesia or medication-assisted treatment for addiction.

Outcomes: The cohort (N=770,326) was 59% female; 27% over 65 (mean 52); and 73% commercially insured. On the index date, 45% visited DC, 33% visited PC, and 3% visited PT. Overall, initial neck pain-related pharmacy fills included muscle relaxants, oral glucocorticoids, short-acting opioids, benzodiazepines, and gabapentinoids for 19.1%, 17.6%, 16.4%, 10.6%, and 7.4% of patients, respectively. Muscle relaxant, opioid, and benzodiazepine use varied substantially across initial provider types over 180 days: 31.9%, 19.0%, and 12.1% for PC; 38.5%, 34.3%, and 14.7% for EM; 20.2%, 19.1%, and 18.3% for neurologist; 21.0%, 26.0%, and 14.9% for orthopedist; 6.5%, 10.3%, and 7.6% for DC; 10.2%, 12.1%, and 11.1% for PT; and 18.8%, 19.9%, and 13.0% for rehabilitation; respectively. These differences were not explained by comorbid head or back pain.

Conclusions: Initial care for neck pain by DC or PT was less likely to precede prescription fills for muscle relaxants, opioids, or benzodiazepines than initial care by PC or other MD. Our data suggest overuse of potentially addictive medications for neck pain in physician practices.

OA03.02

ReCode - Reversal of Cognitive Decline Program Update on Academic Experience

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Objectives: With a rapidly aging population and few medical advances, Alzheimer's disease in the United States has become the third leading cause of death. Since 2017, our institution has initiated a ReCODE protocol on 59 patients to utilize precision medicine and target individual patient risk factors involved in Alzheimer's Dementia (AD). This abstract aims to share one institution's experience with the ReCODE Protocol at our 5-year mark and compare it to recently published data. Additionally, we hope to shed light on the limitations to large-scale application of ReCODE so future clinicians can learn and better implement the protocol.

Method(s): A cohort of 59 patients with diagnosed AD or MCI. Once enrolled, patients received a comprehensive set of baseline cognitive testing, (MOCA, AQ21, BOCA and/or MMSE), as well as serological and imaging studies concordant to individualized risk factors. After analysis,

possible individualized contributors to disease were identified. A precisional treatment plan was designed using the integrative Bredesen Protocol called ReCODE. After implementation of the initial treatment plan, participants were followed longitudinally. Subjective and objective outcome measures such as cognitive testing, cognitive symptom reporting, and imaging modalities were used to assess progress.

Outcomes: Of the observational cohort, 21 of the 59 recruited patients remained actively engaged in the trial (65% dropout rate). Out of 21 pts who remained in the program for more than 12 months: Improved- 7; Stable- 8; Worsen- 6. This represents a response rate defined as no progression or improvement of 71%.

Conclusions: Real-life application of ReCODE remains a significant challenge given cost, complexity of care, and lack of adequate caregiving. However, given that ReCODE demonstrates some clinical improvement, it is still superior to the current standard of care. Our data matches other colleagues who have implemented this protocol. A RTC would offer further clarity on the effectiveness of the protocol.

OA03.03

Innovation & Integration in Acupuncture Research in the Underserved

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Objectives: There is a research gap around the effectiveness and safety of acupuncture with older adults, i.e., age 65 and over. Furthermore, acupuncture research in underserved communities is needed especially for chronic pain. However, there are significant obstacles for this population to participate in clinical research. The HEAL BackInAction is a multicenter study designed to evaluate the effectiveness of acupuncture needling to improve disability in older adults with chronic lower back pain (cLBP). The Institute for Family Health (IFH) is the lone Federally Qualified Health Center (FQHC) recruiting members of the underserved community.

Method(s): This pragmatic trial requires IFH to enroll 123 adults \geq 65 years of age with cLBP to standard acupuncture, enhanced acupuncture, or usual care. Recruitment relies on provider referral through the Electronic Medical Record (EMR). Recruitment is in New York City, with intervention at clinical sites at or close to patients' medical homes. Scheduling and intervention record occurs in the EMR, with session feedback surveys completed by Research Acupuncturists (RAs) via Redcap. Participants must not have received acupuncture in past 6 months.

Outcomes: We are on target to reach our recruitment goal of 123, with deadline approaching in one month. We've seen significant referrals via EPIC each week, and 30% of our enrollees so far have been Spanish-speaking participants. Scheduling of intervention participants is successful in the EMR, and RAs have documented the intervention in the EMR. Redcap surveys capture both challenges and highlights that the RAs have had while working in the IFH clinics.

Conclusions: We are on target to achieve our recruitment goal in overall enrollment, as well as achieving significant diversity, illustrated by a high proportion of Spanish-speaking participants. Our hypothesis was that by embedding our research closely into the clinical milieu, we would leverage significant advantages in patient enrollment and engagement.

OA03.04

Odds of Lumbar Discectomy in Adults Receiving Chiropractic Spinal Manipulation for Radiculopathy or Lumbar Disc Herniation: Retrospective Cohort Study

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Objectives: Discectomy and chiropractic spinal manipulative therapy (CSMT) are both viable treatments for lumbar disc herniation (LDH) and lumbosacral radiculopathy (LSR), however, the relationship between these treatments is not well described. We hypothesized adults undergoing CSMT for incident LDH/LSR would have reduced odds of discectomy through 2 years' follow-up compared to those receiving other care.

Method(s): We conducted a retrospective cohort study with 1- and 2-year follow-up windows and a new-user design. We queried a network of electronic health records data of 105 million patients in the United States (TriNetX, Inc.) August 2022, providing data from 2012 to 2022. We included adults age 18-49 with a new diagnosis of LDH or LSR and excluded those with previous lumbar surgery, absolute surgical indications, scoliosis, spondylolisthesis, and trauma. Propensity score matching was used to control for variables associated with likelihood of lumbar surgery (e.g., age, sex, opioid and tobacco use). Cohorts were formed according to CSMT receipt or non-receipt (other care). Odds ratios (ORs) of lumbar discectomy were calculated.

Outcomes: There were 3,093 patients per cohort after matching (mean age 36.5±8.5). There was a statically significant reduction in ORs (95% CIs) for discectomy in the CSMT cohort compared to the cohort receiving other care over 1-year of 0.61 (0.40, 0.95) and 2-years of 0.65 (0.43, 0.99) with $P < 0.05$ for each. Sensitivity analysis using the E-value suggested no unmeasured confounding variables available in the literature would completely explain these results (e.g., income) with E-value point estimates of 2.66 (1-year) and 2.45 (2-year).

Conclusions: These findings suggest that receiving CSMT for newly diagnosed LDH/LSR is associated with decreased odds of lumbar discectomy over 2-years' follow-up. As this study is observational, it should be repeated using a randomized controlled trial design to reduce residual confounding.

Oral Abstract 04: Overcoming Implementation Barriers

OA04.01

The Coalition for Better Health: A Collaborative Effort to Mobilize Preventive Health Specialists Across Tennessee

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Objectives: Tennessee has very high rates of hypertension, type 2 diabetes, and cardiovascular disease. Behavioral contributors have been exacerbated during the pandemic, with the largest impact falling disproportionately on historically marginalized communities. A state-wide initiative linking business, community and government leaders is implementing a new role in healthcare called the Preventive Health Specialist (PHS).

Method(s): Formed in 2019, the Coalition for Better Health is dedicated to making the prevention of chronic disease just as important as its treatment. The Coalition's Curriculum and Training Work Group drew heavily from behavioral science to define the competencies needed for the new role and developed a competence assessment that has been pilot tested. Three Tennessee academic institutions collaboratively designed integrated training for the PHS role that begins October 1. The Reimbursement Work Group secured funding for the pilot and developed a reimbursement plan for ongoing work. The Deployment Work Group enlisted stakeholders from for-profit and non-profit healthcare systems, including an FQHC. Personnel (n=8) have been committed at three distinct sites.

Outcomes: Three levels of program evaluation data will be presented. First, ratings from the PHSs on each component of training will assess the content and skills practice of the 40-hour October to November 2022 training. Second, skill scores from Subject Matter Experts who evaluate the PHSs in November will provide evidence of professional competency. Third, number of referrals, enrolled patients, and completed sessions between December 1 and February 1, 2023 will serve as the initial measure of feasibility for program implementation.

Conclusions: The pilot deployment of PHSs is the culmination of three-years of collaborative stakeholder development. Ongoing program metrics of the PHSs' training, assessment and implementation will provide an opportunity to iterate this highly collective endeavor to improve the lives of Tennesseans.

OA04.02

Strategic Interprofessional Collaboration Enhances Implementation of Evidence-Based Mindfulness Training that Combines Tradition with Technology

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Objectives: Consistent mindfulness practice and other resilience-building activities are critical for health care worker wellbeing but can be difficult to implement in hospital settings. One challenge is helping workers recognize and take action to address real-time stress. A second barrier is finding a quiet, private environment to complete activities while on duty. Our objective was to engage in a strategic interprofessional collaboration to develop, evaluate, and iteratively refine a set of novel implementation strategies to support self-practice activities for an evidence-based workplace resilience-building program.

Method(s): An interdisciplinary team consisting of integrative health specialists, engineers, and implementation researchers designed, tested, and iteratively refined a set of implementation facilitation strategies with iterative input and feedback from health care worker stakeholders (n=23). The strategies aligned with the theory-based barriers, attitudes, social contexts, and environmental factors (BASE) injury prevention model and piloted within a large medical center. Example strategies included: 1) a wearable biofeedback prompting system to encourage workers to pause and engage in mind-body exercises, 2) cluster recruitment based on worker locations, and 3) creation of a stand-alone, soundproof environment (respite space).

Outcomes: Iterative quantitative and qualitative assessments yielded key insights for successful dissemination and implementation of the strategies. For example, interprofessional and multi-stakeholder feedback were critical for: 1) designing the prompting system, 2) establishing a recruitment process that met manager and staff needs, and 3) addressing fire mitigation and electrical requirements for the respite space.

Conclusions: This proof-of-concept project provides important insight into the technical viability of a bundle of implementation strategies for supporting resiliency-building interventions in acute health care settings.

OA04.03

Implementation of a New Integrative Health and Wellness Clinic for Underserved Veterans: Outcomes of a Mixed Methods Study

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Objectives: We investigated whether a new clinic of inter-professional integrative health providers improved clinical outcomes for a diverse population of veterans.

Method(s): The Integrative Health and Wellness Clinic (IHWC) was implemented at one VA acility in November 2019. The IHWC is staffed by an integrative medical provider, psychologist, dietician, and physical therapist, providing holistic patient-centered care emphasizing non-pharmacologic self-management. Patients with complex chronic conditions seeking complementary and integrative health

(CIH) approaches are referred for short-term management. IHWC clinicians refer patients for additional CIH services such as acupuncture. Mixed methods were used to assess patient-reported outcomes and experiences regarding IHWC effectiveness and implementation. Between 4/8/21 to 9/8/22, patients completed surveys administered at baseline, 3-, and 6-months and a qualitative interview.

Outcomes: Of 63 respondents, 13% were women; 24% were < 50 years; 44% identified as racial/ethnic minorities. Compared to baseline, at 3 months, there were non-significant trends in improved self-reported overall health and increased use of manual modalities. By 6 months, there were significant ($p < 0.05$) improvements in overall health, physical health, perceived stress, and satisfaction with IHWC providers/coaches in goal attainment. There was a trend toward improved mental health ($p = 0.057$). Interviews ($n = 25$) indicated that patients were impressed with care coordination among inter-professional IHWC providers who “listened” and were “non-judgmental.” Patients appreciated the focus on nutrition, exercise, and stress reduction. Areas for improvement included scheduling of multiple IHWC providers and referrals to other CIH services.

Conclusions: Results revealed opportunities to improve clinic processes but also, by six months, significant improvement in several important clinical domains and satisfaction with interprofessional IHWC clinic providers’ care coordination and management.

OA04.04

Using External Facilitation to Build Effective, Equitable TeleYoga Programs in VA

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Objectives: To increase access to yoga for underserved and rural-dwelling Veterans, video-based, livestream yoga (TeleYoga) programs were implemented in 7 VA healthcare systems using external facilitation (EF). This study assessed the role of EF in building effective, equitable TeleYoga programs.

Method(s): We used RE-AIM and an adapted Health Equity Implementation Framework to guide data collection and analysis. From November 2021 to September 2022, we observed 35 EF meetings. We thematically analyzed our notes using template analysis.

Outcomes: EF involved monthly meetings on MS Teams lasting 30-60 minutes with each site. We identified several practices EF used to enhance equity in implementation and enable program success. From the earliest stages of the implementation process, EF helped sites to identify and prioritize barriers faced by underserved Veterans, provide physically accessible and trauma-informed yoga classes, and to develop rural outreach strategies. As new TeleYoga programs came online, EF helped to develop processes for documenting TeleYoga encounters and supported sites in optimizing Veteran experience in video-based movement groups. EF also connected sites with each other to troubleshoot implementation challenges at different stages. While sites varied in the degree of EF needed, all 7 sites met with challenges to implementation and process improvement. All sites drew on EF to navigate clinical and logistical challenges, monitor new and continuing patient engagement, and explore ways to recruit and

retain underserved Veterans.

Conclusions: EF succeeded in helping sites build effective, equitable TeleYoga programs by providing guidance on tailoring program components and implementation strategies and sharing best practices across sites. EF can be used to advance health equity in implementation of telehealth yoga programs by centering accessibility while providing targeted assistance across a range of logistical and technical difficulties.

OA04.05

The Small Steps Healing Project: A Community-centered Approach to Holistic Healing in Boston

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Objectives: Studies have shown that racial discrimination within biomedical settings correlates with higher CIM utilization by historically marginalized populations, while economic and geographic barriers are negative predictors. In response, we developed a model that brings free CIM services directly to Boston residents. In providing direct service, we also sought to 1) evaluate the role of free pop-up clinics to decrease barriers to care, 2) assess the importance of having practitioners of similar backgrounds and 3) understand the relationship historically marginalized Boston residents have with CIM services.

Method(s): We held six pop-up clinics at local Boston events in the summer of 2022, where we offered acupuncture, acupressure, reiki, and sound healing. We chose non-healthcare events and different places to minimize self-selection bias to create a more representative sample. We utilized intake and outcome questionnaires and semi-structured interviews.

Outcomes: Our intake surveys (n=126) indicate that 72.2% identified as African American, 16.7% White, and 9.5% Asian American. 84% had not used CIM practices before. 50.6% sought relief from stress and 26% from pain. In our outcome surveys (n=112), 71.6% felt relief for what they sought treatment for and 21.6% stated it was too early to tell. 98.2% would return to receive more services from the pop-up model. 62.3% indicated no preference for practitioners of the same background and 22.6% reported a preference, and 15.1% stated that it depended on the practice. All these percentages are statistically significantly different (p-value <.01) from the null hypothesis of 50%.

Conclusions: Preliminary analyses reveal a demand by historically marginalized communities for access to holistic healing, especially to address health conditions such as pain and stress. The overwhelming majority of patients indicated preference for a pop-up model of care, and a smaller but significant majority cared more about the competency of the practitioner than racial background.

Oral Abstract 05: Education and Training

OA05.01

Nutrition and Culinary Education for Health Professionals: A response to H. Res. 1118

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Objectives: Resolution, [H. Res. 1118](#) encourages medical schools, graduate medical education programs, and other health professional training programs to provide education on nutrition and diet. The genesis of this unprecedented bipartisan engagement in medical education was the recognition on behalf of government officials that our country's dietary habits are the major contributor to the rising costs and burden of chronic disease in the US.

Method(s): Teaching Kitchen Collaborative (TKC) aims to co-create a cross-disciplinary, adaptable, hands-on modular culinary/nutrition curriculum for health professionals in all fields and stages of education. The development of this curriculum will be led by the TKC and the Osher Center for Integrative Health at Northwestern University. As a first step, the team conducted an asset mapping of existing curricula from multiple TKC member institutions. Data collection methods included surveys and collection of curricular materials and overviews.

Outcomes: 17 institutions participated in the survey. Findings include a large range of course duration (once-1 year), sessions (1-24), class length (20 min-2.5 hrs), and class size (8-150 people). The courses were offered either virtually, in-person, or both, and have been in existence anywhere from 1-7 years. Six have mandatory courses; the majority are supplemental to core education. Five of the institutions have curricula that have been formally reviewed and approved by the Institutional Curriculum Committee. The majority were developed de novo at their institution. Common themes were noted, and major gaps identified compared to proposed competencies.

Conclusions: These findings highlight the robustness of the TKC member's curricular assets relating to nutrition education using Teaching Kitchens as classrooms. These materials will be compared with other existing curricula in an effort to improve nutrition education opportunities across health professional communities.

OA05.02

Variability in Integrative Medicine Education Requirements Among Western Healthcare Professions: A Report on Accreditation Standards

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Objectives: Identify, analyze and critically assess US health professions accreditation requirements on

integrative medicine (IM) in order to provide insight on development of an interdisciplinary IM curriculum for Western healthcare professions students. This is a unique and innovative review across the health professions fields of pharmacy, medicine, physician assistants (PA), nursing, dentistry and social work.

Method(s): The six accreditation standard documents were obtained. Key search terms related to IM were identified, followed by qualitative analysis.

Outcomes: Relative to IM, some professions had patient-centered content (pharmacy, dental), another had personal-wellness centered content (medicine) and some had both (PA, nursing). Nursing had the most IM content. Patient-centered examples included “health promotion and disease prevention,” “emotional and spiritual needs” and “well-being and optimal function of human beings”; a student-wellness example included “engage in care of self in order to care for others”. The second profession with the most IM content was pharmacy. Examples included “holistic patient well-being” and “natural products and alternative and complementary therapies”. Medicine examples included “personal counseling/mental health/well-being programs,” and “preventive...health services”. PA examples included patient “disease prevention” and personal prevention of “impairment and burnout”. Dental standards were broad; examples included “emotional, physical and cognitive circumstances,” and “prevention”. Social work standards were not identified to have IM content. These examples were not exhaustive.

Conclusions: There are distinct differences in IM content, with nursing and social work having the most and least content, respectively. Based on the increasing prevalence of IM practice in the US, this information combined with current best practices will be used to design an IM curriculum for Western healthcare professions students.

OA05.03

Advancing Integrative Dementia Care: Training Interprofessional Staff to Lead a Mind-Body Group Movement Program for Nursing Home Residents

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Objectives: Preventing Loss of Independence through Exercise (PLIÉ) is an evidence-based, integrative mind-body group movement program for people living with dementia that combines movements to support daily function with present moment body awareness and social engagement. The purpose of this study was to implement and evaluate a remote interprofessional PLIÉ training program in VA nursing homes (Community Living Centers, CLCs).

Method(s): Between 6/21-8/22, 3 CLCs participated in 10-week remote PLIÉ trainings that included: (1) weekly didactic sessions focused on PLIÉ principles and functional movements (staff only); (2) weekly “experiential” sessions facilitated by a senior PLIÉ instructor (staff + residents); and (3) supervised teaching practicum (teams of 2-3 staff co-facilitate PLIÉ groups). Qualitative methods and post-training focus groups were used to evaluate staff experience and identify barriers to implementation.

Outcomes: 30 CLC staff members (10 nurses, 8 recreation therapists, 3 social workers, 3 physical therapists, 3 chaplains, 2 speech pathologists, and 1 psychologist) completed the training. 21 staff participated in 4 focus groups. Staff highlighted the importance of experiential sessions to apply and embody PLIÉ principles and movements with residents. Staff valued interprofessional collaboration and co-facilitating PLIÉ (e.g., "It's an opportunity to collaborate from people from different disciplines that we normally wouldn't."). Staff reported a greater sense of connection to residents with dementia, in addition to personal benefits such as increased energy, sense of wellbeing, job satisfaction, and knowledge and skills to engage residents with dementia. Challenges included technology issues and the impact of COVID on group activities and staffing.

Conclusions: The remote PLIÉ training is an effective model for interprofessional CLC staff to advance knowledge, skills, and ability to deliver mind-body movement groups for dementia.

OA05.04

Low Tech to High Tech Parasympathetic State Assessment of Mindfulness Training: Respiration Rate to Continuous Physiology Monitoring

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Objectives: The Mindfulness in Motion (MIM) program is a successful workplace resilience-building intervention that helps protect health care workers from chronic stressor consequences through reductions in perceived stress and burnout, as well as increased resilience and work engagement. We aim to evaluate the effect of MIM on respiratory rates (RR), as an indicator of parasympathetic activity, of health care workers.

Method(s): Four hundred and fifty-six participants self-reported breath counts before and after 8 weekly MIM sessions. MIM was delivered in group format (in-person and virtually) as a structured, evidence-based workplace intervention including a variety of mindfulness, relaxation, and resilience-building techniques. Participants counted their breaths for 30 seconds, which was then multiplied by 2 to report RR per minute.

Outcomes: According to multilevel mixed effect models there were main effects of MIM Session ($p < 0.001$) and Weeks ($p < 0.001$), but no Session by Week interaction ($p = 0.104$) on RR. On average, RR prior to the MIM session were reduced from 12.85 (95%CI= 12.56, 13.14) to 9.33 (95%CI= 9.04, 9.61). While week 2 (11.91 ± 0.191) was not significantly different than week 1 (12.38 ± 0.182 , $p = 0.297$), weeks 3 through 8 demonstrated significantly lower average MIM session RR compared to week 1.

Conclusions: Thus far, completion of MIM sessions has shown acute and long-term effects on RR, demonstrating improved parasympathetic (relaxed) states. With new collaborative efforts, we aim to utilize wearable devices to assess real time physiological measures (heart rate) during MIM sessions and overnight, as well as alert healthcare workers when their data shows negative trends warranting additional sessions/practices. Collectively, this work has shown value for mind-body stress mitigation and resiliency-building in high stress acute health care environments. Additional use of wearable devices can help provide immediate feedback and increase individual awareness.

OA5.05 – Presentation Abstract

Water Cooler Conversation Between Folks at Complementary and Integrative Health and Research-Focused Institutions about Research Collaboration

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Objectives: Institutions that focus on the training of complementary and integrative health (CIH) practitioners, such as chiropractors, acupuncturists, and naturopathic doctors, tend to have limited research infrastructure, resources, and expertise. Research-focused institutions tend to have limited clinical and subject-matter expertise related to complementary and integrative health. Collaborations between researchers from these two types of institutions have occurred and been actively supported by NIH grants mechanisms. We surveyed researchers engaged in such collaborations to determine the secret sauce for productive and harmonious collaborative partnerships.

Method(s): Skit based on results from a cross-sectional, mixed-methods survey developed and used to gather data about the characteristics of research collaborations and perspectives from both CIH and research-focused institutions. The survey was created and piloted within the research working group of the Academy of Integrative Health and Medicine (AIHM) and the Academic Collaborative for Integrative Health (ACIH).

Outcomes: Skit dialogue via watercooler conversations to demonstrate six major themes describing collaboration benefits and four major themes describing challenges between CIH and research-focused institutions. The cross-sectional, mixed-methods survey resulted in 26 unique entries from 12 institutions, including 10 CIH institutions and two research-focused institutions, and represented research on six different integrative health approaches and some combined interventions.

Conclusions: Collaborations between CIH and research-focused institutions can be successful with some bruises and grudges. We advise regular meetings preferably off campus and with beverages. This skit intends to prompt engaged discussion between related stakeholders.

POSTER ABSTRACTS

P01: Clinical and Translational Research

P01.01

Integrative Medicine Modality Usage and Effectiveness on Chronic Pain Conditions in an Urban Clinic Setting

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Objectives: Chronic pain is a highly prevalent condition with negative physical, psychological and financial implications. Integrative medicine modalities (IMM) including acupuncture, yoga, Tai Chi, massage and others are well-established non-pharmacological options for reducing persistent pain and improving overall well-being. The purpose of this study was to assess the most prevalent chronic pain conditions, the prescription, usage and impact of IMM.

Method(s): A retrospective chart review was performed to investigate the prescription and utilization of IMM by patients with chronic pain at a single physician urban practice from February 2021 to August 2022. Demographics, number of visits, pain diagnoses, and pre-existing co-morbid conditions were collected. An in-depth analysis was conducted on a subgroup of 42 patients (ascending order of MRN number) including qualitative data on subjective pain levels pre and post treatment. All data was entered into an online database and descriptive statistics were analyzed using SPSS.28.

Outcomes: A total of 702 new patients were seen with 349 patients having a primary diagnosis of a chronic pain condition. We report a subset of 42 patients (93% female, 62% Caucasian, 36% African American and a mean age of 56 (10.8)). 34 (81%) of the patients were diagnosed with at least one chronic pain condition. 30 (71%) of patients were prescribed acupuncture. 11 used acupuncture at least once and 9 patients had multiple visits. There were 65 follow up acupuncture visits with 33 reports of improved pain (50.7%), 23 no change (35.4%), and 9 increased pain (13.9%). 4 of the 9 patients stated effects of improved well-being and increased range of motion.

Conclusions: Patients with chronic pain represent most patients seen in urban clinic providing Integrative and Lifestyle Medicine consultations. These patients frequently use nonpharmacological treatments to complement their medication-based pain management. The review of the remaining cohort of patients with chronic pain is in progress.

P01.02

Is Home Mindfulness Practice Associated with Outcomes? Results from a Pilot Study of a Four-week Mindfulness Intervention for Chronic Pain Management

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Objectives: To characterize home mindfulness practice and explore associations between home practice and pre-to-post mindfulness-based intervention (MBI) changes in outcomes.

Method(s): In this single-arm study, adults with chronic noncancer pain new to mindfulness were enrolled in an MBI with four weekly 90-minute group sessions. Pre and post self-report measures of pain intensity/interference, physical function, depression, anxiety, positive affect, sleep disturbance (all PROMIS measures), and pain acceptance, catastrophizing, perceived stress and mindfulness were completed, along with daily surveys of formal (mindfulness of breath, body scan) and informal (breathing space, mindfulness of daily activities) practice. Bivariate correlations and multivariable regression were used to assess the association between days and minutes of practice and change in outcomes.

Outcomes: Participants (N=21) were of median age 57 years, 81% White, pain duration 5 years. Formal practice was completed on 65% of assigned days (median=13 days, interquartile range=10) and for 13.5 minutes per day (IQR=19.45). Informal practice was completed on 50% of assigned days (med=7 days, IQR=5) and for 8.6 minutes per day (IQR=9.5). In bivariate correlations, formal practice was not significantly correlated with outcomes (range of Spearman's ρ =|.01|-|.32|), whereas informal practice was correlated with multiple outcomes (range of ρ =|.04|-|.66|). In multivariable models, number of days practiced informally was associated with improved pain interference, pain intensity, physical function, sleep, positive affect, and catastrophizing (p 's<0.10). Minutes practiced informally was associated with improved pain interference, anxiety, positive affect, and catastrophizing (p 's<.05).

Conclusions: Informal home practice time, but not formal practice time, may be associated with improved outcomes during an abbreviated MBI for chronic pain. For brief MBIs for chronic pain, it is important to evaluate the distinct roles of formal and informal practice.

P01.03

Integrating Chiropractic Care and Tai Chi Training for the Treatment of Chronic Nonspecific Neck Pain in Nurses

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Objectives: Chronic nonspecific neck pain (CNNP) is prevalent among healthcare workers, with particularly high rates occurring among nurses. CNNP significantly contributes to sickness, absence, and negatively impacts productivity at work. Two recommended non-pharmacological approaches for the management of CNNP are exercise and manual therapies. Some evidence supports that multimodal treatments, which may additively or synergistically target multiple therapeutic pathways, may be more effective than unimodal strategies. The purpose of this current study was to assess the feasibility and trends in effectiveness of combined multimodal chiropractic care and Tai Chi for CNNP in nurses.

Method(s): We are conducting a single-arm mixed-methods pilot trial of 16 weeks of multimodal chiropractic care and Tai Chi for 20 Mass General Brigham nurses with self-reported CNNP. Primary outcomes are feasibility of recruitment, retention, adherence, and compliance with outcomes

assessment. Clinical outcomes of primary interest are neck pain and neck pain-related disability. Secondary outcomes of interest include a battery of functional, cognitive, affective, and work-related performance assessments.

Outcomes: Currently, of 57 screened, 17 met eligibility criteria and were recruited. Retention and adherence rates are 82.35% and 62%, respectively. Preliminary data from the first 10 participants showed clinically meaningful reductions in both pain severity (mean change -2.2 ± 1.14) and disability (mean change -4.4 ± 2.17) from baseline to 16-week follow-up. Multiple secondary outcomes also demonstrated positive trends.

Conclusions: Along with qualitative feedback regarding facilitators and barriers to participation, these preliminary findings support a future randomized trial evaluating the combined benefits of multimodal chiropractic care and Tai Chi for CNNP.

P01.04

Qualitative Assessment of Community Qigong for People with Multiple Sclerosis

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Objectives: People with multiple sclerosis (MS), a progressive neurodegenerative disorder, may experience motor and non-motor symptoms including physical and cognitive decline, fatigue, anxiety, and depression. The ancient Chinese mind-body practice of qigong has shown benefits to these symptoms in other neurodegenerative diseases; however, few studies have been conducted in MS. We analyzed qualitative data collected from a pragmatic feasibility study to identify benefits and challenges faced by people with MS attending community qigong classes.

Method(s): We collected data from an exit survey of 14 adults with self-reported MS who attended weekly community qigong classes for 10 weeks. Study inclusion criteria included ability to walk 50 feet without assistance, and stable on disease-modifying or balance medications three months prior to baseline. Exclusion criteria included pregnancy or nursing; regular qigong, tai chi, or yoga six months prior to baseline; or an MS relapse within 30 days of baseline. Exit survey questions included discomfort, perceived benefits, obstacles and challenges related to participation in the qigong intervention. Data were analyzed using reflexive thematic analysis.

Outcomes: We identified seven themes reflecting both positive and negative experiences with community qigong classes and home practice: (1) physical function, (2) motivation/energy, (3) learning, (4) dedicating time for self, (5) meditation/centering/focus, (6) relaxation/stress relief, and (7) psychological/psychosocial. Perceived benefits included improvements in flexibility, endurance, energy, and focus; stress relief; and psychological/psychosocial benefits. Challenges included physical discomfort including short-term pain, balance difficulty and heat intolerance.

Conclusions: These qualitative findings help to generate hypotheses about the benefits and challenges of qigong for people with MS. Our results will help to inform future clinical trials of qigong for MS.

P01.05

Effect of OLAVE on Chronic Insomnia in Adult Dayworkers with Normal Sleep Duration (> 6h)

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Objectives: Chronic insomnia is one of the most common sleep disorders among adults, including day workers, with difficulties initiating (latency) and/or maintaining sleep (fragmentation) as well as early morning awakening commonly reported, which can result in daytime impairment. No safe, self-administered intervention has been found to treat chronic insomniac adults with normal sleep duration (> 6h). Previous studies have found that open-loop audio-visual entrainment (OLAVE) potentially reduces excessive hyperarousal that is thought to contribute to difficulties with impairment at daytime and initiating and maintaining sleep at nighttime. This randomized placebo-controlled trial examined the effects of OLAVE on insomnia symptoms, sleep quality, and emotional reactivity.

Method(s): Fifteen middle-aged day workers were randomly assigned to one of two intervention groups: OLAVE (n = 8) or CONTROL (n = 7) (placebo group) for a period of 6 weeks. Both groups attended six, weekly sessions, during the day, at the same time and day of the week. During the 10-week trial, participants completed three self-assessment questionnaires for insomnia symptoms, sleep quality and emotional reactivity, and a sleep diary. Actigraph, heart rate and heart rate variability readings were also recorded throughout the trial.

Outcomes: Between-group differences were found in sleep fragmentation (WASO, $p = .04$) and sleep quality (PSQI, $p < .0001$; CSD, $p = .004$) in the OLAVE group. Improvement in sleep quality (PSQI, $p < .001$, CSD, $p < .01$), WASO ($p < .01$) and sleep efficiency ($p < .05$) in the OLAVE group were reported at post- and 2-week post-intervention periods. Noteworthy, both groups reported significant improvements in insomnia symptoms (ISI, $p < .05$) and emotional reactivity ($p < .05$).

Conclusions: Results suggest that OLAVE technology used during the daytime may be efficacious in improving chronic insomnia in adult dayworkers. Further exploration of this technology for reducing chronic insomnia in adult dayworkers is warranted.

P01.06

Biofield Therapy in Oncology: Exploring the Mechanisms Through the Use of Pancreatic Mouse Models and In Vitro Studies

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Objectives: Biofield therapies (BT) such as healing touch, Reiki, therapeutic touch, and other healing modalities have been used for centuries and are now being explored as possible treatments for cancer. This series of studies examined the effects of BT on the growth of pancreatic cells, explored plausible

mechanisms, and conducted a pancreatic cancer animal model.

Method(s): Cell viability of human Panc-1 and mouse Panc02 cells were measured by PrestoBlue assay. Cell cycle was measured by PI staining and cell voltage potentials were assessed using DiBAC4 staining. Expression of cell signaling proteins was determined by Western blot. Human Panc-1 cell mouse orthotopic model was used to examine the effects of BT on primary and metastases of pancreatic cancer.

Outcomes: Cells exposed to BT for 15 and 30 mins resulted in significantly slower growth compared to sham controls. These experiments were replicated over 12 times. Experimental exposure significantly increased G1 phase population of Panc-1 cells (sham control=43.7% vs treatment=55.0%, $p<.001$). We found that BT resulted in a 36.7% reduction in cell voltage potentials in Panc-1 cells compared to that of sham controls ($p<.01$). Finally, the treatment down-regulated pAkt expression and the pAkt/Akt ratio by 45.3% and 43.8%, respectively, in Panc-1 cells relative to sham controls. The effect of BT on cell signaling proteins measured by Reverse Phase Proteomic Array in Panc-1 cells showed down regulation of FOXM1, Cyclin B1, ALKBH5, CDK1pT14, and others. Conversely, there was an upregulation of p21. The Panc-1 mouse model revealed that BT treatment inhibited growth of primary pancreatic tumor ($p<.05$) and significantly reduced liver metastasis ($p<.05$).

Conclusions: These findings suggest that exposure to BT results in reduced growth and progression of pancreatic cancer cells in vitro and in vivo which might be in part mediated through modification of the cell cycle, reductions in cell voltage potentials, and down-regulation of PI3K/Akt pathways such as FOXM1.

P01.07

Perceived Discrimination and Opioid Dependence Among Black Individuals with Chronic Musculoskeletal Pain Using Opioids

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Objectives: Chronic musculoskeletal pain (CMP) is prevalent, burdensome, and associated with opioid dependence. Black individuals experience worse CMP outcomes than Whites, which may be explained in part by racial discrimination. Evidence suggests that racial discrimination is associated with substance use among Black individuals, but studies have not focused on Black adults with CMP or explored modifiable psychological factors that might explain this association.

Method(s): We recruited 401 Black individuals with self-reported CMP and prescription opioid use. We tested whether perceived discrimination was associated with severity of opioid dependence and whether distress tolerance and pain avoidance helped explain this association. We constructed a multiple mediation model in R using the lavaan package to test our hypotheses, controlling for age and employment status.

Outcomes: Mediation analysis revealed a direct effect of perceived discrimination on severity of opioid dependence ($\beta=.46, p<.001$). This finding persisted ($\beta=.39, p<.001$) after accounting for age ($\beta=.08, p=.065$), employment status ($\beta=.29, p=.007$), and other predictors in the model. Greater perceived

discrimination was associated with lower distress tolerance ($\beta=-.30, p<.001$) and greater pain avoidance ($\beta=.36, p<.001$). Greater pain avoidance, but not distress tolerance, was associated with greater opioid dependence ($\beta=.13, p=.008$). Pain avoidance mediated the association between perceived discrimination and severity of opioid dependence ($\beta=.05, p=.022$). Distress tolerance did not.

Conclusions: Systemic efforts to combat racism along with individualized therapeutic approaches to process and cope with perceived racial discrimination may be particularly important to prevent/reduce opioid dependence among Black individuals with CMP.

P01.08

Facets of Mindfulness are Associated with Inflammation Biomarkers in a Sample of Sexual Minority Men with HIV

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Objectives: Sexual minority men (SMM) are disproportionately impacted by HIV and thus, HIV related-health complications. HIV has been linked to earlier onset of multi-morbid chronic diseases and declines in physical and cognitive functioning. Evidence indicates that these age-related health disparities are attributable to chronic HIV immune activation and resulting inflammation. Inflammation has been targeted with mindfulness-based intervention (MBI); however, hypothesized negative associations between mindfulness and inflammation need to be confirmed in SMM with HIV.

Method(s): Methods: This is a secondary data analysis of baseline data from a randomized clinical trial (ARTEMIS). Mindfulness was assessed with the Five Factor Mindfulness Questionnaire (FFMQ). Inflammation was assessed via cytokines interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNFa). Separate adjusted (for age and viral load) regression models evaluated associations between each facet of mindfulness (describe, awareness, non-judgement, and non-reactivity) with IL-6 and TNFa.

Outcomes: A total of 127 participant had complete data at baseline and were included in the analyses. Overall, the average age of participants was 43.15 (sd=8.97). The describe (b=.06, se=.03, t=1.96, p=.05) and awareness (b=.06, se=.03, t=2.05, p=.04) facets of mindfulness were positively associated with IL-6. Similarly, the non-reactivity facet of mindfulness was positively associated with TNFa (b=.45, se=.22, t=2.04, p=.04).

Conclusions: Contrary to study hypotheses, several facets of mindfulness were positively associated with inflammation in this sample of SMM with HIV. Further research is needed to understand how and under what circumstances mindfulness may be associated with negative effects, including inflammatory processes. This work also demonstrates an important difference between associations with mindfulness and MBI effects.

P01.09

Bach Flower Therapy Improved Mood States in Brazilian Nursing Workers During the COVID-19 Pandemic

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Objectives: To compare the effectiveness of Bach flower therapy with placebo in improving mood states in nursing workers.

Method(s): Randomized, double-blinded, placebo-controlled, pragmatic clinical trial. The sample consisted of 75 participants: seven nursing aides, 47 nursing technicians, and 21 registered nurses who worked in primary health care health centers in Sao Paulo, Brazil. Data were collected from Aug/2021 to Jan/2022 via electronic form using a clinical, sociodemographic questionnaire to characterize the population and the Brunel Mood Scale (BRUMS) to evaluate mood states. The Experimental group received a bottle containing the flower essence formula Cherry Plum, Elm, Hornbeam, Olive, Star of Bethlehem, Walnut, and White Chestnut, diluted in 30% alcohol. The Placebo group received a bottle containing only the 30% alcohol diluent. Both groups were instructed to intake four drops of the bottle's content four times a day for four weeks. The Research Ethics Committee of the Nursing School, University of Sao Paulo, approved this study.

Outcomes: Participants had a mean age of 44 years (SD±9.1); mainly women (93%); nursing technicians or aides (91%); married or cohabitating (61%); an average number of 1.6 children (SD±1.2). Paired samples T-tests showed statistically significant results ($p < 0.05$) in both groups to mood states pre and post-treatment. However, Cohen's d effect size was more prominent in the Experimental group. Total BRUMS score: Experimental, $d = -0.72$ (medium); Placebo, $d = -0.49$ (small). Depression: Experimental, $d = -0.79$ (medium); Placebo, $d = -0.42$ (small). Confusion: Experimental, $d = -0.45$ (small); Placebo, $d = -0.18$ (trivial); Anger: Experimental, $d = -0.56$ (medium); Placebo, $d = -0.38$ (small).

Conclusions: Although the Experimental and Placebo groups had a similar effect on mood states, Bach flower therapy showed a better effect size in total BRUMS score, depression, confusion, and anger domains.

P01.10

Trauma-Informed Yoga for Survivors of Sexual Violence: a Scoping Review of the Current Literature

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Objectives: This scoping review aims to evaluate the current literature on trauma-informed yoga (TIY) for survivors of sexual and interpersonal violence to ascertain the healing benefits of this practice in this population.

Method(s): Scoping review methodology outlined by Arksey and O'Malley (2005) was followed to assess if and how trauma-informed yoga has been utilized to treat sexual and interpersonal violence survivors. Combination of terms used in the searches on PubMed and Scopus databases included "trauma-informed yoga," "domestic violence," "interpersonal violence," "PTSD," and "sexual violence." Title and abstract screening was conducted by two individual reviewers followed by full text review. Articles meeting all study criteria were included in the data extraction which contained main findings, limitations, inclusion and exclusion criteria of study population, and future directions.

Outcomes: The literature search yielded 3165 studies. After title and abstract and full text screenings, 19 studies met all study criteria. Trauma-informed yoga is a nonpharmacologic therapeutic option for sexual and interpersonal violence survivors. Sexual and domestic violence survivors who participated in TIY programs reported enhancement of mental and physical health, stress reduction, increased self-compassion, greater mindfulness, and decrease in PTSD and dissociative symptom frequency.

Conclusions: TIY has been shown to be beneficial to survivors of sexual and interpersonal violence by promoting peaceful embodiment without re-traumatization and enhancing affect regulation to decrease reactivity and agitation. The constellation of these effects can serve to improve the sequelae of trauma, but survivors may benefit from more long-term TIY programming to ensure a more robust and continued improvement in trauma-related symptoms. Future initiatives for TIY for sexual and interpersonal survivors should ensure greater accessibility (practicing spaces and costs) for survivors from different intersectional identities.

P01.11

Analysis of the Medical Use Status and Characteristics of Patients with Major Mental Health Disorders Among Traditional Korean Medicine Using Health

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Objectives: The purpose of this study was to analyze the medical use status of major mental disorders during the use of Traditional Korean Medicine (TKM) using health insurance claim data in South Korea, and to compare the characteristics of the group using only TKM and the group using both TKM and western medicine (WM).

Method(s): From 2016 to 2019, patients with major mental health disorders (ICD-10; F32, F33, F41, F43, F45, et, al.) were extracted from the health insurance claim data. The gender, age, insurance type, economic level, region, psychiatric drug prescription, and TKM treatment such as acupuncture were analyzed. By dividing the group into a group using only TKM (TM group) and a group using both TKM and WM (TW group), the current status of medical use, such as the number of days of medical use and cost, and factors of difference between the two groups were analyzed. Propensity score matching (PSM) was performed to match the distribution between the two groups.

Outcomes: The total number of subjects was 407,768. TM group was 282,698, TW group was 125,070. After PSM, the total number of subjects was each group 125,070. In women, the older, medical benefit, lower economic level, large cities, newly diagnosed patients, no other mental disorders, and no

psychiatric drugs, TK group had higher medical use than TW group. In terms of the number of days of medical use, in TK/TM group, the average number of hospitalization days for TKM per person per year was 11.7/12.9 days and TKM outpatient days 6.1/7.3 days, respectively. In terms of medical use costs of TKM, TK group was about twice as high as TW group. In TKM treatment, TK/TW group had the distribution of acupuncture 45.5%/94.0%, moxibustion 17.6%/40.4%, and cupping 15.2%/34.5%, respectively.

Conclusions: Among the patients with mental health disorders used by TKM, the higher the age group, the lower the economic level, large cities, the newly diagnosed, no other mental problems, and the absence of psychiatric drugs, the more cases were used only by TKM.

P01.12

Supporting Behavioral Change in Integrative Medicine: Insights from a Patient Survey and Systematic Scoping Review

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Objectives: A major challenge faced by medical practitioners is understanding how to best support patients in making sustainable, health-promoting behavioral changes (BC). Lifestyle factors are known to impact health outcomes and chronic disease risk, but long-term BC and treatment adherence rates are low, and there is limited guidance on optimizing BC support, especially in the context of integrative medicine (IM). Our objectives were to, first, develop an understanding of the knowledge base for BC in both conventional and IM, and second, to survey users of an IM technology platform to identify perceived BC barriers, strategies, needs, and preferences.

Method(s): We conducted a systematic scoping review of concepts in BC literature (e.g., theories, assessments, techniques, etc.). Findings guided the development of a 27-question survey that was emailed to 30,000 patient users of the Fullscript platform, who had received a treatment plan containing dietary supplements from their practitioner within the last 12 months. The invitation was skewed 70% toward patients of naturopathic doctors, medical doctors, osteopaths, chiropractors, and nurse practitioners.

Outcomes: There were 605 responses. Patients reported the most success with BC and adherence to recommendations for taking supplements, medications, and lab testing, and the least success with recommendations for diet/nutrition, physical activity, stress management, and sleep hygiene. Commonly reported barriers included financial cost, lack of time, and lack of motivation, positive attitudes or beliefs. Patients sought additional support with education, treatment plan simplification, goal-setting, and practitioner monitoring/feedback.

Conclusions: Supporting BC is challenging, yet evidence-based strategies are likely underutilized by practitioners. Results of our survey provide insightful strategies for practitioners that may enhance the quality of BC support needed to improve long-term treatment adherence and health outcomes.

P01.13

A Web-Based Mind-Body Intervention (Mindful Steps) for Promoting Walking in Chronic Cardiopulmonary Disease: Insights from a Qualitative Sub-Study

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Objectives: Given the negative consequences of physical inactivity in chronic obstructive pulmonary disease and heart failure, interventions are needed for promoting accessible forms of physical activity, such as walking. Mindful Steps is a multicomponent web-based intervention designed to promote walking, combining mind-body (mindful walking videos, movement classes) and other intervention components (pedometer with feedback and goal setting, motivational/educational website, online forum and reward system). The purpose of this qualitative sub-study was to explore, from the participant's perspective, the strategies that may have contributed to their walking behaviors and the most helpful intervention components.

Method(s): The parent pilot RCT compared the year-long Mindful Steps program to usual care. This study focuses on 6-month semi-structured qualitative interviews. Audio-recordings of interviews were transcribed. Data was analyzed using the constant comparative method to code transcripts, identify categories of meaning, and develop interrelated themes.

Outcomes: Participants ($N=19$) were 63% female with a mean age of 70.2 years ($SD=6.95$). A majority of participants noted qualitative improvements in walking. Through free response and targeted interview questions, participants described strategies learned from Mindful Steps that helped with their walking, including: 1) breathing regulation and awareness; 2) body awareness; 3) step goal-setting; and 4) other mind-body techniques (e.g., mindful lower extremity warm-ups). Participants described the pedometer with feedback, movement classes, and videos as the most helpful intervention components.

Conclusions: Participants generally found Mindful Steps helpful for improving walking and they provided insights into the types of strategies and intervention components that were most helpful. In future mixed methods analyses, qualitative and quantitative data will be integrated to help corroborate these findings and identify avenues for intervention improvement.

P01.14

Preoperative Meditation Education of Newly Diagnosed Breast Cancer Patients Leads to Adoption of Regular Meditation Practice

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Objectives: To determine the rate of adoption of meditation practices among breast cancer patients after preoperative meditation education.

Method(s): 26 patients were consented to a feasibility study of the impact of meditation on surgical pain among newly diagnosed breast cancer patients undergoing primary surgical management. Study participants were given two 5-minute pre-recorded guided meditations at a preoperative meditation induction and coaching session. Morning meditation focused on breathwork for pain management, increased energy and stress reduction. Evening meditation focused on a guided visualization to promote deeper relaxation and rest. Patients began the meditation program one week prior to surgery. They kept a daily meditation log for 12 weeks after surgery. Individual meditation coaching was provided at 4 and 12 weeks post op. Patients were surveyed at 12 and 24 weeks after surgery to determine continuation of regular meditation practice.

Outcomes: 26 patients were consented. 20 were initiated into a daily meditation practice for the 12 weeks after surgery. 6 patients were consented but not initiated due to treatment change or inability to attend meditation initiation appointment. At 12 weeks post op, 14 of the 20 patients had a continued regular meditation practice with the intention of continuing into the future; 3 had stopped their practice. 2 patients had become ineligible due to change in treatment plan. 1 patient was lost to follow up. Of the 14 patients who completed the 24 week survey, 12 patients maintained a regular meditation practice (60% of patients inducted; 46% of patients consented), 2 had stopped meditating. 12 patients intended to continue a regular meditation practice beyond 24 weeks and 2 declined.

Conclusions: Preoperative meditation education with support from recorded materials and meditation coaching engages newly diagnosed breast cancer patients in meditation practices and promotes ongoing meditation practices at 6 months.

P01.15

Parents' Perspectives on the Barriers and Benefits to Practicing Mindfulness

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Objectives: To understand parent perspectives on the barriers and benefits of practicing mindfulness and preferred approaches to learn about it.

Method(s): Qualitative interviews were conducted by phone with parents age 18 or older who have at least one child (0-18 years of age). Participants were recruited from the outpatient pediatric clinics of a large academic medical center. Parents were asked about their familiarity and level of engagement with mindfulness using Likert scale questions. Questions also focused on perceived barriers and benefits to practice and learn about mindfulness. Interviews were audio recorded and transcribed; thematic analysis was performed using the constant comparative method.

Outcomes: Twenty-six parents participated; 89% were female (n = 23) and 85% (n = 22) reported children under age 10. Almost half (46%, n = 12) reported they were "somewhat familiar" with mindfulness while over half (54%, n = 14) reported that they were familiar or very familiar. The first theme identified was the lack of knowledge and uncertainty on how to practice mindfulness. The second theme was lack of time

and support. One participant reported that they could practice if “I just had more institutional support.” The third theme was benefits to personal and relational health; one participant described how mindfulness, “gave me a positive outlook and calmed the chaos in my mind.” The fourth theme was the importance of trust in individuals sharing mindfulness information. One parent described parents’ willingness to learn about mindfulness from their healthcare provider: “I think I would because they know that person, it’s not a stranger.”

Conclusions: Findings support the importance of exposing parents to mindfulness practices by a trusted source and providing ongoing guidance on how to practice. Future studies should explore ways that parents can learn about mindfulness and other mind body practices and be supported through places they live and work

P01.16

Assessing Possible Link Between Mercury Toxicity and Risk of Breast Cancer

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Objectives: Mercury accumulation’s influence on cancer development is unclear. New technology, the Quicksilver Scientific Mercury Tri-test, is able to directly measure inorganic, organic, and total mercury accumulation and excretion from blood, hair, and urine. This study aimed to characterize patients’ mercury levels using the Tri-Test upon their recent diagnosis of breast cancer.

Method(s): 22 patients recently diagnosed with breast cancer received the Quicksilver Scientific Mercury Tri-test of the hair, urine, and blood between May 2021 and August 2022. Organic, inorganic, and total mercury were measured in blood as well as patient’s excretion of organic and inorganic mercury through hair and urine, respectively. Patients were divided into quintiles of lowest to highest mercury levels according to the CDC.

Outcomes: Of the 19 patients included in this interim data analysis, mean patient age was 55.8 years. 29.4% of patients had been diagnosed with stage 0 breast cancer, 23.5% with stage 1, 35.3% with stage 2, and 5.9% each stage 3 and 4. For organic mercury, 3 patients exhibited levels above the 75th percentile. For inorganic mercury, only 1 patient displayed levels above the 75th percentile. For total mercury, 3 patients fell into the 75-89th percentile, 2 patients were in the 90-94th percentile, and one patient displayed levels in the 95th percentile.

Conclusions: The expected level of mercury accumulation in the general population as reported by the CDC is lower than what is observed in this study. This preliminary analysis indicates elevated organic, inorganic, and total mercury accumulation in test subjects relative to CDC averages. However, there was no clear association between cancer stage and level of mercury accumulation. Further analysis and a larger sample size are needed to determine an association between mercury accumulation, excretion and stage of cancer at time of diagnosis.

P01.19

Adverse Childhood Experience Prevalence and Associations in Stroke and Transient Ischemic Attack Patients

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Objectives: This study aims to determine the prevalence of positive Adverse Childhood Experience scores (ACEs) in the stroke population, considering that all ACEs ≥2 are positive. Also, it aims to determine an association between positive ACEs and post-stroke residual symptoms.

Method(s): Patients were given multiple questionnaires as a pre-clinic intake before their initial visit, after 6 months, and after 12 months. The questionnaires included the Modified Ranking Scale (mRS), the Patient Health Questionnaire-2 (PHQ-2), the General Anxiety Disorder Screener (GAD-7), and the ACE score questionnaire. Also, patients were given another questionnaire assessing their post-stroke residual physical, mental, and psychosocial symptoms. A retrospective analysis was done of the patient's clinical records using electronic medical records.

Outcomes: Of the 146 patients in the trial, 30% (48) responded with a positive ACE score. 61% (89) of them were male and 39% (57) were female. 53 of these patients returned for a second visit (n=199). The mean age for the patients with the negative ACE scores was 67 years old and 61 for those with positive ACE scores. For patients with a positive ACE score, the average PHQ-2 score, and GAD-7 score was 3.08 and 6.23, respectively. On the other hand, patients with a negative score received a mean PHQ-2 and GAD-7 score of 0.82 and 2.14, respectively. 20% (40) of the patients with a negative ACE score received a score of 1 in the mRS compared to 9.55% (19) of the patients with a positive ACE score. No significant difference was observed between positive ACE scores and post-stroke prevention strategies.

Conclusions: In our cohort, 30% of the patients had a positive ACE score. Those with positive ACE scores reported more residual physical, mental, and psychosocial symptoms compared to those with negative ACE scores. Our study may indicate an association between post-stroke outcomes and ACE scores. Further studies are needed to better understand the prevalence and association of ACE scores in patients that have suffered a stroke/TIA.

P01.20

Prenatal Psychosocial Stress Experiences and Adolescent Depression

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Objectives: Recent studies have examined the role that maternal stress experienced throughout pregnancy has on the development of offspring mental health disorders through epigenetics. However, few studies have examined potential long-term effects of maternal stress exposure during pregnancy on adolescent mental health outcomes. This current study addresses this gap in the literature.

Method(s): We examined the association between prenatal psychosocial stress experiences and adolescent depression in a cohort of 11,853 mother-child pairs with teens born between 2006-2009. Using a prenatal health questionnaire, completed by mothers during pregnancy, we identified two exposure questions that assessed prenatal maternal psychosocial stress. The child then completed a PHQ-2 to assess depressive symptoms at 13-15 years old. All models were adjusted for child's sex, age, and race/ethnicity, Medicaid insurance status, and maternal education. Sensitivity analyses were conducted adjusting for maternal depression.

Outcomes: Children exposed in-utero to maternal home or work stress had an increased odds of reporting depressive symptoms in adolescence ($= 1.32 = 1.13-1.54$). In addition, children with mothers who reported seeking professional help for emotional problems during pregnancy also had increased odds of reporting adolescent depressive symptoms ($= 1.46 = 1.22-1.74$). Effects remained even after controlling for maternal depression assessed during pregnancy (aOR = 1.27, CI = 1.09-1.49).

Conclusions: Our results suggest that exposure to maternal prenatal stress may be an important risk factor in identifying and treating adolescent depressive symptoms even when maternal depression is not diagnosed.

P01.21

Women's Interest in the Development of an Integrative Group Medical Visit for the Menopausal Transition

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Objectives: The menopausal transition (MT) is a natural transition experienced by everyone with a uterus. Women experience symptoms for an average of 7 years but not all women can or choose to take hormone therapy. Thus, evidence-based non-pharmacological interventions are needed. Access remains a barrier due to a lack of health insurance coverage. Integrative Medical Group Visits (IMGV) have been used to deliver care to groups and are billable to medical insurance. The objective of the present study is to examine interest in, and barriers and facilitators to IMGV.

Method(s): We conducted a community engagement session (focus group) designed to elicit community members' opinions about IMGV, preferred integrative health components, and delivery format. Inclusion criteria: intact uterus; aged 40-55; reporting poor menopause-related quality of life and hot flashes; willing to provide menstrual history which indicates either late transition or early post-menopause stage; able to provide informed consent. The session was recorded and transcribed, and data were analyzed using inductive thematic analysis process.

Outcomes: Nine women participated; 75% were Caucasian and the average age was 46.9 years. Identified themes: 1) need for health education regarding MT symptoms, timing, duration, and MT stages; 2) feeling "crazy" and overwhelmed; 3) importance of social roles and pressures, including the sandwich generation; 4) keen interest in IMGV; 5) prefer telehealth delivery.

Conclusions: The study yielded important information about midlife women's need for health education on MT symptoms and strategies for symptom self-management delivered via telehealth. Strengths

include a highly engaged sample of stakeholders. Limitations: small sample size, limited sample diversity, limited generalizability. Study findings highlight the importance of engagement with potential stakeholders before the design and implementation of IMGV.

P01.22

A Successful Case of a Brain-Gut Therapy Intervention for Functional Heartburn

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Objectives: Interest is increasing in complementary and alternative methods to manage functional heartburn (FH), including brain-gut therapies such as cognitive behavioral therapy (CBT) and esophagus-directed hypnosis. However, there have been no studies examining the benefits of integrated treatment. This case report illustrates how an integrated brain-gut therapy was successfully utilized for a patient with FH complicated by generalized anxiety disorder (GAD).

Method(s): Patient was administered 26 individualized therapy sessions (esophagus-directed hypnosis, stress management, and CBT). Depression (PHQ-9), anxiety (GAD-7), somatization (PHQ-15), and health-related quality of life (QOL; PROMIS Global-10) measures were completed at baseline and during follow-up.

Outcomes: A 41-year-old male with GAD (treated with escitalopram oxalate and clonazepam) presented with 18 months of GI pyrosis, globus, and early satiety with no organic etiology. He was treated with a proton pump inhibitor (PPI), lifestyle changes, and diet management. Due to symptom persistence, he was referred to GI psychology. At baseline, anxiety was mild (GAD-7=6), depression was minimal (Phq-9=4), mental health QOL slightly impaired (T-score = 45.8) and somatization was low (PHQ-15= 8). By session 5, GI symptoms were significantly reduced, as well as anxiety (GAD-7 = 0) and somatization (PHQ-15= 4). By sessions 11 and 12, these improvements were maintained, his dose of escitalopram oxalate was lowered, and he was weaned off of clonazepam and PPI therapy; he was also able to expand his diet. By the final 26th session, FH symptoms and mental health symptoms had resolved and QOL exceeded the general population (Physical Health T-score = 62.5, Mental Health T-score=56.0).

Conclusions: An integrative brain-gut therapy may be an effective treatment for patients with FH. More rigorous evidence-based research is warranted to confirm these findings.

P01.23

Routine Practice of Shambhavi Mahamudra Kriya Results in Sustained Improvements in Stress & Well-being

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Objectives: Mind-body interventions (MBI) improve emotional balance and enhances a sense of productivity and self-confidence. This is especially pertinent in pandemic situation where in feelings of stress, anxiety and hopelessness are running high. With this study we hypothesized that exposure to a digitally delivered MBI 'Inner Engineering Completion Online' (IECO), would reduce stress and promote wellbeing in the short-term and sustain the change for a year.

Method(s): This prospective cohort study enrolled consenting participants registered for the IECO course. Participants learn a 21-minute mindfulness practice- Shambhavi Mahamudra Kriya. Each enrolled participant completed self-reported electronic surveys at five key time points: *baseline, immediate post-IECO completion and six weeks, six months & one year* after IECO completion. Effects of IECO practice were assessed using four well-validated neuropsychological scales: Perceived Stress Score (PSS), PERMA Profiler, Pittsburgh Sleep Quality Index (PSQI), and Mindful Attention Awareness Scale (MAAS). *Wilcoxon paired test with Bonferroni adjustment for post hoc analysis was conducted comparing outcomes between time points and P values of <0.05 were considered statistically significant.*

Outcomes: Of 375 interested participants, 174 were eligible. Forty-four participants who completed surveys at all 5 time points were identified as compliant participants. The baseline median score for primary outcome - perceived stress score was 13(IQR 7.75, 17.2); 11(8, 16) immediately post-IECO, 7.5(IQR 3.75, 14) at 6 weeks, 7(IQR 4, 11.2) at 6 months and finally a median PSS score of 7(IQR 3, 10.2) at 1-year post-IECO; demonstrating a 6 unit decrease in PSS scores over a year (p-value<0.01). Nonparametric Friedman one-way repeated measure analysis showed significant effect (p<0.01) with moderate effect size (W=0.3) on reducing PSS scores for one year.

Conclusions: Regular practice of remotely initiated Shambhavi Mahamudra Kriya showed persistent decrease in stress at 1-year.

P01.24

Impact of Inner Engineering Completion Online program on interpersonal relationships

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Objectives: Mind-body interventions (MBI) are hypothesized to improve emotional balance and enhance relationship quality especially with regards to interpersonal relationship. Relationship quality is also linked with psychological and physical health dimensions of well-being. With this study we examine the impact of Shambhavi Mahamudra Kriya on relationship quality.

Method(s): *Prospective observational cross-sectional study will enroll consenting participants registered for remotely delivered course: Inner Engineering Completion Online (IECO). Participants learn a 21-minute breathing and meditation practice called Shambhavi Mahamudra Kriya. Each enrolled participant was asked to complete self-reported electronic surveys at four key time points: baseline, immediate post-IECO completion and six weeks and six months after IECO completion. Effects of IECO practice will be assessed using well-validated neuropsychological scales at aforementioned time-points: Perceived*

Stress Score (PSS), Positive and Negative Relationship Quality Scale (PN-RQ), Flourishing Scale, and Interpersonal Mindfulness Scale (IMS). Additionally, semi-structured individual interviews will be conducted on interested participants at 6 weeks post-IECO to ascertain rich, descriptive information about their intervention experience and the impact of these practice on the participant's daily life & relationships.

Outcomes: *Analyses estimating means (SD) and 95% confidence intervals, or medians (IQR) for all continuous scales will be performed at each time point. Internal consistency for all outcomes will be assessed using Cronbach's α . Correlation analyses will be performed among all collected scales. Thematic and narrative analysis will be performed for qualitative data*

Conclusions: We anticipate that remotely delivered *Shambhavi Mahamudra Kriya* into routine life would result in improvement of quality of interpersonal relationships for complaint participants.

P01.25

Improving Feasibility and Acceptability of a Technology-Based Mindfulness Program, Wakeful: Updated Findings with a Cardiac Rehab Sample

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Objectives: Wakeful is an online mindfulness training tool that delivers a 9-week, sequentially paced curriculum informed by MBSR via an asynchronous, self-directed user experience. Findings from a first wave (W1) of testing with 15 cardiac rehab patients indicated overall feasibility/acceptability, however some refinements were needed. Following a mid-study pause to address W1 feedback, a second wave (W2) of cardiac rehab patients were enrolled into a single-arm, 9-week pilot study. The objective of this presentation is to provide W2 findings.

Method(s): Feasibility/acceptability was measured with 6 feasibility items (e.g., ease of use, navigating, hearing audio clearly) and 11 acceptability items (e.g., satisfaction, adequate information, appealing features, wanting to use it). The top 3 response categories "somewhat", "quite a bit" and "very much" were aggregated to indicate overall endorsement. Percentages $\geq 70\%$ were considered feasible/acceptable. Independent samples T-tests were used to compare ratings between W1 and W2.

Outcomes: Nineteen participants completed the W2 study. Feasibility ratings ranged from 90%-100% (83% improvement), two of which were statistically significant: ease in navigation ($p < .001$) and dashboard ease to find things ($p = .01$). W2 acceptability ratings ranged from 74%-95% (55% improvement) one of which was statistically significant: having the right amount of information ($p = .02$). Wishing to continue after the study and feeling greater social connection via the community did not meet acceptability criteria (65% and 37%, respectively). Among course completers, W2 participants engaged in slightly more classes over the 9-week period than W1 participants (61% vs. 57%, respectively) and practiced more minutes than W1 participants (Means = 297.9 vs. 219.47, respectively).

Conclusions: This study demonstrated adequate feasibility/acceptability of the Wakeful tool in this second wave of testing, and in many cases, improvements in participant ratings following W1 tool modifications.

P01.27

Impact of Mindfulness-Oriented Recovery Enhancement on Disability and Pain in Lumbosacral Radiculopathy: A Randomized Controlled Trial

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Objectives: Lumbosacral radiculopathy (LR), is a common neurologic condition with a prevalence of 3-5%, and mindfulness-based interventions are known to be efficacious in chronic pain management. This presentation will evaluate Mindfulness-Oriented Recovery Enhancement (MORE) as compared to treatment as usual (TAU) on self-reported disability and pain in a randomized controlled trial. This study builds upon early findings presented at ICIMH 2022 and was collaborative effort between the three academic institutions.

Method(s): After completing a screening and baseline visit where disability and pain were evaluated using the Oswestry Disability Index (ODI), painDETECT Questionnaire (PDQ), and Visual Analog Scale (VAS), participants were randomly assigned to the MORE or TAU group for 8 weeks. Participants completed the ODI and PDQ again at follow-up and completed the VAS daily during the intervention.

Outcomes: Data collection finished in January 2022. The following baseline descriptive characteristics were presented at ICIMH 2022 and will be built upon for this presentation: MORE ($n = 37$) and TAU ($n = 34$), age was 48.6 ± 11.6 y (mean \pm SD) vs 45.0 ± 11.5 y; sex distribution was 84% female vs 79% female; LR duration (years) was 15.7 ± 20.3 vs 12.2 ± 11.3 ; and disability (ODI) scores were 19.7 ± 7.7 vs 21.8 ± 10.3 for the MORE and TAU groups, respectively. Randomization prevented group differences (all p -values $> .05$). The analysis planned for this presentation will utilize mixed modeling and growth curve analysis to evaluate efficacy of MORE for improving ODI, PDQ, and VAS scores.

Conclusions: This study was successful in bridging institutional gaps for recruitment with a team of researchers from a Complementary and Integrative Health institution as well as a larger combined research institution and hospital system. A limitation of this study remains poor retention (62%), and future studies may examine the institutional collaboration itself to streamline recruitment and strengthen the researcher-clinician-patient relationship.

P01.28

A Multi-Institution Collaboration for a Randomized Controlled Trial on Mindfulness-Oriented Recovery Enhancement

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Objectives: The movement towards institutional research collaborations has created opportunities for the

advancement of intra-/interdisciplinary science. This presentation evaluates the success of a three-site approach to recruitment for a randomized clinical trial on Mindfulness-Oriented Recovery Enhancement for patients with chronic lumbosacral radiculopathy: National University of Natural Medicine (NUNM) Health Center, Oregon Health and Science University (OHSU) Spine Center (SPC), and OHSU Comprehensive Pain Center (CPC).

Method(s): Upon mutual IRB approval, an Epic query was designed to capture eligible patients. A study coordinator at OHSU performed the same task for SPC and CPC patients with updated cross-referenced queries conducted every two weeks. Recruitment materials were sent virtually to eligible patients, with additional contact via a series of three phone calls one-, two-, and four-weeks post-outreach. Prior to closing enrollment, a final email was sent to all unreached patients. This design included providers from at least nine health disciplines: chiropractic, psychology, psychiatry, physiatry, massage, acupuncturist, naturopathy, interventional radiology, and nurse practitioners.

Outcomes: Between January 2021 and 2022, a team of eight research staff contacted 139 patients from NUNM and 906 patients from the OHSU SPC and CPC. Of these 1,045 patients contacted, 71 (6.8%) were enrolled in the trial. Drop-out and lost-to-follow-up (LTFU) was 27 (38%). 11 (15%) patients were recruited from NUNM, 31 (44%) from the SPC, and 27 (38%) from the CPC.

Conclusions: This project successfully developed a functional and institutionally collaborative recruitment strategy. Despite achieving our target enrollment rate (5-10%), drop-out/LTFU was higher than expected. In addition to factors intrinsic to the study, we believe recruitment and retention would have benefited from stronger bi-directional communication between the research team, physicians, and clinics to minimize patient concerns.

P01.29

Auricular Point Acupressure to Manage Chronic Low Back Pain in Older Adults: A Randomized Clinical Trial

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Objectives: This study aims to test auricular point acupressure (APA) as a non-invasive, nonpharmacological self-management strategy to manage chronic low back pain.

Method(s): This prospective randomized controlled study randomly assigned participants assigned into three groups: *APA* (active ear points related to low back pain with stimulation), (2) Sham (non-active ear points related to low back pain, with stimulation), (3) Control (enhanced educational control to control time and attention). Participants in the APA groups received four weekly interventionist-administered APA (~15 minutes per session) or education counseling (~15 minutes per session). We randomized 272 independent, community-dwelling participants who were recruited from metropolitan Baltimore, Maryland. The study protocol was approved by the institutional review board of the Johns Hopkins School of Medicine. All participants provided written informed consent.

Outcomes: For pain intensity, compared with control, APA reduced average pain severity score by -1.5 points (95% CI, -2.1, -0.9; $p < .001$; Cohen d , -0.78); and sham reduced average pain severity score by -2.0 points (95% CI, -2.6, -1.3; $p < .001$; Cohen d , -0.94) from baseline to post-interventio. For physical function,

compared with control, APA reduce RMDQ score -1.7 points (95%, -3.3, -0.1. Cohen d, -0.38) and sham reduced RMDQ score -2.5 points (95%, -4.1, -0.8. Cohen d, -0.46) from baseline to post-intervention. Sham has higher reduction in pain intensity (0.4), interference (1.0) and physical function (0.7), but noninferiority of sham to APA was not demonstrated. In both APA and Sham, the reduction in pain intensity, interference, improved physical function persisted at 1M-, 3M-, and 6M-follow up. Noninferiority of sham to APA were not demonstrated in the study outcomes.

Conclusions: APA and Sham produced greater pain reduction and physical function than control, but would not demonstrate noninferiority between APA and Sham.

P01.30

Biological Age Reduction in a Group of Participants Using a Low-Carbohydrate Diet and Lifestyle Modification

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Objectives: Aging is one of the greatest problems of our time. We focused on the prevention of the main pathways of aging and the optimization of metabolic health in the study group. With our work, we wanted not only to change the indicators of biological age but to show the correlation of changes in biomarkers in preclinical references with changes in biological age.

A small group of participants followed a low-carbohydrate diet and some basic rules to optimize their lifestyle. Some of the participants used a fasting-mimicking diet through certain cycles.

The biomarkers of complete blood count and biochemistry tests were measured. We conducted an assessment of biological age by the formulas of Morgan Levin and aging.ai

As a result, we received an uneven decrease in biological age with a maximum result of 4 years in 6 weeks of interventions. We have found that the reduction of biological age occurs most effectively in the group of women of fertile age.

This work brings understanding to the structure of changes in biological age and requires a broader consideration of the correlation of biological age with preclinical lab test references.

Method(s): We worked with a group of subjects in a trained coach program that limited carbohydrate intake with no calorie control. Recipes were offered. Laboratory parameters were studied before and after the protocol. Next, the biological age was assessed using different formulas.

Outcomes: We have observed a decrease in biological age and improvement in blood lab tests after short nutrient interventions and lifestyle changes.

Conclusions: As a result, we received an uneven decrease in biological age with a maximum result of 4 years in 6 weeks of interventions. We have found that the reduction of biological age occurs most effectively in the group of women of fertile age. This work brings understanding to the structure of changes in biological age and requires a broader consideration of the correlation of biological age with preclinical lab test references.

P01.31

The Effectiveness of Songwriting for Parents of Hospitalized Children: A Pilot Music Therapy Program

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Objectives: Parents of hospitalized children are exposed to a multitude of psychological, emotional, and physical stressors. The music therapy program at UCLA Health, supported by philanthropic funds, provides support to children, parents and caregivers while hospitalized. The objective of our study was to examine the benefits of a songwriting intervention to reduce parental stress levels during hospitalization.

Method(s): Board-certified music therapists facilitated songwriting sessions with parents of hospitalized children within two inpatient children's hospitals. Fifteen parents' stress levels were measured over the course of five months. The validated Stress Numeric Rating Scale (SNRS-11) was used to measure parents' pre and post stress levels when songwriting interventions were facilitated, with 0 indicating low stress levels and 10 indicating high stress levels.

Outcomes: 15 participants were included in the study. Results showed a significant reduction in mean stress levels, from 6.07 pre-session to 2.33 post-session (p=0.002).

Conclusions: Our findings support the existing data on the effectiveness of songwriting as part of a music therapy program to provide non-pharmacological stress management in a fast-paced clinical environment. Future studies should explore the metrics of implementing a music therapy program across various different clinical settings, including steps to secure funding and gaining hospital leadership support.

P03.32

Mushroom Supplements in Cancer: A Systematic Review of Clinical Studies

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Objectives: Patients seek clinical guidance on mushroom supplements that can be given alongside conventional treatments, but most research on such fungi has been preclinical. The current systematic review focused on clinical studies of mushrooms in cancer care conducted in the past 10 years.

Method(s): A systematic literature search through the databases: Medline, Embase, Scopus, and Cochrane Library for mushrooms and cancer were performed using taxonomic, colloquial, and Chinese or other names of mushrooms (including but not limited to Reishi, Turkey Tail, Shiitake, Maitake, Lion's

Mane, Chaga, and Huaier granule) and cancer.

Outcomes: Of 136 clinical studies identified by screening 2349, 39 met inclusion criteria: 15 randomized control trials (RCTs), 11 prospective and 13 retrospective studies. The study selection process was recorded in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram. The studies included 12 different mushroom preparations. A survival benefit was reported using Huaier granules (*Trametes robiniophila* Murr) in 2 hepatocellular carcinoma studies, 1 breast cancer study. A survival benefit was also found in 4 gastric cancer studies using polysaccharide-K (polysaccharide-Kureha; PSK) in the adjuvant setting. Eleven studies reported a positive immunological response. Quality-of-life (QoL) improvement and/or reduced symptom burden was reported in 14 studies using various mushroom supplements. Most studies reported adverse effects of grade 2 or lower, mainly nausea, vomiting, diarrhea, and muscle pain.

Conclusions: Most reviewed studies showed favorable effects of mushroom supplements in reducing the toxicity of chemotherapy, improving QoL, favorable cytokine response, and possibly better clinical outcomes. Nevertheless, the evidence is inconclusive to recommend the routine use of mushrooms for cancer patients, as many reviewed studies are small and observational. More trials are needed to explore mushroom use during and after cancer treatment.

P02: Clinical Practice Guidelines and Best Practices (e.g., evidence-based practice)

P02.01

Effects of Yoga on Patients with Parkinson's Disease: A Systematic Review and Meta-Analysis

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Objectives: We conducted a systematic review of randomized controlled trials to evaluate the effects of yoga for people with Parkinson's Disease, focusing on motor function, activities of daily living, quality of life, emotional functioning, sleep, and adverse events at short (≤12 weeks) and long term.

Method(s): We searched 4 electronic databases from inception to December 2021 and screened studies for inclusion. We extracted key study characteristics and outcomes and assessed risk of bias using the Cochrane tool. We used RevMan 5.4 software to combine study data when appropriate. The I² statistic was used to represent the percentage of variation between studies due to heterogeneity and GRADE methods were used to evaluate the certainty of evidence.

Outcomes: We retrieved 966 records and included 14 trials published from 2010-2021. Yoga was significantly better than no exercise for motor function and quality of life at short term, but the evidence is very low certainty due to risk of bias, heterogeneity, and low precision. Yoga was also superior to no exercise at short and long term on several tests of function, balance, gait, and fear of falling, but the certainty of the evidence is low or very low. Compared to other exercise at short term, there was probably

no difference in motor function (moderate certainty evidence), and there may be better quality of life with yoga (very low certainty evidence). There was no consistent pattern of differences between yoga and other exercise on other outcomes at short and long term (low or very low certainty evidence). There was little mention of adverse events, and risks are uncertain.

Conclusions: Yoga may be better than no exercise and similar to other exercise for Parkinson's Disease, but the evidence is based on small studies with methodological issues. More and larger studies need to be conducted to clarify the effects of yoga compared to no exercise and to various other forms of exercise and strengthen an evidence base for practice and policy.

P02.02

Practice of Ayurvedic Medicine in A Collaborative Team-Based Integrative Care Setting within an Academic Medicine Center: Narrative Case Presentation

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Objectives: Ayurveda, derived from a Sanskrit term meaning "science of life" is one of the world's oldest medical systems. We conducted an observational narrative of an Ayurvedic approach to patients with chronic conditions within an integrative clinic at an academic medicine center. These patients were struggling with management via standard care and have chosen an Ayurvedic approach.

Method(s): Combination of literature review of the benefit of Ayurvedic practices for chronic condition management, and observation of Ayurvedic practice applied to small cohort of patients.

Outcomes: Observed patients reported high satisfaction from added Ayurvedic care. Patients were able to appreciate their health in a more holistic framework and begin implementing continuous lifestyle changes that led to improvement in quality of life. For example, one patient reported that Ayurveda "helps reflect more inward versus outward," and "understanding the inner workings of not just the body but also the soul." Integration of Ayurveda into an academic integrative medicine center was seemingly easy. Ayurvedic provider fit very well into the existing clinic system, providing valuable insight during staff meetings, not just to patients she was treating but to others as well. The practitioner quickly became a full member of the team and was able to quickly build her panel of patients while also serving in a part-time academic/administrative role.

Conclusions: Despite large differences in practice of Ayurveda versus existing biomedical model, integration of Ayurveda into the clinical work of at least one academic health center was achieved with ease and clear benefit to existing patients. Additionally, having an Ayurvedic practitioner engaged in workings of administrative aspect of the integrative training programs provided additional insight and broadening of teaching offerings for trainees.

P02.03

What we Give our Attention to: Psychological Flexibility and Controllability Awareness Predict Diabetes Prevention Behaviors and Diabetes Distress

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Objectives: Type 2 diabetes, a leading cause of morbidity and mortality in the US, is a preventable chronic disease. Yet, 70% of those with prediabetes will likely develop diabetes due in part to demands of self-management regimens. In a cross-sectional study of individuals with diabetes or at-risk for developing diabetes, we identified key psychological tendencies related to diabetes prevention / management behaviors and diabetes distress in order to inform targeted psychological approaches to enhanced outcomes of diabetes prevention programs.

Method(s): We collected a sample of United States adults who had Type II Diabetes, a Prediabetes diagnosis, or were high-risk (N = 165). Participants completed The Diabetes Self-Management Questionnaire (associated with glycaemic control), The Brief Diabetes Distress Scale, The Diabetes-Related Controllability Awareness Inventory; and The Personalized Psychological Flexibility Index.

Outcomes: Results of the regression of the final stepwise elimination indicated that controllability awareness explained 27.5% of the variance in diabetes prevention / management ($R^2=.28$, $CI, F(1,160) = 60.77, p < .001$) - and controllability awareness and diabetes-related perceptions of threat explained 57.7% of the variance in diabetes distress ($R^2=.58$, $CI, F(3,156) = 71.08, p < .001$). In a subset (N = 84), psychological flexibility (non-avoidance subscale) explained 35.7% of the variance in prevention / management behaviors ($R^2=.36$, $CI, F(1,81) = 44.88, p < .001$) and 38.1% of the variance in diabetes distress ($R^2=.27$, $CI, F(2,80) = 15.14, p < .001$).

Conclusions: Controllability awareness and the non-avoidance dimension of psychological flexibility consistently survived into most of the final backwards elimination models, indicating that these constructs were most reliably related to diabetes prevention / management behaviors and diabetes distress. Therefore, these psychological tendencies should be targeted in diabetes prevention interventions.

P02.04

Breaking the Silos of Psychiatry and Neurology: Practical Lessons from Building and Piloting an Embedded Psychology Clinic in Multiple Sclerosis

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Objectives: Multiple sclerosis (MS) is a chronic neurodegenerative disease that onsets in the early 30s, impacting people with MS (PwMS) and their care partners (together termed *dyads*). Adjusting to MS is challenging and requires early psychological care. We embedded a psychology service in the Massachusetts General Hospital (MGH) MS clinic to provide timely care to dyads. We present the initial phase of building this collaboration and a case study of one MS dyad who participated in this clinical service.

Method(s): By assessing patient needs from MS neurologists and nurses, we developed a clinical

research proposal to offer mental health services within the MS clinic. We piloted a virtual, six-session mind-body program in one MS dyad. We collected pre and post questionnaires of depression and anxiety (Patient Health Questionnaire-9, Generalized Anxiety Disorder-7), and exit interviews to characterize program impact.

Outcomes: The MS psychology clinic offers individual, dyadic, and group-based interventions led by a clinical psychology fellow. Our pilot dyad included a 60-year-old female living with MS for 2.5 years and her informal care partner. The program's skills included: mindfulness, dialectics, acceptance, and values-based living. The patient reported a decrease in depressive symptoms from moderate (score of 10) to mild (6), with less frequent anhedonia, fatigue, and feelings of failure. Self-reported anxiety increased from pre (0) to post (4; below clinical threshold). In the exit interview, the patient noted improvements in acceptance, communication, and decision-making. The care partner's improvements in mood were linked to deep breathing, mindfulness, and cognitive defusion. The dyad reported appreciation, validation, and greater confidence to cope together.

Conclusions: The MS psychology clinic was established through assessment with stakeholders at MGH. This clinical innovation offers a model for breaking departmental silos and providing whole health care to patients within their family systems.

P02.05

Development of a Flexible Yoga Therapy Protocol for Application to Clinical and Research Settings

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Objectives: The aim of this intervention design was to create a yoga therapy (YT) protocol for FQHC patients with chronic pain that is standardized for replication with flexibility for individualized care. The YT protocol was to be combined with a previously developed flexible acupuncture intervention.

Method(s): A team of 6 yoga professionals experienced in chronic pain care met in person and virtually to develop the protocol from knowledge of the research literature and shared clinical experience. Categories of yoga practices were identified that would be most relevant and appropriate for chronic pain management and feasible in a FQHC. Within each category, specific practices were chosen based on: 1) usefulness for chronic pain management, 2) safety, 3) ease of teaching and learning, and 4) cultural appropriateness, to be selected by the yoga provider for each individual study participant as clinically indicated.

Outcomes: The final manual included: 1) stabilizing poses, 2) mobilizing poses, 3) breathing practices, 4) relaxation, 5) mental practices, and 6) applied philosophy. Each study participant begins with a 40-min. intake to inform initial practice selection. Subsequent sessions (n=10) are 30 min. with 1-2 participants receiving care at a time. Every first session (visit 2) begins with diaphragmatic breathing before the introduction of additional practices and usually includes some physical postures (asana). All practices are adapted for each individual. After 10 sessions, each participant should receive at least one

practice from each of the 6 categories. Participants are given written instructions, scripts, and/or images to inform home practice. SOAP notes kept in each participant chart ensure continuity of care and consistency of practices across all sessions regardless of clinical staff schedules.

Conclusions: A flexible protocol may resolve the perceived tension between individualized care and evidence-informed practice in integrative health. Further clinical and research application is needed.

P02.06

Integration of Behavioral -Cognitive therapies and biofeedback for the treatment of headache - A case study

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Objectives: Despite advancements in pharmacotherapies for headache treatment not all patients respond well, are good candidates for, or consent to regimens that combine preventive and acute medications due to intolerable side-effects. Patients often voice dislike of taking medication without understanding contributing or maintaining factors. This case study seeks to demonstrate the efficacy of combining behavioral and cognitive interventions with biofeedback for the treatment of headache and related comorbidities.

Method(s): 42-year-old male Veteran diagnosed with unspecified headache disorder in the context of medication overuse headache, neuralgia, OSA with CPAP non-adherence, insomnia, and anxiety was referred by his neurologist for behavioral management. He quit his job due to headache episodes. Medical history was remarkable for resection of right vestibular schwannoma that caused dizziness, balance issues, and headaches off and on that progressed into severe and daily headaches overtime. Pt. experienced rt facial palsy and V2 V3 numbness since the surgery and did not respond to gabapentin, amitriptyline, duloxetine or Botox injections. MRI and MRA studies were unremarkable. The Veteran completed psychoeducation on headache disorders and their treatment, CBT-I, and biofeedback. He completed headache diaries.

Outcomes: Pt. completed 2 CBT sessions where he learned that most of his symptoms were consistent with tension-type headaches. He became aware of the contribution of poorly managed stress, anxiety, inconsistent nutrition and poor sleep quality on headaches. After 4 biofeedback sessions the Veteran was able to practice mindfulness, paced breathing at resonance frequency, reduced sEMG on frontalis with zero headaches in two months. The Veteran discontinued biofeedback, returned to work, and neurology discharged him to primary care.

Conclusions: This case study demonstrates the importance of interdisciplinary consultation and supports evidence-based practices for headache treatment.

P02.07

Investigating the Experience of an Audio-based Mindfulness vs. Control Program for Mothers with Infants in the NICU

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Objectives: Hospitalization of U.S. infants in the neonatal intensive care unit (NICU) is common and highly stressful for parents. Mothers of infants in the NICU are more likely to experience psychological distress including depression, anxiety, stress, and post-traumatic stress, which can have lasting negative impact on mother and infant. The aim of this study was to explore the experience of an audio-based mindfulness intervention for mothers of infants in the NICU.

Method(s): This qualitative evaluation was embedded in a pilot RCT of an audio-based mindfulness intervention consisting of two sets of audio practices for mothers of infants in the NICU. We interviewed participants up to two times each (after they received Set 1 and one month after their infant was discharged home). Key domains of the in-depth interviews included the NICU experience, coping with stress and difficult emotions, previous experience with mindfulness, and perspectives on the program. Data analysis of the interview text was conducted using an iterative, thematic constant comparison process informed by grounded theory.

Outcomes: Thirty-five interviews with 26 mothers were conducted (15 intervention participants, 11 control participants). Overall, participants had favorable experiences with the intervention and control programs. Compared with controls, four themes emerged regarding the mindfulness intervention, which helped mothers: 1) calm the chaos through re-centering and fostering connections, 2) find comfort through non-judgmental acceptance, 3) gain perspective on the situation, and 4) facilitate self-care.

Conclusions: Maternal stress as a result of infants' NICU stays has negative implications for maternal and child wellbeing yet remains an under-appreciated public health issue with few effective interventions. Mindfulness programming may be feasible, acceptable, and beneficial for mothers with infants in the NICU.

P02.08

Integrative Medicine Approach for Non-alcoholic Fatty Liver Disease

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Objectives: Non-alcoholic fatty liver disease (NAFLD) is a leading cause of chronic liver disease and affects 24% of the U.S. adult population. NAFLD is associated with obesity and metabolic syndrome; weight loss is the primary therapy. Currently no drugs are approved, so integrative approaches for NAFLD should be considered.

Method(s): Starting January 2022, NAFLD patients were seen jointly by providers in Departments of

Gastroenterology/Hepatology and Integrative Medicine (IM). Detailed diet advice, emotional eating management, vitamins/supplements counseling, referrals to holistic psychotherapy, chiropractic/massage therapy, acupuncture or yoga were provided. We assessed 3-month weight loss effectiveness, and how well the combined Hepatology/IM approach was perceived.

Outcomes: Overall, 73 NAFLD patients (32M/41F) received IM consultation (mean age: 52.4; range 18-79), with average BMI of 35 (range: 18.5-60) at baseline. After 3 month follow-up, 22 out of 31 (71%) patients reported decreased BMI (-0.8; range -5.2 to 1.9). Combined Hepatology/IM approach was perceived well by all patients, and 60% (39 out of 65) considered IM to be beneficial. Many felt holistic psychotherapy were helpful to manage emotional eating and/or sugar addiction. 10% were able to resume exercise after receiving chiropractic and/or acupuncture and/or for back pain. 20% had multiple conditions such as irritable bowel syndrome and/or small intestinal bacterial overgrowth, fibromyalgia, autoimmune disorders, chronic fatigue or migraine and were suspected to have underlying issues of microbiome imbalance and intestinal hyperpermeability ("leaky gut").

Conclusions: Combined Hepatology/Integrative Medicine intervention has demonstrated a very promising outcome by providing "holistically tailor-made" lifestyle interventions possibly due to individual differences in patient clinical profiles. Additional studies that include long-term follow up may be necessary before incorporating into standard clinical practice.

P03: Dissemination and Implementation

P03.01

Emergency Department Provider Perceptions of Implementing Nonpharmacological Pain Treatment

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Objectives: To examine provider perceptions on the benefits, barriers, and facilitators of implementing conventional and complementary nonpharmacological pain strategies within the emergency department (ED).

Method(s): ED providers who treat patients with acute pain completed a semi-structured interview with a trained qualitative researcher. Interviews were audio-recorded and transcribed. The interview focused on the provider's current pain management approach, perceptions of nonpharmacological treatments, and barriers and facilitators of implementing these treatments within the ED. A hierarchical coding system was developed using the interview guide, the Consolidated Framework for Implementation Research, and preliminary transcript review. Transcripts will be coded and analyzed using an iterative inductive-deductive approach.

Outcomes: Seven physicians (females = 1, median years of experience = 10.5) participated in the study. The iterative process of codebook development allowed us to identify preliminary themes. Pain was a common complaint: "60% of my patients have some form of active pain, and so maybe 20 to 30% have some sort of chronic pain." Chronic pain was viewed as complex and influenced by psychosocial factors.

Current approaches to pain varied based on pain type and severity and often involved multimodal pharmacological or topical treatments. Physical therapy was perceived as potentially helpful for pain. ED providers had limited knowledge of other nonpharmacological options such as acupuncture or mindfulness: "I know that there's benefit. But I don't have that personal experience per se, to be able to relate to the patient in that way." Overcoming patient, provider, and systems-level barriers was noted as important to overcome for successful implementation.

Conclusions: Based on our preliminary data, ED providers see potential value of some nonpharmacological options for pain. However, providers are uncertain of the feasibility to implement due to multi-level barriers.

P03.02

Designing a Stress Management and Resiliency Training Primer for New Parents Using the Baby2Home App

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Objectives: The eight-week Stress Management and Resiliency Training - Relaxation Response Resiliency (SMART 3RP) program is an effective, manualized therapeutic approach that has been applied to numerous health conditions. Our objective was to adapt the existing SMART 3RP program into a digital format focused on the transition to new parenthood that could serve as a behavioral intervention technology (BIT) within the Baby2Home app – built to support new parents from birth until 12 months post-delivery.

Method(s): In 2022, we held three meetings with an interdisciplinary collaborative team from NM and MGH comprised of OBs, pediatricians, a neonatologist, psychologists, developers, User Experience experts, and physician experts in SMART 3RP and mind-body medicine. In the first meeting, we focused on common goals. In the next two meetings, we redesigned SMART 3RP content to make it suitable for a brief and interactive digital format, and we put it through expert review. We added features to bolster parents' skill building, including: 1) guided audios to enhance learning, 2) content for new parents, 3) self-paced modules, and 4) placement of SMART 3RP within an app that uses a private messenger system to the care manager. We will launch the app into the clinic in October 2022 and track parent engagement in 2023.

Outcomes: The digital app has eight modules with SMART 3RP content, with education for each

treatment strategy, guided audio narratives to reinforce skill understanding and practice, skill modules to generate home-based practice, a private messaging interface for the clinical care manager and parent to communicate. Content was adapted to be relevant to individuals transition into their role as parents. We will evaluate parent usage patterns in 2023.

Conclusions: Use of SMART 3RP strategies can be realistically translated into a digital health app for new parents. Given the modality, we can evaluate user engagement of the modules, skills, homework, and messaging systems.

P03.03

Integrating Mind-Body Medicine into Primary Care: an online pilot program

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Objectives: The objective of this project was to pilot a mind-body medicine program for our academic primary care practice patients in the form of online skills groups. We assessed the feasibility of embedding these skills groups within primary care and monitored recruitment efforts, participant demographics, patient satisfaction, and retention.

Method(s): Participants were recruited from our Medicaid primary care patient population at our academic internal medicine practice at the University of California San Francisco. Sessions were experiential and focused on different techniques: diaphragmatic breathing, meditation, guided imagery, mindful eating, biofeedback, expressive movement, drawing, and journaling. These groups followed the Center for Mind-Body Medicine 8-session continuity skills group format. Satisfaction with the program and acceptability was evaluated based on participant attendance and an online survey at the completion of group. The group was free of charge and was sponsored by a grant from the Mount Zion Health Fund.

Outcomes: Twenty patients participated in two mind-body medicine skills groups. At the time of this abstract writing, the second group is ongoing. Of the ten participants in the first group, six were female and mean age was 44 years old (range: 27-53). 40% of the participants were non-Latinx White. 50% of participants completed the 8-session group. Average attendance was 6/10 participants per session. Four participants completed the final survey, 100% of whom would recommend the mind-body medicine skills group to others and reported that they used what they learned in their everyday life.

Conclusions: Our mind-body medicine skills groups were feasible (moderate attendance and retention rate) and well-accepted (highly rated on final survey). Participants also identified strengths and weaknesses of the program and format for improvement of future groups. We anticipate reporting complete data from the full pilot at the Symposium.

P03.04

Shared Medical Appointments (SMA) at an Academic Institution: An Engaging, Effective, Efficient, Educational Model Benefiting Patients and Clinicians

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Objectives: SMAs were implemented at Weill Cornell Medicine New York Presbyterian (WCM/NYP) to offer prevention and symptom management of lifestyle related chronic diseases to patients and model to future physicians.

Method(s): Virtual SMAs were piloted by a physician at the Integrative Health Center at WCM/NYP in oncology, lifestyle change, women's health, narrative medicine, and yoga in 2021-2022 including a Registered Dietitian, yoga instructor, chef, medical students, and residents.

Outcomes: From January 2021 - August 2022: 237 attendees in Lifestyle Change SMA (18 months; 3-18 patients/session), 240 in Oncology SMA (11 months; 6-19/session), 127 in Yoga SMA (13 months, 2-9/session), 103 in Narrative Medicine SMA (7 months; 1-10/session), and 83 in women's health SMA (3 month; 2-11/session). Topics: culinary medicine, nutrition literacy, herb supplement review, mind body therapy, acupuncture/acupressure, Traditional Chinese Medicine/Ayurvedic Medicine, and medical humanities. Patients benefits: medical education, motivational interviewing for behavioral change, peer-to-peer support, creation of self-agency, culturally responsive care, and shared goals/resources. Patient recruitment: clinical referrals, flyers, institution-wide events blasts, local faith-based community health education leaders serving underserved high risk cardiovascular populations. Classes were evaluated using surveys. A majority found the SMA programs beneficial to quality of life; some chose to participate in multiple programs. Physician leaders reported increased work satisfaction, productivity, patient volume, and personal well-being. Clinician lifestyle practice/attitude toward lifestyle medicine counseling are known to impact patient care.

Conclusions: Virtual SMA is feasible, cost-effective, time-efficient to benefit vulnerable patients and clinicians with interest and satisfaction among stakeholders. Pilot findings of SMA are promising for both patient and clinician well-being. Further research and evaluation recommended.

P03.05

Cooking Classes in a Community Garden: Skills to Increase Food Sovereignty

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Objectives: Bickerdike Redevelopment Corporation, a major developer of low- and mixed-income housing in Humboldt Park, Chicago, IL, owns and operates two community gardens. These function to: beautify the neighborhood, provide a safe and welcoming space, and provide fresh, organic produce. The aim of this project was to increase engagement with the garden and equip community members with the skills and resources to eat and cook healthy.

Method(s): Bilingual cooking classes were taught by the author using demonstration and sampling. Classes were paired with other large well-known community events to both increase exposure to new foods and knowledge of nutrition. Recipes were chosen to be both culturally relevant and to increase exposure to a variety of fruits and vegetables. A bilingual cookbook, of the recipes made in the classes will be shared with all that attended one event or more, to have something to consult.

Outcomes: Over 4 cooking sessions, over 200 community members sampled new foods, learned how to incorporate more fruits and vegetables, and shared knowledge amongst each other. Many people were pleased with the taste of each dish and the nutrition it incorporated. The first version of the cookbook is under revision and there is hope for future version to be collections of recipes shared amongst community members.

Conclusions: Through a 4 cooking classes and the first edition of a community cookbook, residents were able to engage more deeply with the garden and learn new recipes and skills for healthy cooking and eating. Potential barriers to scalability are specified funds, time of volunteers available to run events, and potential organization restructuring that de-prioritizes garden events. Furthermore, this work may be continued as an integral part of future garden events, having a lasting impact on the community.

P03.06

Tracking Utilization of Complementary and Integrative Health and Well-being Services at Work: VA Employee Whole Health

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Objectives: Whole Health empowers and equips people to take charge of their health and well-being and live life to the fullest. It is the model of care delivery currently being implemented for all Veterans within VA. It is equally important that VA employees, who provide care for Veterans and their families, give themselves the same care and attention. VA has embraced Employee Whole Health (EWH) as a key component of supporting employee well-being. EWH represents a proactive model that is protective against stressors and challenges employees face. VA Medical Centers are at varying levels of EWH implementation. One challenge has been tracking EWH services as employees are not included in the Electronic Health Record. The objective of this presentation will be to describe a new tracking system currently being deployed in VA to capture the provision and utilization of general well-being services and complementary and integrative health (CIH) services for employees.

Method(s): Since January 2022, VA has been piloting a system to track well-being services delivered to employees. The tracking system was created using VA's Light Electronic Action Framework (LEAF), which allows for real-time data and status tracking. The EWH services being tracked include a wide variety of general well-being and CIH services currently being offered to VA employees, including health coaching, nutrition, movement approaches, and a range of CIH services for well-being. To date, the tracking system has been pilot tested in two Veterans Integrated Service Networks and rolled out to several other medical centers.

Outcomes: At present, 36 sites have input some data into the system. Between January-August of 2022, there were a total of 772 unique offerings for employees captured with a total of 12,200 employees in attendance across 20 different EWH services. The most common services were meditation (n=104 offerings) and yoga (n=74 offerings).

Conclusions: VA's LEAF tracking system supports increased implementation and spread of EWH in VA.

P03.07

The Coalition for Better Health: A Collaborative Effort to Mobilize Preventive Health Specialists Across Tennessee

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Objectives: Tennessee has very high rates of hypertension, type 2 diabetes, and cardiovascular disease. Behavioral contributors have been exacerbated during the pandemic, with the largest impact falling disproportionately on historically marginalized communities. A state-wide initiative linking business, community and government leaders is implementing a new role in healthcare called the Preventive Health Specialist (PHS).

Method(s): Formed in 2019, the Coalition for Better Health is dedicated to making the prevention of chronic disease just as important as its treatment. The Coalition's Curriculum and Training Work Group drew heavily from behavioral science to define the competencies needed for the new role and developed a competence assessment that has been pilot tested. Three Tennessee academic institutions collaboratively designed integrated training for the PHS role that begins October 1. The Reimbursement Work Group secured funding for the pilot and developed a reimbursement plan for ongoing work. The Deployment Work Group enlisted stakeholders from for-profit and non-profit healthcare systems, including an FQHC. Personnel (n=8) have been committed at three distinct sites.

Outcomes: Three levels of program evaluation data will be presented. First, ratings from the PHSs on each component of training will assess the content and skills practice of the 40-hour October to November 2022 training. Second, skill scores from Subject Matter Experts who evaluate the PHSs in November will provide evidence of professional competency. Third, number of referrals, enrolled patients, and completed sessions between December 1 and February 1, 2023 will serve as the initial measure of feasibility for program implementation.

Conclusions: The pilot deployment of PHSs is the culmination of three-years of collaborative stakeholder development. Ongoing program metrics of the PHSs' training, assessment and implementation will provide an opportunity to iterate this highly collective endeavor to improve the lives of Tennesseans.

P03.08

Expanding Healthcare Access and Improving Provider Well-being Through Complementary and Integrative Health Provider Skills Trainings in the VHA

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Objectives: List CIH skills trainings in VA; Identify impact of training on CIH availability and provider well-being

Method(s): To address limited resources to hire CIH providers and challenges training staff externally VA developed trainings for mindfulness, clinical hypnosis, acupuncture, guided imagery, yoga, battlefield acupuncture and auricular acupuncture. To evaluate expansion, CIH encounters were extracted from the VA Corporate Data Warehouse. Course survey data was pulled for participant feedback

Outcomes: Acupuncture providers trained, facility implementation, and encounters increased (FY20 number of facilities (F): 130, providers trained (P): 709, encounters (E): 137,117; FY21 F: 131, P: 1,090, E: 158,150). Biofeedback providers trained did not increase and facilities and encounters decreased (FY20 F: 113, P: 0, E: 5,000; FY21 F: 107, P: 0, E: 3,491). Clinical hypnosis providers, facilities and encounters increased (FY20 F: 31, P: 77, E: 765; FY21 F: 52, P: 194, E: 1,393). Guided Imagery providers and facilities increased, and encounters decreased (FY20 F: 55, P: 0, E: 4,886; FY21 F: 72, P: 236, E: 3,751). Massage Therapy providers did not change, however, facilities and encounters increased (FY20 F: 121, P: 0, E: 17,932; FY21 F: 123, P: 0, E: 28,371). Meditation providers, facilities, and encounters increased (FY20 F: 102, P: 39, E: 24,346; FY21 F: 114, P: 57, E: 37,015). Tai chi providers did not change, and facilities decreased, however, encounters increased (FY20 F: 109, P: 0, E: 56,514; FY21 F: 105, P: 0, E: 69,850). Yoga providers and encounters increased, however, facilities decreased (FY20 F: 111, P: 0, E: 68,250; FY21 F: 110, P: 25, E: 75,847). Survey data suggests positive impact on participant well-being.

Conclusions: To increase CIH access, VA developed internal trainings. Preliminary data suggest an increase in number of providers trained corresponding with an increase in the number of facilities offering CIH and encounters. In addition, participants reported positive personal experiences.

P04: Diversity, Equity and Inclusion

P04.01

“We Do What Normal People Do and We Are in Pain The Whole Time:” Pain Management Strategies of Patients with Sickle Cell Disease

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Objectives: Sickle cell disease (SCD) is associated with chronic pain and distress. The purpose of this study was to identify sources of distress and management strategies among SCD patients. Findings informed the development of a mobile app to deliver mindfulness-based strategies to this population to manage pain and distress. In this presentation, we focus on pain management strategies that participants described.

Method(s): We used a meaning-centered qualitative design to develop an interview guide exploring participant distress. A single team member conducted semi-structured interviews with 11 participants. Interviews lasted 45 minutes on average and were recorded and transcribed verbatim. Four team members reviewed all transcripts to identify findings of interest. Two qualitative team members developed a focus for the manuscript based on this analysis, coded transcripts separately and together using NVivo 12 software, identified pain management strategies, and selected narratives to retain.

Outcomes: Nearly all participants initially defined distress as pain. As interviews progressed, they characterized pain as a form of uncertainty that interferes with all aspects of life and has interrupted life trajectories. Participants identified a range of pain management strategies that include *internalizing strategies* intended to prevent or treat pain through direct attention (e.g. using a heating pad to prevent what one participant called “radical time” pain), and *externalizing strategies* to direct attention away from pain (e.g. distraction through singing or cognitive reframing).

Conclusions: Pain is a defining feature of SCD, which participants in our study characterized as a totalizing condition. Most participants use several internalizing and externalizing strategies to manage pain and the distress associated with pain that are essentially mindfulness practices. Patients may benefit from receiving app mindfulness-based training that supports and enhances their current practices.

P04.02

A Story of Integrative Medicine, COVID-19, and Anti-Asian Hate

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Objectives: The aims of our project were to illustrate the story of a fictional ethnic minority patient, Ratna Bajei, who experienced a hate crime as a byproduct of the dual pandemic of COVID-19 and anti-Asian hate, using the medium of a children’s book, *Hira Makes a Sound*. Succumbing to physical and emotional distress, Ratna Bajei was not entirely healed by conventional western medicine. Instead, she relied on a traditional Nepali Gurung ritual to mend her spirit. Clinicians will gain insight into the importance of Integrative Medicine in treating minority and immigrant communities.

Method(s): Four team members developed a standardized guide to conduct oral histories in native language conversations with seven Khmer, Nepali, and Vietnamese frontline workers. These stories were compared and corroborated with ethnic news media sources. Story data themes from the interviews were used to inform the storybook scripting, storyboarding, and creative processes. Bilingual team members also worked with Khmer, Nepali, Vietnamese, and Chinese translators. Nepali community leaders were consulted throughout the process.

Outcomes: Four bilingual versions of a children’s book were developed about a traditional Nepali Gurung healing practice (Sato Bolauney) used to cope with the lasting effects of the double pandemic. The book was shared in different educational contexts, including a Black and Latinx fifth-grade classroom, a community and campus-wide book event, and Asian American Studies college classrooms. Team members engaged diverse audiences in reflection and dialogue.

Conclusions: *Hira Makes a Sound* demonstrates the need for clinicians to value Integrative Medicine to improve care for minority and immigrant patients. In the story, grassroots community mobilization and cultural wealth complemented the hospital care experience for Ratna Bajei. This accessible book can be applied as a teaching tool for clinicians to understand the intersectionality of racism, culture, healthcare disparities, and alternative healing systems.

P04.03

Complementary and Integrative Health: A Systems Thinking Response to COVID-19

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Objectives: This critical analysis established how Complementary and Integrative Health (CIH) practitioners and the modalities they offer were incorporated into the COVID-19 pandemic response and how they might play more of a role in prevention and intervention during future emergencies.

Method(s): For this critical analysis, a systematic search and review of the relevant literature was first conducted in the Cochrane Database of Systematic Reviews (CDSR) and then uploaded into Covidence from PubMed. Initially, two-hundred and thirty-one articles (n=231) were examined by two CIH experts through a title and abstract screening. From that initial pool, one-hundred and eighteen articles (n=118) were fully assessed for relevance and then sorted by topic for further analysis by the author and, when necessary, in consultation with key informants.

Outcomes: This critical analysis stems from a body of literature focused on Traditional, Complementary, and Integrative Medicine/Health (TCIM/CIH) health practices, therapies, and medical systems that address both the health and disease of human beings, consisting of ninety-two articles (n=92) from the first two years of COVID-19 pandemic.

Conclusions: Traditional, Complementary, and Integrative Health (T/CIH) can play a pivotal role in addressing concurrent public health emergencies through coordinated efforts by all stakeholders. This analysis may provide important considerations for future research and policy efforts to ensure better public health during future emergencies.

P04.04

Awareness of LGBTQ+ Health Disparities: A Survey Study of Complementary Integrative Health Providers

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Objectives: Objectives: The purpose of this study was to survey awareness of lesbian, gay, bisexual, transgender, queer/questioning, plus (LGBTQ+) health disparities among complementary integrative health providers; chiropractors (DC), naturopaths (ND), acupuncturists (LAc) and massage therapists (LMTs) and secondly, examine how providers' sexual and gender identity correlated with that awareness.

Method(s): Methods: An electronic survey was designed which included demographic questions as well as closed-ended and Likert response items to measure provider awareness of LGBTQ+ patients and the health disparities they experience. Kruskal-Wallis H tests with pairwise comparisons were used to evaluate the differences between defined groups and their awareness of health disparities of LGBTQ+ adults and youth.

Outcomes: Outcomes: The survey showed that most complementary integrative healthcare providers

agreed that LGBTQ+ individuals experience discrimination and health disparities. However, providers are unaware of the specific disparities experienced in this population, including increased risk of substance abuse and mental health issues. Pairwise comparison tests demonstrated that providers that identify as a part of the LGBTQ+ community are often more aware of disparities than their heterosexual cisgender counterparts.

Conclusions: Complementary integrative healthcare providers demonstrated some general awareness of LGBTQ+ health disparities yet most providers lacked awareness of specific disparities that pose major health risks for this community. Cultural competency training specific to LGBTQ+ individuals is lacking and may explain some of the findings in this study. This suggests that education is needed, both in professional educational programs and in the healthcare community by way of conferences, webinars, and other opportunities.

P05: Education Practices (e.g., interprofessional education)

P05.01

Health Literacy in Integrative Medicine: Key Insights from a Patient-user Survey

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Objectives: In April 2022, we surveyed 911 patient users of an integrative medicine health technology platform. Our objectives were to establish baseline health literacy levels, determine the most common and trustworthy sources of health information, and inquire about educational behaviors, needs, preferences, and barriers. Ultimately, we hope to increase awareness of health literacy in integrative medicine and provide practitioners with evidence-based educational practices.

Method(s): An email invitation to participate in a 28-question survey was sent to patient users (n=30,000) who had been invited to the health technology platform, opened an account, and received a treatment recommendation within the last six months. Patients were not required to have placed an order through the health technology platform to be eligible for participation. Data was collected and analyzed using SurveyMonkey software, and secondary stratification analyses were conducted using Google Sheets.

In addition to the survey, we also completed a literature review on the topic of health literacy.

Outcomes: The survey data suggest that the patient users had high health literacy as most rated their overall health knowledge (~54%) as “moderately knowledgeable.” The primary barrier to finding reliable health information was not knowing where to look, which may explain why the majority (~72%) of patient users source their health information from their primary care providers. Finally, patient users indicated preferring short (~45%) to medium-length (~51%) written educational materials (~60%).

Conclusions: The patient users of the integrative medicine health technology platform appear to have high health literacy. Their most trusted and common source of health information is their primary care

provider, which highlights the importance of providing health education and resources to patients during their clinical appointments.

P05.02

Nutrition and Culinary Education for Health Professionals: A response to H. Res. 1118

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Objectives: Resolution, [H. Res. 1118](#) encourages medical schools, graduate medical education programs, and other health professional training programs to provide education on nutrition and diet. The genesis of this unprecedented bipartisan engagement in medical education was the recognition on behalf of government officials that our country's dietary habits are the major contributor to the rising costs and burden of chronic disease in the US.

Method(s): Teaching Kitchen Collaborative (TKC) aims to co-create a cross-disciplinary, adaptable, hands-on modular culinary/nutrition curriculum for health professionals in all fields and stages of education. The development of this curriculum will be led by the TKC and the Osher Center for Integrative Health at Northwestern University. As a first step, the team conducted an asset mapping of existing curricula from multiple TKC member institutions. Data collection methods included surveys and collection of curricular materials and overviews.

Outcomes: 17 institutions participated in the survey. Findings include a large range of course duration (once-1 year), sessions (1-24), class length (20 min-2.5 hrs), and class size (8-150 people). The courses were offered either virtually, in-person, or both, and have been in existence anywhere from 1-7 years. Six have mandatory courses; the majority are supplemental to core education. Five of the institutions have curricula that have been formally reviewed and approved by the Institutional Curriculum Committee. The majority were developed de novo at their institution. Common themes were noted, and major gaps identified compared to proposed competencies.

Conclusions: These findings highlight the robustness of the TKC member's curricular assets relating to nutrition education using Teaching Kitchens as classrooms. These materials will be compared with other existing curricula in an effort to improve nutrition education opportunities across health professional communities.

P05.03

"Doc, what about a ___ replacement?" Filling In the Perioperative Optimization Gap with Integrative Medicine

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Objectives: In the Medicare population, total hip arthroplasty (THA) and total knee arthroplasty (TKA) are the most frequent inpatient procedures. According to the American Joint Replacement Registry, total joint replacements (TJA) are expected to reach 1.9m cases by 2030. Medicare is the primary payer for over 60% of TJAs totalling over \$50 billion annually. There is a growing interest from the Centers for Medicare & Medicaid Services (CMS) to decrease cost per episode of care which has peaked interest in perioperative optimization. The goals of this presentation are to highlight integrative practices as filling in the perioperative optimization gap.

Method(s): This abstract serves as an educational template to bridge the gap between lifestyle medicine and orthopedics through a critical analysis of integrative medicine concepts that could be applied to the elective surgery patient. Reviews of relevant studies and data will be presented.

Outcomes: In 1948, the American Board of Preventive Medicine was founded. In 2000, Integrative Medicine became a two year fellowship. In 2016, The American College of Lifestyle Medicine became a board certification. Focus on lifestyle is not new and has taken many names. However, taking such concepts and applying them to clinical practice has fallen short, especially when it comes to elective surgery. According to the National Council on Aging, 80% of U.S seniors have at least one chronic disease, 68% have two or more. Such conditions include: hypertension (58%), hyperlipidemia (47%), arthritis (31%), coronary artery disease (29%), diabetes (27%), chronic kidney disease (18%), heart failure (14%), depression (14%), Alzheimer's (11%), and chronic obstructive pulmonary disease (11%). All of these conditions can benefit from lifestyle interventions.

Conclusions: There is tremendous cost to patient quality of life and function for months following surgery; patients and providers deserve to be made aware of the part of the planning and recovery process that they can control.

P06: Embracing Positive Deviance: Thinking Outside the Box

P06.01

Whole Person to Whole Planet: Climate Considerations in Integrative Medicine

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Objectives: While we have some knowledge to share with patients regarding environment and health, for example, pesticides and other chemicals that can act as endocrine disrupters, it's time to take it to the next level and discuss climate and health with our patients. For example, we may take a climate/environmental history to help support patients in understanding heat illness, knowing about medicines you may be taking that cause you to be less heat tolerant, planning a pregnancy and understanding how you might react to changes in climate, selecting food in a more climate conscious way, and preparing for health and safety to thrive in weather extremes. Helping patients understand climate and how it may influence their individual health status and how they live, work and play can go a long way to promote patient equity, wellbeing and empowerment.

Method(s): Communicate with patients that our health doesn't exist in a vacuum, the better we understand how our environment influences our health, the more empowered we will be. Show them how

knowledge is power. Provide a set of questions and salient information and further resources to prepare patients for climate events or simply better thrive within the climate environments in which they live.

Outcomes: Eventually include a climate history in every integrative medicine standard intake as a significant aspect of the health care we provide. Know how to do a simple climate and environment risk assessment and plan for the individual patient.

Conclusions: As integrative medicine practitioners we likely have more time and bandwidth to address areas of health currently considered at the margins. With further knowledge and skills, we will be able to cultivate awareness for our patients, help prepare them from a climate perspective and teach our colleagues the same.

P06.02

Critiquing the Buzzword: What is Decolonization and What makes an Initiative Decolonial?

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Objectives:

1. To come to an understanding of the term decolonization
2. To better understand the vocabulary that pertains to the decolonization conversation
3. Learn what you can do in your organization, class, clinic, spaces that is actionable and true to the movement.

Method(s): I will share the process of creating and rewriting the Food is Power curriculum with Julia Hesse Fong that teaches Afro Centric, decolonized culinary medicine to middle schoolers on Chicago's South Side, as well as reflections on being a medic healer at Standing Rock during the NODAPL protest in 2016.

Outcomes: Vital to consider how our work can cause harm and can be improved upon as we strive to create meaningful collaborations and equitable and inclusive spaces, will share preliminary positive data from Food Is Power program, first known decolonized culinary medicine program in US.

Conclusions: As we create and innovate within integrative medicine and in healing spaces, it is vital that we not only dedicate ourselves to thinking about decolonization and understanding what it really means to organize in this movement, but we also act to decolonize. Deconstructing settler-imposed systems that continue to oppress Black, Brown, and Indigenous people, requires deeply considering and changing the way we teach, what we teach and how we teach it. Framing who decolonization work is about and for is an integral step in moving forward with effective decolonial action.

P06.03

Auricular Point Acupressure for Older Adults with Chronic Low Back Pain: A Randomized Clinical Trial

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Objectives: To determine the effectiveness of auricular point acupuncture (APA) in older adults with cLBP.

Method(s):

DESIGN— Randomization (1:1:1) to ear points targeted to cLBP (T-APA, n=92), ear points non-targeted to cLBP (NT-APA, n=91), or waitlist education control (n=89). Patients in the education control were re-randomized to T-APA or NT-APA after they completed 1-month (M) follow-up.

SETTING— Community-dwelling participants were recruited from metropolitan Baltimore, Maryland.

PARTICIPANTS—60 years or older adults with cLBP.

INTERVENTIONS—Participants received 4 weekly APA sessions and were instructed to self-stimulate ear points at home; the education control group received 4 weekly educational sessions.

MAIN OUTCOMES AND MEASURES—The primary outcomes included changes in pain (Numerical Rating Scale) and function (Roland and Morris Disability Questionnaire). Secondary outcomes included interference, pain catastrophizing, fear avoidance, anxiety, depression, fatigue, sleep disturbance, and pain medication use. Intent-to-treat analyses were conducted.

Outcomes: A total of 272 participants were enrolled (174 women ; mean age, 70.0 years; 62% non-White). Compared to educational control, T-APA group had significantly improved pain by 1.28 points (95% CI, -2.13, -0.42) and function by 2.86 points (95% CI, -4.07, -1.02) at 6M; NT-APA group had significantly improved pain by 1.52 points (95% CI, -2.40, -0.64) and function by 1.98 points (95% CI, -3.91, -0.05) at 6M. Only NT-APA group had significant improvements in interference by 0.80 points (95% CI, -1.31, -0.28) and fatigue by 2.86 points (95% CI, -5.69, -0.03) at 6M. Differences in treatment responses between T-APA and NT-APA groups were not significant.

Conclusions: APA treatments effectively improved pain and function, and the effects were sustained at 6M. APA should be considered and recommended as a nonpharmacologic therapy for older adults with cLBP.

P06.04

Unconscious Bias in Science and Integrative Medicine Research

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Objectives: Clinicians are taught to only trust evidence that is published in a peer reviewed journal, yet in the last few years that body of evidence has been compromised by fraudsters and organized crime. Today there is a tendency of partisans to interpret science in ways that defend their ideology. It's important to learn to identify sources of evidence that are and are not trustworthy so we can better understand biases, lack of oversight, and fabrication of fraudulent efforts.

Method(s): Editors have experience with fraud in publishing. We are called upon by our publishers to share the information with our reviewers, authors and colleagues. Editors have developed strategies to quickly spot fraudulent journal submissions generated from paper mills, email invitations to join editorial boards of predatory journals, and how to objectively evaluate accusations of misconduct. A group of editors who are members of the Academic Consortium for Integrative Medicine and Health and who share an interest in providing more resources for our authors, reviewers, and editors to navigate ethical challenges in research and publishing have organized to develop programming to increase awareness of scientific integrity in the integrative medicine industry.

Outcomes: The Research Quality and Integrity Working Group has been established within the Cochrane Complementary Medicine Field to meet this goal. The group aims to begin discussions, create awareness, and begin to examine multiple topics that fall under the umbrella of scientific integrity. Webpages on the Cochrane Complementary Medicine website have been developed to house resources for authors, reviewers and editors to navigate ethical challenges in research and publishing.

Conclusions: As both producers of research and consumers of research who use evidence to inform our clinical decision making, we all can benefit from more critically evaluating the credibility of peer reviewed science we read and share with our colleagues and patients.

P07: Health Services Research

P07.01

Healthcare Provider's Views on Dietary Supplement Reconciliation in the Electronic Health Record

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Objectives: Concomitant use of dietary supplements (DS) with medications is common and may pose a threat to patient safety due to supplement-drug interactions. However, DS reconciliation in the electronic health record (EHR) is poor, requiring innovative approaches to improve. In this study, we sought to assess healthcare providers' (HCPs) perspectives on the current challenges and facilitators of DS documentation in the EHR and their opinions on a proposed mHealth application (app) to assist with DS tracking and reconciliation.

Method(s): We recruited 30 HCPs to participate in recorded semi-structured interviews. We inquired about HCP's experiences documenting DS in the EHR and their opinions about our proposed mHealth app. Interviews were recorded, transcribed, and coded for themes. Thematic analysis included deductive codes based on the interview guide, and inductive codes that emerged during review within and across transcripts.

Outcomes: HCPs (N=30) included 60% females; mean age 46 years \pm 10 years; 70% White. Pharmacists (20%), nurses (17%), and physicians (17%) were the most represented professions. Years in practice ranged from 3-35 years (mean: 15 \pm 8). Most HCPs were concerned about DS safety and the potential for

supplement-drug interactions. HCPs cited several current barriers to accurate DS reconciliation in the EHR including time constraints, problems locating DS in the EHR databases, and poor patient-HCP communication about DS. HCPs expressed support for the proposed barcode-scanning mHealth app in that it could streamline documentation processes and enhance patient-provider communication. HCPs expressed desire for a high-quality mHealth app that includes access to evidence-based dietary supplement information, integrates with the EHR, and does not increase time-burdens on providers.

Conclusions: HCP interviewees believe that DS documentation is important but inaccurately represented in the EHR. Support was expressed for the proposed DS mHealth app.

P07.02

Fusion of Integrative and Palliative Medicine: A Hospital-Based Program

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Objectives: Patients with serious illness experience pain, anxiety and perceived stress. Integrative medicine (IM) and palliative medicine (PM), unique medical specialties, have similar philosophies but discrete treatment approaches. The combination of IM and PM may relieve suffering better than either specialty alone. A combined integrative palliative medicine (IPM) service was created to provide care to seriously ill patients in both inpatient and outpatient settings. Referring physician attitudes, feasibility of adding IM to an inpatient PM consultation service and impact on symptom management and patient satisfaction were assessed.

Method(s): Patients were referred by oncologists, hospitalists or surgeons. The team included an IPM physician, IPM nurse practitioner (NP), mind-body specialist (MBS), IPM social worker, music therapist, acupuncturist and wellness volunteers who provided mind-body therapies and massage. Patients were first seen by the IPM physician or NP and received a personalized pharmacologic and non-pharmacologic treatment plan. Patients were surveyed prior to and following mind-body treatments using a 0-10 scale for pain, anxiety and perceived stress. The Edmonton Symptom Assessment System (ESAS), a standard palliative medicine metric, was used prior to and after acupuncture treatment, and the Was It Worth It (WIWI) questionnaire, a standardized metric, was used after treatment. Outpatients were surveyed by email annually.

Outcomes: The IPM program was feasible and well-received by patients and referrers. The WVs and MBS (n=1,290 visits) reduced patients' pain, anxiety and stress. Acupuncture (n=100) reduced pain, anxiety, stress, and depression. Per the WIWI questionnaire >90% of patients were satisfied with acupuncture during an IPM consultation. Patient surveys (n=87, 19.6% response rate) revealed satisfaction with the IPM team, improved quality of life, and enhanced impression of the organization.

Conclusions: Adding IM to PM enhances symptom management for patients with serious illness.

P07.03

Factors Associated with the Use of Complementary and Integrative Healthcare by Patients with Chronic Pain

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Objectives: This study reports on 12 patient characteristics previously identified as impacting the prevalence of chronic pain and health care utilization and their association with total usage of a CIH clinic over a 12-month period. Identification of factors with the biggest impact on CIH use can guide future attempts to optimize CIH pain care delivery.

Method(s): This study used a descriptive retrospective cohort design. Patient report and electronic health record data for adult chronic pain patients attending an integrative CIH clinic between 11/2017 and 03/19 were eligible for inclusion. We used linear regression models to explore the associations of the total number of visits and use of an interdisciplinary team with patient characteristics with total service use.

Outcomes: A patient's distance from the clinic (those farther away had fewer visits) and education level (those with more education had more visits) were associated with total clinic visits. Second, distance from the clinic (those farther away were less likely to use an interdisciplinary team) and employment status (part-time employees more likely to use an interdisciplinary team) were associated with use of an interdisciplinary team. While additional patient characteristics were significant in the unadjusted models (sex, anxiety, depression) those associations did not hold up when accounting for all patient characteristics.

Conclusions: To address the increasing efforts to improve quality chronic pain care and include CIH therapies, our study suggests that strategies to address geographical proximity of patients to CIH services may be most relevant to improving their utilization.

P07.04

Interest in Gardening Among Families Who Identify as Food Insecure During Pediatric Visits

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Objectives: Food insecurity (FI) is increasingly identified as a predictor of poor mental and physical health and usually lives with other social determinants of health (SDoH). One strategy that may help aid in increasing food security for families is to participate in gardening practices. The purpose of this study was to understand interest in learning about gardening among families with children who identify as food insecure during well-checks at a pediatric clinic in central Pennsylvania.

Method(s): Families who identified as food insecure during screening at well child visits from 2017-2021 were surveyed (via REDCap) asking about current food security, social barriers to health, and gardening interest/experience. Descriptive statistics were then calculated.

Outcomes: 49 families with FI were identified of whom 22 (45%) responded to the survey. 27% (n=6) have a garden at home, 13% (n=3) receive food from someone else's garden, 36% (n=8) have participated in vegetable gardening, 41% (n=9) have room at home to garden. 64% (n=14) were interested in learning about container gardening, 36% (n=8) about gardening in a small space, 18% (n=4) about urban gardening, and 36% (n=8) in cooking demonstrations.

No participants reported participating in community gardens. However, 36% (n=8) would be interested in participating in community gardens and 59% (n=13) believed that it would improve their access to healthy food. Barriers to participating in gardening included: location and knowledge of gardens, personal health concerns, transportation, and childcare.

Conclusions: Among patients who experienced FI in the past 4 years, the majority believe that gardening may improve their food security. Respondents were most interested in container gardening with community gardens and urban gardens showing some interest. The next step in this line of research is to explore opportunities to provide gardening training and education in our patient population to aid in improving food security.

P07.05

Assessing the use of Veterans Health Administration Chiropractic Care by Patients with Headache Disorders

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Objectives: To describe trends and characteristics of patients with diagnosed headache disorders (HAD) who use Veterans Health Administration (VA) chiropractic care.

Method(s): This is a serial cross-sectional analysis of VA electronic health record data limited to on-station outpatient visits in fiscal years (FY) 2015-2019 (10/1/2014 - 09/30/2018). From a national cohort of HAD patients, we identified VA facilities providing a threshold of a least 500 chiropractic visits in one FY, and from these identified patients receiving chiropractic visits including HAD diagnoses. Patient demographics and clinical characteristics were assessed.

Outcomes: The number of VA facilities meeting our threshold of at least 500 chiropractic visits annually has increased 66% over time (42 in FY2015 to 70 in FY2019). Among these stations, 14,153 veterans with HAD received chiropractic care for a HAD between FY 2015-2019. These Veterans were predominantly White, Non-Hispanic (n = 9,992, 70.6%; Black n = 1,788, 12.6%; Hispanic n = 1,256, 8.9%; Other n = 1,117, 7.9%). The most common HAD (non-exclusive) diagnosed in these Veterans were headache not otherwise specified (n = 11,022, 77.9%) migraine (n = 6,573, 46.4%), tension-type headache (n = 3,500, 24.7%), and post-whiplash headache (n = 2,902, 20.5%). The most common medical comorbidities were musculoskeletal pain conditions: lower back pain (n = 12,926, 91.3%), neck pain (n = 12,399, 87.6%), and limb pain (n = 11,966, 84.5%). Compared to published rates of HAD within the VA, Veterans with HAD who received chiropractic care skewed more White, Non-Hispanic (70.6% vs 56.7%) and more often had migraine (46.4% vs. 37.2%), tension-type headache (24.7% vs. 7.2%) and post-whiplash headache (20.5% vs. 5.4%).

Conclusions: Veterans with HAD increasingly receive VA chiropractic care. This highlights the need for future work to examine referral patterns and the components and outcomes of such care.

P07.06

Measuring Up: Evaluating Barriers to Food Security in Central Pennsylvania

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Objectives: Over 1.6 million people in Pennsylvania suffer from food insecurity, which is associated with poor health outcomes. Therefore, the American Academy of Pediatrics recommends screening for food insecurity routinely. This study aims to evaluate and better understand utilization of resources given to families who identify as food insecure and barriers to food access in Central Pennsylvania.

Method(s): A retrospective review of patient charts was completed to identify families who screened positive for food insecurity in 2021 or received a food box between 2017-2021 at Penn State Health Pediatric Harrisburg and Hershey sites, respectively. Families were then contacted and asked to participate in a survey about current food security, information given at visits, and any comments they had regarding their experiences accessing food resources.

Outcomes: We identified 102 families with food insecurity to date. 22 patients responded to the survey, 64% (14/22) of respondents still identified as food insecure. 27% (6/22) of respondents indicated they received information regarding food resources and only 2 indicated they were able to use the resources. Those unable to utilize the resources cited transportation, time, safety, and money/economic concerns as barriers. When asked about experiences accessing food resources, several recurrent themes emerged: unrealistic income restrictions for food assistance programs (e.g., "We just pass the financial threshold...by \$50 or so.") and embarrassment to utilize food resources (e.g., "These programs demean you by assuming you're taking advantage.").

Conclusions: The majority of families with food insecurity still identify as food insecure at future dates, despite screening and giving resources at visits. Additionally, the currently available food resources are not adequately meeting the needs of these families. Therefore, new, innovative programs that aim to mitigate barriers and limit systematic biases are needed to address food insecurity in this area.

P07.07

Complementary and Integrated Health Therapies in VA: Preliminary Patient-Reported Outcomes of Health and Well-Being

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Objectives: Veterans often have more pain and chronic conditions than the general population. As such, providing them with effective alternatives to pharmacologic treatments is essential to help them manage their pain, improve their overall health, and avoid risks associated with opioids. In our VA APPROACH trial of CIH therapies' effectiveness, we qualitatively examined Veterans' perceptions of the effects of CIH therapies on aspects of their health and their quality of life. We hypothesized that dual care, a combination of at least one practitioner-delivered (acupuncture, massage, chiropractic care) and one self-care (Yoga, Tai Chi, meditation) therapies, had greater perceived positive effects than practitioner-delivered care alone.

Method(s): We used electronic health records to identify patients (n=120) receiving self-care CIH and practitioner-delivered CIH therapies in the prior six months via telehealth or in-person. We mailed Veterans information packets including opt-out instructions and then enrolled and consented them by phone. We analyzed transcribed audio-recorded telephone interviews to examine patient-reported outcomes on the effects of the six CIH therapies on pain, anxiety, depression, fatigue, quality of life/wellbeing, and being empowered to self-care (i.e., managing and/or taking charge of one's health).

Outcomes: We will present qualitative themes with supporting quotes to demonstrate Veterans' perceived effectiveness or ineffectiveness of the CIH therapies on their health and quality of life, and will compare their perceptions of the effectiveness/ineffectiveness of provider-delivered care with those of dual care.

Conclusions: Greater understanding of Veterans' perceived effects of CIH therapies on their health and well-being and the potential to achieve greater positive effects is essential for examining the effectiveness of CIH therapies in real-world clinical settings.

P07.08

Clinical Effectiveness of Medical Music Therapy within Community Medical Centers: An EMMPIRE Retrospective Study

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Objectives: Given the challenges health systems face in providing effective nonpharmacologic treatment for pain and psychological distress, clinical effectiveness studies of evidence-based strategies such as music therapy (MT) are needed. Since MT has been incorporated into clinical care, this study examined changes in patient-reported outcomes (PROs) after MT and explored variables associated with pain change.

Method(s): A retrospective review was conducted of all first MT interventions with PROs provided to adult patients receiving community hospital care between January 2017 and July 2020. All participants reported pre-session pain, anxiety, and/or stress scores ≥ 4 on a 0-10 numeric rating scale. Data analysis included paired *t*-tests of single-session changes in PROs and a mixed model to estimate predictors of

pain change adjusted for demographics, clinical characteristics, and whether pain management was a goal of the MT session.

Outcomes: Patients ($n = 1,056$; mean age: 63.83 years; 76.1% female; 57.1% white; 41.1% Black/African-American) reported clinically and statistically significant reductions in pain (2.04 units), anxiety (2.80 units), and stress (3.48 units). Characteristics associated with greater pain change included pain management as a MT session goal ($p < .001$); primary diagnosis of cardiovascular ($p = .011$), infectious ($p = .012$), or neurologic disease ($p = .001$); and the interaction between the year and medical center in which MT was provided ($p = .002$).

Conclusions: This study supports the clinical effectiveness of MT for symptom management in community hospitals. Additional research is needed to determine which characteristics of MT interventions and patients influence pain change.

P07.09

First-Seen Provider and Utilization Patterns Among Patients with New-onset Neck Pain

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Objectives: Neck pain is a common problem and is less well-understood than back pain. We compared care utilization among patients diagnosed with new-onset neck pain, based on whether their initial encounter was with chiropractor (DC), physician (MD), or physiotherapist (PT).

Method(s): We obtained 2016-19 deidentified data from OptumLabs Data Warehouse, which contains medical and pharmacy claims and eligibility information for commercial and Medicare Advantage enrollees across all adult ages and regions. Initial providers were categorized as primary care (PC), emergency medicine, neurologist, orthopedist, DC, PT, or rehabilitation; patients who only saw other providers or both DC and MD on the index date were excluded. We excluded patients with visits for neck pain or injury in the preceding year, or prescriptions for chronic/current opioid analgesia or medication-assisted treatment for addiction.

Outcomes: The cohort ($N=770,326$) was 59% female; 27% over 65 (mean 52); and 73% commercially insured. On the index date, 45% visited DC, 33% visited PC, and 3% visited PT. Compared with patients who saw PC first, those who saw DC first were younger (mean 47 vs 56), more likely to have commercial insurance (85% vs 64%), and more likely to be male. Spinal imaging was more frequent after an index PC visit compared with DC or PT: 26%, 16%, 3% for plain X-ray in 30 days; 3%, 1%, 1% for CT in 180 days; and 11%, 2%, 6% for MRI in 180 days; respectively. After an index PC visit, 26% of patients had additional PC visits and 4%, 6%, and 7% received DC services for neck pain in 30, 90, and 180 days, respectively. After an index DC visit, 82% had additional DC visits, while 4% saw PCP, 2% saw PT, and $\leq 1\%$ saw other provider types for neck pain.

Conclusions: Initial care for neck pain by DC was less likely to be followed by imaging, but more likely to

be associated with multiple visits, than initial care by a PC provider. Crossover between DC and PC care occurred in both directions with similarly low frequency over the next 180 days.

P07.10

The Evidence Map of Acupuncture - VHA's Health Services Research & Development (HSR&D) Update for Adult Health Conditions

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Objectives: Due to the increased utilization of acupuncture in the Veterans Health Administration and a growth in the acupuncture literature, an updated evidence synthesis map was requested to evaluate the current evidence of the effectiveness of acupuncture. These maps are used to inform clinicians who may refer patient to acupuncture when acupuncture is expected to be useful for particular health conditions.

Method(s): A literature search was conducted for research from 2013-2021, over 300 abstracts were reviewed, with 64 publications in this report categorized into more than 40 conditions. Evidence was mapped as having benefit or no benefit, based on strength of findings, effect of acupuncture and comparators.

Outcomes: Compared to the previous evidence map many more conditions show benefit from acupuncture. The majority of studies included comparisons of acupuncture to sham or control acupuncture. The maps include visual representations of the acupuncture evidence for: 1) all pain other than musculoskeletal, 2) musculoskeletal pain, 3) mental health, 4) women's health, and 5) other conditions. The largest number of published reviews are centered on pain conditions. Only a small number of reviews had a least one conclusion with a high certainty of evidence (N=3), more had moderate certainty of evidence but the majority of reviews had conclusions rated as low or very low certainty. A review of adverse events in the literature revealed there is no evidence that acupuncture is less safe than usual care for these conditions

Conclusions: Researchers identified 370 new systematic reviews of acupuncture compared to about 370 new RCTs of acupuncture published in the same time period. Those interested in acupuncture research are producing about as many systematic reviews (that generally conclude the certainty of evidence is low or very low) as new RCTs needed to raise the certainty of evidence. The field would be better advanced by more high quality RCTs and fewer new systematic reviews.

P08: Nourishment of Mind, Body & Spirit

P08.01

Center Stage: Drama Program Sprouts Meaningful Collaboration and Awareness in Pediatric & Adolescent Psychiatry

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Objectives: 1) Describe & discuss benefits of collaborative, drama-based programming, and available resources & introductory steps to develop dramatic programming. 2) Discuss three ways collaborative, drama-based programming aids growth of self-esteem and confidence, and their associated outcome measures. 3) Reflect on relevance of collaborative, drama-based programming for use in practice setting.

Method(s): The PDSA model guides development of therapeutic drama in Pediatric Residential Psychiatry. Led by Certified Therapeutic Recreation Specialists, with multidisciplinary collaboration across each 8-week cycle, an iterative, adaptive drama program has been facilitated through thirteen cycles ~ Dramatic Sprouts is one iteration of this drama programming. Interdisciplinary meetings after each 8-week cycle facilitate next cycle planning, based on assessments of client growth, needs and responsiveness; intervention feasibility and effectiveness; and identifying collaborating partners and necessary changes. Interventions are also evaluated within cycles, and changes made as needed.

Outcomes: This therapeutic programming is growing self-awareness and relational health in children and teens, using wonder, wisdom, collaboration, nature, and creative arts. Since starting therapeutic drama in September 2020, 13 performances have been completed, showcasing growth and learning in 39 clients. 'Dramatic Sprouts' has represented three of the cycles, reaching 13 clients ages nine to seventeen. Pre/post assessments, journaling, and leader observation demonstrated improvements in social skills, confidence, assertive communication, and leadership skills.

Conclusions: This program is facilitating improvements in positive social interactions and self-confidence. With horticulture, clients have opportunity to immerse themselves in a secondary environment and gain exposure to new experiences. Increasing collaboration and co-leading opportunities with colleagues in other disciplines may accelerate these positive outcomes. There is potential to expand programming beyond inpatient/residential settings into outpatient areas, facilitated by CTRS healthcare professionals in collaboration with Horticultural Therapy. This example of innovative programming reflects commitment to child and adolescent health and the potential within intentional collaboration across professions.

P08.02

Introducing a Screening Tool for Empowering Patients to Risk Stratify Dietary Supplements

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Objectives: Dietary supplement use is highly prevalent in the United States: over 57% of Americans report recent use of dietary supplements. Despite the popularity of dietary supplements, their safety and efficacy remain unclear. Safety concerns include outdated regulations, poor oversight of the supplement industry, product adulteration, and misbranding, all of which lead to concerns about the quality of dietary supplement products. Imported products and those marketed for body building, sexual performance, or weight loss may be particularly suspect. Adverse events related to dietary supplements can result from adulterated or misbranded products, supplement-supplement interactions, drug-supplement interactions as well as inappropriate use in medical conditions. Toxicity can occur when patients take multiple

products containing the same ingredient. Preserving safety is also hampered because patients often do not report their supplement use to a healthcare provider. Even when patients disclose their supplement use, many healthcare providers find it challenging in a clinical encounter to document and evaluate the safety of those supplements. Clearly, healthcare providers need additional tools to help their patients choose safer dietary supplement options. One such tool was developed by Operation Supplement Safety (OPSS), a program of the Consortium for Health and Military Performance at the Uniformed Services University.

Method(s): In this poster, we will share the OPSS tool, describe its rationale and intended use and apply it in a case scenario. Healthcare providers will learn how the tool can be used to educate themselves and colleagues about dietary supplements and identify those that may be less safe. In addition, providers will learn how to share the tool with their patients to help them make informed choices. Finally, we will share additional resources for valuable dietary supplement information.

Outcomes: N/A

Conclusions: This reliable and valid tool promotes patient-provider collaboration and serves as an example of advocacy for dietary supplement education where it is critically needed.

P08.03

Utilizing the Health Care Tree, SWOT, SMART, and PDSA as a Sequential Framework for Wellness and Well-being

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Objectives: To present a novel framework that improves self-efficacy for people and organizations on how to be well (a very personal and dynamic definition throughout our lives). Think about healthcare as a tree: the trunk as disease prevention, the branches as disease management, the leaves as innovations - some become new branches while others fall by the wayside, and the roots as wellness promotion. This **health care tree** framework is novel and prioritizes health promotion as the rooting and can help people to know how to organize their priorities. The **SWOT** analysis (**S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats), **SMART** goals setting (**S**pecific, **M**easurable, **A**chievable, **R**elevant, **T**ime-based), and **PDSA** evaluation as a sequential framework (**P**lan, **D**o, **S**tudy, **A**ssess) is novel and innovative in that these 3 evidence-based tools have not been utilized in this manner for health, wellness, and well-being improvement previously. Utilizing this stepwise framework with the health care tree model can shift the approach to education, care provision, and organizational management.

Method(s): Users will create a plan to address one organizational wellness issue in their work environment and also a personal well-being area of interest utilizing the Health Care Tree, SWOT, SMART, and PDSA as a sequential framework for wellness and well-being. Measure engagement, progress, and sense of wellness and well-being at 3,6,9, and 12 months.

Outcomes: Anticipated improvement in awareness of health, wellness, well-being of self, team, and organization.

Conclusions: Just as our sense of health, wellness, and well-being are different at different stages of our personal and professional lives, so are they different for our patients, their caregivers, our own loved

ones, colleagues, and staff. By utilizing this unique and novel framework we can improve focus on health, wellness, and well-being promotion as primary steps in self-care, health care, and organization management.

P08.04

Take 15: Listening as Collaboration

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Objectives: The Take 15 pilot project was implemented by the Veterans Health Administration (VHA) as a way for staff at VA Medical Centers (VAMCs) to feel both heard in the nation's largest healthcare system and appreciated during the COVID 19 pandemic.

Method(s): Take 15 flyers were shared with VA staff at 6 midwestern VA hospitals. Interested staff reached out to the Take 15 via email. Trained VA staff and community volunteers scheduled short (~15 minute) listening sessions with interested VA staff over the Webex platform. After the interview they write up a poem for the person and send it to them. The poem was confidential. The employee decides whether they wanted to share the poem and whom they want to share it with. Three surveys were distributed to staff who participated: a link to Survey #1 was emailed to staff when their interview was scheduled; a link to Survey #2 was emailed to staff once they received their poem; a link to Survey #3 was emailed to staff 2 - 3 months after they received their poem.

Outcomes: There was significant agreement from participants that: 1) they found value in the experience; 2) the VA should continue the program; and 3) they would recommend the program to co-workers. 70% of respondents replied "Yes" when asked if the experience had "changed my perspective on my life." Written responses were overwhelmingly positive. Several respondents mentioned that they shared their poems with friends and family members, the poems made them cry, and they felt valued and listened to as VA employees.

Conclusions: Employees who participated in Take 15 had very positive responses to the program overall. The sample size was small and participants self-selected to participate so the impact of this experience on the VHA employees as a whole has not been determined, but for those employees did participate, it was a meaningful and meaning-making experience.

P08.05

Developing a Mindful Workforce: VA CALM Mindfulness Facilitator Training

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Objectives: The national VA Compassionate Action Learning Modules (CALM): Mindfulness Facilitator Training is a one year train-the-trainer course to build VHA capacity to teach mindfulness and compassion skills to Veterans and VA employees. VA CALM was developed to scale the availability of MBIs across the country and overcome multiple barriers including access to training, clinician personal

expense, and the lack of evidence about the impact of such training on the clinician. VHA is also committed to training a diverse work force, including racial/ethnicity identity, work location (urban, suburban, rural), and professional discipline. The training includes three-phases taught over the course of a year including: participation in a nine-week Mindfulness Based Stress Reduction course, personal mindfulness practice, study of mindfulness theory, observed facilitation skills with feedback, and implementation support to lead groups for patients and employee wellness.

Method(s): Encounter and facility data was pulled from the VA Corporate Data Warehouse using Clinic Stop Code, Four Character (CHAR4) codes, Health Factors, and CPT codes when available. Data on the number of providers trained was pulled from the Integrative Health Coordinating Center (IHCC) course completions list and the Employee Education System (EES) database. Participant evaluation data was pulled to identify participant feedback and experience.

Outcomes: Program outcomes include large effect-size decreases in clinician stress and burnout and increases in teaching competence, mindfulness, and self-compassion. VA CALM began with 74 participants in Fiscal Year 2019 (FY19), graduated 142 clinicians for FY22, and has approximately 300 clinicians training in FY23. The demand for the training remains high; applications exceed available training positions each year by the hundreds. As VA CALM has scaled, the number of total meditation clinical encounters have also increased (FY19 = 81,506, FY20 = 76,003, FY21 = 133,716 and FY22 = 229,939).

Conclusions: It is possible, on a large scale within a healthcare setting, to offer high fidelity mindfulness training to employees when there is support for doing so. To our knowledge this is not offered in any other healthcare setting. Since 2019, meditation encounters have changed in a similar pattern to the changes in numbers of providers trained. VA plans to continue to expand VA CALM training to provide mindfulness skills to both employees and Veterans and to increase access to meditation and mindfulness practices. Course evaluations have demonstrated benefits both personally and professionally.

P08.07

Integrating Wellbeing and Self-Care as a Healing Practice for Women at High Risk for Breast and Gynecologic Cancers

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Objectives: The Hoag Breast and Ovarian Cancer Prevention Program provides cancer surveillance and prevention to women at high risk for breast and gynecologic cancers due to inherited cancer genes. (ie *BRCA*) Wellness practices have been shown to reduce cancer risk by up to 30%. Our program integrates self-care and a mixture of eastern and western wellness practices into standard medical care as healing practices for prevention, treatment and recovery from cancer. Our healthcare team reflects the principles of diversity, equity, inclusion and belonging in team composition, team culture and interactions with each other and with patients.

Method(s): Our multidisciplinary team of genetic counselor, breast surgeon, gynecologic oncologist, women's health nurse practitioner, nurse navigator, social worker, dietician, activity coach, mindfulness coach and psychologist/sex therapist plus administrative support staff provide an integrated approach

to standard medical care and wellness. Our team composition reflects the community we serve. Monthly team patient care meetings integrate our various care specialties. Team interactions seek to dismantle hierarchical power structures prevalent in healthcare settings.

Outcomes: Integration of western medical care and eastern wellness practices increases access to wellness in this community of at-risk women. Collaborative approach with a focus on sustainable care plans dismantles tokenism and performance.

Conclusions: Integration of wellness and standard medicine can meet the unique needs of these “previvor” patients. Integration of eastern wellness practices and western medical care focuses on physical, mental and psycho-social health. DEIB is prioritized in program and team development, patient and team member interactions and provision of health care.