Background:
Pain is a leading cause of disability in the United States. Given the complexity and biobehavioral nature of pain, the 2011 Institute of Medicine report on Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research advocated for multifaceted approaches for pain management comprised of both pharmacological and nonpharmacological therapies. In 2017, the National Academies of Sciences, Engineering, and Medicine's report Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use reviewed the status of available evidence on nonpharmacological therapies for managing chronic pain. For example, CBT, a type of psychotherapy focused on restructuring negative thoughts and experiences with positive expectations, has been shown to be effective in reducing pain intensity and other psychological effects caused by pain (e.g., anxiety and depression) for low back pain, headaches, arthritis, orofacial pain, and fibromyalgia.

As a result of this national push toward the use of nonpharmacological therapies for chronic pain, increased health professionals’ education and training will be needed to encourage the adoption and appropriate use of the evidence-based approaches. In addition, addressing policy barriers, such as those related to reimbursement for these treatments will be important to enable broader use and dissemination. Given the changing landscape for pain management, the Forum on Neuroscience and Nervous System Disorders and the Global Forum on Innovation in Health Professional Education will bring together key stakeholders to discuss these treatments and integrative health models for pain management.

Workshop Objectives:
- Review the current state of evidence on the effectiveness of nonpharmacological treatments and integrative health models for pain management, as well as available evidence on use patterns and patient interest. Examples may include acupuncture; manual therapies; physical therapy, occupational therapy, and exercise; cognitive behavioral therapy; tai chi; yoga; meditation; and neurostimulation.
- Explore the state of evidence on the effectiveness of emerging models of pain management.
- Consider multimodal approaches and potential synergies between and among pharmacological and nonpharmacological approaches to pain management.
- Consider multimodal approaches and potential synergies between and among devices and nonpharmacological approaches to pain management.
- Discuss research gaps and key questions for further research.
- Examine health professions’ current approaches for educating students, trainees, and practicing clinicians on nonpharmacological pain management, and discuss potential next steps to improve training and education within and across health professions.
- Explore policies, such as those related to reimbursement that would enable broader dissemination and implementation of evidence-based nonpharmacological treatments when appropriate.
DAY ONE: December 4, 2018 | Room 125

8:00 a.m.  Welcome and Overview of Workshop
            DANIEL CHERKIN, Kaiser Permanente Washington Health Research Institute (emeritus)
            (Co-Chair)
            ANTHONY DELITTO, University of Pittsburgh (Co-Chair)

8:15 a.m.  Why This Workshop Matters - Lived Experience and Provider Perspective
            CHRISTIN VEASLEY, Chronic Pain Research Alliance
            MARK RYAN, Virginia Commonwealth University

<table>
<thead>
<tr>
<th>Session I: Nonpharmacological Approaches to Pain Management - Evidence on Effectiveness and Safety, and Emerging Models of Care</th>
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<td>Objectives:</td>
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<tr>
<td>– Describe the treatments used for pain problems covered by insurance and patient use of complementary and integrative health approaches often not covered by insurance.</td>
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<td>– Review evidence for the effectiveness and cost-effectiveness of nonpharmacological treatments for pain management.</td>
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<td>– Describe the impact of psychological and social factors on patient responses to pain and pain treatments.</td>
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<tr>
<td>– Explore the state of evidence on the effectiveness of emerging models of pain management.</td>
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<tr>
<td>– Consider multimodal approaches and potential synergies between and among 1) pharmacological and nonpharmacological approaches; and 2) devices and nonpharmacological approaches to pain management, and for whom.</td>
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<td>– Discuss research gaps and priorities for further research.</td>
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8:35 a.m.  Session Overview
            STEVEN GEORGE, Duke University, Moderator

8:45 a.m.  What health care services are provided to persons with pain?
            • In large insured population
            • In indigent (Medicaid) population
            • In older adults (Medicare)
            • Use of complementary and integrative health approaches in US population
            DAVID ELTON, Optum

9:00 a.m.  What do we know about the effectiveness and safety of nonpharmacological and nonsurgical treatments for chronic pain conditions?
            • Low back pain
            • Other common pain problems
            • In specific populations (indigent, elderly, ethnic groups)
            ROGER CHOU, Oregon Health & Science University

9:30 a.m.  What is known about the cost-effectiveness of nonpharmacological and nonsurgical treatments?
            PATRICIA HERMAN, RAND Corporation

9:45 a.m.  Discussion
10:15 a.m.  BREAK

10:30 a.m.  What are the effects of psychological and social factors on patient responses to pain and pain treatments?
            DENNIS TURK, University of Washington

10:45 a.m.  Emerging Models of Care
            Overview (deficiencies of current models; principles guiding development of new models; evidence for effectiveness of major models; and challenges for implementing in diverse settings)
            ROBERT KERNS, Yale University, Moderator

11:00 a.m.  Major Models and Evidence for Effectiveness (series of 10-minute presentations)
            Stepped Care, Stratified Care and Matched Care
            WILLIAM SHAW, University of Connecticut
            First contact care
            JULIE FRITZ, University of Utah
            Care for patients with complex and high impact chronic pain
            ROBERT EDWARDS, Brigham and Women's Hospital/Harvard Medical School
            Integrative Care
            LYNN DEBAR, Kaiser Permanente Washington Health Research Institute
            Use of technology to support access, self-management and care processes
            ALICIA HEAPY, Yale University; VA Connecticut Healthcare System

11:50 a.m.  Discussion

12:30 p.m.  LUNCH

1:30 p.m.  Multimodal Approaches to Pain Management and Potential Synergies
            Pharmacological and non-pharmacological approaches
            KURT KROENKE, Indiana University
            Devices and non-pharmacological approaches
            RICHARD WILSON, Case Western Reserve University

2:00 p.m.  Discussion

2:15 p.m.  Major Current Research Initiatives and Priorities
            LINDA PORTER, National Institute for Neurological Disorders and Stroke
            DAVID SHURTLIFF, National Center for Complementary and Integrative Health
            WENDY SMITH, NIH Office of Behavioral and Social Sciences Research
            ALISON CERNICH, National Center for Medical Rehabilitation Research, Eunice Kennedy
            Shriver National Institute of Child Health and Human Development
            CHRISTINE GOERTZ, Patient Centered Outcomes Research Institute (PCORI)
            DAVID ATKINS, Department of Veterans Affairs
            ERIC SCHOOMAKER, Uniformed Services University of the Health Sciences;
            Department of Defense
3:05 p.m.  Panel on Future Research Priorities
ALICIA HEAPY, Yale University; VA Connecticut Healthcare System
ROGER CHOU, Oregon Health & Science University
PATRICIA HERMAN, RAND Corporation
KAREN SHERMAN, Kaiser Permanente Washington Health Research Institute
BEVERLY THORN, University of Alabama

3:30 p.m.  Discussion
KIM DUNLEAVY, University of Florida, Discussant

4:00 p.m.  BREAK

**Session II: Education and Training of Health Professionals in Pain Management**

**Objective:**
- Examine health professions’ current approaches for educating students, trainees, and practicing clinicians on nonpharmacological pain management.

4:15 p.m.  Session Overview
ELIZABETH (LIZA) GOLDBLATT, Academic Collaborative for Integrative Health, Moderator

4:25 p.m.  Current status of health professional education in pain management and the incorporation of nonpharmacological approaches
SCOTT FISHMAN, University of California, Davis

4:40 p.m.  Discussion
NANCY BAKER, Tufts University, Discussant
DAVID THOMAS, National Institute on Drug Abuse, Discussant
BENJAMIN KLGILER, Veterans Health Administration; Icahn School of Medicine at Mount Sinai, Discussant

5:30 p.m.  Adjourn Day One
DANIEL CHERKIN, Kaiser Permanente Washington Health Research Institute (emeritus) (Co-Chair)
ANTHONY DELITTO, University of Pittsburgh (Co-Chair)
DAY TWO: December 5, 2018 | Room 120

8:00 a.m. Day Two Opening Remarks
  DANIEL CHERKIN, Kaiser Permanente Washington Health Research Institute (emeritus)
  (Co-Chair)
  ANTHONY DELITTO, University of Pittsburgh (Co-Chair)

Session II: Education and Training of Health Professionals (continued)

Objective:
  – Discuss potential next steps to improve training and education for pain management within and across health professions.

8:10 a.m. Session Overview
  ELIZABETH (LIZA) GOLDBLATT, Academic Collaborative for Integrative Health, Moderator

8:20 a.m. Interprofessional education: How do we move from classroom to practice?
  MICHELE MAIERS, Northwestern Health Sciences University, Moderator

Speakers:
  JUDY WATT-WATSON, University of Toronto
  S. LIZ HARRELL, Arizona State University

8:50 a.m. Discussion
  BENJAMIN KLGILER, Veterans Health Administration; Icahn School of Medicine at Mount Sinai, Discussant

9:30 a.m. BREAK

9:45 a.m. Collaborative practice: Facilitating a team-based approach for pain management
  MARGARET CHESNEY, University of California, San Francisco, Moderator

Speakers:
  LESLIE DAVIDSON, George Washington University
  ANTHONY LISI, Veterans Health Administration; Yale School of Medicine

10:15 a.m. Discussion
  BELINDA (BEAU) ANDERSON, Monmouth University; Albert Einstein College of Medicine, Discussant

11:00 a.m. LUNCH

Session III: Policies to Promote Evidence-based Nonpharmacological Approaches

Objective:
  – Explore policies, such as those related to reimbursement that would enable broader dissemination and implementation of evidence-based nonpharmacological treatments when appropriate.
  – Discuss potential policy barriers and opportunities for innovation.
  – Consider the research and evidence needed to advance these policies.

12:00 p.m. Session Overview
  ROBERT SAPER, Boston University, Moderator
12:10 p.m.  Patient, Clinician, Educator and Healthcare System Perspectives
    PENNEY COWAN, American Chronic Pain Association
    ROBERT BONAKDAR, Scripps
    BETH DARNALL, Stanford University
    DANIEL CARR, Tufts University School of Medicine
    HARLEY GOLDBERG, Kaiser Permanente (retired)
    CHESTER (TRIP) BUCKENMAIER, III, Uniformed University of the Health Sciences;
    Department of Defense

12:40 p.m.  Discussion

12:55 p.m.  What policies would help reduce major barriers to change?
    Insurance Coverage and Reimbursement Perspective
    SHARI LING, Centers for Medicare and Medicaid Services
    CATHERINE LIVINGSTON, Health Evidence Review Commission/Oregon Health Authority
    DAVID ELTON, Optum
    CALEB ALEXANDER, Johns Hopkins University
    PATRICIA HERMAN, RAND Corporation

1:20 p.m.  Discussion

### Session IV: Moving Forward

Objective: Synthesize and discuss key highlights from the workshop presentations and discussions and, most importantly, identify next steps and promising areas for future action and research.

1:40 p.m.  Session Overview and Synthesis of Key Workshop Themes and Future Directions
    DANIEL CHERKIN, Kaiser Permanente Washington Health Research Institute (emeritus)
    (Co-Chair)
    ANTHONY DELITTO, University of Pittsburgh (Co-Chair)

2:00 p.m.  Open Discussion

2:25 p.m.  Closing Remarks from Workshop Co-Chairs

2:30 p.m.  Adjourn Workshop
**Workshop Planning Committee**

Daniel Cherkin, Kaiser Permanente Washington Health Research Institute (emeritus), Co-Chair  
Anthony Delitto, University of Pittsburgh, Co-Chair  
Megan Driscoll, University of Pittsburgh Medical Center  
Kim Dunleavy, University of Florida  
John Chae, Case Western Reserve University  
Steven George, Duke University  
Elizabeth Goldblatt, Academic Collaborative for Integrative Health  
Allen Jette, MGH Institute of Health Professions  
Robert Kerns, Yale University  
John Krystal, Yale University  
Anne Marie McKenzie-Brown, Emory University  
Vitaly Napadow, Massachusetts General Hospital; Harvard University  
Robert Saper, Boston University  
Dennis Turk, University of Washington  
Christin Veasley, Chronic Pain Research Alliance