DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL CENTER FOR COMPLEMENTARY AND INTEGRATIVE HEALTH
NATIONAL ADVISORY COUNCIL FOR
COMPLEMENTARY AND INTEGRATIVE HEALTH
Minutes of the Eighty-Sixth Meeting
January 19, 2024

NACCIH Members Present Virtually

Dr. Helene Benveniste, New Haven, CT
Dr. Todd Braver, St. Louis, MO
Dr. Per Gunnar Brolinson, Blacksburg, VA
Dr. Nadja Cech, Greensboro, NC
Dr. Robert Coghill, Cincinnati, OH
Dr. Anthony Delitto, Pittsburgh, PA
Dr. Daniel Dickerson, Los Angeles, CA
Dr. Margaret Haney, New York, NY
Dr. Girardin Jean-Louis, Miami, FL
Dr. Benjamin Kligler, Washington, DC*
Dr. Helen Lavretsky, Los Angeles, CA
Dr. James Russell Linderman, Bethesda, MD*
Dr. Wolf Mehling, San Francisco, CA
Dr. Lynne Shinto, Portland, OR
Dr. Erica Sibinga, Baltimore, MD

NACCIH Members Not Present

Prof. Rhonda Magee, San Francisco, CA
Dr. Karen Sherman, Seattle, WA
Dr. Amala Soumyanath, Portland, OR

*Ex Officio Member

I. Closed Session

The first portion of the eighty-sixth meeting of the National Advisory Council for Complementary and Integrative Health (NACCIH) was closed to the public, in accordance with the provisions set forth in Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S.C., and Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2). A total of 153 applications were assigned to the National Center for Complementary and Integrative Health (NCCIH). Applications that were noncompetitive, not discussed, or not recommended for further consideration by the scientific review groups were not considered by Council. Council agreed

with staff recommendations on 94 scored applications, which requested $39,759,865 in total costs.

II. Call to Order of Open Session; Review and Approval of Council Operating Procedures

Dr. Martina Schmidt, director of the NCCIH Division of Extramural Activities, convened the open session at 12:30 p.m. ET. This meeting was held virtually for all attendees, including Council members, NCCIH staff, and the public. The September 2023 meeting minutes were approved unanimously. As required by the Council charter, Dr. Schmidt presented the annual review of Council operating procedures to ascertain whether they are serving NCCIH's needs. The topics, describing NCCIH's and Council's responsibilities, included NCCIH reports to Council, secondary review of grant applications, review of concepts for research initiatives, adjudication of appeals, and advising on policy and research priorities. Council unanimously approved the operating procedures.

III. NCCIH Director's Welcome and NCCIH Report

Dr. Helene M. Langevin, director of NCCIH, welcomed the Council members and attendees. She announced that Dr. Monica M. Bertagnolli is the new director of the National Institutes of Health (NIH). Dr. Bertagnolli's scientific priorities include ensuring diversity in clinical trials, embracing learning-based analytical tools, restoring trust in science, and stregthening collaborations across NIH. Dr. Tara Schwetz is the new director of the Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI); she will oversee and coordinate many Offices within the NIH Office of the Director. President Biden has honored Dr. Steven Rosenberg, National Cancer Institute, with the National Medal of Technology and Innovation.

Dr. Langevin briefly summarized the simplified, streamlined NIH grant review process that will take effect for grant applications received on or after January 25, 2025. Dr. Langevin further pointed out that in September 2023, NIH launched a first-of-its-kind NIH-wide community-led research program, Community Partnerships to Advance Science for Society (ComPASS), an NIH Common Fund program led by the National Institute of Nursing Research. This groundbreaking program supports studies of ways to address underlying, structural systemic factors within communities that affect health, e.g., access to safe spaces and safe schools, healthy food, and employment opportunities. Twenty-six awards have been made to date.

The 2024 International Congress on Integrative Medicine and Health (ICIMH) will take place in Cleveland, Ohio, on April 9 to 13, 2024. Dr. Langevin noted that NCCIH is a very important presence at ICIMH's congresses, e.g., by giving workshops and connecting with researchers.

Dr. Langevin congratulated Dr. Lauren Y. Atlas, lab chief of the Section on Affective Neuroscience and Pain, NCCIH Division of Intramural Research, on becoming an NCCIH tenured investigator.

Regarding the NCCIH budget, Dr. Langevin noted NIH is in a continuing resolution until March 8, 2024, which means that NCCIH is being funded at the FY 2023 level. She hopes that there will be new budgetary information to provide at the next Council meeting.

Next, Dr. Langevin highlighted two recent NCCIH-sponsored studies:

- A research team from four U.S. institutions created an extensive lexicon of terms in complementary and integrative health, applying natural language processing techniques to support their recognition in the biomedical literature. "Mindbody therapies" and "manual body-based therapies" were two examples. Dr. Langevin thinks this work will have implications for how people approach this topic in the future.
- Researchers from Emory University and Georgia State University looked at the relationship between levels of C-reactive protein, the "threat network" of the brain, and attention to a perceived threat of racial discrimination. This is the first empirical study to show that racial discrimination may influence activation of the immune system and the brain's threat network—specifically, the ventromedial prefrontal cortex. One implication is that this may be a mechanism by which racial discrimination could contribute to brain health vulnerabilities. Participants were a group of Black American women in a trauma study.

Dr. Langevin presented a graphic illustrating the draft of a theme-based framework to better integrate and communicate NCCIH program news. The draft framework has three major elements:

- "What" (i.e., five categories of research that NCCIH funds—pain and pain management; mind and body connection; health restoration; whole person health; and nutrition continuum and natural products)
- "Who" (who is doing the work—the research workforce, research participants, and populations)
- "How" (methods and data science)

Dr. Langevin asked Council to consider two questions: Where has the NCCIH portfolio been historically? Where should the portfolio grow? For the first category in the "What" element a strong focus is on pain and pain management, and examples of growth could be toward the better understanding of endogenous pain resolution and the prevention of pain, or of the transition from acute to chronic pain. The four other "What" categories focus on health restoration (the return to health, or "salutogenesis," and resilience); the mind and body connection (e.g., mind and body therapies, stress and stress management, sleep, and interoception); the nutrition continuum and natural products (e.g., the microbiome, probiotics, cannabinoids, phytochemicals, and endocrine disrupters); and whole person health (e.g., interrelated systems, multicomponent interventions including whole health systems, and their effects on multisystem outcomes).

Dr. Langevin added that the draft framework does not necessarily reflect the next NCCIH strategic plan, on which work has not yet begun. She noted that the steps that were followed to

prepare the current NCCIH strategic plan will also be followed in the next plan, such as a Request for Information to invite comments on a draft of the plan.

Category 1. Pain and Pain Management

With regard to activities relating to NCCIH's interest in pain and pain management, Dr. Langevin provided an update on Helping to End Addiction Long-term® Initiative, or NIH HEAL Initiative®, activities including the following:

- At the HEAL PURPOSE Network (PURPOSE stands for Positively Uniting Researchers of Pain to Opine, Synthesize, & Engage) meeting on November 17, 2023, Drs. Lanay Mudd and Inna Belfer, NCCIH Division of Extramural Research (DER), highlighted NCCIH strategic priorities and funding opportunities in pain research. PURPOSE is an effort to connect pain researchers across the continuum of pain research and provides a digital platform.
- The 5th Annual NIH HEAL Initiative Scientific Meeting will be held on February 7 and 8, 2024.
- NCCIH is participating in these NIH HEAL Initiative funding opportunities:
  - Research to Increase Implementation of Substance Use Preventive Services (R61/R33 Clinical Trial Optional) (RFA-DA-24-066)
  - Non-addictive Analgesic Therapeutics Development [Small Molecules and Biologics] to Treat Pain (UG3/UH3 Clinical Trial Optional) (RFA-NS-24-019)

Category 2. Mind and Body Connection

Dr. Langevin provided an update on activities related to mind and body connection, including the following:

- The 2nd Annual NIH Investigator Meeting for Interoception Research, on November 11, 2023, highlighted recent advances in interoception research relevant to the NIH Blueprint for Neuroscience Functional Neural Circuits of Interoception Initiative. NCCIH hosted this meeting.
- The workshop, "Music as Medicine: The Science and Clinical Practice" took place on December 14 and 15, 2023. The goals were to highlight accomplishments from the last 6 years in advancing scientific research on music and health, develop a blueprint for the next phase of research, and further build the research community. The workshop was sponsored by NIH and the National Endowment for the Arts (NEA) and jointly organized by NIH, the NEA, the Renée Fleming Foundation, and the John F. Kennedy Center for the Performing Arts. Within NIH, the workshop was led by NCCIH and supported by six other NIH Institutes/Centers/Offices (ICOs).
- The annual meeting of the Society for Neuroscience was held on November 10–15, 2023, in Washington, D.C. Dr. Helene Benveniste, Yale School of Medicine and a Council

member, served as chair and Dr. Belfer served as co-chair of a symposium entitled "Mechanisms and Modulations of the Brain Lymphatics System."

- On April 11, 2024, there will be a symposium at ICIMH, "How Advancing the Science of Emotional Well-Being Can Improve Whole Person Health." The five presenters include two from NCCIH DER, Drs. Emmeline Edwards (DER director) and Erin Burke Quinlan. This symposium will introduce the three research networks on emotional well-being funded by NCCIH and the efforts of researchers in those networks to understand emotional well-being and how it may play an important role in improving health outcomes.

Category 3. Health Restoration

Dr. Langevin provided an update on activities related to health restoration, including the following:

- On December 6, 2023, NCCIH presented the 2023 Stephen E. Straus Distinguished Lecture in the Science of Complementary Therapies. The speaker, Dr. Ahmed Tawakol, director of nuclear cardiology and co-director of the Cardiovascular Imaging Research Center, Massachusetts General Hospital, addressed the topic, "Novel Insights Into Heart-Brain Interactions and Neurobiological Resilience."

Category 4. Whole Person Health

Dr. Langevin provided an update on activities related to whole person health, including the following:

- At the 2nd World Congress Integrative Medicine and Health, held in Rome, Italy, Dr. Langevin delivered the lecture, "Advancing Integrative Medicine Towards Evidence-Based and Patient-Centered Comprehensive Care," on September 21, 2023.
- At the 3rd International Danube Symposium, held in Vienna, Austria, Dr. Langevin gave the presentation, "The Future of Healthcare: Uncovering the Whole Picture with Whole-Person Research," on September 22, 2023.
- Dr. Langevin and Dr. Emrin Horgusluoglu, DER, will participate in the workshop, "New Strategies and Methodologies for Whole Person Research," at ICIMH on April 11, 2024. This event builds on NCCIH's workshop on methodologies for whole person research held in September 2021.
- Dr. Quinlan will present the session, "NIH Open Access Repositories: How Can They Be Leveraged to Advance Whole Person Health Research?" at ICIMH on April 11, 2024. This symposium will introduce data resources (e.g., Stimulating Peripheral Activity to Relieve Conditions [SPARC], Topological Atlas and Repository for Acupoint Research [TARA], and Brain Research Through Advancing Innovative Neurotechnologies [BRAIN] Initiative repositories) that can increase understanding of physiological systems

and the mechanisms by which complementary and integrative health approaches can impact them.

Category 5. Nutrition Continuum and Natural Products

Dr. Langevin provided an update on activities falling into category 5, focusing on topics related to the nutrition continuum and natural products, including the following:

- Dr. Langevin participated in The Climate Underground 2023 Conference, at which other speakers included former Vice President Al Gore and Dr. Dennis Derryk, New School University and the Corbin Hill Food Project. An important theme was the link between human health and planetary health.
- An NIH workshop on "Complementary and Integrative Interventions To Prevent and Mitigate the Effects of Endocrine-Disrupting Chemicals" will be held on June 10–11, 2024. NCCIH and the National Institute of Environmental Health Sciences (NIEHS) are partnering on this workshop to stimulate discussion about and interest in researching ways to reduce and mitigate the effects of endocrine-disrupting chemicals in people who have been exposed to them.
- NCCIH and three other ICOs have issued the funding opportunity Resource Center for Cannabis and Cannabinoid Research (U24 Clinical Trial Not Allowed), AT-24-006 to provide resources for investigators for overcoming the challenges of doing research in this space. There will be a technical assistance webinar on this notice of funding opportunity (NOFO) on January 25, 2024, and the NCCIH lead is Dr. Patrick Still, DER.

Category 6. Workforce Development and Special Populations

Dr. Langevin provided an update on activities related to workforce development and special populations, including the following:

- On November 2, 2023, the RAND Corporation and NCCIH launched the RAND Research Across Complementary and Integrative Health Institutions (REACH) Virtual Resource Center. A collaboration between RAND and institutions that train complementary and integrative health practitioners, the resource center's purpose is to support collaborative research across and within these institutions by leveraging RAND's research infrastructure.
- Drs. Mudd and Belfer will lead a post-conference workshop, "Navigating Early Career Stage Transitions and Finding Funding for Career Development in Complementary and Integrative Health Research," at ICIMH on April 13, 2024. It will focus on skill development for navigating early research career transitions and pursuing funding opportunities.
- The NIH Office of Disease Prevention is serving as the lead for:
    - Notice of Pre-Application Webinar and FAQs for the Multi-Sectoral Preventive Interventions (MSPI) Research Network: PAR-24-053 (UG3/UH3, Clinical Trial Required), and RFA-OD-24-006 (U24, Clinical Trial Not Allowed)

    - Interventions To Promote Mental Well-Being in Populations That Experience Health Disparities Through Social, Cultural, And Environmental Connectedness, NOT-OD-23-194
    - Multi-Sectoral Preventive Interventions That Address Social Determinants of Health in Populations That Experience Health Disparities (UG3/UH3, Clinical Trial Required), PAR-24-053
- Encouragement of mentorship is the main goal of Administrative Supplements to Recognize Excellence in Diversity, Equity, Inclusion, and Accessibility (DEIA) Mentorship, NOT-OD-24-001.
- The notice Encourage Eligible NIH BRAIN Initiative Awardees to Apply for PA-23-189, Research Supplements to Promote Diversity in Health-Related Research (Admin Supp - Clinical Trial Not Allowed), NOT-AA-23-020, is also for mentoring. The leads on this notice of special interest (NOSI) are the BRAIN Initiative and the National Institute on Alcohol Abuse and Alcoholism (NIAAA).
- The National Institute on Minority Health and Health Disparities is the lead for Health and Health Care Disparities Among Persons Living with Disabilities (R01 - Clinical Trials Optional); PAR-23-309.

Category 7. Methods and Data Science

Dr. Langevin provided an update on activities related to methods and data science, including the following:

- At the 16th Annual Conference on the Science of Dissemination and Implementation (D&I) in Health, hosted by NIH and AcademyHealth on December 10–13, 2023, NCCIH staff led panels on the following: Dissemination and Implementation in Embedded Pragmatic Trials: Raising the Bar for Real-World Research (Dr. Beda Jean-Francois, DER); Building Implementation Strategies into Large Scale, Multisite Pragmatic Clinical Trials (Dr. Jennifer Baumgartner, DER); and Expanding the Support for Implementation Science Across the NIH: Opportunities for Partnerships and Capacity Building (Dr. Baumgartner).
- Dr. Baumgartner will lead the post-conference workshop "Orientation to Dissemination and Implementation Science for Complementary and Integrative Health and Whole Person Health" at ICIMH on April 13, 2024.
- Dr. Quinlan is the NCCIH lead for the NOFO BRAIN Initiative: Brain Behavior Quantification and Synchronization (R61/R33 Clinical Trial Optional): RFA-MH-22-240.
- The National Institute of Mental Health is the lead ICO for the NOFO Collaborative Research in Computational Neuroscience (CRCNS) NSF Innovative Approaches to Science and Engineering Research on Brain Function: NOT-MH-24-140. This is a reissue of NOT-MH-20-110, and the NCCIH lead for this NOFO is Dr. Horgusluoglu.

Dr. Langevin summarized the goals of the new framework in her closing and invited feedback from members and the community at large.

Discussion: Dr. Langevin and Dr. Brolinson clarified the starting date for the revised review process. Dr. Cech asked if there are specific efforts going on at NCCIH to try to facilitate more inclusivity in terms of who participates in research and clinical trials and the types of mentorship. Dr. Langevin responded that all of NIH is driving the efforts. She added NCCIH is fortunate to not have to invent or reinvent many of the opportunities she had presented. As a small Center, it is important for NCCIH to take advantage of initiatives already in place. When necessary, NCCIH develops its own initiatives—two examples have been on (1) emotional well-being in underserved populations and (2) work with the Department of Veterans Affairs (VA) and the Department of Defense to help their patient populations, which are disproportionately affected by pain.

Dr. Edwards said she sees a lot of active participation by NCCIH across the board on diversity and health equity efforts. For example, NCCIH's Diversity and Health Disparities Working Group meets monthly and helps identify and monitor opportunities in this area, and a webpage is maintained. NCCIH has made some changes in the number of times it encourages diversity supplements to be submitted. DER has held many webinars for applicants and grantees on topics such as engaging diverse populations, including for potential participation in NCCIH clinical trials. Dr. Cech commented it is exciting to see these efforts starting to bear fruit and becoming part of the NIH culture and environment.

Dr. Dickerson said there might be different versions of the framework for different ethnic minorities or underserved populations. Will the framework have subgroups? Dr. Langevin said NCCIH has been targeting some specific populations that are minority, underserved, experiencing socioeconomic disparities, and/or disproportionately affected by specific health issues. Systemic interventions are also important, such as the ComPASS initiative. NCCIH will continue this effort on social determinants of health and how to address them. She also mentioned the concept of the exposome on the topic of environment. NCCIH benefits from partnerships with other ICOs, and one way it has influence is through the questions it asks. NCCIH has had a particular impact in emphasizing the positive aspects of mitigation of some environmental stresses, promotion of resilience, and addressing stress.

Dr. Kligler thanked Dr. Langevin for taking NCCIH into more of a whole person space and including both the concept of whole person health and the impact of social determinants of health. There is a trend across the Federal Government to start thinking about health and personal responsibility for health as bigger than the traditional framework. A Federal interagency working group led by the Healthy People 2030 initiative is examining these topics across different agencies, and he invited Dr. Langevin to join. Dr. Kligler remarked that the impact NCCIH has in its collaborations around NIH, especially on what kinds of approaches can mitigate difficult determinants of health, can echo across Government agencies that are responsible for much of the implementation around health care.

Dr. Langevin said the word "health" has been used extensively but not always to really mean health. She thinks there is some movement away from looking just at diseases—not that diseases are unimportant; they are. However, better understanding and more efforts are needed on this broader concept of health. Many initiatives across the Government are now taking "health" seriously, which she sees as a very good sign.

Dr. Lavretsky said she is excited about whole person health and that it is becoming a movement that people follow and that NCCIH can lead. She is part of the whole brain health movement and sees a snowball effect there, such as organizations working with each other that did not previously do so. The World Health Organization provides the key documents (e.g., on whole brain health and "global aging") to support this effort. She also mentioned seeing through her work a push on advocacy and perceiving health as a human right. She provided examples of plans and efforts on these topics.

Dr. Mehling asked whether the terms "whole health" and "whole person health" are the same. Dr. Langevin replied that the term "whole health" has been used quite a bit, including by the VA to describe its approach to health care. She then gave some NCCIH background starting with the development of NCCIH's current strategic plan 5 years ago. At NIH and in many other places in science, there is a tendency to break things into parts, such as the different organs, systems, and other parts of the body. In defining "whole person health," NCCIH integrates across a person's internal systems and also across the biological, behavioral, social, and environmental aspects of the individual. The concept also includes a bidirectional health continuum between health and less health. She said there is not a huge difference between the two terms Dr. Mehling mentioned, but for research purposes and NCCIH's research operational definition, NCCIH thought it was important to have "person" in its term.

Dr. Langevin asked Council members whether the new framework she presented was helpful. Dr. Cech said it was effective. Additional Council members agreed that the new framework was helpful.

Recognition of Retiring Council Members

Dr. Langevin recognized retiring Council members Drs. Todd Braver, Anthony Delitto, Wolf Mehling, and Lynne Shinto, thanking them for all the valuable advice they provided to NCCIH during their tenures.

IV. Two Presentations on Native American/Alaska Native Populations and NIH Tribal Health Research

Dr. Langevin welcomed speakers Dr. Karina L. Walters and Dr. Daniel Dickerson to explore how Native American health practices, including spiritual practices, fit into the whole person health paradigm and to discuss potential areas of shared interest between the work supported by the NIH Tribal Health Research Office (THRO) and NCCIH.

A. Directions taken by the NIH Tribal Health Research Office and Future Possibilities With NCCIH

Dr. Walters was appointed as the director of the Tribal Health Research Office (THRO), which is within DPCPSI in the NIH Office of the Director, in April 2023. In her directorship, she works to advance initiatives that will ensure tribally informed biomedical and behavioral research, enhance NIH's tribal consultation and tribal engagement efforts, and coordinate research on American Indian and Alaska Native (AI/AN) populations across NIH and with other Federal entities. She is deeply committed to engaging tribal leadership in health research efforts. Dr. Walters is a social epidemiologist, health prevention scholar, and researcher on AI/AN health issues, social and structural determinants of health, and health disparities and inequities. Dr. Walters is also an enrolled member of the Choctaw Nation of Oklahoma. She is interested in NCCIH from a personal and spiritual position as well. She noted that she has been a Sun Dancer for almost 25 years as well as a traditional health practitioner. She has both, hands-on, lived experience. and a research interest in opportunities for working closely with and exploring indigenous knowledge, and traditional health practices and protocols, toward achieving health and health equity for Indian country.

THRO is a synergistic hub for all AI/AN activities at NIH (also engaging with Native Hawaiian and other indigenous populations of the U.S. and its territories), and works directly with NIH and tribal partners to increase science and a research workforce to build healthy lives and communities. THRO's theme for 2024 is "Indigenous Knowledges Powering Science," which Dr. Walters believes aligns well with NCCIH. THRO serves 574 federally recognized nations, 277 of which are in Alaska.

Dr. Walters provided some demographic and epidemiological information. For example, one in four AI/ANs live in poverty and experience food insecurity—the highest rates for racial or ethnic groups in the United States. The poverty rate is even higher for people living on or near reservations. AI/AN people and other indigenous populations in the United States live an unhealthy reality that their ancestors did not dream for them. For example, their health care system is chronically underfunded, generally inaccessible, and inadequate. The Indian Health Service (IHS) budget is about 50 percent of what it should be for spending per capita. The structural determinants of health are poor, including food insecurities; substandard, overcrowded housing; and disproportionate exposure to damaging environmental hazards. These and other structural factors have led to a very high multiple chronic disease burden, or what can be called "syndemics," for example diabetes, heart disease, and post-traumatic stress disorder. AI/AN adults are almost three times more likely than non-Hispanic white adults to be diagnosed with diabetes. At age 65, life expectancy is the lowest it has ever been, and over a quarter of the population dies before age 45. Native populations have the highest rates of deaths from opioid overdoses, suicide, and diabetes.

Dr. Walters said Native people are invisible to public awareness. Few non-Native people really listen to them, and data about them are rarely gathered. She talked about and described an obligation for indigenous populations to reconnect to the power and love in their ancestors'

vision, change the course of their health, and harness collective scientific and indigenist wisdom to achieve that health. It is also important to acknowledge and build on resilience so people can do well.

Since Dr. Walters arrived at THRO, the Office has developed an acronym for the principles under which it operates, CEDAR: Creativity, Ethics, Determination, Accountability, and Respect/Responsibilities. Dr. Walters provided details for each element. THRO is about harnessing Native people's power to heal through science, by turning culturally informed discovery into health equity. It works on four areas represented by the following foundational elements:

- AIR [for the traditional element of wind] is about advancing indigenist research, which entails uplifting and harnessing Native "indigi-nuity" (ingenuity) and indigenous knowledge as culturally appropriate across the health sciences. Dr. Walters said NCCIH could potentially be a great home for this.
- EARTH is about cultivating capacity, including by building a culturally informed NIH workforce and a culturally representative Native external workforce. It requires raising awareness through technical advising, convenings, coordinating activities, troubleshooting, and doing educational outreach. One of the hopes is to build a corps of AI/AN **community-based** researchers (not just university-based researchers and initiatives). AI/ANs account for only about 1/3 of 1 percent of all Ph.D. holders in the United States.
- WATER is about watering the seeds of tribal engagement, consultation, and healthful partnerships. The hope is to accelerate cultural and scientific integrity, tribal accountability, and social responsibility in the conduct of research by, for, and in partnership with AI/AN communities—research that is authentic, credible, and responsive to the needs of tribal nations.
- FIRE is about blazing new trails and new paths for strategic initiatives, policies, and collaborations. Coalitions are vital because THRO itself is not a grant-awarding office. Partnerships will help address the most pressing issues in Indian country and build and maximize resources and policies that can better streamline activities and expectations across the ICOs.

Dr. Walters gave four main areas of focus by THRO in 2024: (1) Develop a tribal data sovereignty (TDS) policy, including through tribal consultations, ICO consultations, and a TDS workgroup. This will harmonize with tribal ordinances and codes and inform development of a Department of Health and Human Services (HHS) tribal data access and sharing policy. She would appreciate input from NCCIH in this area and, in general, working together. (2) Develop a new strategic plan for 2025–2030; based on recommendations by a specifically formed workgroup. (3) Develop indigenous knowledges guidelines that harmonize with the White House Office of Science and Technology Policy; this also includes a workgroup. (4) Develop cross-cutting initiatives across NIH, HHS, the U.S. Department of the Interior, and other relevant

Federal agencies. An example of a working group recently started is a Boarding School Healing Research Initiative inspired by the "Road to Healing" listening sessions tour held for Native communities by Deb Haaland, U.S. Secretary of the Interior.

Dr. Walters sees a great opportunity to look at the role of Native knowledges and practices in the context of what NCCIH is already exploring and has identified several groups as examples. The first group is neuroarts and how they can impact community health and well-being. Examples include songs, drumming/rattles, and traditional tattooing, toolmaking, and arts. The second group is traditional healing and traditional health practices. *Traditional healing* consists of practices done to correct something that is out of balance or needs to be put back into balance. *Traditional health practices* are everyday practices people use to keep themselves well and in balance. Indigenous communities have contributed greatly to traditional medicines, although this point often goes unacknowledged. It is estimated that 1,300 different types of indigenous medicines have been integrated into the pharmacopeia in Western science models, with prostratin, willow, and aspirin as examples. Dr. Walters noted that at times of crisis like COVID-19, almost everyone in Native communities turned to traditional medicines if they could not access conventional Western care. Informally, there have been some serious discussions among different healers and communities on some of the traditional medicines that were used to help people recover quickly from COVID-19. The National Institute on Drug Abuse (NIDA) has expressed some interest in psychedelics and their role in various Native communities. The third group is environmental interventions (e.g., land-based healing and the use of water). For example, AI/AN's have land-based, earth-based, and sky-based ceremonial cycles that play a role in maintaining well-being for individuals and the community and often offer opportunities for healing practices (e.g., sweat-lodge ceremonies).

Dr. Walters introduced the concept of "restoration of relational ways of being" in the world. It is critical to thought and healing in Native communities. For example, when an AI/AN person goes to pick a plant, they put a prayer into this, ask permission to do this, and approach that plant with reverence. This is relational. The restoration may be to the plant world, spirit world, element(s), ancestors, one's own body, or other things. As with other indigenous knowledges and practices, it often leads to narrative transformation, or how people talk and think about themselves. All these elements are often present in prevention science and health promotion coming out of Indian country.

Dr. Walters announced that THRO will be contributing to an upcoming Traditional Medicine Summit, with White House participation, that will likely be in spring 2024. In addition, there are efforts to obtain reimbursement from the Center for Medicare and Medicaid Services for traditional Native health practices and providers.

B. Native American Traditional Practices and Spirituality

Dr. Dickerson, the second speaker, is an associate research psychiatrist at the University of California, Los Angeles, Integrated Substance Abuse Programs and an Inupiaq (Northern Alaska

Native) on his mother's side. The NIH funders of his research include NCCIH, NIAAA, and NIDA. Dr. Dickerson's talk focused on two NIH-funded research studies he has conducted.

Dr. Dickerson opened by discussing the effects of historically based trauma and intergenerational trauma among Native Americans, including on AI/AN spirituality and people's souls. He noted a book on this topic by psychologist Eduardo Duran, *Healing the Soul Wound: Counseling with American Indians and Other Native People*. Dr. Dickerson gave examples of traumatic events and actions that Native American people have experienced since the 1400s. Many of the recent health disparities are based, in great part, on historical trauma. However, Native people are also looking at questions that focus on resilience and inherent strengths, such as, "Where do we go from here? How do we capitalize on our strengths?" Communities are emphasizing the need for integrating traditional practices and interventions for various health conditions, but very limited research has been conducted on them. This is in part because to do so requires working and dealing carefully and mindfully with the sacred parts of Native culture and spiritual beliefs.

Drumming is used by most, if not all, people in the world. Among Native Americans, the drum is a sacred instrument and a critical part of the culture, carrying songs, traditions, and stories; having sacred meanings; and bringing communities together. Drumming is used in ceremonies, social dances, feasts, and historically in preparation for hunting. It carries songs, prayers, stories, and traditions, brings AI/ANs together, and is a way to heal. Drumbeats symbolize the heartbeats of Mother Earth and the indigenous nations.

After meeting with some community leaders and elders, Dr. Dickerson developed an evidence-based intervention for substance use treatment that is integrated with AI/AN traditional practices, Drum-Assisted Recovery Therapy for Native Americans (DARTNA). Alcohol and other drug use among AI/ANs is a significant health issue, but there have been very few evidence-based interventions studied for it that incorporate drumming. Dr. Dickerson explored his intervention in two focus groups, a small pretest study, and then a feasibility randomized controlled trial. A manual was developed. Participants were AI/AN adults seeking substance use treatment in an urban area of southern California.

DARTNA has AI/AN drumming (adaptable by tribe) as the core component, with the other components including cultural education/discussion; making a drum; an overview of the Alcoholics Anonymous (AA) program and Wellbriety (a grassroots movement that provides culturally based healing to indigenous people, including support to heal from alcohol and substance abuse); the teaching of songs; and a processing group or talking circle. DARTNA is a 6-, 12-, or 24-session program. The optimal number of "doses" is under study. Dr. Dickerson said the DARTNA intervention reflects an approach of truly looking at the mental, physical, spiritual, and emotional aspects of well-being. AI/ANs have been using whole person health for centuries and recognize the interrelatedness of these various aspects of health and well-being. He added that it is exciting to be part of NCCIH's interest in whole person health.

The DARTNA team has followed the community-based participatory model for research. The ideas come from the community, which is critically involved in the developmental process and subsequent analyses. Early studies on DARTNA indicate that drumming can be of benefit for Native people, but a culturally based focus must be utilized rather than a "New Age" or non-Native approach. There were some promising areas of improvement of medical status, psychiatric status, spirituality, and physical and functioning levels, which the team looks at in addition to substance use. There is a huge need for more development of spiritual measures for all populations, and in his area, for Native Americans (few have been developed in partnership with communities).

In the DARTNA feasibility randomized controlled trial, the intervention was compared to a control of usual care plus an integrated multimedia health education program. At the end of treatment, participants who had participated in DARTNA reported less cognitive impairment, better physical health, fewer physical ailments, fewer alcoholic drinks per day, and less cannabis use in the past 30 days compared with the control group. At 3-month follow-up, DARTNA participants reported less cognitive impairment and lower anxiety with close relationships compared with the control group. However, they also reported more cigarette use and more alcoholic drinks per day, and they scored lower on a measure of adoption of AA principles than the control group. Dr. Dickerson and the community and elder advisory boards think that the negative findings may reflect the difficulty of finding opportunities in the big cities to do Native American drumming. To find it requires help from AI/AN connections. He and the boards see a need to develop a continuity plan (as a relapse prevention approach) so that the benefits from this intervention can be sustained longer. In general, many people with substance abuse disorder end up returning to substance use after treatment. More work is needed on relapse prevention and achieving and sustaining recovery in the long term. Dr. Dickerson recapped in his closing that Native American tradition mirrors many of the elements in NCCIH's whole person health model, and more work is needed in how to study and analyze spirituality.

Discussion: Dr. Langevin thanked both speakers. Dr. Benveniste asked Dr. Walters whether the epidemiology the speakers shared about Native communities was related to the axis of health care, where people live, and Federal regulations. If so, is there Federal intent to change that situation? Dr. Walters responded she thinks many of these health issues are related to structural determinants and structural inequities. Access to care and adequacy of care have been getting a little bit better; for example, IHS services and funding are being continued during potential continuing resolutions in Congress, which was not the case previously. But there are many factors contributing to the epidemiological findings given. Urban Indians are struggling with high poverty rates, lack of access to health insurance and adequate care, substandard housing in some places, food insecurities, and other inequities.

More broadly, there has been systematic harm to Indian country and communities for generations. One example is the boarding schools, which had as a saying: "To kill the Indian to save the man." Children were removed from their families and placed hundreds of miles away from home in these schools and forbidden to speak their own language, which had devastating

consequences for their and future generations' well-being. In the 1880s, if a Native person was caught dancing, participating in traditional ceremonies, or engaging in any other cultural practices, they could be jailed or fined, or food rations could be withheld from their communities. This widespread, consistent treatment of Native people, their cultures, and worldviews has undeniably impacted the community. But Dr. Walters agreed with Dr. Dickerson that communities are also looking at questions such as "What can they do to recover, restore, and continue to increase the indigenous ways of knowing and being over millennia that have helped them not only survive, but do well?" Traditional stories are an example, and even children's stories hold indigenous knowledge on good, healthful practices. Dr. Walters illustrated this point by telling a traditional story.

Dr. Kligler mentioned several questions such as, "What is success?" "How does one define it?" "Who defines it for any given population?" A modern scientific way of knowing can coexist with a traditional, more holistic way of knowing, and each can reveal different truths. He asked Dr. Dickerson whether any work has been done with elders in the tribes, asking them to help researchers define success and develop outcomes. On outcomes, the VA is doing work related to questions of meaning and purpose in life (he shared a measure of whole health at the VA). Re-establishing connection with the things that give a person meaning and purpose in life may be itself an important outcome and change the nature of their life, regardless of whether physical or mental health has improved. Also, "What is whole person health?" is defined differently within different cultural groups. He invited the speakers to talk further with him.

Dr. Walters said all tribal communities and their elders would say they want to reduce opioid use and improve health as outcomes, but there can be divergent understandings between Western science and indigenous approaches on the mechanisms of change. She gave an example of a study she conducted that was funded by NIDA. People's behaviors do not change just because they are given information; rather, information that is rooted and grounded in culture makes a great difference. In her study, questions included: What kind of ancestor did my ancestors dream me to be? What kind of ancestor do I want to be? What kind of ancestors do I dream the future to be through my actions today? Shifting in that study to the ancestral-relational way of thinking made a major difference, such as motivating more women to participate. The mechanisms of change need to be discussed and articulated. Also, systems can work together simultaneously (e.g., traditional practitioners and Western doctors) if it is done well.

Dr. Dickerson compared aspects of Western research with Native American research, which is only a few decades old. Communities need to have more of a say interpreting the results and contributing their perceptions of what is going on in a study and whether an intervention is working. If it is not working, for example, what is needed to make it work or get where they feel it needs to go? There is probably a great need for statistical and analytic approaches that are more culturally focused to the community as well as to researchers. Some parts of interventions have been congruent with spirituality and Native American tradition. How does one analyze aspects of culture, is it being done correctly, and are there ways to do it more succinctly? Dr. Langevin commented that NCCIH is looking at different kinds of interventions that involve a

person's mind, body, and spirit, and the question tends to be, "Does the intervention work?" But another way to think about it is that the person receiving treatment is doing the work, and the treatment is facilitating or helping. Thus, she thinks asking the question a different way can be helpful but is difficult when doing research, as researchers tend to return to the drug-based model. NCCIH is working on better ways to ask that question.

Dr. Walters added that a relevant question is not just "Did the pill work?" but "What is your relationship to that pill? Did you pray with the medicine, talk to it?" There is a process, manifesting differently for each tribe and originating from colonization, to be "good subjects" or "good patients." From an indigenous point of view, this is not healthy. As one elder has said, "You have to meet the medicine halfway for that medicine to be activated." This contrasts with passivity and illustrates the relational way of thinking. Dr. Langevin called this point profound; NCCIH has conversations about nonspecific effects of treatment, and much in those effects could be the relationship to treatment.

Dr. Brolinson asked Dr. Dickerson what the "dose" was of drumming. Dr. Dickerson replied that in the last version, it was 2 hours per session for six sessions. The team also created a shorter version, using group drumming. He detailed a typical drumming style in an urban area of California. He said Dr. Barry Bittman, a neurologist, has done research on drumming with general populations and found some potential neurologically based benefits from this practice. Drumming may help with focus and concentration; Dr. Dickerson's team has found some initial significant findings of improved cognition from DARTNA. He wants to look more closely at neurocognitive benefits that may occur.

Dr. Brolinson said that the Oklahoma State University College of Osteopathic Medicine has a very large involvement with indigenous tribes in its region, and he sees an opportunity to expose medical students to the delivery of culturally competent care. Dr. Walters said she is very excited about that; the Cherokee Nation and her nation have invested efforts in this area. Dr. Brolinson agrees with her on developing more of a culturally representative Native American research workforce; this is important on the clinical side as well, and then to connect the dots in a multidisciplinary way. His school, the Edward Via College of Osteopathic Medicine, has a campus in Spartanburg, South Carolina, with a good working relationship with the Eastern Band of Cherokee Indians, who have an excellent medical-care delivery system. He has talked to the Chief of the tribe and raised the idea of a rotation for osteopathic medicine students there. Research opportunities would exist as well.

Dr. Walters added some details about drums, how they are used, and stories associated with them. She suggested it would be interesting to study songs as well as drumming (including synchronized drumming) and how they impact neurodevelopment and other aspects of the nervous system. The power in performing songs is not just in the activity itself. In healing through song, a spirit works through any song and is helping, she said. A traditional healer usually works with the person in care to help them understand this. This type of song has tonal

qualities and usually connects to different elements. All types of Native songs have benefits, she said. Dr. Langevin commented that these sound like great research questions.

Dr. Shinto mentioned that she grew up in an immigrant neighborhood that had traditional Taiko drumming and Japanese dance. She agreed with Dr. Walters about a person's relationship to a medicine, which she thinks is a true lens (although often overlooked) in looking at traditional medicine. She asked whether Dr. Dickerson interviewed his study participants after treatment as to what they would like for follow-up. He said no, but they did have a satisfaction questionnaire, and participants were extremely satisfied. The elder and community advisory boards he worked with felt there needs to be more thought and approaches to help people connect with their culture in urban areas. This relates to urban health programs as well. He also works clinically as a psychiatrist in Los Angeles County, and he and his colleagues are constantly trying to create those kinds of opportunities for connections.

Dr. Shinto discussed a study she did 6 years ago with youth who had first episode psychosis. The multicomponent lifestyle intervention included the Taiko drum as a physical activity, and it was extremely popular. When interviewed after the intervention, almost all the participants and their families said they wanted booster sessions or some other way to continue drumming. The social aspect of gathering and doing a group drum or other intervention was highly positive for these participants. Dr. Shinto remarked that it is possible in research to forget about looking at connections, and that various types of connections exist with drummers and drumming. Dr. Dickerson commented that these classes on traditional practices offer an opportunity to learn and engage with one's culture, and his dream would be to do this out in the community. One area needing further study is how to facilitate these kinds of social connections, as through drumming groups, traveling with pow-wows, etc. In another study he is analyzing social connections.

Dr. Sibinga commented that the work presented reminded her of the importance of the ability to include qualitative interview and story-gathering methodologies in this kind of work, which is evolving in terms of outcomes. Her team obtains very rich and nuanced information when they apply high-level, rigorous, qualitative methodology that is culturally appropriate. The interviewers need to have a nuanced understanding of what a participant might mean when they respond. She encouraged more exploration of this rich area. She loves the "beautiful" Native stories and the work and sees them as a reminder that how people understand what they are offered and what they accept are very important in what impacts them, what they hold onto, how they hold onto it, and what that means for them going forward.

Dr. Walters agreed the qualitative component is huge and felt it deserves its own research grants and other support. When she worked on national research on the health of lesbian, gay, bisexual, and transgender people, there were well-trained Native American interviewers who could create a safe space for Native respondents. Spirituality came up constantly in those interviews, as did strong examples of the role of spirituality in promoting health for people—even divine intervention. Dr. Haney asked how Dr. Dickerson incorporates gender in designing his studies. He provided a few examples of males' and females' participation in dancing and/or singing and

did not think there have been any studies about the degrees to which men and women benefit in the context of drumming. Dr. Walters added that the stories, traditions, and drum approaches vary among different regions and tribes. Quite often, there is exception to gender roles in Native communities at times when that is culturally appropriate. Genders are not always binary. Talking about gender in AI/AN communities becomes complex.

Dr. Coghill brought up the Tromsø Study in Norway, which found that children who shared the same social networks had similar degrees of pain tolerance, from very sensitive to highly tolerant. He wondered if social networks and bonding could be incorporated into the experimental design in drumming studies. Relapse in substance use might result in part from breakup of the social connection. Dr. Dickerson thought this is a good topic to examine and include in research designs. However, he added that life is not perfect; people may think if they engage in this activity or that activity, they will have a perfect life, do things perfectly, and be 100 percent healthy. This does not always happen. For example, while he and his colleagues always emphasize the healthy notions of traditional practices, some people who participate in traditional practices like drumming still use drugs and alcohol. He thinks more studies are needed to look at social networks.

Dr. Langevin expressed gratitude for the talks, speakers, and rich discussion. Dr. Walters said she looks forward to talking more with her about how NCCIH and THRO could potentially partner. Dr. Dickerson said he looks forward to further discussion of spiritual and whole person health for diverse populations.

V. The Council Working Group Process

Dr. Schmidt began this session by asking two questions that originated from staff and Council members: Does NCCIH make optimal use of Council members' extensive expertise in advising NCCIH? How can members more productively contribute their expertise while serving on Council?

Some Council members have an interest in how they might contribute more to NCCIH's mission. Dr. Schmidt reviewed the NACCIH Charter section on objectives and scopes of activities and the Council operating procedures section on policy and research priorities. There it states, "Council members serve as a national resource in developing, recommending, and setting of NCCIH policy and research priorities. On occasion, special working groups may be formed by or at the request of Council to examine and address critical scientific or policy issues of importance to NCCIH and its constituencies."

It has been noted that recently, NCCIH has not made as much use of working groups as it has in the past. However, one recent example of a working group is the one that led to the development of the NOFO REsearch Across Complementary and Integrative Health Institutions (REACH) Virtual Resource Centers (U24 Clinical Trial Not Allowed), RFA AT-23-004.

Generally, Council working groups serve as fact-finding bodies, temporary in nature, that gather information, analyze relevant issues and facts, and provide recommendations or assistance on a specific, limited project for final deliberations by the NACCIH. Dr. Schmidt then provided additional details regarding the role and operation of these groups.

Discussion: Dr. Schmidt asked whether the members would be interested in more active use of Council working groups, and if so, what topics could be discussed and be beneficial. Dr. Cech commented positively on this idea. She said it has been difficult to get some innovative proposals through review that deal with issues like complex botanicals that might not fit in the pharmaceutical definition. Many study sections are set up internally at NCCIH and that seems to work better, but they have not been used for these types of applications in the recent past. Conversations about how to create better funding opportunities for researchers at the intersection of whole person health with complex botanicals and other natural products and how to improve the review situation would be beneficial. Dr. Benveniste asked if a formal working group has been established to address the incorporation of "spirituality" into NCCIH's mission statement, which was brought up during the previous Council meeting. Dr. Schmidt said that this particular question was what prompted her have this discussion with Council members about possible working groups.

Dr. Brolinson would be interested in a working group to look at ways not currently being used to develop physician scientists. A group could think outside the box to give the physician workforce more options—people could go to a course for a weekend and be able to participate in online forums, self-directed learning opportunities, etc. This effort would be important to the future physician workforce and future biomedical/clinical research. Dr. Mehling suggested that former NACCIH members may be interested in the working groups, and Dr. Langevin thought that was a great idea.

VI. Public Comment

Dr. Schmidt announced that the next Council meeting will be on May 17, 2024, and will be held in person. She then discussed public comments. Since this meeting was virtual-only, presentation of public comments in person was not possible. Current procedure requires that any member of the public who wishes to submit comments send them in writing to Dr. Schmidt, by email (Martina.Schmidt@nih.gov) or postal mail, no later than 15 days prior to the date of the Council meeting. All written comments must be under 700 words in length, which is consistent with a 5-minute oral presentation. Written comments will be provided to Council members in the electronic Council Book in advance of the Council meeting. No comments were received for this meeting.

VII. Final Remarks and Adjournment

Dr. Schmidt thanked Council members for attending and noted that NCCIH would not be able to pursue its mission without their expertise, feedback, and guidance. She extended special thanks to the retiring members and to NCCIH staff. She thanked the Council for a wonderful meeting and their great participation in the discussions. The meeting adjourned at 3:45 p.m.

We hereby certify that, to the best of our knowledge, the foregoing minutes are accurate and complete.

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Martina Schmidt, Ph.D. Executive Secretary National Advisory Council for Complementary and Integrative Health	Helene M. Langevin, M.D. Chairperson National Advisory Council for Complementary and Integrative Health