

CONFERENCE ABSTRACTS

IM4US Conference 2015 Abstracts: Poster and Oral Presentations

2015 年 IM4US 大会摘要: 海报和口头发言

Resúmenes de la conferencia IM4US 2015: Póster y presentaciones orales

The following abstracts were presented on August 7, 2015, during the poster session at the Integrative Medicine for the Underserved (IM4US) Conference held at Tufts University School of Medicine in Boston, Massachusetts.^a The annual IM4US conferences provide a space for practitioners across a variety of disciplines to gather, share information, and promote affordable, accessible integrative healthcare for all. IM4US strives to shift the current healthcare paradigm in the direction of wellness, prevention, patient empowerment, and self-care.

Integrating Mindfulness into the Patient-Centered Medical Home (MINDFUL-PC)

Zev Schuman-Olivier, MD; Liza Pine, BA; Zayda Vallejo, M.Litt; Susan Pollak, MTS, EdD; Elana Rosenbaum, MS, LICSW; Richa Gawande, PhD; Liz Gaufer, MD, MPH; Todd Griswold, MD

Background: This project aims to integrate mindfulness training into the heart of the standard healthcare delivery system. Since patient-centered medical homes (PCMHs) are encouraged as part of the current wave of healthcare reform, this project focuses on harnessing the momentum for change by creating a replicable and sustainable implementation model for mindfulness in the PCMH. Mindfulness training is an evidence-based approach to patient-centered care, self-regulation, and whole-person self-management. Mindfulness-based interventions (MBIs) have been shown to improve self-management in major areas of community health and chronic illness, and can be effective for anxiety, depression, and pain. MBIs can also reduce the stress associated with chronic illness. Mindful communication training for healthcare providers can reduce provider burnout and increase resiliency, patient-centered communication, provider empathy, and patient satisfaction. Currently, no studies examine the effects of provider mindfulness training on patient health outcomes. The overwhelming majority of MBIs have been conducted in educated, white, English-speaking populations.

Methods: This project has trained primary care providers (PA, APRN, DO, MD) in mindfulness-based stress reduction (MBSR) and mindful communication. We have developed an adaptation of MBSR modified specifically for direct implementation within the PCMH, which is called mindfulness training for primary care (MTPC). MTPC is enrolling patients with anxiety, depression,

chronic pain, and adjustment disorder related to chronic medical illnesses. MTPC adds psychoeducational components designed to enhance the capacity for self-management of chronic illness. The MINDFUL-PC project aims to investigate the effects of MTPC for patients, MBSR and mindful communication for providers, and the combination of the trainings on patients' experience of care and providers' experience of caring.

Results: The MINDFUL-PC project has already enrolled primary care providers and began offering patient groups in September 2015. MINDFUL-PC aims to enroll a culturally diverse population of patients with at least 30% of patients completing the program being non-white or having a primary language other than English. Patient groups in Portuguese and Spanish are planned for mid-2016.

Conclusion: This innovative project was developed by a multidisciplinary team at Cambridge Health Alliance and is the core project of our new academic Center for Mindfulness and Compassion.

Massage Therapy vs Music Therapy vs Usual Care in an Inpatient Setting: Feasibility and Qualitative Findings

Oscar Cornelio-Flores, MD; Kirsten Resnick, MPH (c); John Forrestal, PhD (c); Eric Roseen, DC; Maria Hernandez, MD, MT-BC; Jon Wardle, BH Sc Naturopathy, MPH, PhD; Suzanne Hanser, EdD, MT-BC; Robert Saper, MD, MPH

Background: Music and massage therapies are effective for different patient outcomes in the hospital setting. However, these therapies are still marginalized in healthcare. Our study examined the feasibility and effectiveness of conducting a randomized controlled trial (RCT) comparing massage therapy and music therapy to usual care in a medical inpatient floor of an urban safety-net hospital.

Methods: Ninety patients admitted to the Family Medicine Inpatient Unit of Boston Medical Center (BMC) were randomized in a 1:1:1 ratio to daily massage therapy, music therapy, or usual care. Inclusion criteria were ≥ 18 years old, and English or Spanish speaking. Exclusion criteria were skin infection, hemophilia, thrombocytopenia, hepatic encephalopathy, dementia, altered mental status,

^a "Xylitol Nasal Irrigation in a Patient with Gulf War Illness: A case report" (Hayer et al) was accepted for poster presentation but was not presented at the conference.

Citation
Global Adv Health Med.
2015;4(6):65-72. DOI:
10.7453/gahmj.2015.125

requiring constant supervision (eg, incarceration, psychosis), and expected same-day discharge. Data were analyzed qualitatively using thematic analysis, where initial codes were developed and used to create higher order categories in a cumulative manner. Semi-structured interviews to ask patients about perception of interventions were conducted 1-2 weeks after hospital discharge. Lyrics from songs written by patients were collected and analyzed. Themes were coded using an iterative process until agreement had been reached between researchers. Post-discharge surveys and lyrics were coded by two researchers independently, with a third member reviewing the coded data (triangulation) to improve inter-rater reliability.

Results: Of 1070 inpatients admitted July 1 through December 9, 2014, 237 (20%) were eligible. Of the eligible patients, 90 (38%) were enrolled to massage therapy (30), music therapy (30), or usual care (30). Our 90 study participants were 70% female, 43% non-Hispanic black and 23% Hispanic. Post-discharge data collection was accomplished for 68 (76%) participants. Analyses are ongoing and were presented. Preliminary qualitative findings showed common themes of “improved hospital stay,” “music focused me away from pain,” “reduced stress,” “reduced anxiety,” and “happiness.”

Conclusion: It is feasible to conduct an RCT providing music and massage therapy in a safety-net hospital inpatient setting. The music therapy experience seems to be associated with a sense of improved hospital stay and mind off pain. Lyrics show that music may play an important role when coping with stress in the hospital setting. The effects of massage therapy were associated mostly with improved pain and relaxation.

Feasibility of the Integrative Medical Group Visit (IMGV) Model to Treat Chronic Pain and Improve Function in an Underserved Spanish-speaking Community

Oscar Cornelio-Flores, MD; Sheila Abdallah, MD; Amanda DeLoureiro, MD; Paula Gardiner, MD, MPH

Purpose: Disparities exist in access to treatment options to improve chronic pain in underserved Spanish speaking patients. The integrative medical group visits (IMGV) model combines a medical group visit with mindfulness stress based reduction (MBSR), nutrition information, and evidenced-based complementary therapies. Our successful IMGV model has proven to reduce pain in English-speaking patients at Boston Medical Center, and we plan to develop a “Latino IMGV” model and assess the feasibility of this intervention to reduce pain and improve function in Spanish speaking patients with chronic pain.

Methods: This is a clinical feasibility study (N=30). We will recruit and screen 120 patients from East Boston Neighborhood Health Clinic and the outpatient Family Medicine Clinic at Boston Medical Center. Inclusion criteria: Spanish speaking patients, aged 18 years and older, who have had chronic pain for the past 12 weeks. Exclusion criteria: pregnancy, psychosis, suicidal ideation or active substance abuse disorder. The IMGV interven-

tion consists of once-weekly group visits lasting 2 to 2.5 hours for a total of 9 weeks. Our current IMGV model will be culturally adapted to meet the needs of the growing Latino community with chronic pain. Data will be collected on group attendance (9 sessions total), healthcare utilization, sociodemographic variables, and patient-centered outcomes: PROMIS 29 questionnaire (pain level, pain interference, physical and emotional function) at baseline, and at 9 weeks. Mixed analysis will include descriptive statistics and *t*-test (baseline and at 9 weeks) as well as qualitative analysis from focus groups at the end of the study that will address the following feasibility questions: how acceptable this model is within the Latino community and what changes need to be made to our current IMGV model for it to be successfully adapted and implemented in the outpatient setting.

Results: Results will be presented at the 2016 IM4US annual meeting on 30 patients who joined the study over the course of 4 months. Mean difference in pain level for all patients between baseline and 9 weeks will be reported as well as the measurements for the PROMIS 29 such as emotional distress and sleep quality. In addition to this, relevant information will be obtained from the focus group at the end of the intervention and presented in terms of acceptability of the Latino IMGV model, patient satisfaction, and likelihood to be used in a sustainable manner by the Latino population.

Conclusion: This IMGV model may be feasible to be used in low-income Latino patients with chronic pain.

Characteristics of Patients Receiving Acupuncture at Health Events for the Underserved in Southern California

Gina R. Hamilton, DC, MAOM; Sivarama Prasad Vinjamury, MD (Ayurveda); MAOM, MPH; Jennifer Noborikawa, BS

Background: Research indicates high satisfaction rates among users of integrative therapies. However, a lack of affordability and accessibility often limits access to such therapies in the underserved communities. Acupuncture services were provided at no cost to the underserved communities in Los Angeles and Orange counties during various health events as part of a community outreach program of a university.

Objective: To describe the characteristics of patients seeking acupuncture care at health events for the underserved.

Methods: A retrospective data analysis of first-visit data capturing patient demographics was obtained during free community health fairs and church-sponsored activities from 2012 to 2014 in Los Angeles and Orange counties. The following characteristics were included in the study: age, gender, chief complaint, and symptom severity. Descriptive statistics were calculated using SPSS version 23 to report the frequencies of age, gender and symptom severity.

Results: A total of 554 patients received acupunc-

ture care from 2012 to 2014. There were 324 females and 219 males. The average age range was 41 to 50 years. Most patients complained of chronic pain with moderate to severe intensity. Additionally, non-musculoskeletal conditions such as depression and fatigue were reported.

Conclusion: Underserved patients who sought acupuncture services were predominantly middle-aged females with chronic musculoskeletal pain. These characteristics are similar to those who used other forms of integrative medicine. Future research is recommended to validate these findings.

**Development of an Integrative Medicine
Subspecialty in an Underserved Primary Care Clinic:
Optimus Clinic for Integrative Medicine**
Shakeilla Howell, MD, CA

Integrative medicine (IM) is being broadly practiced around the United States. Several models have emerged, but few address the healthcare needs of our most vulnerable populations. The current shortage in primary care physicians and our disease-centric healthcare system make implementation of a patient centered, preventive medical approach imperative. Development of IM subspecialty clinics within underserved primary care clinics is one potential solution to the American healthcare crisis. An outline of the creation of the Optimus Integrative Medicine Clinic (OIMC) is highlighted here. OIMC, housed in a federally qualified health center in southwestern Connecticut, is focused on providing patient-centered, healing-oriented methods that are safe, evidence-based, and affordable. The clinic works with predominantly Medicaid and self-pay patients and their physicians to produce a comprehensive treatment plan. Treatment plans may include family medicine physician-administered nutritional counseling, trigger point injections, botanical and supplement counseling, mind-body therapies, and soon, acupuncture. Development of IM subspecialty clinics like the OIMC can be an innovative answer for access to holistic, preventive, and therapeutic medical modalities in a dysfunctional healthcare system. OIMC and places like it will need further research and support to assess clinical development and health outcomes.

**Examples in Practice: Integrative Patient-Centered
Medical Homes Delivering Care to Underserved
Populations**

Jennifer Olejownik, PhD, MS

Background: The Project for Integrative Health and the Triple Aim (PIHTA) promotes the intersection between the values of integrative health and medicine (treating the whole person, using least invasive methods, partnering with others, supporting self-care, and creating health) and the goals of the Triple Aim (reducing costs, enhancing patient experience, and improving population

health). The purpose of this presentation is to showcase existing models on community health for underserved populations using the Triple Aim as an evaluative framework. To achieve this goal, it is important to explain the objectives of the PIHTA initiative, which includes aspects of community and population health. The purpose of PIHTA is to (1) continuously create a useful database of published research, high-quality gray literature, and examples in practice to support our diverse group of stakeholders making implementation and policy decisions and (2) build an interdisciplinary, multi-stakeholder community by engaging leaders and by highlighting emerging practices. One key topic area contained within the Examples in Practice portion of the PIHTA initiative, integrative patient-centered medical homes (IPCMHs), has implications for those offering integrative care to underserved populations.

Methods: While the PIHTA initiative is connected to multiple learning communities, this presentation identifies outstanding practices of IPCMHs delivering care to underserved populations. Using interview data from key leaders at IPCMHs, information on best practices within these settings will be highlighted and organized around the strategies of the Triple Aim.

Results: Using examples from selected clinics, this section will showcase advances and innovations currently being implemented to reduce cost, enhance patient experience, and improve population health within IPCMH environments. The intention is four-fold: to share integrative approaches to care; to highlight how group visits are utilized; to identify innovative approaches for acute and chronic conditions; and to understand how the concept of community impacts how care is ultimately delivered.

Conclusion: The application of these findings will ultimately guide other individuals and clinics wishing to adopt integrative approaches for underserved populations. As part of a pre-pilot investigation, these results would undoubtedly serve as a foundation for a larger case study investigation across multiple IPCMHs.

**Exploring the Birth Experience of Centering
Pregnancy Participants**

Rhianon Liu; Maria T. Chao, DrPH, MPA; Ariana Jostad-Laswell; Trilce Santana; Larissa G. Duncan, PhD

Background: Centering pregnancy (CP) is a group-based model of prenatal care that aims to empower women by combining health assessment, education, and support. Drawing on conventional and integrative health practices, CP has been shown to improve birth outcomes and prenatal care satisfaction in underserved populations. Less is known about how CP affects patient experience during labor and delivery. We investigated how CP influences the birth experience of racially and ethnically diverse low-income mothers.

Methods: We recruited patients already enrolled in the CP program at an urban safety net hospital. In the

postpartum period, we conducted qualitative interviews on women's birth experiences, including whether and how they found CP to be helpful, their overall birth satisfaction, and satisfaction with care during labor and delivery. Two researchers independently coded interviews using a phenomenological approach to characterize the lived experience of giving birth. We calculated descriptive statistics of quantitative data, including a scale of pregnancy-related empowerment.

Results: Study participants (N=36) were primarily Latina (68%), Spanish-speaking immigrants (71%) with low annual household income (74%, <\$30,000) and an average age of 29.7 years (SD=4.0). Most participants found CP helpful for learning about having a healthy pregnancy (87.2%), skills for managing labor pain (82.1%), taking care of a newborn (82.1%), and reducing stress (64.1%). On a scale from 1 (not satisfied) to 10 (very satisfied), participants' birth satisfaction was 9.0 (SD=1.5) and care satisfaction 9.3 (SD=1.3). Qualitatively, participants discussed CP in terms of techniques learned to manage pain (breathing, walking, different body positions), knowledge about procedures like Cesarean section, and positive experiences when CP providers attended the birth. In terms of overall birth experience, women liked that providers attempted to minimize medical intervention in labor and tried to follow their birth plans. Negative experiences arose when women interacted with a range of anonymous birth attendants, leading some to feel less supported or like they were receiving conflicting instructions.

Discussion: CP positively influenced the birth experience of underserved mothers. In addition to imparting knowledge and skills important to a healthy pregnancy and care for a newborn, CP may increase women's ability to cope with general stress and challenging circumstances surrounding labor and birth.

Feasibility of Group Acupuncture for Painful Diabetic Neuropathy Among Linguistically and Racially Diverse Safety Net Patients

Maria T. Chao, DrPH, MPA; Trilce Santana; Unity Nguyen, MD, LAc; Rhianon Liu, MA; Anna Napoles, PhD, MPH; Eliseo J. Pérez-Stable, MD; Dean Schillinger, MD; Frederick M. Hecht, MD

Background: Neuropathy affects nearly half of patients with diabetes and is particularly burdensome for older adults due to higher prevalence with age, impact on activities of daily living, and risk of falls associated with many medications. Effective, non-pharmacologic approaches for painful diabetic neuropathy (PDN) are needed, particularly for older minorities at highest risk of diabetes-related complications. Acupuncture is a promising treatment for PDN but its feasibility and acceptability have not been established among linguistically and racially diverse patients. Group-based acupuncture may provide an effective and feasible treatment for PDN in safety net settings.

Methods: To determine feasibility, acceptability, and preliminary effects of group acupuncture among linguistically and racially diverse safety net patients with PDN, we are conducting a pilot randomized controlled trial at a public hospital in San Francisco. Study participants are randomized to (1) treatment as usual (TAU), (2) TAU with 12 weeks of acupuncture once weekly, or (3) TAU with 12 weeks of acupuncture twice weekly. Measures of pain, health-related quality of life, and other symptoms are collected using validated measures. To facilitate recruitment and retention of older patients with limited English proficiency (LEP), study materials and bilingual staff will be available in languages spoken by at least 5% of primary care patients at the study site.

Progress to date: Based on 5360 primary care visits, patients with diabetes at our study site speak primarily English (52%), Spanish (29%), and Cantonese (8%). All study materials have been translated to Spanish and Chinese. We have addressed various administrative hurdles including credentialing acupuncturists at the hospital, obtaining resources for language translations, and securing space availability for study visits. Recruitment began in March. Acceptability of acupuncture has been promising. A majority of providers have agreed to recruitment of their patients for the study. Initial outreach to patients has been successful to date; one-third of participants have LEP.

Conclusion: Lack of research infrastructure to include patients with limited English proficiency can be addressed but requires flexible timing and resources. If pilot data are favorable, a follow-up RCT will test group acupuncture for PDN as a low-cost, non-pharmacologic, culturally appropriate treatment approach to improve health-related quality of life.

Health in the Classroom: Special Educators' Attitudes Towards Integrative Medicine

Naomi Schoenfeld, PhD; Diane Connell, EdD

Background: As increasing numbers of parents turn to integrative medicine to meet the needs of children with disabilities (eg, ADHD, autism, learning disabilities), special education teachers serve an important role in the ways such approaches are implemented during the school day. Families that choose integrative medicine face school reactions ranging from support to indifference to hostility. These reactions, in turn, determine the extent to which a child's health and dietary needs will be met during school hours.

Results: Literature review results indicated a strong bias toward allopathic medicine use in schools, both in research studies and in suggestions regarding ways to encourage parents who are using integrative approaches to seek conventional medical advice. While individual instances of support for integrative medicine did occur, teacher survey results indicated that overall teacher and pre-service teacher attitudes reflect high levels of unfamiliarity with, and skepticism

regarding, alternative and/or integrative approaches. Teachers felt it reasonable to ignore or override parent requests that are not supported by mainstream medicine (eg, the teacher declining to permit a child to drink an herbal beverage provided by parents) or that are seen as counter to their own health understanding (eg, requiring all children to use hand sanitizers daily or giving milk at lunch to a child whose parents have requested that their meals be dairy free).

Conclusion: These results suggest that closer attention to role of special educators in integrative care, both in regard to training and to familiarity with key concepts, will be central to improving positive health interventions for children with disabilities.

Integrative Medicine—Harlem Needs Assessment for the Underserved

Denise M. Elizondo, MD; Ray Teets, MD

Background: Integrative medicine (IM) is often understood as an approach involving treatments that low-income patients cannot afford. Is this the case with all integrative modalities or are patients in Harlem, an underserved community, already incorporating IM into their self-care?

Objective: The objective of the assessment survey was to investigate the awareness of IM in our patient population, determine the level of interest, and assess which practices our patients have or wish to integrate into their management.

Methods: A 17-question survey was developed to assess the following: personal use of vitamins, supplements, herbs, and homeopathy; visits to dietician or nutritionist and chiropractor; experience with osteopathic manipulation, acupuncture, massage therapy, hypnotherapy, cognitive behavioral therapy, and biofeedback therapy; and practice of yoga or meditation. Patients were asked to respond “yes” if they practiced the specific integrative approach, “no” if they had not, or “no, but interested” if they desire to incorporate these modalities.

Results: Out of 200 questionnaires, 164 were submitted. The majority of our patients had either experience with IM modalities or were interested. Results were as follows: vitamins or supplements 34% yes, 36% no but interested; herbs 34% yes, 37% no but interested; homeopathy 7% yes, 47% no but interested; dietitian or nutritionist 28% yes, 37% no but interested; osteopathic manipulation 13% yes, 47% no but interested; acupuncture 11% yes, 46% no but interested; hypnotherapy 6% yes, 45% no but interested; massage therapy 21% yes, 44% no but interested; yoga 22% yes, 43% no but interested; meditation 20% yes, 40% no but interested; cognitive behavioral therapy 6% yes, 44% no but interested; biofeedback therapy 7% yes, 44% no but interested. When patients were asked if they would be interested in having IM practices available at Institute for Family Health Center of Harlem,

55% replied yes.

Conclusion: In conclusion, it was clear from this pilot study that patients either have some experience with IM or have an interest in an integrative approach as part of their medical therapy. Integrative medicine interest from our population remains strong despite low socioeconomic status.

Mindfulness for Medical Students: Increasing Empathy, Reducing Bias

Jay Luthar

Background: Disparities in healthcare can be perpetuated through implicit biases held by physicians toward marginalized groups, leading to deficits in care quality or decision making. Increasing empathy and reducing automatic associations are hypothesized methods to reduce implicit bias in the social science literature. One process that been shown to prevent a decline in empathy during medical training and decrease implicit biases in the general population is mindfulness-based stress reduction training. By addressing both empathy and cognitive control over automatic associations, it is a unique intervention that might address bias and thus improve the quality of patient care.

Methods: This project seeks to examine the effects of a 6-week mindfulness elective on medical student empathy (Interpersonal Reactivity Index) and perceived stress (Perceived Stress Scale), as well implicit bias (Implicit Association Test) toward marginalized groups. Students in a quasi-control group will be compared to students participating in the course through the surveys administered before and after the course.

Results: We anticipated the course to run and data collection to occur from October-November of 2015. Previously, from January to March 2015, a pilot mindfulness class was conducted with positive student feedback helping to inform study design and curricular development and providing qualitative assessment of the impact of the course.

Discussion: Based on other studies, we anticipate that participants in the mindfulness course will show a reduced implicit bias and increased parameters of empathy and wellbeing. The conclusions drawn from this study will help to inform curricular changes that will improve the quality of future physicians and their interactions with patients.

Patient Advisory Groups and Integrative Medicine: How and Why to Incorporate Them Into Research Studies

Paula Gardiner, MD, MPH; Denise Crooks, MPH; Amenah Shamekhi, PhD (c); Kelly McCue, MPH; Timothy Bickmore, PhD

Background: With the current focus on patient

satisfaction in healthcare, patient advisory groups (PAGs) will be used more often in research, including Integrative Medicine research. We review the methods used to include a PAG into the design and conduct of a randomized controlled trial (RCT) of integrative medicine group visits (IMGV) to treat chronic pain and depression.

Methods: Five patients (3 women, 2 men) with chronic pain and depression who participated in IMGV in the past form the PAG. They meet once per month for an hour. During these meetings, patient advisors review study-related materials such as the group visit curriculum, study flyers, website design and content, and study procedures. Meetings start with a brief meditation. A facilitative rather than didactic dynamic is used. Participants are encouraged to reflect on why particular materials are more or less appealing. Due to participants having chronic pain and depression, meetings are scheduled in the afternoon. Snacks and a small stipend are provided to encourage attendance.

Results: PAG participants have suggested changes to the IMGV curriculum materials and website and have provided critical feedback on the health literacy level of curriculum content. They have assisted with increasing the usability of the study website and offered opinions on increasing the reliability of the study virtual patient advocate (VPA). They have also pilot-tested the chair yoga sequence developed for study. The study materials have become more accessible and appropriate for the target population based on input from the PAG.

Conclusion: Incorporating a PAG into the design of integrative medicine research studies can be beneficial. It can make the study materials and approach more appropriate for the population being researched. Patient advisors' medical conditions should be considered when determining a time, format, and location for conducting the PAG meetings.

A Feasibility Study to Introduce an Embodied Conversational Agent (ECA) on a Tablet Computer Into a Group Medical Visit

Kelly McCue, MPH; Amenah Shamekhi, PhD (c); Denise Crooks, MPH; Timothy Bickmore, PhD; Katherine Gergen Barnett, MD; Gwynneth Johnson; Niina Haas, MA; Paula Gardiner, MD, MPH

Background: The purpose of this pilot study is to evaluate the feasibility of introducing a tablet computer with an embodied conversational agent (ECA) into an integrative medical group visit (IMGV) for patients with chronic pain and depression.

Methods: This prospective observational cohort study enrolled 21 participants who were attending an integrative medicine group visit. Patients attended a 9-session integrative medical group visit and received a tablet computer with an ECA. Participants were encouraged to interact with the ECA between groups at home. Participants completed questionnaires at baseline and 9 weeks. We recorded sociodemographics and feasibility

outcomes including ECA helpfulness, satisfaction with the ECA, areas of interest for the ECA to discuss (nutrition and stress), and what could be improved about the ECA.

Results: Patient demographics were as follows: all participants receive their primary care in inner-city outpatient clinics; the average age of participants was 47 years; 11 participants identified as black/African American and 3 participants identified as Latino/a; 16 participants had an annual income under \$30,000; 12 participants were on sick leave or disability. Of the participants who completed surveys, 84.62% reported using the ECA's suggestions to reduce stress; 76.92% reported using the ECA's suggestions to eat healthier; 83.33% reported some level of confidence that they could continue to use the ECA's recommendations post-study; 88.89% said it was easy to talk with the ECA; 75% said they trusted the ECA very much; 36.36% said they would prefer speaking with the ECA over speaking with a clinician; and 90.91% said they would definitely recommend the ECA to a friend. Emerging themes included participants feeling like the ECA was a friend and someone to talk and relate to, ability to use the ECA whenever they wanted (accessibility), and ability to dive deeper into curriculum at their own pace and review material with the ECA when needed.

Conclusions: It is feasible to introduce an ECA into a 9-week IMGV program for an underserved patient population with chronic pain and depression.

Designing Patient Engagement Interactions to Enhance Use of Preconception Care Technology System

Michelle Bennett, MD (c); Megan Hempstead, MPH; Cleveanne Julce; Paula Gardiner, MD, MPH; Leanne Yinusa-Nyahkoon, ScD; Fatima Adigun, Brian Jack, MD; Suzanne Mitchell, MD, MS

Background: Patient engagement has been shown to have a positive effect on personal health outcomes. The "Gabby Preconception Care System" was introduced as a tool to be used outside of the traditional healthcare visit to help bridge the gap in women's medical knowledge and to facilitate interventions that will lead to a healthy pregnancy, whether planned or unplanned. The system assesses a woman's risks related to adverse birth outcomes and provides tailored health information and behavior change support specific to those risks.

Methods: The patient engagement modules were developed using 2 theoretical frameworks, adult learning theory and self-determination theory. We identified specific content areas of interest by examining published articles from popular media targeting the audience of African American women of reproductive age and obtained iterative feedback from target audience representatives to hone the voice of the scripted interaction to ensure the interaction would be acceptable to users. Seven female participants who were between the ages of 18 and 24 years and self-identified as African American were asked what they would enjoy learning from Gabby,

impressions of the content, and feedback on language used for the hair, skin, and relationship and sexuality scripts. The focus group session was audio recorded and transcribed verbatim, and a grounded theory approach was used for data coding.

Results: The following themes were found in the conversation: (1) Gabby's credibility, (2) acceptability of topics in the Gabby system, (3) content feedback, and (4) empowering patients to be active in their medical care.

Conclusion: The Gabby System is an appropriate medium for content such as hair and skin care to engage African American women. These scripts contain content that interests them and could promote their continued use of the program, which would support behavior change and risk reduction.

Facilitators and Barriers to the Integration of Mind-Body Medicine Into Primary Care

Chelsea McGuire, MD; Jonathan Gabison; Galina I. Umanski, MS; Benjamin Kligler, MD

Background: There have been no studies to date describing the experience of primary care providers who have integrated mind-body medicine (MBM) into their practice. This study utilizes quantitative and qualitative methods to understand the key facilitators and barriers to the integration of MBM into primary care in both underserved and non-underserved settings.

Methods: An online survey and telephone interviews were conducted with primary care providers who have integrated MBM into their practice. We calculated descriptive frequencies for survey participants' demographic characteristics, MBM provision strategies, and the relative importance of each facilitator and barrier. Spearman rank correlations were used to compare the frequencies of reported facilitators and barriers between providers working in underserved settings to those working in non-underserved settings. Interviews were audio-recorded, transcribed, and independently coded by two coders. The immersion/crystallization approach was used to identify emergent themes.

Results: Among the 68 survey respondents, "insufficient time in clinical schedule" was the most highly ranked barrier. Confidence in one's knowledge or skill in MBM, positive attitudes of patients toward MBM, and patient interest in MBM ranked as the 3 most important facilitators. Providers working in underserved settings ($n=38$) consistently reported more barriers than those working in non-underserved population, resulting in a non-correlated Spearman coefficient of 0.571 ($P=.084$).

Our qualitative analysis generated 4 main themes: (1) MBM as both an approach to patient care and a set of specific modalities, (2) time and reimbursement as significant challenges to MBM, (3) support for MBM in a provider's practice setting as a key facilitator, and (4) commitment to mind-body primary care is driven by personal experience. Participants reported strategies to

overcome certain barriers, including a number of specific strategies for providing mind-body primary care in underserved settings.

Discussion: The potential impact of MBM on our delivery of healthcare remains far from being fully realized, especially within primary care. Although MBM/primary care providers working in underserved settings report more overall barriers, providers are using innovative strategies, such as group visits, referral networks with discounted services, and incorporation of healthcare staff in the provision of MBM to offer mind-body primary care in this population.

Qualitative Evaluation of an Integrative Medicine Group Visits Model of Care for Patients With Chronic Pain and Depression

Paula Gardiner, MD, MPH; Denise Crooks, MPH; Katherine Gergen-Barnett, MD; Gwynneth Johnson; Kelly Mccue, MPH; Lance Laird, ThD, MDiv; Niina Haas, MA; Suzanne Mitchell, MD, MS

Purpose: Integrative medicine group visits (IMGV) are a series of 10-week intensive outpatient group visits for patients with chronic pain and depression that combine principles of mind-body techniques with group discussions on wellness topics.

Methods: We conducted 4 focus groups ($N=20$) with participants with chronic pain and depression who had participated in an IMGV program in order to better understand the participants' experiences and interpretations of the program and its effects. An unaffiliated facilitator asked participants about their perceptions of the program and motivation for attending; lessons learned; lifestyle changes made; physical, mental, or behavioral effects attributed to the program; and opinions about group vs individual care. Participants were also asked to reflect on the technology components of IMGV. The focus groups were audiotaped, transcribed, and analyzed preliminarily. Transcripts will be further analyzed using grounded thematic analysis techniques.

Results: The focus group participants ($N=20$) all received their primary care from inner-city outpatient clinics; the average age of participants was 51 years; 13 participants identified as Black/African American, and 7 participants identified as Latino/a; more than half of the participants were on sick leave or disability ($n=13$); more than half of the participants were on food stamps or used food pantries ($n=12$); 7 participants were using a Section 8 housing subsidy; the average pain level was 6 (range = 0-10). Emerging themes include the significance of the group in providing social support, universality, affiliation with a clinician, health-directed behavior, and self-efficacy. We explore the multiple meanings of efficacy in an integrative group care delivery model. Participants also commented on the role of technology during the group.

Conclusions: IMGV is a multifaceted intervention that increases social support, universality, affiliation with a clinician and self-efficacy.

Nasal Irrigation for Chronic Rhinosinusitis and Fatigue in Patients With Gulf War Illness: Preliminary Data From a 3-arm Randomized Controlled Trial

Chidi Obasi, MD PhD; Supriya Hayer MD; Tony Kille, MD; Rachel Molander, MD; Ian Hauffe; Ina Kansariwala; Daniel Fehrenbach; Lily Comp; Laura Van Leuven; David Rabago, MD

Background: Gulf War illness (GWI), a multi-system condition with substantive impact on quality of life, affects 1 in 7 Persian Gulf War (1990-1991) veterans. The etiology is unclear; chronic sinus symptoms and fatigue are common. Nasal irrigation with saline (NI-S) or xylitol (NI-X) is reported to improve sinus symptoms and fatigue in the general population; neither has been assessed in GWI. NI-S is hypothesized to improve sinus symptoms by thinning, cleaning, and clearing mucus and by improving the protective function of the nasal mucosa. NI-X is hypothesized to enhance mucosal cellular immunity. We therefore assessed effects of NI-S and NI-X on participants with GWI, sinus symptoms, and fatigue.

Methods: This 3-arm federally funded Phase 2 randomized controlled trial (Clinicaltrials.gov NCT01700725; target sample size; N=75) is enrolling participants with GWI, chronic sinus symptoms, and fatigue. All groups use routine medical care; NI-S and NI-X participants add nasal irrigation twice daily using 80 mL 2% saline or 120 mL 5% xylitol solutions made using distilled water. Primary outcomes include the validated Sinonasal Outcome Test (SNOT-20, 0-100 points) and the Multidimensional Fatigue Index (MFI). Secondary outcomes include pro-inflammatory cellular and cytokine profiles, cost-benefit analysis, and participant satisfaction. Assessment is at baseline and 8 and 26 weeks. Intention-to-treat analysis of within- and between-group differences is by Mann-Whitney *U* and Cohen's *d* effect size tests.

Results: Thirty-six participants are enrolled, 23 (74% male; 51.4±6.9 years old) have completed baseline and 8-week assessments. All groups improved SNOT-20 scores compared to baseline status; NI-S: 17.1±17.4 points, *P*=.02; NI-X: 7.8±11.6 points, *P*=.1; Control: 4.0±4.2 points, *P*=.05). Within- and between-group differences on the MFI subscales were not statistically significant. Compared to SNOT-20 Control scores, NI-S scores showed moderate effect size (Cohen's *d*=0.45; *P*<.001); NI-X scores showed small effect size (Cohen's *d* 0.17, *P*=.07). There has been one case of self-limited epistaxis.

Discussion: Preliminary data suggest that NI-S and NI-X may improve chronic sinus symptoms among participants with GWI. Progress to date suggests robust study conduct, protocol adherence to nasal irrigation use, and satisfaction with care. Full enrollment and 8-week data on secondary outcomes and all 26-week data on current participants are pending.

Xylitol Nasal Irrigation in a Patient With Gulf War Illness: A Case Report

Supriya Hayer MD; Chidi Obasi, MD, PhD; Daniel Fehrenbach; Lily Comp; David Rabago, MD

Background: Veterans are among the most underserved patients in the United States. Gulf War illness (GWI) is a multisystem condition affecting 1 in 7 US veterans of the Persian Gulf War (1990-1991). The cause is multifactorial; the impact is large, and there is no cure. Chronic sinus symptoms and fatigue are common symptoms. Nasal irrigation with saline (NI-S) is an evidence-based treatment for sinus symptoms in the general population. Xylitol (NI-X) is less well-studied; NI-X is hypothesized to enhance mucosal cellular immunity. Neither has been assessed studied in patients with GWI.

Methods: A 41-year-old male Gulf War veteran developed symptoms consistent with GWI, including chronic sinusitis and fatigue, sleeping approximately 18 hours daily. He presented to a primary care clinic without surgical indication or allergy. He achieved mild-to-moderate short-term improvement for sinus symptoms with multiple courses of Amoxicillin/Clavulanate; however, symptoms returned after antibiotic use. He was also refractory to nasal steroids, decongestants, dietary change, and NI-S. He was prescribed NI-X irrigation using Xlear xylitol spray 2 to 4 times daily and was assessed clinically with the validated measure Sino-Nasal Outcomes Test 20 (SNOT-20; 0-100 points; psychological, sleep, rhinological, and ear/facial subscales) over 5 years.

Results: The patient's sinus and fatigue symptoms improved. His baseline composite SNOT-20 score was 78, indicating a high disease burden. In the first 3 years of follow-up he was seen every 6 months; he used NI-X an average of twice daily and reported an average improvement of 25 points. In years 4 and 5, he was seen annually and continued NI-X as needed, averaging twice weekly. SNOT-20 scores were 32 and 34, respectively. His sleep quantity (12-13 hours daily), quality, and SNOT-20 sleep subscale improved. Qualitatively, he reported improvement in overall quality of life. There were no side effects or adverse events.

Discussion: NI-X is an under-studied form of NI. These results suggest NI-X may be adjunctive therapy for GWI patients with chronic sinus and fatigue symptoms. NI-X may add to the therapeutic options for challenging conditions. Formal study in the GWI and general population is indicated; one such federally funded study is now in progress. (Clinicaltrials.gov NCT01700725).



To view or download the full-text article, visit: www.gahmj.com/doi/full/10.7453/gahmj.2015.125