

Subtle Energy & Biofield Healing:

Evidence, Practice, & Future Directions

APRIL 2020



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ABOUT THE AUTHORS

[The Consciousness and Healing Initiative](#) (CHI)¹, a 501(c)(3) nonprofit organization, is a collaborative accelerator of scientists, healthcare practitioners, educators, innovators, and artists who lead humanity to heal ourselves. CHI evolves the scientific understanding and real-world application of consciousness and healing practices, so that individuals and societies are empowered with the knowledge and tools to ignite theirs and others' healing, and thus foster flourishing lives. CHI's values include service, integrity, collaboration, multiple perspectives, and creative rigor.

CHI is known for its dedication to the scientific method and the transdisciplinary study of healing, which incorporates practitioner wisdom as well as cutting-edge empirical science. CHI activities include 1) conducting research, 2) supporting the research community, and 3) educating the public about the science of healing through in-person, online, and print distributions - including peer-reviewed published scientific papers, infographics, webinars, summits and conferences. Both research and education activities coalesce luminary scientists, healing practitioners, educators, and artists to foster both greater scientific and practical understandings of healing practices.

This report was co-authored by CHI Program Manager Meredith Sprengel, CHI Research Director Dr. David Muehsam, CHI Founder and CEO Dr. Shamini Jain, and CHI Board of Directors member Dr. Cassandra Vieten, who each have decades of experience and achievements in scientific and education disciplines including clinical psychology, biophysics, psychoneuroimmunology, bioelectromagnetics, integrative and mind-body research, and conflict resolution.

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PURPOSE STATEMENT

Modern medicine has made tremendous strides in the last century, effectively doubling human life span, eliminating and ameliorating widespread diseases, and reducing pain and suffering for billions of people. Much of this progress stems from the Enlightenment in the 18th century, when a movement from superstitious, anecdotal, speculative, and unsystematic approaches, to rational, scientific, and evidence-based approaches to health and healing took place. However, a consequence of this was the elimination or marginalization of healing modalities embedded in religious, spiritual, indigenous, and philosophical systems. While justified in many cases, this exclusion of nonmaterialist approaches to healing led to an overemphasis on pharmacological, surgical, and physical manipulation as the nearly sole methods of healing and the vast majority of scientific investigation. Other elements of whole person healing, including nutrition, indigenous medicine, mind- body, and subtle energy/biofield approaches, have received relatively minimal attention.

Advances in conventional medicine should be heralded and continued full force. At the same time, our overarching paradigm for health and well-being is limited and should be expanded. Our healthcare system does not adequately address the full spectrum of healing. Globally, chronic disease is rampant and inadequate approaches to pain management have led to reduced quality of life and an unprecedented opioid addiction crisis. [Human behavior](#) is now a leading cause of mortality and morbidity.⁸¹ There is an urgent need to expand our approaches to health and healing, particularly at the intersection of mind and body. Subtle energy and biofield healing has been used for millennia in cultures around the world, yet its scientific study has been hindered as a result of its having been a casualty of the general rejection of religious, spiritual, indigenous, and ancient medical systems. Based on current promising data, we believe subtle energy and biofield healing modalities and the study of biofield science deserve a closer look.

The purpose guiding the Systems Mapping for Subtle Energy and Biofield Healing project is to foster progress in the field of subtle energy and biofield healing. To state our viewpoint clearly, our premise is that a purely materialist approach to healing is limited, and that addressing healing at the subtle energy and biofield levels holds the potential to help alleviate unnecessary suffering and enhance individual and collective thriving.

Despite widespread use of subtle energy and biofield therapies, a trained and willing workforce, and promising evidence for [reducing anxiety, pain, trauma, and other ailments](#), scientific investigation and application of subtle energy and biofield healing modalities remain marginalized.² Our primary goals are to advance scientific understanding and increase integration of evidence-based subtle energy and biofield healing modalities as healthcare options. Our overarching aims are to foster greater scientific and medical progress by considering the role of the biofield in cultivating healing processes.

[Foster-Fishman, Nowell, and Yang \(2007\)](#) describe systems change as “an intentional process designed to alter the status quo by shifting and realigning the form and function of a targeted system.” As a first step toward systems change, we have engaged in a process of systems mapping. As Joelle Cook explains:

“to change the system, you need to first understand the system, and mapping is a great way to do that. A system,³ as described by Julia Coffman in her 2007 [framework](#) for evaluating system change, is a group of interacting, interrelated, and interdependent components that form a complex and unified whole.⁴ A system’s overall purpose or goal is achieved through the actions and interactions of its components.”

In this report, we describe the current state of progress, constituents/stakeholders, and gaps/next steps/future directions in several key subtle energy and biofield healing domains. We propose a set of recommendations, and in an accompanying document, suggest a [roadmap](#) for advancing the field of subtle energy and biofield healing.

EXECUTIVE SUMMARY

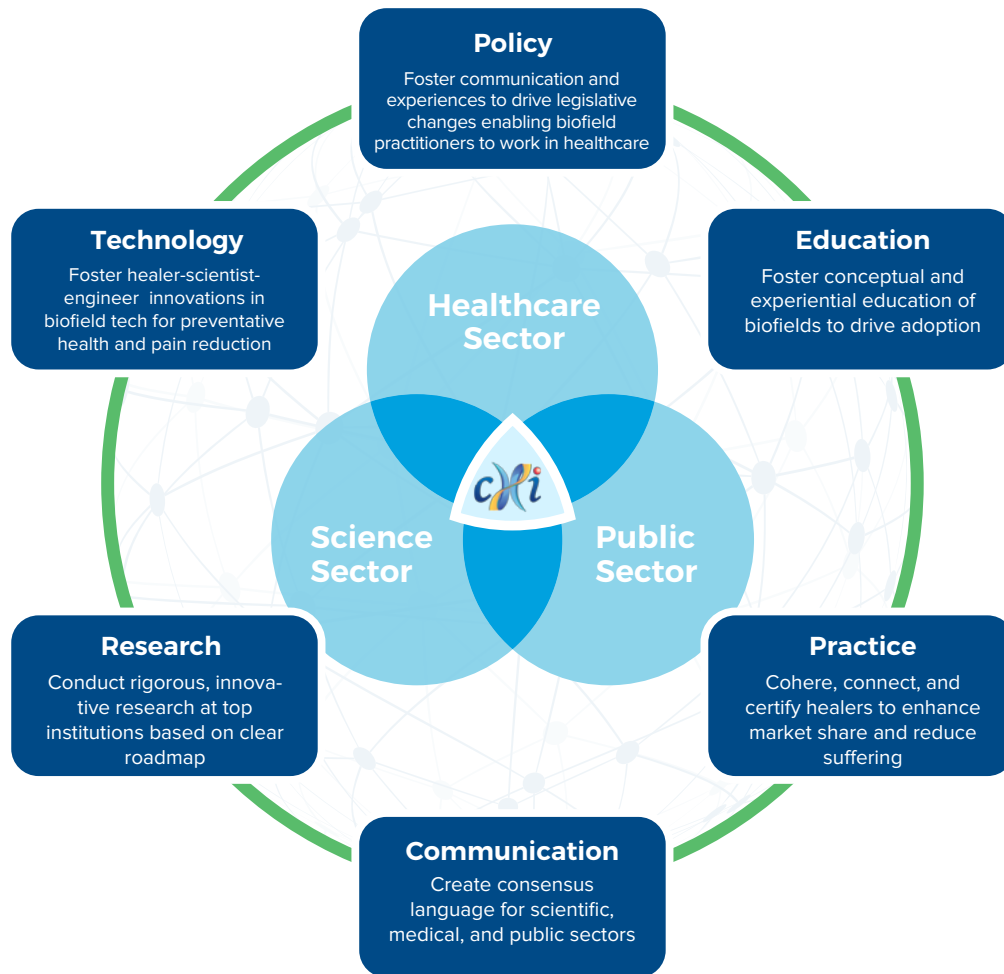
This report is an initial step in a [collaborative systems-change endeavor](#)⁵ to positively impact our collective approach to health and healing by advancing subtle energy and biofield science and healing. Our goals were to 1) identify the stakeholders, assets, opportunities, challenges, and levers for change in the subtle energy and biofield science and healing domain, and 2) provide guidance for making that system more robust, coherent, connected, and evidence-based. These goals are in service to expanding and improving the overall mainstream healthcare system as well as enhancing personal wellness practice, for improved societal health

*“Systems change is an intentional process designed to alter the status quo by shifting the function or structure of an identified system with purposeful interventions. It is a journey which can require a radical change in people’s attitudes as well as in the ways people work. Systems change aims to bring about lasting change by altering underlying structures and supporting mechanisms which make the system operate in a particular way. These can include policies, routines, relationships, resources, power structures and values.”*⁶

A systems-change approach to subtle energy and biofield healing necessitates research and evaluation to better understand hindrances and opportunities for progress. To create this report, we:

- Identified and conducted in-depth interviews with over 65 key leaders in biofield/subtle energy domains, including research, education, policy, clinical practice, technology and community
- Convened a Systems Mapping meeting July 17th, 2019 with 22 diverse stakeholders to review progress and research and technology databases developed to co-create strategies for biofield science and healing systems change (attendee list and Systems Mapping meeting summary [here](#))
- Identified and organized in a database, over 400 existing researchers in prominent universities and research institutions in the US and worldwide, who have conducted and/or are keenly interested in biofield science research
- Identified and organized in a database and an [interactive online map](#), over 225 research organizations worldwide and over 125 healing organizations within the United States
- Identified around 6,200 publications in biofield science and placed them in a publicly available, key-word searchable [reference management](#) database
- Identified and organized in a database and webpage over 280 biofield devices that are currently in use and marketed to the public

We identified six key domains of the subtle energy and biofield healing system: research, practice, technology, education, communication and policy, which interact with and transforming the science, healthcare, and general public sectors.



Our key takeaways (described in detail in the full report) are that in order to enable systems change in healthcare with respect to subtle energy and biofield healing, we must engage in these critical next steps:

- Summarize and synthesize current evidence in subtle energy and biofield healing with systematic review, scoping reviews, and evidence maps
- Increase the number and quality of tier-1 research studies assessing both efficacy and effectiveness of subtle energy and biofield healing for key public health concerns such as anxiety, pain, and trauma
- Create coherent taxonomies on what the biofield is and how it is thought to work
- Innovate subtle energy and biofield healing measurement devices
- Foster ongoing communication and collaboration across policy, practitioner, education, technology, and research domains

To achieve the goal of incorporating evidence-based biofield therapies into mainstream healthcare, we will need to catalyze scientific research, effective communication, evidence translation, and policy adoption strategies. This would entail:

- Increased training opportunities in subtle energy and biofield therapies and technologies for healthcare providers
- Regulatory approval and insurance reimbursement for implementation of biofield approaches
- Facilitation and further growth of economic markets for healing practitioners (currently evaluated as \$2.8B/year) including deeper integration into consumer, corporate, and healthcare markets
- Incorporation of biofield based approaches in corporate wellness and health promotion

Catalyzing these efforts will result in:

- Integration of evidence-based subtle energy and biofield healing approaches into mainstream healthcare settings
- Increased use of biofield-based approaches in self-care and preventative medicine among the general public, helping mitigate costs to society for health-related issues, including pain and mental health
- Key investments in specific domains and activities, along with fostered connections and engagement between domains and activities. This will lead to healthcare integration and public empowerment, in turn leading to improving wellness and thriving, decreased suffering, and reduced healthcare costs and consequences of chronic disease. Please see the systems map for more details.

What are Subtle Energy and Biofield Therapies?

Descriptions of subtle energies (sometimes referred to as vital energy chi, qi, prana, mana, and others) have been [described by nearly every healing tradition for millennia](#)⁷ and feature prominently in numerous indigenous forms of medicine, including Chinese Medicine, Indigenous Medicine, Ayurveda, and others. These terms for subtle energy generally refer to a non-physical “life energy”, inherent in living systems, that parallels and reflects physical, mental, emotional, and spiritual well-being, or the state of the system or organism. Complementary and integrative practices such as acupuncture, qi gong, tai chi and biofield therapies find their roots in these ancient practices directed toward facilitating this life force energy to become more balanced or flow more freely - to foster greater wellness and capacity for healing. While research studies in these complementary practices indicate positive benefits for health, a key issue for subtle energy research is the inability to reliably measure it using current standard, materialist research methods.

In recent years, Western scientists have become increasingly interested in subtle energy healing effects, as well as exploring biological effects of low-level electromagnetic energies, which are more amenable to measurement. In 1992, a panel of scientists at the National Institutes of Health chose the word “biofield” to describe [“a massless field, not necessarily electromagnetic, that surrounds and interpenetrates the human body.”](#)⁸ Since then, the [concept of biofields has been extended](#) to describe the behavior of cells, organs, plants, interpersonal interactions, and even the Earth.³⁶ Some biofields are currently measurable using standard equipment. For example, electrocardiograms are a biofield measure that gives us information on electromagnetic emanations of the heart, which provide useful clinical information about the heart’s functioning. Other aspects of biofields appear to be more difficult to measure directly, yet are reported to be sensed and utilized by practitioners for diagnostic and therapeutic purposes. Like ancient subtle energy practitioners, modern biofield practitioners report that imbalances or disruptions of the biofield that permeate, surround, and interact with the physical body can cause physical, mental, or emotional pain or illness.

What is subtle energy or biofield healing then? [A September 2019](#) article for the general public in Health Magazine puts it this way: “Energy medicine (or biofield therapies) is the act of channeling and manipulating the energy that courses through your body in order to heal it. Energy practitioners believe that your body is instilled with a subtle energy, or animating life force, the flow of which must be balanced for good health.”¹⁹ Most subtle energy and biofield healing practitioners would use a more nuanced description - seeing themselves as facilitators or catalysts of the natural healing process within the participant/patient. Subtle energy and biofield healing might be better described as practices (sometimes also called modalities or therapies) that claim to be working with subtle energies or biofields to foster whole person - physical, emotional, and spiritual - health and well-being.

Subtle Energy and Biofield Therapies Show Promise

A 2008 [Cochrane review](#) examined 24 randomized controlled trials focusing on a number of biofield therapies (including Healing Touch, Reiki, and Therapeutic Touch) on pain and reported that these therapies may have a modest effect for pain relief, with findings not attributable to a [placebo effect](#). Another [systematic review published in 2009](#) compiled evidence from 66 clinical studies (both randomized controlled trials and quasi-experimental designs) of subtle energy and biofield healing modalities, and reported that on average, studies were of medium methodological quality at that time, meeting criteria for validity of inferences. This review used a standard best evidence synthesis approach to grade the level of evidence for biofield therapies and found the following: strong evidence for reducing pain intensity in pain populations, and moderate evidence for reducing behavioral symptoms in dementia, mitigating anxiety in

Biofield Therapies and Healing: A Report from the Field

Kathie Lipinski, RN, MSN, CH

This past year I was privileged to be part of the Innovations in Care Grant at the Northport VA Medical Center on Long Island. The grant was part of a national movement toward wellness, health coaching and self-care for veterans. Richelle Rappaport, RN, MSN, AHN-BC, PMHCNS-BC, was responsible for writing the grant. The focus of the program was to train VA Clinical staff in various holistic modalities including Reiki, meditation, guided imagery, Tai Chi and reflexology. I began teaching Reiki I and II to the VA staff in October 2011 and completed the training in June 2012.

Reiki, simply stated, calms and stills the spirit of the person. It can promote relaxation from the outside in and remind the body how it feels to be calm again. The act of sharing Reiki can also remind the body that physical touch can be nurturing and therapeutic. Reiki promotes inner peace and calm. When the spirit self has been calmed and quieted, the physical healings of the body can begin.

Since the Innovations grant began, nurses and other health care professionals who have provided Reiki have shared some of the comments from vets after their sessions. Here is what the vets said:

“The Reiki helps me sleep through the night.”

“I can focus better and I am looking at life more positively.”

“I have not had a panic attack in four weeks and have not awoken with a nightmare.”

“The Reiki helps my headaches. I am decreasing my pain meds with my doctors’ direction.”

“I have never showed any emotion related to my survivor guilt. The Reiki helped me to let the emotions out.” (Vietnam vet)

“I can’t believe my pain is decreased. The narcotics can’t do that.”

“I have not been able to relax since Iraq. The Reiki allows me to relax for the first time.”

PTSD is a complex condition and many people will have to deal with it sometime in their life or the life of a loved one. The more we know about it, the more we can understand and help. Public awareness of PTSD is on the rise and there is so much information and so many resources now available. Reiki is a great way to calm and nurture the spirit of someone experiencing PTSD.

hospitalized populations, and reducing pain in hospitalized and cancer populations. Since these reviews were published, single studies of biofield therapies have reported other effects, including reduction of fatigue and depression in cancer populations.¹⁰ In addition, since this review, preclinical studies using cell culture and animals have reported effects on inflammatory markers and even tumor growth.^{11, 12, 13} However, significant gaps in scientific knowledge hinder our understanding and utilization of subtle energy and biofield healing.

What are the Critical Viewpoints/Criticisms of Subtle Energy and Biofield Healing Therapies?

There are an additional three Cochrane Reviews on the state of the science for subtle energy and biofield healing modalities that have not found evidence supporting their use. Two reviews focused on a specific biofield therapy and specific outcomes of interest (versus examining the literature as a whole). A 2007 Cochrane Review, [Therapeutic Touch for Anxiety Disorders](#), did not identify any randomized or quasi randomized controlled trials meeting criteria for inclusion and therefore could not assess the evidence in favor of or against therapeutic touch for treating anxiety disorders.⁵⁸ A 2015 Cochrane Review of [Reiki for Treatment of Depression and Anxiety](#) showed no evidence that Reiki was either beneficial or harmful.⁵⁹ [The Intercessory Prayer for the Alleviation of Ill Health](#)¹ Cochrane Review (although not all people would consider intercessory prayer a biofield therapy, it was included in our literature database) stated the authors could not support recommending or rejecting the use of intercessory prayer and concluded that: “We are not convinced that further trials of this intervention should be undertaken and would prefer to see any resources available for such a trial used to investigate other questions in health [care](#).”⁶⁰ These reviews are cited as evidence against the effectiveness of subtle energy and biofield healing modalities.

There is considerable skepticism in the academic and medical community regarding purported effects or mechanisms of subtle energy and biofield healing, and many attribute any effects observed to placebo - defined as an inert substance with no therapeutic benefit that causes psychological but no real physical effects. While often included in complementary, alternative, or integrative medicine clinics, even the National Center for Complementary and Integrative Health [states that](#) “Reiki (a form of subtle energy healing) hasn’t been clearly shown to be effective for any health-related purpose. It has been studied for a variety of conditions, including pain, anxiety, and depression, but most of the research has not been of high quality, and the results have been inconsistent...There’s no scientific evidence supporting the existence of the energy field thought to play a role in [Reiki](#).”⁶¹

Many subtle energy and biofield healing clinical studies are published in alternative/complementary/integrative health journals, many of which are poorly indexed and have low impact factors. While there is bias against publishing controversial findings in mainstream journals, this also reflects the pilot nature of many of these studies - many are uncontrolled, observational, cross-sectional, underpowered, and unreplicated. This is in part due to the small amount of funding dedicated to this work, but is also due to uncoordinated, incremental, disparate efforts in the field, which result in multiple unrelated small studies. It is safe to say that, while some findings are promising enough to warrant additional investigation, the jury is still out, scientifically, regarding the physical effects, mechanisms, and existence of subtle energies.

At the same time, enthusiasm for investigating and applying subtle energy and biofield healing remains. This is in part due to a small but notable amount of promising scientific findings in human, animal, and cell culture models, widespread adoption among the general public, compelling patient reports, and clinical experience of practitioners. In addition, critiques of evidence-based medicine may be particularly relevant to the field of subtle energy and biofield healing, in that the emphasis on clinical trials is accompanied by a corresponding diminishment of accumulated clinical expertise and observation, and dismissal of approaches that appear to be effective in real-world settings.

¹ Although not always considered a subtle energy and biofield healing modality, Intercessory Prayer was included in our literature database and [Landscape Map of Peer-Reviewed Clinical Studies](#).

In this view, the definition of “evidence” should not be limited to research designs inspired by drug trials. Mind-body practices rely, in part, on mobilizing environmental, expectancy, and contextual elements rather than attempting to remove them.

A recent *The Atlantic* [magazine article](#) put it this way:

“Its [Reiki] presence is particularly vexing to naysayers because Reiki delivers demonstrable salutary effects without a proven cause....Over the past two decades, a number of studies have shown that Reiki treatments help diminish the negative side effects of chemotherapy, improve surgical outcomes, regulate the autonomic nervous system, and dramatically alter people’s experience of physical and emotional pain associated with illness. But no conclusive, peer-reviewed study has explained its mechanisms, much less confirmed the existence of a healing energy that passes between bodies on command. Nevertheless, Reiki treatment, training, and education are now available at many esteemed hospitals in the United States, including Memorial Sloan Kettering, Cleveland Clinic, New York Presbyterian, the Yale Cancer Center, the Mayo Clinic, and Brigham and Women’s Hospital.”⁶²

In fact, a 2015 [report produced](#) by the Veterans Administration (VA) found that 30% of the VA’s clinics were offering subtle energy or biofield therapies (referred to as Energy medicine in the report). Another VA report released in 2018 ([Passport to Health](#)) laid out the different complementary and integrative practices, including biofield therapies and their evidence base, to assist Veterans to make informed healthcare decisions. Such initiatives by the VA have led to the inclusion of practices such as Reiki, Therapeutic Touch, Healing Touch, and Emotional Freedom Technique in [List II approval practices](#). List II practices are considered safe, but have an unexplained mechanism of action, and are not required to be integrated into all Veterans Administration facilities.

Our stance in this report is that the evidence to date warrants investigation and advancement of the field of subtle energy and biofield healing. This systems-mapping effort takes the preliminary step of bringing this evidence to light and making recommendations regarding what it will take to mature the field. Our interest is in strengthening the field to a point where it can answer some of the key questions that are crucial to determining the viability of including subtle energy and biofield science and healing in mainstream healthcare.

How Many People Use Subtle Energy or Biofield Therapies?

Based on current published epidemiology studies, it is estimated that [approximately 5% of the US population](#) is already using biofield therapies.¹⁴ Reasons for use in the United States include chronic pain, cancer symptoms, post-cancer treatment recovery, and to address mental health issues. A [survey conducted in 2018 in the United Kingdom](#) found that 76% of people using biofield therapies were women, who most often used biofield therapies to address mental health problems and pain.¹⁵ People (93%) reported immediate benefits, and further reported that, after seeing a biofield practitioner, they experienced relaxation, improved wellbeing, and relief of pain.

The National Alliance of Energy Practitioners (NAOEP) estimates that in the US today, there are 174,000 professional subtle energy and/or biofield healing practitioners. Some universities and hospitals offer subtle energy and biofield healing modalities, mostly in response to patient demand, although these are rarely covered by insurance.

Approximately 74,000 of practitioners report working and receiving funds for their healing in a part-time or full-time capacity. Conservative estimates of these 74,000 practitioners seeing 12 clients a week at a relatively low estimate of the average cost of a session (\$80/hr) represent a considerable market size: current estimates for market share are approximately \$2.8 billion annually in the United States alone.

What Kind of Subtle Energy or Biofield Therapies Are There?

A diverse variety of subtle energy and biofield therapies have been practiced in the context of indigenous, spiritual, religious, and healing traditions for millennia. Today, subtle energy and biofield healing is practiced informally by family, friends, and local healers, formally by people who are trained in specific modalities, in private practice, in spiritual and religious communities, and in clinics and medical centers. Examples of popular subtle energy and biofield energy healing practices included in this report are: Reiki, Healing Touch, Therapeutic Touch, External Qigong/Qi-therapy, Shamanic Healing, Johrei, Distant Healing, Intercessory Prayer, Barbara Brennan School of Healing, The Eden Method, and Energy Psychology (Emotional Freedom Technique, Thought Field Therapy, and more).

Do Subtle Energy and Biofield Therapies Affect Physiology?

Several studies indicate that biofield healing approaches affect physical systems, including downstream immune and hormone regulation in humans, as well as tumor growth and cytokine function in animal models. With respect to the effects of biofield therapies on biological outcomes and processes, we highlight a few recent studies that have been published in relatively high-impact peer-review scientific journals:

- Results from a [randomized, placebo-controlled trial on a biofield therapy \(Hands on Healing\) for cancer related fatigue](#), conducted at UC San Diego and published in the journal *Cancer*, reported that biofield healing markedly reduced fatigue and improved cortisol variability in breast cancer survivors. The change in cortisol variability was unique for the healing group and not explained by measured placebo variables, including treatment expectation, sense of connection with practitioner, or belief that the therapy was helping.¹⁶
- Results from a randomized, controlled trial comparing a [biofield therapy \(Healing Touch\) with relaxation in cervical cancer patients](#) found that the biofield therapy not only significantly reduced depression in these patients, but also uniquely affected the preservation of natural killer cell cytotoxicity, compared to both relaxation and wait list control groups. The study was conducted at the University of Iowa and published in *Brain, Behavior, and Immunity*.¹⁷
- Results from a randomized, controlled study conducted at the University of Arizona found that a [biofield therapy \(Reiki\)](#) significantly reduced noise-induced microvascular leakage in mice compared to sham Reiki and noise alone.¹⁸
- Results from a randomized, controlled study conducted at the University of Connecticut found that a [biofield therapy \(Therapeutic Touch\)](#) significantly reduced tumor metastasis, cancer related cytokines and lymphocyte splenic cell subsets, as compared to mock therapeutic touch, but did not affect tumor size, in a mouse model of cancer.¹⁹
- Results from a recent controlled study conducted at MD Anderson Cancer Center [found that biofield therapy exposure resulted in suppressed tumor growth and reductions in cancer related cytokines](#), in a mouse model of cancer.²⁰

- Results from a randomized, controlled trial on Emotional Freedom Technique found reductions in [cortisol, heart rate, systolic blood pressure, and diastolic blood pressure](#) in a non-clinical [population](#).⁶³

These studies suggest that biofield therapies can affect clinical and biological outcomes, with studies on animals and cells showing that these therapies do not function only through [placebo effects](#).

Can Subtle Energies and the Biofield be Measured Directly?

While some devices purport to measure subtle energies or biofields, a key hindrance to understanding potential biologically-related mechanisms of subtle energy and biofield therapies is the absence of a reliable measure of purported biofield emanations between practitioners and patients.

While a few studies have reported detecting emanations (such as electromagnetic fields) from some practitioners, these results have not been replicated and confirmed. A systematic study of these bioenergetic signals is needed and is a crucial next step toward a better understanding of the physiological bases of subtle energy and biofield therapies. Creating a systematic, standard format of biofield measurement would allow us to explore whether effects of healing interactions are:

- Dependent on a particular pattern of biofield emanation
- Directly proportional to the strength, duration, and distance of the biofield emanation
- Correlated with measurable bioenergetic signaling (e.g., brain waves, biochemistry) that significantly contributes to the outcomes of the healing encounter

As interested engineers and scientists further develop techniques to measure emanations from practitioners at different electromagnetic frequencies, it will be of interest to determine whether specific patterns of bioenergy are predictive of better healing outcomes. At the same time, there are potential pitfalls from assuming that electromagnetic emanations are the sole explanation for the experience and practice of subtle energy and biofield therapies, as they would not account for some results of distant healing studies carried out in electromagnetically shielded environments.²¹

Could Subtle Energy and Biofield Therapies Help Address the Healthcare Crisis?

Poorly managed and treated diseases result in needless loss of dollars and quality of life. In the United States, the current estimated yearly economic costs for pain alone are [over \\$635 billion per year](#), with over [68 million adults experiencing pain resulting in disability and decreased participation in the workforce](#).^{22, 23} [Drug overdoses have increased, obesity has skyrocketed, and healthcare costs have increased](#). Monetary [costs for the current opioid crisis](#) are estimated at \$631 Billion from 2015-2018, with a projected cost of \$184 billion per year. Not surprisingly, mental health is also affected; an estimated [264 million people globally are affected by depression](#) and another 100+ million suffer from other psychiatric conditions including, but not limited to, anxiety and PTSD.^{24, 25}

In its latest strategic plan, the National Center for Complementary and Integrative Health (NCCIH) identified “nonpharmacologic management of pain” as a leading scientific priority. This is aligned with the priorities of other healthcare practitioner organizations (such as the American College of Physicians)

to [identify and deploy evidence-based nonpharmacological solutions for pain](#).²⁶ While biofield therapy studies tend not to be included in systematic reviews of nonpharmacological approaches to pain, based on prior systematic reviews and our analysis of stakeholder interviews, it appears that subtle energy and biofield healing could hold significant promise for reducing healthcare costs and potentially reduce the prevalence and ongoing maintenance of costly and intractable health conditions, particularly depression, anxiety, pain, and trauma.

The Full Report

The full report provides an overview of research on subtle energy and biofield healing, a summary of subtle energy and biofield devices, and a description of constituent domains of the biofield science and healing system. Constituent domains include research, practice, technology and innovation, education and training, communications, public relations, funding, and policy.

This report also offers recommendations and future directions to create systems change for subtle energy and biofield healing, through a collaborative framework catalyzed by collaborative backbone activities. In addition, the full report includes;

- A link to a [comprehensive database](#) of over 6,000 peer-reviewed subtle energy and biofield healing publications²⁷
- Links to a sortable, online [Landscape Map of Peer-Reviewed Clinical Studies](#) of [396 clinical studies](#) conducted with biofield therapies²⁸
- Links to an [interactive map](#) showing existing subtle energy and biofield researchers, associations, organizations, and centers worldwide
- A [website](#) of subtle energy and biofield technologies
- [Surveys](#) used to obtain data and guide stakeholder conversations

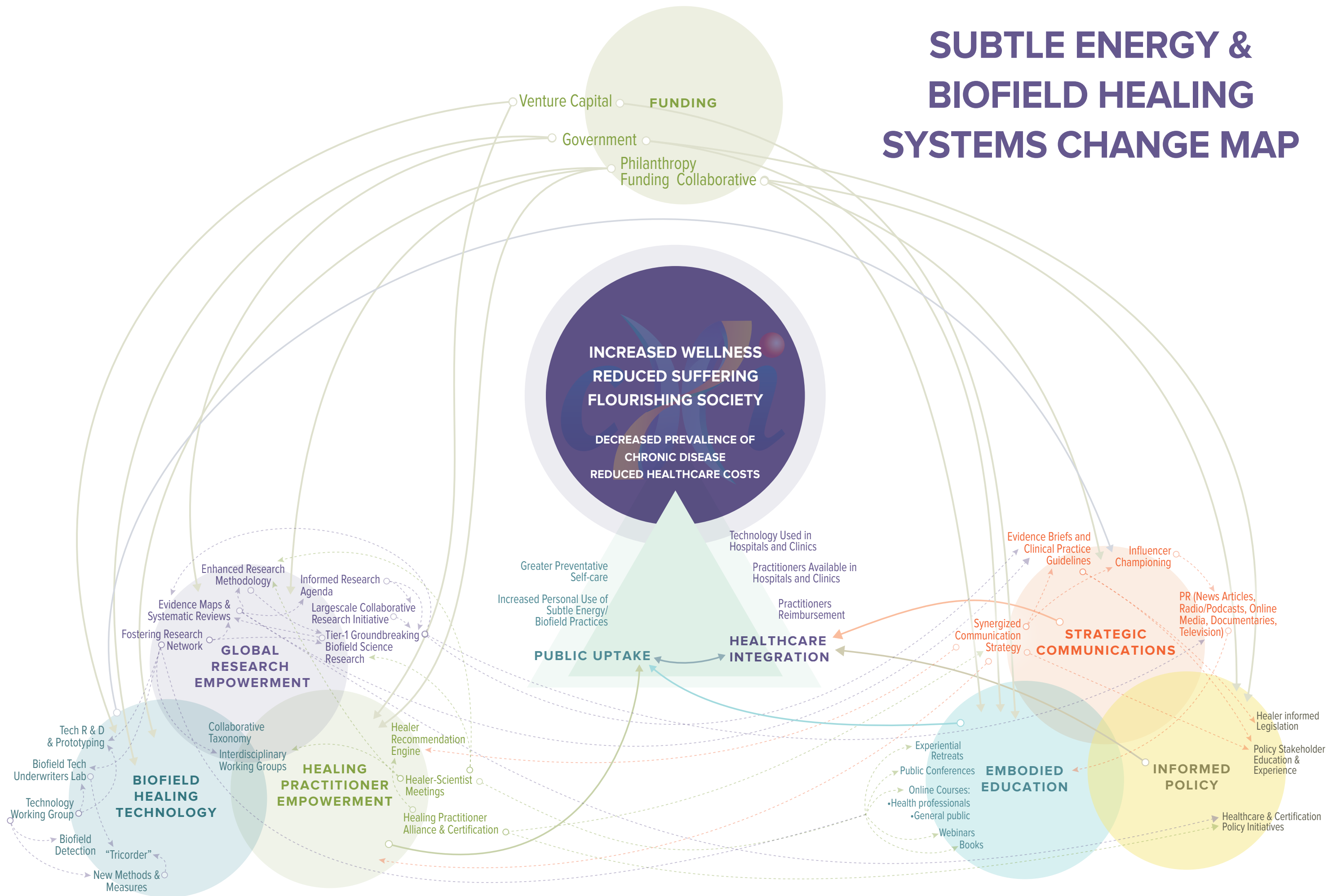
Subtle Energy & Biofield Healing Systems Change Map

The following [systems map](#) captures the findings of this report. This systems map synthesizes responses from our stakeholders regarding how various domains might interact to advance the science and practice of subtle energy and biofield healing. Synergizing these collaborative interactions could lead to integration of evidence-based modalities into people's personal lives and into the healthcare system - with the goals of increasing wellness, reducing suffering, and fostering a flourishing society.

Key next steps in each domain are noted. The key featured in the map are: Subtle Energy & Biofield Healing Technology, Global Research Empowerment, Healing Practitioner Empowerment, Funding, Embodied Education, and Informed Policy. Ways that the domains could overlap and interact with one another are highlighted through the Venn diagrams and lines connecting the domains. The ways in which activities in one domain can feed into or lead to activities and outcomes in the same domain, or in another domain, are captured by the lines with arrows that lead from one domain or activity to another. Dotted lines show crucial opportunities for fostering cross-disciplinary communication facilitated by a collaborative backbone organization and subtle energy and biofield healing coalition.

All of these activities lead to the dual goals of public uptake and healthcare integration of evidence-based modalities, which, in turn, lead to the central goals of increasing wellness, reducing suffering, and fostering a flourishing society. The whole ecosystem requires funding, which can come from venture capital, government, individual philanthropy, and the subtle energy and a biofield funding collaborative which we recommend in this report.

SUBTLE ENERGY & BIOFIELD HEALING SYSTEMS CHANGE MAP



A Roadmap for Subtle Energy and Biofield Healing Systems Change

From this Systems Mapping Project, we have created a [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#) that describes a coordinated set of activities in the key domain areas. The plan includes multiple recommendations in the domains of research, training, communications, collaboration, and funding that would move the field forward. Informed by this report, previous research, and input from stakeholders, it includes a specific set of key projects in each domain. This roadmap will be used as an invitation for colleagues who wish to join us in this effort, for funders who would like to invest in such an endeavor, and for potential grantees who are 1) positioned to carry out one or more of the various activities; 2) interested in working with a coalition as part of a systems change endeavor; and 3) require funding.

We also propose the creation of a Subtle Energy and Biofield Science and Healing Coalition that will facilitate interaction among the domains we've identified in this report to collaboratively work on implementing these recommendations and support one another in their respective endeavors. The goal is a persuasive and well-informed large-scale agenda ready to share with partnering funders, foundations, and government agencies. Some of these recommended projects have associated groups who are already, or who are interested in, completing the work. Others are projects that could be funded through a request for proposals (RFP) from interested groups.

A summary of these recommendations follows:

Research

- Improve conceptualization and measurement of subtle energies and biofields
- Accurately assess and describe the state of the evidence through evidence maps, systematic reviews, and evidence summaries, which will influence clinical practice guidelines and inform key stakeholders in policy, healthcare, research, and the general public
- Engage in rigorous theoretical work on the underlie ontology/frameworks that underlie these therapies
- Bridge the materialist-non-materialist divide (a key divide that has hindered the study of biofield therapies in mainstream science and medicine) by posing a “middle ground” view (e.g., emergentism)³⁶ in an effort to open the conversation and encourage deeper inquiry into biofield science by mainstream science and healthcare
- Include theory and examination of mechanism of action in research studies
- Enhance the network of subtle energy and biofield healing researchers through meetings, associations, subgroups of existing associations, and collaborative research projects
- Foster a collaborative research agenda to better support individual research studies
- Emulate NIH U01 Collaborative Research Funding Mechanism to coordinate funding and research teams

Strategic Communications

- Achieve domain leader and working group collaboration and agreement on terms to describe subtle energies and the biofield, and subtle energy/biofield therapies and technologies for stakeholders in various domains
- Develop clear lay-friendly language to share with legislators, clinical administrators, and those in medical leadership organizations explaining what the biofield/subtle energy is, how biofield therapies work, and what the evidence to date says about their effects
- Develop a communication strategy with a seasoned PR firm who is well-versed in areas of consciousness science and integrative medicine
- Identify and recruit key influencers to deliver the message across a variety of archetypes and domains (e.g., business, science, clinician, householder);
- Work to differentiate the field from, and to actively discourage, fraudulent or exploitive claims
Increase the scientific literacy of the overall subtle energy and biofield community

Devices and Technology

- Identify “state of the art” technologies for biofield mapping (e.g., electromagnetic fields, biophotonics, infrared imaging, acupuncture, meridian system analyses, near infrared spectroscopy, fMRI, electrophysiology (EEG/HRV/GSR), etc.)
- Create images of biofields informed by both healer and device/sensor methods. Focus on changes in human biofield during healing sessions, health, stressed conditions, and disease states
- Identify and fund studies on therapeutic technologies with greatest promise for further study (e.g., devices for pain in the elderly)
- Fund validation studies on key technologies claiming to measure or modify the biofield
- Develop a 5-year plan for a technology development and device testing collaborative
- Establish an X Prize/Grand Challenge style program to engineer real-time sensors which measure the biofield with validity and reliability

Education, Training and Practitioner Support

- Fund tenured chairs/scholars for Biofield Science at universities
- Provide small grants for thesis and dissertation work and link students with mentors in biofield science
- Author a definitive/foundational textbook
- Develop and provide course curricula for evidence-based biofield therapies for healthcare professionals

- Establish an umbrella organization that provides clear certification across modalities (such as APA/AMA)
- Provide opportunities for biofield healing practitioners to collaborate with and educate researchers, engineers, and the general public on their expertise in biofield practices

Collaborative Framework for Systems Change

- Support a collaborative backbone/hub to foster communication and collaboration amongst scientific researchers, healing practitioners, and stakeholding organizations globally
- Foster consistent communication among key stakeholders in diverse domains, including policy, practitioner, research, technology, healthcare integration, communication, and education
- Continue to assess capacity and resources needed for domain leaders aid domain leaders in key areas needed to move forward
- Expand and connect the network of subtle energy and biofield researchers, practitioners, and organizations worldwide
- Keep all research, researcher, healer, healing organizations, devices, and other related databases up-to-date
- Establish a Subtle Energy, Biofield Science, and Healing Coalition: a transdisciplinary alliance of individuals, groups, and organizations representing each of these domains that would work together to foster ongoing communication and collaboration
- Create a Subtle Energy and Biofield Funding Collaborative, to encourage the interest of individuals and foundations to leverage combine funds and administrative resources, to support the implementation of the [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#)

Learn more about these next steps in our [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#) and Healing, and in the Full Report. If you are interested in becoming involved in these next steps, or have comments or ideas, please connect with us at healingreport@chi.is.

This report was authored by the Consciousness and Healing Initiative (www.chi.is), and supported by Jeffrey Walker, Jason Yotopoulos, Tom Dingedine, the [Emerald Gate Foundation](#), Walker Family Foundation and Wake Forest University. All inquiries and comments regarding this report should be directed to healingreport@chi.is.

Subtle Energy and Biofield Healing:
Evidence, Practice, and Future Directions

Full Report

APRIL 2020



Subtle Energy and Biofield Healing: Evidence, Practice, and Future Directions

This report provides an overview of research on subtle energy and biofield healing, a summary of current biofield devices and technologies, and a description of subtle energy and biofield healing constituent domains, including researchers, healing practitioners, patients, technology and innovation, education and training, communications and public relations, funding, and policy. It provides summary feedback from stakeholders of these constituent domains, and offers recommendations for future directions to create systems change within a collaborative framework. The report also includes links to a database of selected peer-reviewed subtle energy and biofield healing publications, a list of research organizations, a list of subtle energy and biofield associations, organizations, and centers, a webpage of subtle energy and biofield technologies, the surveys used to conduct the research, resources for further exploration, and a roadmap identifying next steps in the subtle energy and biofield healing domain.

I. Definitions and Historical Context

As this report makes clear, a consensus definition of subtle energy and biofield healing is lacking. However, for purposes of this report, we use the term “subtle energy” to refer to an energy or life force that permeates all things and is both affected by and affects the physical systems it permeates. We use the term “biofield” to refer to a field of energy and information that surrounds and interpenetrates the physical body. And when we say “subtle energy and biofield healing” we are referring to activities (sometimes called practices, modalities, or therapies) directed toward affecting or interacting with these subtle energies or biofields to foster physical, emotional, and spiritual health and well-being. These definitions are oversimplified at this stage in our conceptualization of these phenomena, but for purposes of discussing these in this report, they are sufficient.

For a bit more detail, a rough approximation is provided by [Rosch \(2009\)](#):

“Belief in a restorative life energy that pervades living things dates back to antiquity. Hindu prana, Chinese Qi (chi), and Japanese ki are a few examples of some sort of poorly understood vital energy that flows throughout the body and is intimately linked with physical, mental, and spiritual health...various types of energy medicine practices have been designed to harness such subtle energies to promote health.”²⁹

Another general description is provided by [Leskowitz \(2001\)](#):

“...all of the world’s healing systems, except for Western allopathic medicine, emphasize the role of a so-called “life energy” in maintaining health. This energy is known as “prana” in the yoga system, “qi” in Chinese medicine, “ruach” in Jewish mysticism, and it is even acknowledged in several notorious offshoots of Western medicine (the “Animal Magnetism” of Franz Mesmer, the “elan vital” of Henri Bergson, the “libido” of Sigmund Freud, and the “orgone” of Wilhelm Reich).

In this model, health is seen as a state of freely flowing vitality, and illness is marked by a blockage or imbalance of some sort in the natural ebb and flow of this energy. Many of these traditions also map out the specific routes by which this subtle energy is collected and travels, as exemplified by the acupuncture meridians of traditional Chinese medicine and the energy centers or chakras of the yoga system. Universal spiritual energy is somehow tapped into and “stepped down” in intensity by these subtle anatomic structures so that it can be used in the creation and maintenance of physical organisms. Therapies based on the manipulation of this energy include acupuncture, qigong, the laying-on-of-hands, Reiki, Therapeutic Touch and others.”³⁰

In terms of biofield descriptions, [Muehsam and colleagues \(2015\)](#) put it:

“Advances in biophysics, biology, functional genomics, neuroscience, psychology, psychoneuroimmunology, and other fields suggest the existence of a subtle system of “biofield” interactions that organize biological processes from the subatomic, atomic, molecular, cellular, and organismic to the interpersonal and cosmic levels. Biofield interactions may bring about regulation of biochemical, cellular, and neurological processes through means related to electromagnetism, quantum fields, and perhaps other means of modulating biological activity and information flow. The biofield paradigm, in contrast to a reductionist, chemistry-centered viewpoint, emphasizes the informational content of biological processes; biofield interactions are thought to operate in part via low-energy or “subtle” processes such as weak, nonthermal electromagnetic fields (EMFs) or processes potentially related to consciousness and nonlocality”³¹

Though these definitions lack scientific precision as constructs, together, they paint a picture of what we are discussing in this report.

I.1 Defining Healing

The word “healing” originates from the term *haelen* (old English) which means “wholeness.” Standard dictionary definitions of healing stem from views of healing as simply, “to make free from injury or disease,” ([Merriam Webster](#)) or more precisely, a person or treatment meant to cause an injury, wound, or person to become sound and healthy again ([Oxford Dictionary](#)). However, more modern views understand healing as more than just absence of disease, but rather “a holistic, transformative process of repair and recovery in mind, body, and spirit resulting in positive change, finding meaning, and movement towards self-realization of wholeness, regardless of the presence or absence of [disease](#).”⁶⁴

When we use the term “subtle energy and biofield healing” throughout this report, we are using it as an adjective or verb - a process directed toward healing, or intended healing, of another person. We do not presuppose that the outcome or event of “healing” is occurring. For some time, the preferred term was “energy medicine”, where the term “medicine” refers to efforts to diagnose, treat, and prevent illness and disease - as opposed to the outcome of healing. However, since medicine is used in popular modern

vernacular to refer only to physicians, it can be interpreted to exclude nurses, traditional practitioners, chiropractors, energy psychologists, acupuncturists, etc., who combined make up the bulk of subtle energy and biofield practitioners.

I.2 Historical Context

Biofield-based medical systems have influenced western medical practice throughout their shared history. Traditional Asian medical views, such as Chinese Medicine, Tibetan Medicine, and Ayurveda, described health as a balance of types of subtle energy (using umbrella terms such as prana, chi, and qi). These types of energy were sometimes described as elements (earth, wind, fire, water, wood, metal), which were not only found in the world, but in our bodies. They were understood as distinct types of subtle vibrations that were associated with specific functioning of, and communication between, organ systems. These teachings are echoed in other ancient spiritual healing systems, including African, South American, and other indigenous forms of healing. They are also strikingly similar to the medical teachings of Ancient Greece and Rome, which, in turn, influenced European hermetic and alchemical schools, teaching that health depends upon a harmony of bodily “humours.” These approaches fueled scholarly interest in the use of magnetism for spiritual and healing purposes in Europe during the Renaissance, and biofield healing methods such as the controversial “animal magnetism” taught by Antoine Mesmer in the late 18th century. In the late 19th and early 20th centuries, the growth of Christian Science and spiritualist movements, such as the Theosophical Society, coincided with the advent of the age of electricity and the sudden appearance of numerous electric and magnetic therapy devices similar to the upsurge we’re seeing today.

Biofield research in the early 20th century continued in the West with Harold Saxton Burr’s seminal experiments with bioelectricity and Alexander Gurwitsch’s discovery of “mitogenic radiation,” - ultraviolet emissions associated with seed germination. These researchers held to a biofield-based view of living organisms, a view reflected in Wilhelm Reich’s theory of “orgone energy.” Gurwitsch’s findings , which demonstrated that biological signals could be carried by light, stimulated researchers, such as Fritz-Albert Popp, who contributed the large and growing body of research in biophotonics. New findings continue in this area, Beverly Rubik and Harry Jab’s 2017 [report](#) on human biophoton emissions during healing/ Qi practices, and ongoing work forging connections between biophotonics and acupuncture Traditional Chinese Medicine at [Meluna](#), formerly the [Sino-Dutch Centre for Preventive and Personalized Medicine](#).⁶⁵

Clinical biofield healing research has been performed for many years, with a timeline that can be explored interactively [here](#). Basic science studies of the anatomy of the biofield by researchers, such as Elmer Green, Valerie Hunt, Hiroshi Motoyama, and others, have begun to explore electrical characteristics of the biofield, chakras (energy centers according to yoga anatomy), and acupuncture meridians. In recent years, nonprofit organizations, including the [Institute of Noetic Sciences](#), the [Samueli Institute](#), [Miraglio Foundation](#), [Chopra Foundation](#) and the [Consciousness and Healing Initiative](#) as well as researchers and physicians in mainstream universities, have contributed to basic science research and clinical adoption of biofield-based mind-body therapies. Cognitive behavioral therapies based on whole-person biofield-inclusive viewpoints have generated a substantial body of research in the last 30 years, including extensive study of Emotional Freedom Technique, which has led to clinical adoption of these mind-body biofield based therapies.

Biofield and subtle energy research has accelerated in the last 20 years, and interested researchers can access our public research database [here](#). In this report, we’ve also highlighted a sampling of the [research organizations](#) active today.

II. Project Parameters and Limitations

This report is intended to be an overarching review. We are aware that we have excluded or neglected potentially relevant domains and information, and overemphasized others.

In this report, we have included the following areas of research: subtle energy, biofield science and healing, acupuncture, qigong (external)/qi therapy, traditional healers and healing ceremonies, faith and religious healers/ healing, Shamanism, medical intuition, traditional medical systems, touch and non-touch biofield modalities (see [Landscape Map of Peer-Reviewed Clinical Studies](#)), energy psychology therapies, group healing, biophoton research, subtle energy technology/devices, and intercessory prayer. We have excluded yoga; meditation, mindfulness, chiropractic care, naturopathic medicine, homeopathy, the doctor-patient relationship, and anthroposophical medicine, and placebo. Even though some of these claims are, in part, based on subtle energies and biofields, many of them either, have other hypothesized physical mechanisms of action or are not primarily based on them.

However, in the [Research Database](#) and Researchers Database, areas we also highlighted some acupuncture, qigong (internal), meridians, TCM research, and researchers who study acupuncture and TCM and identify the purported mechanism as “subtle energy.” There is a need to continue to survey acupuncture, Traditional Chinese Medicine (TCM) as a whole, biophysics, and other integrative medicine disciplines and areas of research. However, at this time, given our scope, the literature was too extensive to address these subjects adequately, and, in the case of [acupuncture](#), there have already been efforts to comprehensively survey its research and impact.

We made a specific decision to include some touch therapies (such as Emotional Freedom Technique, Thought Field Therapy, and Laying-on-of-Hands) because, while they do include physical touch, their stated primary mechanism of action is interaction with subtle energy or biofields. The touch therapies included do not use tools or instruments other than their own bodies and “subtle energies” to interact with the biofield, and the interactions involving touch are not focused on manipulating physical aspects of the body such as the skeletal-muscular systems.

We use the phrase “subtle energy and biofield healing” to describe the healers and modalities/therapies discussed in this report. Although the use of the term “healing” may reflect a bias, we have chosen to use this term because this language is used by practitioners and stakeholders. By using this term, we are representing the language the community uses, not making the claim that healing is occurring. This report is an investigation into the subtle energy and biofield healing community from the perspective of its stakeholders.

For the clinical studies included in our [Landscape Map of Peer-Reviewed Clinical Studies](#) and [Clinical Studies Database](#), we used a systematic search process to locate a majority of these articles. Although more studies have been published, many were published in unindexed or poorly indexed peer-reviewed journals. We have attempted to include as many of these studies as possible, but given lack of accessibility, some of these articles may be missing. We will continue to update the [Landscape Map of Peer-Reviewed Clinical Studies](#) as we receive more citations. (Please contact healingreport@chi.is to propose inclusion of published clinical research).

Finally, many stakeholders in the subtle energy and biofield domain would likely say that consciousness is the key component in subtle energy and biofield healing. For example, one philosophy asserts that it is the intention, attention, or mental/spiritual state of the healer that interacts with the subtle energy or biofield of the patient to promote healing - rather than any kind of physical “energy” being transmitted from the healer to the patient. Another philosophy is that both the physical and energetic aspects of both healer and patient are secondary, and that consciousness is the primary force at play in both. In this view, the

consciousness of the healer interacts with the consciousness of the patient, and the interaction is reflected in changes in subtle energies, biofields, and the mental/physical body. This view is sometimes extended to the idea that there is only one consciousness that is part of the fabric of reality, and this essential interconnection or oneness allows healers to have a positive impact on patients. This can make it difficult to apply the current scientific method to these processes, since, from this perspective, the consciousness of the scientist or researchers would also be involved in the observations they are making, as opposed to being neutral.

This report makes no claims about the nature and role of consciousness in subtle energy and biofield healing. The stakeholders interviewed for the report are a diverse group with beliefs about consciousness ranging from an understanding of subtle energy and biofield healing as a physical/material process that will eventually be measurable, to people who believe physical reality is secondary to a larger, non-physical consciousness. Most people fall in the middle, believing that consciousness interacts with physical reality, and that this interaction relies heavily on intention, attention, visualization, and other aspects of awareness. For more information about the role that consciousness plays in defining our physical reality, we recommend Ed Kelly's books [Beyond Physicalism: Toward Reconciliation of Science and Spirituality](#) and [Irreducible Mind](#). Also see these popular press articles on panpsychism: [Is Consciousness Universal?](#) and [A Neuroscientist's Radical Theory of How Networks Become Conscious](#), and the book [Consciousness and Healing: Integral Approaches to Mind-Body Medicine](#).

III. Subtle Energy and Biofield Healing Constituent Domains

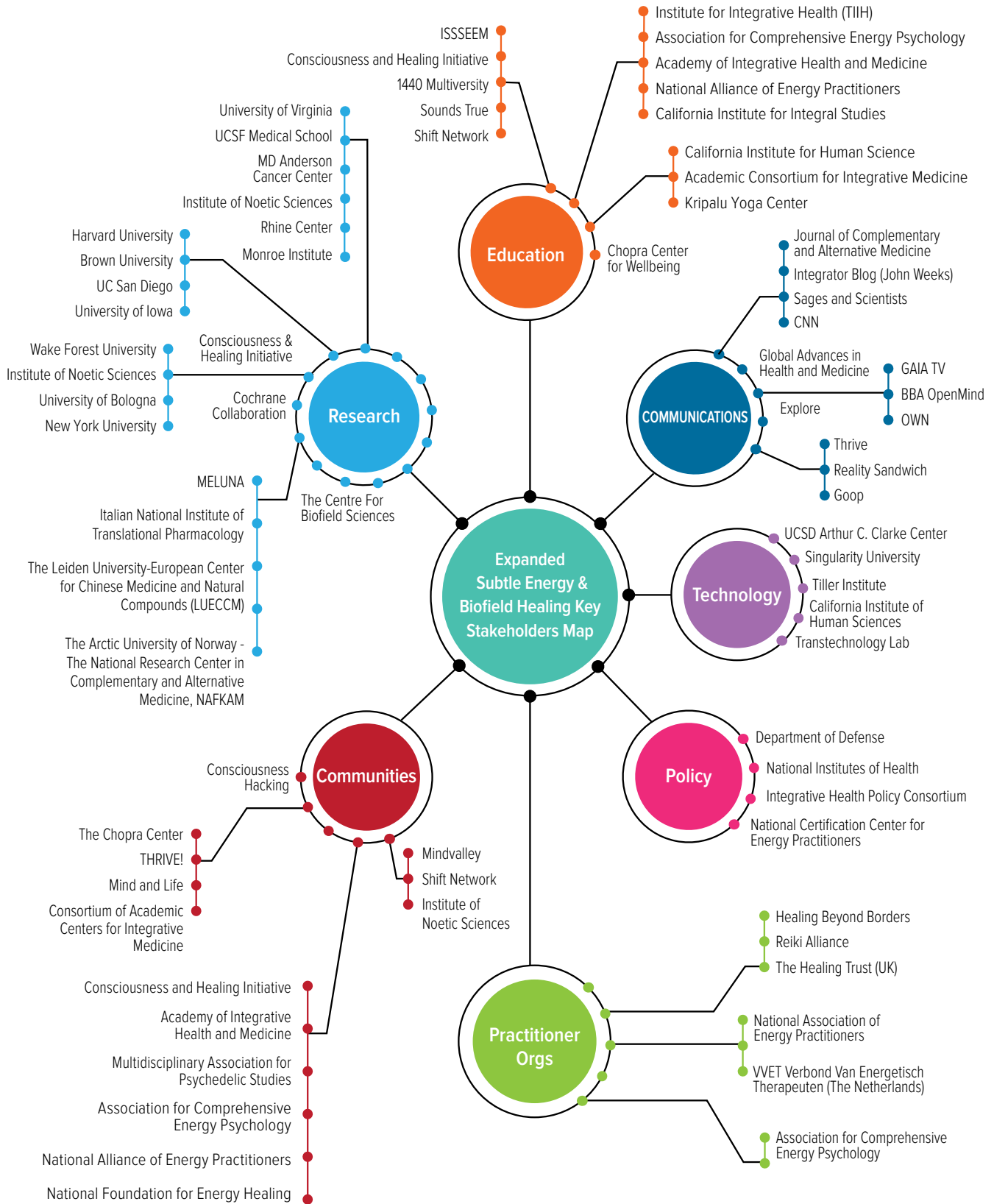
To assess the state of the field and opportunities for moving it forward, we mapped the various constituent domains for the subtle energy and biofield healing arena. The Constituents Map highlights these domains, and identifies a few anchor tenants in each domain. In the following sections, we address each of the subsequent Subtle Energy and Biofield Healing:

1. Science and Researchers
2. Conceptualization and Measurement
3. Practice and Practitioners
4. Patients and Consumers
5. Technology and Innovators
6. Education, Training, and Certification
7. Policy and Policy Makers
8. Funders and Investors

III.1 Subtle Energy and Biofield Healing Science

Our work in this section describing the current status of subtle energy and biofield science and healing relied on a thorough compilation of existing published research on subtle energy and biofield healing, a richer description and data visualization of the subset of articles reporting on the effects of subtle energy and biofield healing on clinical outcomes, and interviews with selected researchers in the field to better understand their perspectives on the opportunities and challenges in this domain.

Constituents Map*



*This is an example of constituents and we understand there are many more organizations working in the field of Subtle Energy and Biofield Healing. We have included many of these in [Subtle Energy & Biofield Healing Network Map](#). Please contact us at healingreport@chi.is if you have any suggestions for organizations to include.

III.1.A Subtle Energy and Biofield Healing Publications Library

Peer-reviewed publications were extracted using a search string designed to capture the available scientific literature on subtle energy and biofield healing. Examples of search terms included “Qigong” or “Therapeutic Touch” or “Spiritual Healing” or “Subtle Energies” or “Distant Healing” and about 30 other terms. This was followed by the arduous process of removing irrelevant articles, including relevant ones, and examining citations in relevant articles to identify additional articles that the search string did not yield. Selection criteria used to build the database can be found [here](#).

Articles in subtle energy and biofield healing were identified and placed into this open-source database called the [Subtle Energy & Biofield Healing Publications Library](#). With over 6,000 articles and growing, this database is designed to provide subtle energy and biofield healing researchers with an overview of the peer-reviewed clinical literature available. We plan to continue to update this database and expand its scope in the future.

Takeaways from the Subtle Energy and Biofield Healing Publications Library:

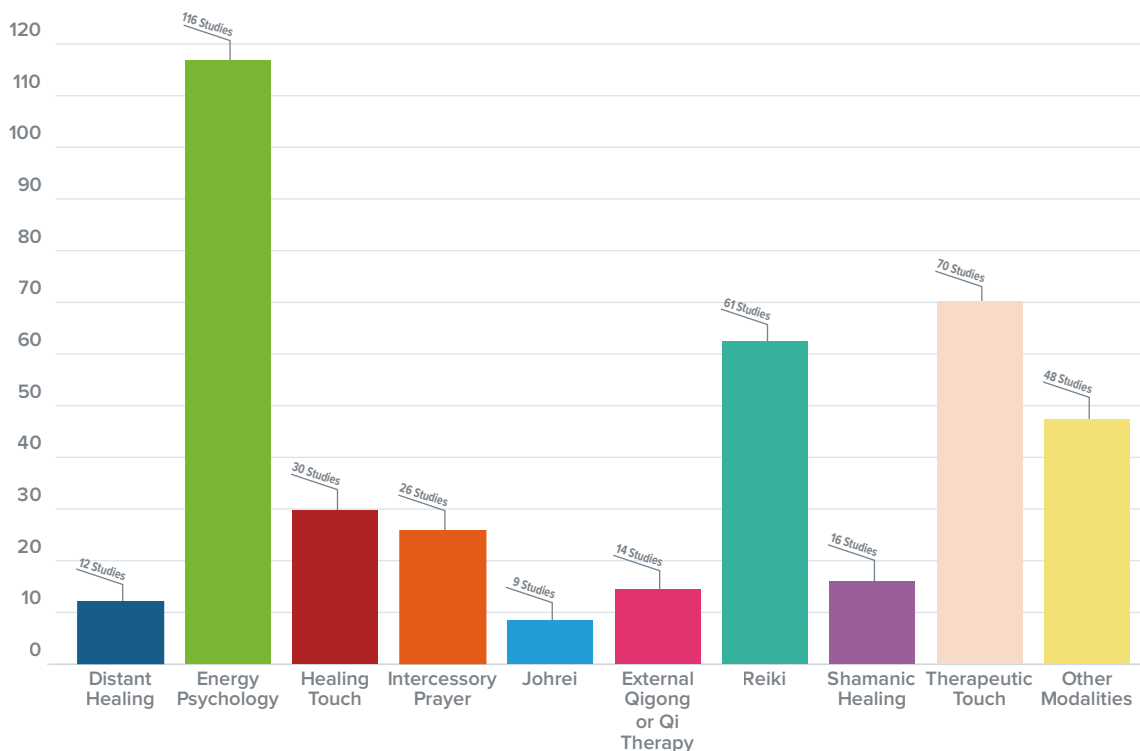
- A substantial proportion of published articles are review articles focused on theory and scientific hypotheses about biofield and subtle energy
- A large proportion of biofield-relevant research is published by mainstream researchers who do not use terms such as ‘biofield’ or ‘subtle energy’
- There is a large body of anthropological and sociological studies looking at biofield therapies;
- Studies on practitioner perspectives and indigenous healing practices, such as shamanism, often consider biofield therapies
- There is a growing body of work emerging mostly from Asia considering Traditional Chinese Medicine and related treatments based upon biofields

III.1.B Subtle Energy and Biofield Healing Clinical Studies Database and Data Visualization

A subset of articles from the [Subtle Energy and Biofield Healing Publications Library](#), including only those reporting on clinical studies of subtle energy and biofield healing, were selected and tagged based on type of healing modality, type of healing engagement (i.e., person-to-person touch), type of study (therapeutic, mechanism, or device), study design, population, primary outcome measures, secondary outcome measures, sponsoring research institutions, funding sources, and study location. This [collection of clinical studies](#) of subtle energy biofield healing research yielded 396 peer-review, published clinical studies on biofield therapies, which we have included in our [Landscape Map of Peer-Reviewed Clinical Studies](#).

Although modalities such as acupuncture and Tai Chi were included in the larger database, the clinical research database focused on interventions in which the practitioner facilitated energetic healing as opposed to an instrument where alternative explanations could account for the healing (such as a needle used by an acupuncturist).

Biofield Modalities Included in the Landscape Map of Peer-Reviewed Clinical Studies*



* Please note that some studies include more than one subtle energy and biofield modality.

Note: This infographic does NOT represent a systematic review. The team responsible for this report has not evaluated for positive or negative outcomes, nor assessed the quality or strength of evidence for the overall set of articles nor the subset of clinical trials peer-reviewed published literature. Colleagues, Dr. Wayne Jonas and Cindy Crawford, reviewed and assessed the quality and strength of evidence for a subset of these articles published until 2007, and a 2009 systematic review, which included 66 of these articles. We believe it is an important next step to take the data represented in the [Landscape Map of Peer-Reviewed Clinical Studies](#) and conduct both evidence maps and systematic reviews that provide an unbiased assessment of study quality, validity of inferences, and outcomes. Such systematic, evidence-based reviews are needed to guide clinical practice guidelines and healthcare integration, and to inform further research.

Because many are unaware of the number of studies that have been conducted on biofield therapies, and people tend to either over or underestimate the volume and breadth, we have created a data visualization to help people explore the landscape of subtle energy and biofield healing clinical studies by type of modality, outcome of interest, and study location. This Landscape Map of Peer-Reviewed Clinical Studies interactive infographic can be found [here](#).

III.1.B.i Overview of Clinical Research

The most recent comprehensive systematic review of clinical trials of subtle energy and biofield therapies was conducted over 10 years ago. More recent reviews have looked at 1) biofield therapies tested for specific conditions (e.g., cancer, pain, and cardiovascular disease); 2) specific biofield therapies for any condition (e.g., Healing Touch and Reiki); and 3) specific biofield therapies for specific conditions (e.g., Therapeutic Touch for wound healing or for pain).

The last comprehensive review of clinical studies examining the effectiveness of subtle energy and biofield therapies (both contact and non-contact) including all patient populations was [published](#) in 2009.⁷³ A total of 67 clinical studies with various study designs were included. These studies examined a variety of patient populations: chronic pain or pain related disorders, cancer patients, postoperative or rehabilitation patients, patients with dementia, patients with varying cardiovascular ailments, healthy populations, and students. The review concluded that there is strong evidence for the use of biofield therapies for reducing pain intensity in pain populations and moderate evidence for pain reduction in cancer populations. However, some randomized controlled trials (RCTs) of biofield therapies for pain produced negative results. There was moderate evidence supporting the use of biofield therapies for behavioral symptoms in dementia and for decreasing anxiety for hospitalized populations.

Another review, [published in 2014](#), assessed the quality and outcomes of randomized controlled trials of non-contact (non-physical) biofield therapies, including External Qigong, Healing Touch, Johrei, Reiki, and Therapeutic Touch.³⁵ Of the 18 clinical trials that met research design criteria, 12 produced positive results under controlled conditions, suggesting that biofield therapies appear effective even when participants are not touched, and even when compared to mimic biofield therapy (placebo) [controls](#).⁶⁷

Many of these published clinical studies did not adequately account for the type of healing practice used by the subtle energy and biofield healing practitioners. These therapists engaged with participants in a few different ways, including touching, not touching with hands held close to the patient, at a distance (patient not in the physical presence of the practitioner), or a mixed type of healing engagement. Importantly, touch therapies do not require concepts of biofields or subtle energies for their explanation; it is [well documented](#) that touch can alter hormone levels (such as oxytocin, serotonin, and cortisol) and physiology (such as heart rate and blood pressure).⁶⁸ Reviews are needed that differentiate touch vs non-touch therapies. Understanding the role that touch and proximity play is crucial to deciphering whether and how biofield therapies work, and the degree to which different types of healing engagement have different impacts on the patient.

In addition, over the past ten years, the number of publications has significantly increased. Any effort to affect policy or healthcare integration will require an up to date, focused systematic review of subtle energy and biofield therapies on key outcomes of focus, for example: trauma, mental health, and pain.

Finally, previous systematic reviews on subtle energy and biofield healing therapies have not included Energy Psychology therapies. During the last ten years, there has been a considerable increase in the number of clinical studies on Energy Psychology therapies, including Thought Field Therapy (TFT) and Emotional Freedom Technique (EFT), among others. Energy Psychology therapies are touch-based and include the patient tapping on parts of the body thought to be associated with energy meridians to focus the patient on the relationship between thoughts, emotions, sensations, and behaviors, particularly when experiencing or recalling a troubling event. Systematic reviews and individual studies in Energy Psychology have found that these therapies:

- Significantly [reduce anxiety](#).⁶⁹

- Simultaneously [reduce post traumatic stress disorder, anxiety, and depression symptoms](#) in heterogeneous populations;⁷⁰
- Are similarly effective in significantly [reducing depression and anxiety](#) when compared with cognitive behavioral therapy;⁷¹ and
- Positively impact [physiological outcomes](#), including decreased resting heart rate, cortisol, systolic blood pressure, and diastolic blood pressure.⁷²

To date, Energy Psychology therapies have built up a strong evidence base by standardizing their meridian tapping interventions (such as EFT and TFT) and replicating studies with [positive outcomes](#).^{73 74} This evidence base has led to increased interest and adoption by mental health professionals.⁷⁵

Takeaways from the [Landscape Map of Peer-Reviewed Clinical Studies](#) assessment are:

- The most studied biofield therapies among the 396 studies (publication dates ranging from 1965-2019) are Energy Psychology (116), Therapeutic Touch (70), and Reiki (61).
- Not all of the clinical studies report positive results.
- Many of the articles do not provide an adequate description of the subtle energy and biofield healing therapeutic interventions (such as duration and use of hands) or the training of the practitioner.
- Promising results from clinical studies indicate that biofield therapies may be most effective for anxiety, pain, trauma, depression, and cancer. More adequately powered clinical studies are warranted.
- More high-powered longitudinal (long-term) studies with physiological and biological measures are needed.
- A majority of the 396 are either randomized control trials (128) or quasi-experimental (128).
- Only a few trials with positive results have been replicated.
- Study designs are heterogeneous, which may account for the inconsistent results across clinical trials.
- There are an estimated 143 clinical trials on biofield therapies published in the past 5 years (2014-2019).
- The top most studied biofield therapies during the last five years (2014-2019) are Energy Psychology (61), Reiki (28), and Therapeutic Touch (12).
- United States research institutions are responsible for 37% of the peer reviewed publications (52 publications) in the last 5 years, followed by Australia (10) Brazil (9), and Iran (9).
- Much of the clinical research is published in nursing journals and journals targeting the integrative medicine community. Some of the research is published in poorly indexed or un-indexed journals, making it difficult to collate all the research.

In summary, there is a growing body of published peer-reviewed scientific literature on the subjects of subtle energy and biofield healing. These promising results need to be examined closely for commonalities among modalities and patient populations with positive results to identify best bets for future research. These results should also be communicated clearly and accurately to healthcare professionals and the general public, and where appropriate, included in training and translated into applications.

While promising, many trials are inadequately powered, the research design and populations studied are heterogeneous, and few studies with positive results have been replicated. There is a need for adequately powered, controlled, rigorous studies of subtle-energy and biofield therapies, that use both subjective and objective measures, and capitalize on recent advancements in technology.

Furthermore, better descriptions of the interventions and practitioners' training is important for better understanding the impacts of different types of healing engagements (for example, touch versus non-touch). There is a need for updated systematic reviews. Increased funding and coordinated efforts among researchers (e.g. shared measures and protocols) are also needed to produce more well-powered and adequately controlled studies, with designs that can answer crucial research questions, and at a level of quality be included in meta-analyses.

Are Subtle Energy and Biofield Therapy Effects Attributable to the Placebo Effect?

One question that many ask about subtle energy and biofield healing therapies is whether they are simply placebo effects. While biofield studies, including animal studies, suggest that biofield therapies can affect biological outcomes beyond placebo controls, we recognize that placebo research itself tells us much about the power of our consciousness to help foster our own healing, and thus, is of great relevance to subtle energy and biofield science and healing.

Elements of placebo that have been discussed, investigated, and found to augment the healing process include:

- Expectation (the conscious belief in a medicine or therapy to help or not help)
- Conditioning (the often subconscious experience of the body-mind to the substance or therapy - for example, the body relaxing in anticipation of a massage based on previous experiences)
- Meaning and Context effects which include ritual, healer-patient relationship, cultural context, and related factor..

Research indicates that placebo elements are embedded in nearly every clinical intervention and have significant effects on healing outcomes. Integrative medicine interventions, including biofield therapies, are rife with placebo elements that help augment healing effects, as they often are delivered in a holistic environment and induce a relaxation response as well as expectations of healing. Current understandings of placebo based on research trials involving surgery, antidepressants, and other studies help us understand that placebo is not only an inert substance - but rather, that it influences the mind-body to respond to a certain

Are Subtle Energy and Biofield Therapy Effects Attributable to the Placebo Effect? (cont.)

intervention more favorably - including immune, neural, and hormonal factors (for review, see [this article](#)). [Discussions regarding the interpretation of the](#) randomized placebo controlled trials and their relevance to integrative medicine research have been discussed extensive (for review, we recommend reading [this article](#)).

Given this richness of healer-client interaction, expectation, conditioning, meaning, and context present in biofield healing sessions, one may wonder whether biofield therapies show effects beyond influencing placebo elements. While the field will benefit from deeper research on the role of placebo elements in biofield therapy research (including potential moderating roles on outcomes), here is what we currently know based on studies so far:

- A [2008 Cochrane systematic review on biofield based therapies for pain included](#) an examination of studies with placebo controls. This review reported that biofield therapies affected pain beyond placebo controls.
- A 2014 published review of RCTs (Randomized Controlled Trials) of non-touch biofield therapies noted [methodological issues with the use of mock groups](#) in biofield therapies. An [infographic of results of this review may be found here](#) - which allows sorting of the data by studies that had mimic vs. actual healing groups.
- A [rigorously placebo-controlled RCT of a biofield therapy for fatigue and hormonal function in cancer survivors](#) examined placebo elements including a sham control group, weekly measurements of sense of connection with the therapist, treatment guess (sham vs. real), treatment expectations, and perceived benefits of treatment. This study, which was designed to investigate the nuances of placebo elements on healing responses, indicated that biofield therapies influenced physiological functioning (cortisol rhythms) in fatigued breast cancer survivors, while sham therapy did not. Placebo elements such as sense of connection with therapist, expectations, and benefit also did not account for the effect.
- [Several controlled studies with cells and animals indicate that biofield therapies](#) affect physiological outcomes beyond sham control groups, suggesting that placebo effects do not drive physiological outcomes.

These studies suggest that biofield therapies affect psychological and biological outcomes beyond placebo effects. Similar to other trials in integrative medicine, such as acupuncture, biofield therapy research studies to date suggest that placebo elements could augment the healing response, but do not account for their full effects.

III.1.C Subtle Energy and Biofield Researchers

As part of this project, we identified 220 research institutions with the capacity and skills to conduct subtle energy and biofield healing and science research, and who either are currently, or are interested in, studying biofield science mechanisms, measurement, or modalities for clinical populations. These institutions can be found [here](#).

We identified over 400 domestic and international researchers actively participating in and/or keenly interested in pursuing subtle energy or biofield healing research, and surveyed 38 identified researchers. Many are “mainstream” scientists in tier-1 research universities (including Harvard University, Brown University, UC San Diego, and others) with significant laboratory resources, research program, and faculty connections that will be helpful in advancing future research in biofield science and align biofield science with related areas including mindfulness, neuroscience, psychoneuroimmunology, and integrative medicine. Researchers who are “newer” to the area of biofield science include senior and mid-level investigators with established track records in grant funding and are interested in extending their research programs to include biofield concepts, measurement, and interventions. Research specializations included anthropology, cell biology, clinical medicine, bioelectromagnetics, biophysics, electrical engineering, integrative medicine, neuroscience, parapsychology, physics, physiology, psychology, and psychoneuroimmunology. Studies in these areas represent a broad transdisciplinary view of biofield science and subtle energies, with results relevant to 1) measures of biofields and subtle energies, 2) underlying mechanisms, and 3) practical applications.

Key Themes among Subtle Energy and Biofield Researchers:

- Researchers report, almost universally, that their interest in subtle energy and biofield healing was stimulated by personal spiritual/healing experiences
- Some researchers report that they conduct research in the area of subtle energy and biofield science, but do not publish it, nor do they openly discuss this research with colleagues for fear of ridicule
- Many tenured professors will assist with or contribute to subtle energy and biofield science/energy medicine research projects, but may not want to be included on publications
- There is a need to produce scientifically validated images of purported subtle energies and biofields
- Some researchers are finding ways to perform subtle energy and biofield studies in parallel with more conventional research projects

Importantly, many researchers also expressed gratitude for being able to have open conversations about consciousness, subtle energy and the biofield, and a hunger for a community of scientists where they could more openly discuss such ideas and explore collaborations on biofield related studies. Subtle energy and biofield healing researchers report facing considerable stigma – from implicit bias against their work, to outright hostility or ridicule – and that they feel isolated from one another. A clear path that engages and integrates multiple stakeholders and researchers is needed to address these systemic challenges currently faced by the research community.

Stakeholder interviews and the systems mapping meeting identified these additional obstacles and barriers to advancing, and anchors holding back the community from advancing, the state of the science:

- Lack of funding
- Lack of coherent strategies - no systematic research agenda
- Ongoing focus/bias toward materialism/reductionism/drug-trial emulation in science
- Lack of community - researchers are siloed and working on “one-off” projects limited by lack of peer engagement and collaboration
- Lack of innovative protocols/study designs to accurately capture the impact of biofield therapies (RCTs are not painting the whole picture)
- Lack of consensus in the community regarding what the best methods are to study biofields and subtle energies

It was clear through these interviews that a transdisciplinary approach will be required for a deeper understanding of biofield science and subtle energies because these topics involve biophysics, psychology, psychoneuroimmunology, the neurosciences, clinical medicine, and other related disciplines.

Our overall assessment of the present state of subtle energy and biofield healing research is that: 1) current research with subtle energy and biofield healing approaches demonstrate enough reports of beneficial effects on clinical outcomes to warrant further empirical research; 2) most research is limited by small sample sizes, inadequate controls, and quasi-experimental designs; 3) researchers face substantial barriers to rectifying these issues, including stigma, and would benefit from researcher networking, being part of a coherent research agenda, and receiving funding support.

III.1.D Subtle Energy and Biofield Healing: Conceptualization and Measurement

There have been multiple attempts to measure subtle energies and biofields, with some interesting results. Measures of physical biofields continue to be developed, as reflected in the published literature which includes measures of electromagnetic fields, human biophoton emissions, infrared imaging, acupuncture meridian system analyses, near infrared spectroscopy, functional magnetic resonance imaging, and electrophysiological changes with healing and mind-body practices (electroencephalography, electrocardiology, and electromyography).

The hypothesized underlying mechanisms for biofields are reflected in these measurements, with groundbreaking results from biophotonics, study of electromagnetic fields directly related to nervous system and cardiac activity, and patterns of distributed cell membrane voltages governing growth and regeneration (see [Hammerschlag et al., 2015](#)).³⁸ Receptor systems sensitive to low-level electromagnetic fields have been identified, and these may mediate responses to these biofields, suggesting that components of the biofield physiology framework are already in place in mainstream scientific research. A more unified understanding of the function of these biofields is likely to emerge in parallel to an evolving understanding of the role of electromagnetic field theory and quantum physics in biology, where concepts such as nonlocality and entanglement have been suggested as mechanisms for biofield healing (see [Kafatos et al., 2015](#)).³⁶

Biofield-related research has contributed to a diverse set of practical applications. Along with the general acceptance in the scientific community of brain and nervous system activity as electrical activity distributed in a field-like fashion throughout the body, numerous electrical and electromagnetic therapies and diagnostics have been developed. Thousands of studies have been performed on therapies using light

(photobiomodulation), and a growing body of scientific literature supports the existence of biofield interactions. Prominent examples include studies supporting the effects of human intention on the behavior of sensitive electronic and biological systems, and devices reporting to operate via subtle energies, scalar electromagnetic waves, or torsion fields (see [Muehsam et al., 2015](#)).

In summary, there are varied conceptualizations regarding the nature of subtle energy and biofield healing, including potential mechanisms by which the biofield impacts physiology. This is equally true for many other fields of scientific inquiry in biology, physics, etc.. Competing theories are typical at this nascent stage of study, however, work toward refining conceptualizations of subtle energies and biofields from an empirical and practitioner-informed perspective will help to advance the field. A primary rate-limiting step in subtle energy and biofield science and healing is a lack of reliable and validated objective measures of purported subtle energies. It is upon scientists and innovators in this area to develop objective measures of purported subtle energies and biofields, and to continue studies that reliably measure biofield effects on physical systems and/or clinical efficacy. It is also possible that subtle energies and some forms of biofields are not physical, at least within our current understanding of the nature of reality, and will only be measurable through their effects on physical systems.

III.2 Subtle Energy and Biofield Healing Practice and Practitioners

Our work in this section, describing the current status of subtle energy and biofield healing practice, relied on extensive interviews with subtle energy and biofield healing practitioners and organizations such as [National Alliance of Energy Practitioners \(NAEOP\)](#) and [Association for Comprehensive Energy Psychology](#). These interviews helped us to learn about and better understand their perspectives regarding the opportunities and challenges in this domain.

III.2.A The Subtle Energy and Biofield Healing Marketplace

To better understand the current number of subtle energy and biofield healing practitioners and types of healing being practiced throughout the United States, NAOEP estimated the number of Biofield Healing Practitioners in the United States. Table 1 represents data shared by the NAOEP on program websites and through email correspondence with program directors.

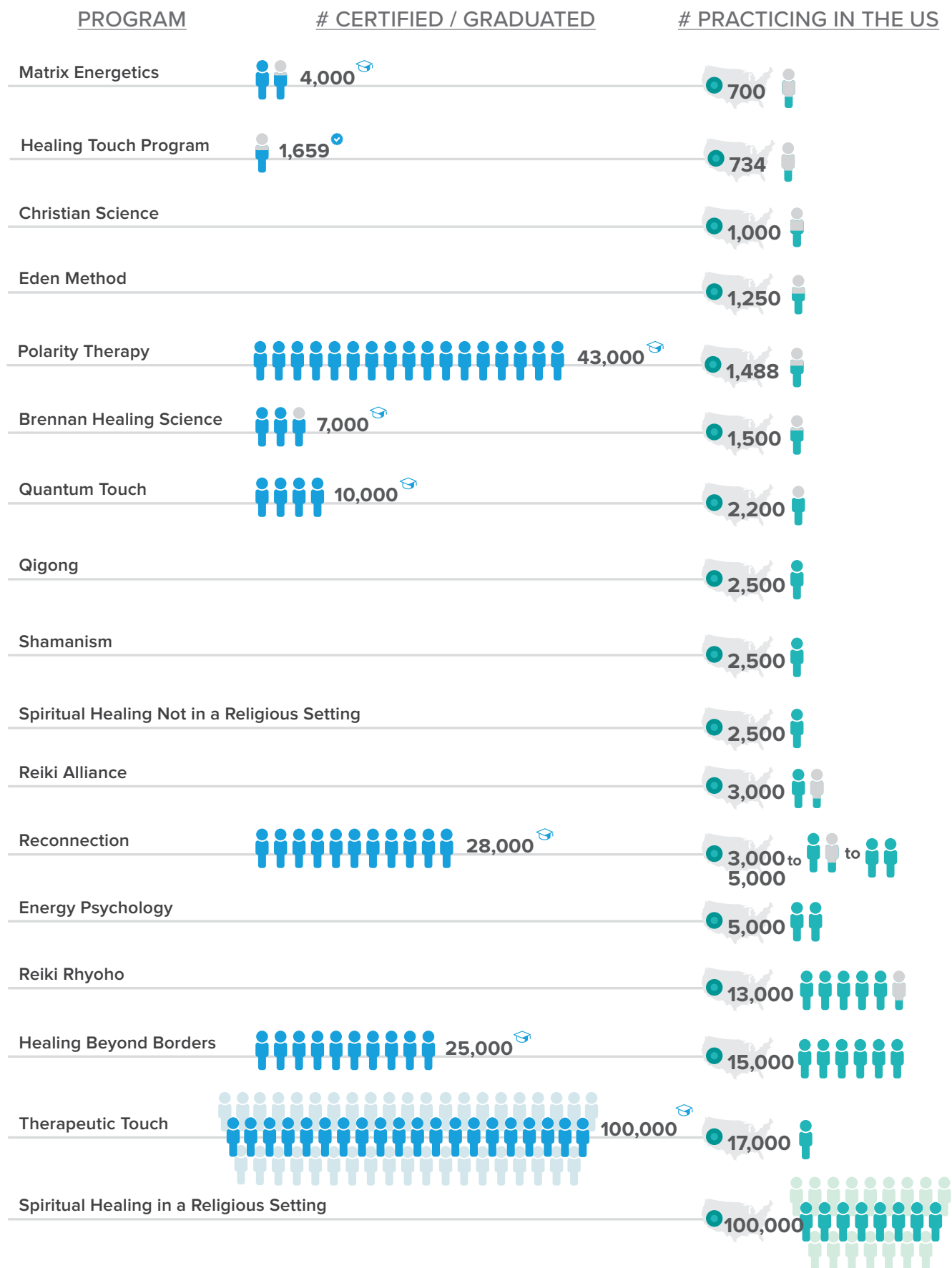
Subtle energy and biofield healing practitioners generally charge a fee for service, with the exception of approximately 100,000 people practicing spiritual healing in a religious setting or non-religious setting in the United States. The total number of paid practitioners in the US is estimated to be 74,000. Based on these numbers, a rough estimate for revenue generation by subtle energy and biofield healing practitioners, using a conservative estimate for hourly pay in the United States, follows:

74,072 practitioners X 12 clients per week X 40 weeks per year X \$80/hour = **\$2,844,364,800** per year.

These estimates suggest a workforce generating nearly \$2.8 billion per year in the “United States alone. The vast majority, if not all, non-reimbursable by insurance companies today.

Biofield Healing Practitioner modalities definitions can be found [here](#).

Table I: Estimated Number of Biofield Healing Practitioners



III.2.B Healing Practitioner Interviews

We interviewed 13 Biofield Healing Practitioners representing and/or incorporating the following healing traditions into their practice:

- Reiki - [involves a transfer of a universal energy or life force mediated by one sentient being to another.](#)
- Healing Touch - [aims at balancing energy systems in the body to initiate or accelerate the self-healing process.](#)
- Barbara Brennan School - [a holistic healing modality based on the Human Energy-Consciousness System and its relationship to health and disease.](#)
- External Qi - [a system of techniques to influence or cultivate the flow of qi within the body in order to attain and/or maintain mental and physical health.](#)
- Laying on of Hands - [a religious ritual act in which a priest or other religious head places his palms on the top of another's head while reciting a prayer or blessing.](#)
- Shamanic Healing - [a group of techniques utilized by practitioners who access the help of spirits to heal members of their group.](#)
- Pranic Healing - [a type of energy healing classified as "non-touch healing" that manipulates subtle life-energy, or "prana," in order to benefit physical health.](#)
- Bioenergetic Therapy - [a therapy which addresses the energetic aspect of the individual, including self-perception, self-expression, and self-possession to help align one's self image is with the reality of one's self.](#)

Key interview takeaways:

- A variety of approaches used by subtle energy and biofield healing practitioners involve both sensing and working with the biofield for healing. These approaches depend on the healing tradition and the subtle energy and biofield healing practitioner's abilities (e.g., multi-layered field vs. unified field, seeing the field vs. feeling the field, utilizing hands-on, hands-off, distance techniques).
- There appears to be some consensus around descriptions of what "healing" is (e.g., a return to the soul, source, spirit, purpose) and distinguishing this from "curing" terminology and diagnostic terms.
- Many successes are anecdotally reported, but the published data do not always reflect the anecdotes.
- Biofield Healing Practitioners note the need to discuss and co-develop research protocols with scientists.

The healers we interviewed suggested three primary best-bets for subtle energy and biofield healing research and applications:

- Acute conditions, including trauma and pain
- Fertility
- Somatic disorders that have immune/hormonal components that are often considered “mystery” illnesses in Western medicine

In summary, there is a large and willing subtle energy and biofield healing practitioner workforce generating an estimated \$2.8B dollars a year. Approaches that subtle energy and biofield healing practitioners use depend on their healing tradition but there is a general consensus among practitioners that when they “heal” they are helping to activate the person’s innate healing response, and to balance and align their subtle energy body. Subtle energy and biofield healing practitioners report that biofield therapies could be best used for pain and trauma, fertility, and intractable disorders.

III.2.C Subtle Energy and Biofield Healing Education, Training, and Certification

Our survey of the landscape of education and training in subtle energy and biofield healing reveals that healing practitioners obtain their knowledge and skills in many ways, including:

- Informal learning
- Apprenticeships and formal courses in spiritual, religious, and indigenous traditions
- Peer learning in modern/eclectic or “new age” spiritual practices and communities
- Healing trainings that have been more secularized for the nursing, medical, or healthcare professional community (such as Therapeutic Touch or Healing Touch)
- Energy healing approaches that are part of a integrative care model (such as craniosacral training)

There are several international training programs that vary by length, depth, frequency, and cost of training. Examples of subtle energy and biofield healing training programs in the United States include: Healing Beyond Borders, Healing Touch Program, Healing Light Center Church, Brennan Healing Science, Reiki Alliance, The Eden Method, Polarity Therapy, Quantum Touch, Reconnective Healing, Bengston Energy Healing, Pranic Healing Institute, [Association for Comprehensive Energy Psychology](#) (ACEP), and many more.

For this report, we created a non-comprehensive, but extensive, database/map of major subtle energy and biofield organizations, which we will continue to expand, and can be found [here](#).

Associations among biofield healing organizations are forming, such as the [National Alliance of Energy Practitioners \(NAOEP\)](#).³⁸ There are also efforts to provide an overall certification process across healing modalities that allow for both ethics and competence reviews that are at once comprehensive and modality specific, such as the work being done by the newly-formed National Certification Center of Energy Practitioners. This group is focused on providing certification for biofield healers across healing modalities, and helping introduce legislation to help integrate biofield healers into healthcare settings.

Subtle Energy and Biofield Healer Perspectives on Healing

“A healer does not heal you. A healer is someone who holds space for you while you awaken your inner healer, so that you may heal yourself.”

-Mayam Hasnaa

Subtle energy and biofield healing practitioners (also referred to in this document as healing practitioners or biofield therapists) report that subtle energy is what they are sensing and working with when interacting with a patient's biofield. During a healing, the interaction between the subtle energy and biofield healing practitioner's subtle energy and the individual's biofield stimulate the patient's own healing response. Subtle energy and biofield healing practitioners report that, when they are healing, they are tapping into a source outside of space and time that they describe in terms such as “the life force” and “universal energy”. They are not generating this energy, rather, they are connecting with and utilizing it when interacting with the patient.

Subtle energy and biofield healing practitioners consistently report that they are not doing the healing per se; and, in fact, many practitioners do not care for the term “healer”, because they note that they are not the ones doing the healing. Subtle energy and biofield healing practitioners explain that they are acting as conduits to allow the person to heal his or her self. Often, this process is described within spiritual terms, such as aligning the client with their soul, spirit, true nature, or higher self. Subtle energy and biofield healing practitioners state that by working the client's biofield or energy field, they are creating an environment within the patient that removes obstacles/blocks and allows for the body-mind-spirit to heal itself.

How quickly a subtle energy and biofield healing practitioner is able to foster healing depends on the nature of what they are healing. Some practitioners report that the longer a trauma resides in the body (physical, psychological, or both) the more difficult it is to address the trauma. Acute injuries or stressors will take the least amount of time to heal with the help of a subtle energy and biofield healing practitioner because it has not been residing in the person for a long time.

Subtle energy and biofield healing practitioners can either transmit this energy through the use of touch, not touching (non-contact), or at a distance (not in the same room or even the same location as a client). They report that the element of touch/proximity to the patient is not required; many noting that healing occurs outside of the constructs of space and time and, therefore, can take place non-locally.

How a subtle energy and biofield healing practitioner sees and interprets the field is greatly impacted by the method/tradition of healing that he/she is using; some styles see the field as one layer, where as others see it as a multilayered field. The style of healing will also impact how they interact with the field and control the flow of energy to the patient.

Subtle Energy and Biofield Healer Perspectives on Healing (cont.)

Subtle energy and biofield healing practitioners will not always use one style of healing and, as a practitioner learns different healing techniques and works on/with different patients, their style will evolve and so will their relation to their healing practice and the patient.

Many subtle energy and biofield healing practitioners describe the healing process through a salutogenic model of health promotion. Salutogenesis refers to an innate ability of the whole self (body, mind, and soul) for sustaining and returning to health. Subtle energy and biofield healing practitioners often report that they are assisting the natural healing process or removing blocks to healing, in accord with a salutogenic view. From this perspective, nature heals through salutogenesis, and the mechanisms for healing can be described as the ways that subtle energy and biofield healing practitioners intervene to enhance this natural process.

Interestingly, practitioners indicate that biofield therapies are often helpful to remove energetic patterns reflecting underlying traumas that cause both physical pain and long-term psychological suffering. Many biofield practitioners believe that trauma is stored in the biofield, and that by identifying and treating disturbances associated with a trauma in the biofield one can remove the effects of the trauma (including ongoing anxiety, pain, and social discomforts) on the psychological and physiological levels. Deepening a scientific and cultural understanding of these practitioner assertions is key to demonstrating a potential “value add” for biofield therapies over and above current approaches. This relationship will be better understood through future dialogue and research studies with healers, in addition to scoping and systemically evaluating the current literature.

ACEP provides certifications for energy psychology techniques, and continues to work with the [American Psychological Association \(APA\) on accreditation, a process that they report is becoming increasingly difficult.](#)

However, subtle energy and biofield science concepts and research, as well as simple subtle energy and biofield practices that can be taught to a variety of health professionals, largely remain outside of medical and healthcare education. One notable exception is the emphasis on biofield healing placed in the interprofessional fellowship for the Academy of Integrative Health and Medicine (AIHM). AIHM continues to lead professional education in integrative medicine for Medical Doctors (MD), Doctors of Osteopathy (DO), and other licensed health professionals, and has collaborated with CHI to offer education on both the science and practice of biofield healing through pre-conference workshops. AIHM notes that continuing education credits for biofield related education, including biofield science, have been difficult to obtain from Accreditation Council for Continuing Medical Education (ACCME®) accreditors, even for modalities that have an evidence-base.

In summary, there are gaps in knowledge about subtle energy and biofield healing modalities among scientists, healthcare professionals, and the public. Although interest has increased, knowledge about these therapies has not been communicated effectively to or by the popular press. Universities and

research organizations studying subtle energy and biofield healing modalities are including accurate information on their websites, while other organizations have focused on education efforts to expand the understanding and knowledge of these modalities.

III.3 Subtle Energy and Biofield Healing Patients and Consumers

Through our interview process with healing practitioners as well as personal stories from stakeholders, we have heard stories of healing practitioners who have been able to facilitate marked recovery in patients with cancer and other ailments - including total remissions - in situations where modern medicine has been unable to help patients.

A Subtle Energy and Biofield Healing Case Example

The following story, shared with one of our investigators from a couple in Southern California, illustrates the power of healing:

“We are sorry. She only has a few months to live. There is nothing we can do.”

These are devastating words that no parent wants to hear from a doctor about their child. When Devan and Medha’s 2-and-a-half-year-old daughter, Meera, their second daughter, started to show symptoms of a stomach flu that wouldn’t abate, they went to the doctor immediately. They thought it might be a case of severe acidity or a chronic GI issue. They never expected that an MRI would reveal that their toddler had a brain tumor - and that there was nothing that the doctors could do to help her.

Devan and Medha took swift action, as any parents would. They sought the best doctors. On the doctors’ recommendations, they had Meera go through radiation treatment immediately. At first, the radiation seemed to work. However, Meera developed nausea and severe ataxia, (meaning that she had trouble walking and talking). It appeared she had swelling in her brain. A follow up MRI showed that there was recurrence of a tumor in her brain stem that was causing the swelling and discomfort. The tumor was malignant and positioned in such a way that they could not operate on her to remove it. There was, they said, “nothing else that they could do.”

As anyone can imagine, Meera’s parents were devastated. They had gone to the best cancer doctors to get answers and help, but the doctors did not know how to stop the disease and save her life.

What were their options? Accepting the doctor’s words meant that they would be forced to watch their child slowly die in a few months. But they were not ready to accept this fate. They decided to seek out other options, any safe option, that would help their daughter to live and give her any chance to thrive.

A Subtle Energy and Biofield Healing Case Example (cont.)

As they began looking for alternatives, a friend approached them.

“I know it might seem like a long shot, but it might be worth a try to have Sara work with Meera,” he suggested.

Deven and Medha considered it carefully. While they’d never experienced distant healing before, they thought highly of their friend and knew he was trying to help them save their daughter. They were running out of options, so it didn’t seem like there would be any harm in trying a session with Sara.

Sara agreed to work with Meera and explained to her parents that she would “tune in” to Meera (in California), from her home in Israel. She would focus on dissolving the tumor in Meera’s brain every week. Sara explained to Devan and Medha that her healing approach did not necessarily mean that she would be able to cure Medha’s cancer. She shared how the process of healing was different from curing. Curing represented getting rid of a disease by specifically targeting it. Healing, which was what Sara would do with Medha, was to foster the inner capacity of Medha to heal herself, body, mind, and spirit by connecting Medha to her “Higher Self” (a term often used by Biofield Healing Practitioners which is similar to concepts of Spirit or Soul). While Sara could not guarantee that Medha’s tumor would dissolve, she had confidence that the process of healing would bring Meera a greater sense of peace and well-being no matter what the medical outcome. Essentially, Sara felt that curing Medha’s cancer was not up to her, but rather God and Meera’s Higher Self.

While Sara did healing work on Meera, she asked her parents to note any changes, and also explained to them how to facilitate a balanced home environment that emulated peace, calm, and happiness to help Meera heal.

After three months of these sessions, despite the doctors’ prognosis, Meera seemed to be doing better. Devan and Medha took Meera to the doctor for a brain scan. During her first follow up appointment, the doctors said that the tumor had shrunk from the size of a quarter to a size of dime. In the next appointment, there was no longer a visible anomaly in her brain stem.

The doctors were shocked. The tumor was completely gone.

“We can’t understand this,” they said. Meera’s parents told them about the healing experience with Sara. “We’ve never heard of such a thing,” they said. “We’re not averse to believing in miracles...this is certainly a miracle. She’s in complete remission.”

Meera is still in remission today. She just celebrated her 18th birthday with her family, and is well and thriving. She enjoys practicing classical Indian dancing and has performed her dances publicly in dance troupes in California. Devan told me that Meera’s indomitable spirit is a lesson for all of us – she is confident, poised, and determined to live her life fully in the best ways possible.

Meera's story echoes themes found in other subjective reports from subtle energy and biofield healing practitioners:

- The healing practitioner (like others we have interviewed) emphasized to the parents that Meera's healing was ultimately up to her "Higher Self". The role of the subtle energy and biofield healing practitioner is not to cure or control outcomes, but to facilitate a process to re-align the client with their Higher Self or Soul/Spirit. The rest of the process is determined by the client's Higher Self.
- Facilitating healing can be done from a distance (although whether healing is done from a distance depends on the practitioner's experience, preference, and practical considerations).
- Healing is described as "full-spectrum" - affecting the spiritual and bioenergetic aspects of being, but also affecting emotional, mental, and physical aspects of well-being.

This story also illustrates the huge dichotomy currently at play - the immense power of healing via personal reports, vs. the relative dearth of scientific understanding of the processes of healing - and the need to create clearer language to express to stakeholders and the public the process by which healing appears to work. Many questions remain to be answered, notwithstanding - was Meera's extraordinary healing part of a family "placebo effect"? How do we understand the role of belief and other placebo elements such as ritual, conditioning, and relationship as a potential moderators or mediators of healing effects?

In summary, Meera's story is emblematic of how practitioners report subtle energy and biofield healing works: 1) that the practitioner helps to facilitate the healing process as opposed to curing, manipulating, or controlling outcomes; 2) healing can be done at a distance (distance from the patient does not limit the healing process); and 3) healing modalities are directed toward all aspects of the self, not just the symptoms.

III.4 Subtle Energy and Biofield Healing Technology & Innovation

Biofield devices are physical instruments that have been developed to measure or manipulate biofield interactions for fostering healing. These include both diagnostic devices (to measure biofield properties) and therapeutic devices (to manipulate biofield interactions). These biofield devices share the following:

- They do not appear to function in a chemistry-oriented manner
- They claim to function via the informational content of biological processes
- They claim to interact via low-energy or "subtle" informational processes, including those related to consciousness and nonlocality
- They operate through a variety of modalities rather than a single mechanism

Some biofield devices function through well-understood mechanisms and are already widely used in clinical settings. Examples include pulsed electromagnetic field (PEMF) therapies for pain and bone/wound repair, electroencephalography (EEG), and electrocardiography (ECG), and in over-the-counter neurofeedback and biofeedback that give users information on their mental-emotional state based on physiological data.

Our non-comprehensive survey of biofield devices identified over 280 biofield-based technologies currently in the marketplace for diagnostic (measuring biofield activity) and therapeutic (modifying biofield activity) uses. The database includes: company and type of biofield tech, FDA/CE clearance information, manufacturers' descriptions and contact information, and whether peer-reviewed evidence exists to support manufacturers' claims. Biofield devices for pain are listed, and include pulsed electromagnetic field (PEMF), bioresonance and light therapies, and a large body of transdermal electrical stimulation (TENS), frequency specific microcurrent (FSM), and low-level laser therapy (LLLT). United States Food and Drug Administration (FDA) clearances have been obtained for PEMF, TENS, and FSM devices, which have helped them to enter mainstream medical practice.

Many entries into the database are less well-understood, and appear to operate through nonlocality and subtle energy processes. Prominent examples are devices operating through human consciousness and intentionality. Subtle energy devices purported to heal or produce wellness include:

- Bioresonance devices
- Nonlocal frequency transmitters
- Sacred geometry and crystal therapies
- Electromagnetic Field smog protection devices
- Orgone energy treatment devices
- Energy balancing devices
- "Torsion" fields and "scalar wave" technologies

Devices/Technology Key Takeaways

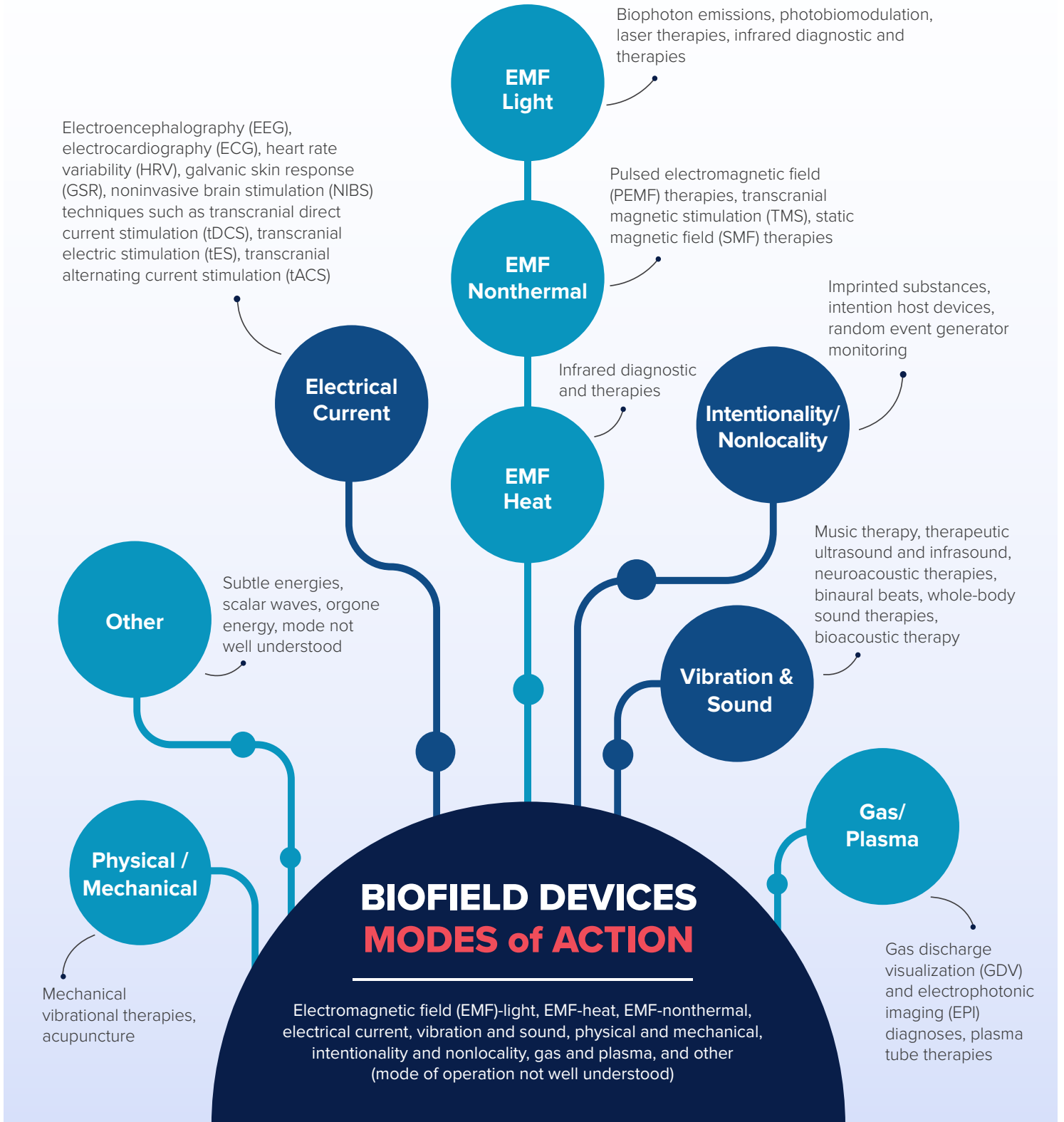
We identified a wide range of devices purported to diagnose or treat by interacting with the human biofield. While a number of these devices (PEMF, TENS, etc.) have received regulatory clearances and entered mainstream medical practice, in recent years, a rapidly growing field of devices has emerged for which there is little or no scientific support. Many devices contain proprietary technologies and manufacturers' claims are often the only sources of information available to the public. This lack of information is compounded by the use of vague or pseudoscientific language, used by some manufacturers to describe their products and how they work.

Take-aways from the device database, stakeholder interviews, and current research make clear that to advance biofield technology and its impact, further foundational work is required in the following areas:

- **Biofield Mapping** - Find and investigate ways to reliably measure and visualize the biofield.
- **Biofield Measurement Device Testing and Validation** - Test and validate devices claiming to be able to measure one or more components of the biofield.
- **Assess the Risk of Biofield Devices** - Test whether these devices may have short- or long-term health risks.
- **Continue Tracking and Assessment of New Devices** - Continue to assess and map the claims about mechanism and impact of new biofield technologies (which is ever increasing).

BIOFIELD DEVICE CATEGORIES

Physical instruments to measure or manipulate biofield interactions



Assessing Mechanism

It is important that we understand whether the claims made about how a device works (mechanism) can be tested, and if it indeed is impacting the person using the device in the way that it reports. Prominent examples of technologies for which we are unsure how they work (the mechanisms of action) and are not well-understood or accepted include devices claiming to operate via:

- Quantum theory, scalar waves, and non-local effects (Timewaver, Philip Stein, and Teslar watches, etc.)
- Human intention (Global Consciousness Project, Bill Tiller Intentional Host Device, etc.)
- Measuring biofields and meridians (Motoyama AMI, Jabs/Rubik Biofield Detection Suite, Streeter Biofield Viewer, Oldfield Camera, BioWell/GDV, etc.)
- Promising, but poorly understood, EMF and electrical devices (Ondamed, Seqex, Wavemaker, etc.)
- Ability to foster coherence and help the body attune to its natural rhythms (Voll acupuncture, Lenyo, Mora, Oberon, etc.)
- Reharmonizing the body with its surroundings, protecting from EMF electrosmog (Qi-Technologies, Aamora, Qlink, etc.)

Assessment and Next Steps for Biofield and Subtle Energy Devices

As one of our stakeholders in the communication domain put it, “There seem to be contradictory forces at play. Doctors experience extreme stigma if they explore subtle energies in their research or practice. Yet, the number of unsubstantiated devices on the market suggests that there is consumer demand. Bad devices bolster the perspective of naysayers, while consumers continue to look for alternatives amid a flawed healthcare system. The contradictory forces support the need for good research so that consumers can make health-positive, substantiated choices.”

Many of the devices listed in the database are based on claims of detecting the human biofield, usually in the form of changes in electromagnetic fields, electrical activity on the skin, light emissions from the body, sounds produced by the body, contrast-enhanced photography, effects on physical systems such as pendulums or rotating wheels, and claims of detecting scalar waves, torsion fields, and the effects of human conscious intention on physical devices.

However, to date, no technology has been confirmed to directly measure subtle energy and/or the biofield. The lack of scientific validation discourages scientists and researchers from assessing the safety and efficacy for the majority of biofield devices. Claims made by manufacturers are the primary source of information. Therefore, the public is unable to access clear and unbiased information about biofield and subtle energy devices. A full assessment of best technologies for both early stage and/or validation research in specific technology areas should be made by a selected group of experts, including scientists and biofield healing practitioners. Also, it may be that we cannot directly visualize or measure subtle energy or the biofield. The detection of subtle energies may be only possible by measuring their impact on the human body and other living systems, or perhaps by measuring their effects at the quantum informational level ([as posited by Hameroff and Penrose](#)).⁷⁶

Lastly, it is important to note that subtle energy and biofield healing practitioners who report they can detect the biofield can be considered instruments similar to the way psychologists, not machines, are the leading assessors of mental health. It may be that humans are required to effectively use technology to measure subtle energies or biofields, like x-rays or MRIs that radiologists then interpret.

In summary, diagnostic and therapeutic subtle energy and biofield devices are a diverse and generally scientifically unsubstantiated group. While some biofield devices have achieved FDA clearance and have entered the medical mainstream (e.g., EEG, ECG) most of the devices lack the scientific foundations needed to establish safety and efficacy. Manufacturers' claims are often the only sources of information available for biofield and subtle energy devices; these claims often contain false or pseudoscientific information. This leaves the public unable to access clear, unbiased information on biofield devices. A critical next step is to develop infographics for the public that delineate the presence or absence of studies on specific devices, and later, share the actual state of the evidence via systematic reviews. Lastly, biofield mapping is essential: developing clear means for measuring biofields is a key priority for further progress.

III.5 Subtle Energy and Biofield Healing Evidence Dissemination, Communications & Public Relations

There are considerable gaps in the education of scientists, health professionals, and the public in the general science and practice of subtle energies and biofields; these shortcomings are not limited to any single healing tradition. Historically, nonprofit organizations including the Samueli Institute and Institute of Noetic Sciences (IONS) have shared evidence and practice behind biofield therapies in [books](#), [conferences](#) and web resources, and organizations such as ACEP and the NAOEP continue to share educational resources for practitioners.⁴⁰ Another recent advance was the peer-reviewed, published [Special Issue in Biofield Science and Healing](#), undertaken by the CHI community in 2015.³⁹ This scientific special issue garnered significant readership (thousands of downloads) as well as enthusiasm from an international community of integrative medicine scientists and practitioners. CHI's [infographic](#) on the evidence base of non-touch biofield therapies based on a systematic review of 18 randomized controlled trials continues to receive published [positive acclaim](#) by peers and leaders in the integrative medicine community.

Interest in biofield therapies continue to gain momentum with the mainstream popular press – examples include articles in [US News and World Report](#), [Prevention Magazine](#), and the [New York Times](#).^{41, 42, 43} However, discoveries from rigorous studies in biofield science are often overlooked in the mainstream press and science journalism, perhaps because of their controversial nature.

Because it does not reference primary sources, some have noted that Wikipedia should be considered more of a social information network that reflects the current mainstream worldview, as opposed to an encyclopedia of factual information. Wikipedia's accuracy has been questioned in other healthcare domains; for example, a [2008 study](#) on the accuracy of pharmaceutical information on Wikipedia stated: "Wikipedia has a more narrow scope, is less complete, and has more errors of omission than the comparator database. Wikipedia may be a useful point of engagement for consumers, but is not authoritative and should only be a supplemental source of drug information."⁷⁷ Another [study](#) on the use of Wikipedia for political scientists concluded: "Wikipedia is almost always accurate when a relevant article exists, but errors of omission are extremely frequent. These errors of omission follow a predictable pattern. Wikipedia's political coverage is often very good for recent or prominent topics but is lacking on older or more obscure topics."⁷⁸

Whether accurate and fair or not, the field of subtle energy and biofield science and healing must deal with the so-called “Wikipedia problem.” This will require strengthening the evidence-base, mobilizing public relations and partnering with journalists on popular press articles on results of studies (since these are the sources that are allowed to be cited), reviews or meta-analyses, and becoming respected, trustworthy Wikipedia editors that can defend justified changes in Wikipedia entries on subtle energy and biofield science and healing.

Several groups noted above (including IONS, CHI, ACEP, as well as university clinics including [Johns Hopkins](#) and [Harvard University](#)) include well-balanced and accurate information about the state of the science regarding subtle energy and biofield healing.^{44, 45} Other groups that are working to expand education and communication efforts include the [The Chopra Library of Integrative Studies and Whole Medicine](#) by the Chopra Foundation and the [University of Virginia’s Mandala system](#).^{46, 47} However, these websites and organizations are not generally known to the public. There is still a significant gap in public understanding for the evidence base, utility, and approaches, that underlie biofield healing.

Stakeholders interviewed for this report agreed that a high priority for the field is a coordinated communication strategy that would include leading influencers, healing practitioners, scientists, doctors, and other stakeholders – to counter misinformation and provide clear communication on what subtle energy and biofield healing is, how it is thought to work, and in whom it is likely to alleviate suffering.

III.6 Subtle Energy and Biofield Healing Policy

Subtle energy and biofield healers can face legal, ethical, and regulatory risks, and there is a need for greater cohesiveness in the field to advocate both for the rights of subtle energy and biofields practitioners, and the protection of patients/clients/recipients/consumers of subtle energy and biofield approaches. In addition, consensus-based objective criteria for certification would be useful. Just like in other fields of clinical practice that are currently regulated under the Federal Trade Commission, clear guidelines about what language can be included in websites or marketing materials will be helpful.

As [Michael H. Cohen put it in the CAM Law Blog](#):

“Without the benefit of clear legal, regulatory, and policy guidance, practitioners and institutions (as well as patients) operate in an uncertain and hazardous legal environment. At least seven interrelated areas of law affect legal and policy decisions surrounding clinical integration of CAM into conventional care. These include: (1) credentialing and licensure; (2) scope of practice; (3) malpractice liability; (4) food and drug law; (5) professional discipline; (6) third-party reimbursement rules; and (7) rules governing health care fraud....There is a crucial need to provide leadership in legal and regulatory developments to answer these questions in ways that can serve hospitals, academic medical centers, educational institutions, patients and their families, and federal, state, and local governments who are creating law and setting policy.”

In response to this need, to our knowledge there are two main organizations that are focused on educating policymakers about biofield approaches. One is the [Integrative Health Policy Consortium](#) (IHPC), which has helped form a congressional caucus on integrative health, and is including subtle energy and biofield healing and concepts in its discussions with policy makers. Another new organization, the [National Certification Center of Energy Practitioners](#) (NCCOEP), reports that they are introducing state legislation to ensure that subtle energy and biofield practitioners are involved in establishing certification and insurance reimbursement regulations for their field, as opposed to being left out or simply combined with massage therapists or other types of practitioners.

Stakeholders in the policy domain report that while certification processes will be helpful for healthcare integration, they also need short, vetted consensus summaries on what subtle energy and biofield healing is, how it works, and what the best evidence is, in order to more readily advocate for considering incorporating evidence-based subtle energy and biofield therapies into healthcare. Creating more opportunities for these organizations to communicate with other stakeholders in the arena will enhance their efforts, and inform the community about what they are working to achieve.

In summary, two main organizations are involved in policy efforts as it relates to the integration of subtle energy and biofield modalities into healthcare environments: IHPC and NCCOEP. Increased communication between policy makers and subtle energy and biofield healing scientists and practitioners is needed, as is effectively communicating evidence to policymakers. There is a need to support efforts in the subtle energy and biofield domain to self-establish ethical, legal, and certification guidelines - otherwise these guidelines will either be instituted in a top-down manner or combined with guidelines for other fields (such as massage or chiropractic) that have different risks and needs.

III.7 Subtle Energy and Biofield Healing Funding and Funders

Historically, funding for subtle energy and biofield healing has been limited. In the United States, the National Institutes of Health's (NIH) National Center for Complementary and Integrative Health (NCCIH and formerly NCCAM) is the government funding agency most appropriate to fund biofield modalities under the umbrella of integrative medicine. The NCCIH grants and funding page states that, "The National Center for Complementary and Integrative Health (NCCIH) at the National Institutes of Health (NIH) funds and conducts research to help answer important scientific and public health questions about complementary health approaches. NCCIH works to determine what is promising, what helps and why, what doesn't work, and what is safe." NCCIH has prioritized funding for the following research areas: pain, mind-body interventions, and natural products. NCCIH has and continues to fund and conduct research on complementary healing modalities that historically include subtle energy/biofield components, such as acupressure, acupuncture, Qi Gong, Tai Chi, and others.

While NCCIH funded center grants in Biofield Science in the early 2000s, nearly all funding for biofield science research studies ended after those center project grants were completed. For years, research studies on biofield modalities have not been research priority for the NCCIH and were often omitted in NCCIH's strategic plan. Former director of NCCIH Josephine Briggs has [publicly noted](#) the lack of funding for biofield therapies.⁴⁸ However, given NCCIH's current interest in research areas including acupuncture physiology and whole-person health, biofield research may fit nicely into future NCCIH programmatic agendas.

Other recent funders have included the Chopra Foundation, Mindfulness Connections, the One Research Foundation, the Fetzer Memorial Trust, the BIAL Foundation, the [Emerald Gate Foundation](#), the Walker Family Foundation (supporters of this report), the Institute of Noetic Sciences, the Samueli Foundation, the Ira I. Moskowitz Foundation, and multiple small family foundations and individual donors who have personal interest in this arena (is almost always because of a personal experience of energy healing).

Universities (domestically and internationally) who have recently supported subtle energy and biofield related research include Grand Canyon University, the University of Minnesota, the University of Southern Maine, Texas Woman's University, Mashhad University of Medical Sciences (Iran), Leopold-Franzens-University of Innsbruck (Austria), and the Arctic University of Norway.

Internationally, the following organizations have supported subtle energy and biofield research within the past 5 years: the National Health Services (United Kingdom), the Centre for Quality in Care (ZPQ)

(Germany), Goerd-Stiftung im Stifterverband für die Deutsche Wissenschaft (Germany), MOA Health Science Foundation (China), National Council of Scientific and Technological Development (Brazil), The World Pranic Healing Foundation, the Norwegian Extra Foundation for Health and Rehabilitation, and the Nanjing Health bureau. Interestingly, there appears to have been a substantial increase in interest and funding internationally for research related to biophoton emission and Traditional Chinese Medicine (TCM). In addition, in Saudi Arabia and the UAE, projects focusing on why people are going to healers and what impact this is having on their use and trust of allopathic medicine have been launched and some of these findings [have been published](#).

Our assessment is that there are potential individual, foundation, and government funders who would support a more coordinated, strategic, rigorous, and large-scale initiative with accountability to the highest standards of research, as well as at high enough levels of funding to have statistical power and adequate controls to increase chances of meaningful findings (whether positive or negative).

IV Future Directions in Subtle Energy and Biofield Healing: Toward a Systems Change Endeavor

The following [Subtle Energy & Biofield Healing Systems Change Map](#) captures the findings of this report. We identify here how the stakeholders we reviewed, surveyed, interviewed, and convened saw multiple domains of the subtle energy and biofield system potentially interacting to lead to advancing the science and practice of subtle energy and biofield healing. Eventually, these collaborative interactions could lead to integration of evidence-based modalities into people's personal lives and into the healthcare system – with the goals of increasing wellness, reducing suffering, fostering a flourishing society, and reducing healthcare costs.

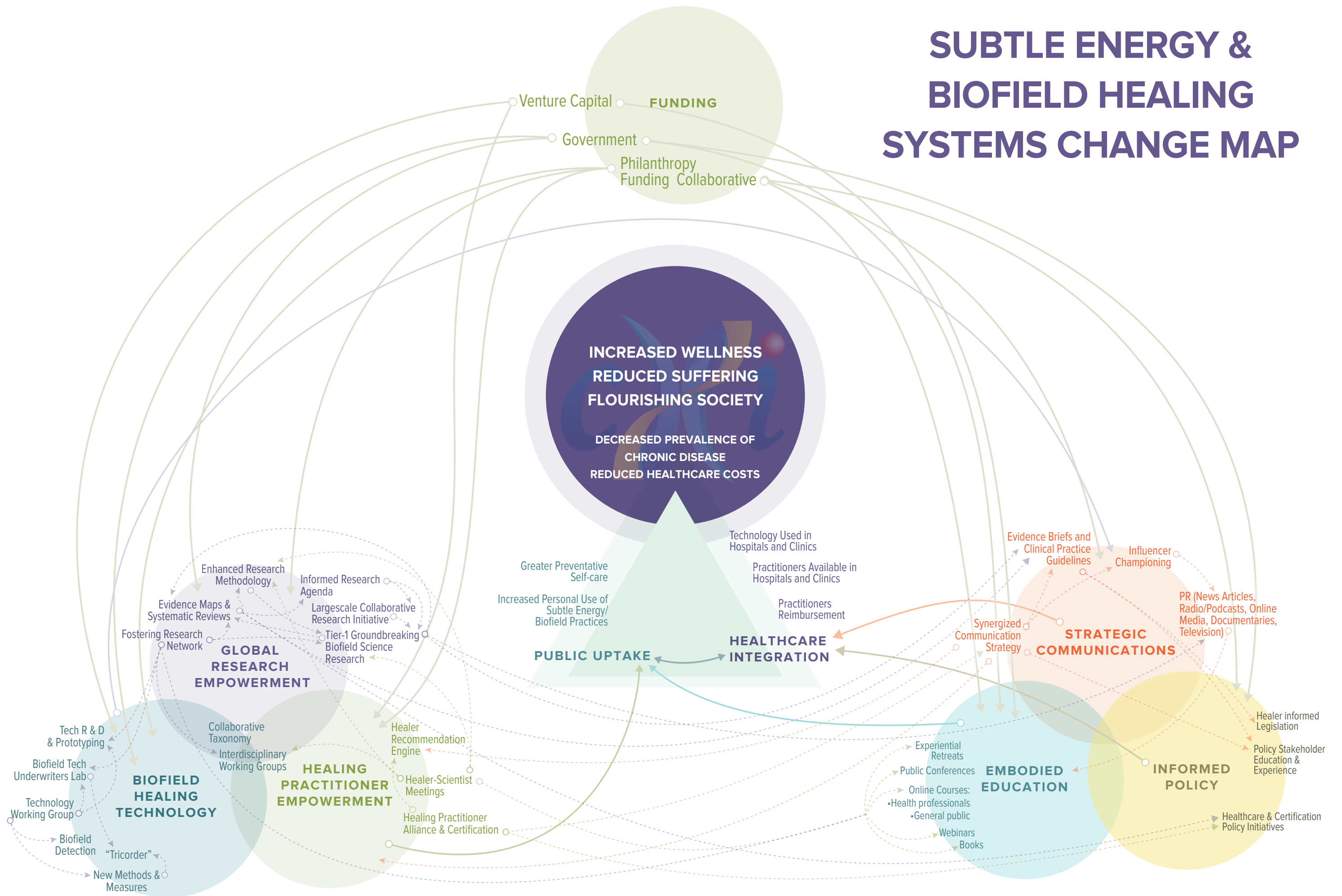
Key next steps in each domain are noted. Ways that the domains could overlap and interact with one another are highlighted through the Venn diagrams and lines connecting the domains. The ways in which activities in one domain can feed into or lead to activities and outcomes in the same domain, or in another domain, are captured by the lines with arrows that lead from one domain or activity to another. Dotted lines show crucial opportunities for fostering cross-disciplinary communication facilitated by a collaborative backbone organization and subtle energy and biofield healing coalition.

For example, the map shows how the domains of subtle energy and biofield healing Global Research Empowerment, Healing Practitioner Empowerment, and Biofield Healing Technology overlap with one another. In one connected set of activities, meetings between healers and scientists could lead to enhanced research methodology. Those meetings, combined with fostering a research network, could lead to a collaborative taxonomy developed by interdisciplinary working groups. The development of a research network also links to better technology research and development (R & D) and prototyping. Conducting systematic reviews and creating evidence maps in the Research domain leads to evidence briefs and clinical practice guidelines in the Strategic Communications domain, which in turn leads to policy and stakeholder education in the Informed Policy Domain.

All of these activities lead to the goals of public uptake and healthcare integration of evidence-based modalities, which, in turn, lead to the central goals of increasing wellness, reducing suffering, fostering a flourishing society, and decreasing healthcare spending. The whole ecosystem requires funding, which can come from venture capital, government, individual philanthropy, and the subtle energy and biofield funding collaborative we recommend in this report.

We consider this a dynamic change model, and welcome input from you at healingreport@chi.is.

SUBTLE ENERGY & BIOFIELD HEALING SYSTEMS CHANGE MAP



INCREASED WELLNESS
REDUCED SUFFERING
FLOURISHING SOCIETY
 DECREASED PREVALENCE OF
 CHRONIC DISEASE
 REDUCED HEALTHCARE COSTS

PUBLIC UPTAKE **HEALTHCARE INTEGRATION**

STRATEGIC COMMUNICATIONS

EMBODIED EDUCATION

INFORMED POLICY

GLOBAL RESEARCH EMPOWERMENT

BIOFIELD HEALING TECHNOLOGY

HEALING PRACTITIONER EMPOWERMENT

Tech R & D & Prototyping
 Biofield Tech Underwriters Lab
 Technology Working Group
 Biofield Detection
 "Tricorder"
 New Methods & Measures

Enhanced Research Methodology
 Evidence Maps & Systematic Reviews
 Fostering Research Network
 Informed Research Agenda
 Largescale Collaborative Research Initiative
 Tier-1 Groundbreaking Biofield Science Research

Collaborative Taxonomy
 Interdisciplinary Working Groups
 Healer Recommendation Engine
 Healer-Scientist Meetings
 Healing Practitioner Alliance & Certification

Greater Preventative Self-care
 Increased Personal Use of Subtle Energy/Biofield Practices
 Technology Used in Hospitals and Clinics
 Practitioners Available in Hospitals and Clinics
 Practitioners Reimbursement

Evidence Briefs and Clinical Practice Guidelines
 Influencer Championing
 PR (News Articles, Radio/Podcasts, Online Media, Documentaries, Television)
 Synergized Communication Strategy
 Experiential Retreats
 Public Conferences
 Online Courses:
 •Health professionals
 •General public
 Webinars
 Books
 Healer informed Legislation
 Policy Stakeholder Education & Experience
 Healthcare & Certification Policy Initiatives

From this Systems Mapping Project, we have also created [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#) that describes a coordinated set of activities in the key domain areas. This will be used as an invitation for colleagues who wish to join in this effort, for funders who would like to invest in such an endeavor, and for potential grantees who are 1) positioned to carry out one or more of the various activities; 2) interested in working with a coalition as part of a systems change endeavor; and 3) require funding.

The recommendations below describe these activities in detail in the key domains for systems change identified in this report:

1. Future Directions in Research: Building the Evidence Base
2. Future Directions in Practice
3. Future Directions in Communications
4. Future Directions in Technology and Innovation
5. Future Directions in Education, Training, and Certification
6. A Collaborative Framework, Coalition, and Funding Plan for Advancing Subtle Energy and Biofield Science Healing: Funding and Investment

IV.1 Future Directions in Subtle Energy and Biofield Healing Research: Building the Evidence Base

As we have reviewed above, while there is a growing body of promising research on subtle energy and biofield healing, most studies to date are grossly underpowered and studies with positive results have not been replicated. Initial promising results on physiological effects of biofield approaches must be made more robust in number and depth to have impact. A collaborative research agenda with significant funding attached will help galvanize synergistic tier-1 research that will help move the needle toward incorporating biofield science into the mainstream. The scientific literature also contains negative results that need to be better understood in order to evaluate the efficacy and best uses for subtle energy and biofield healing. The section below provides examples of types of research that will benefit the field at this juncture.

IV.1.A Conceptualization and Measurement of Subtle Energies and Biofields

Our interviews, surveys, and working groups identified two, needs for furthering biofield systems change: 1) developing a taxonomy of commonly accepted language as well as evidence summaries to enable effective communication to galvanize further research and healthcare implementation, and; 2) identifying reliable and promising measures and methods for future studies.

Indeed, a major rate-limiting step in the science of subtle energy and biofield healing is lack of consensus and agreement on how these purported energies and biofields are conceptualized. A key need articulated by stakeholders in ALL domains (research, policy, practitioner, education, healthcare integration, and technology) is a need for clear subtle energy and biofield terminology that is consensus-driven.

Researchers have often used language to describe biofields that is vague, poorly defined or jargon heavy, thus creating a barrier to communicating with the public and the broader research community. There are widely varying names and definitions for the purported subtle energies and biofields, and for various modalities.

It is important to create a more precise taxonomy of biofield/subtle energy terms for stakeholder communication with one another, the healthcare profession, and the general public. A consensus-building process with scientists from multiple disciplines, healers from various traditions, and other stakeholders is recommended.

A note of caution here is that such efforts should avoid homogenization – while consensus is important, it is also important to value diversity of theories, language, and approach.

While some promising evidence exists for subtle energy and biofield healing, the field remains in a relatively fledgling state. Ways to measure purported subtle energies or biofields have been suggested, but have not been validated. There are currently no agreed upon reliable, validated means of measuring subtle energies or biofields. The hodgepodge of measures of EMFs, biophotons, healing interactions, etc., needs to be evaluated, and the most promising measures and tools for research studies identified. It is not an overstatement to suggest that developing measures of subtle energies and biofields is of the highest scientific priority at this time.

IV.1.B Subtle Energy and Biofield Healing Researcher Network

This project has provided an initial network map and database of subtle energy and biofield researchers and research institutions worldwide. This network should continue to be expanded and documented, which may lead to a formal association of scientific researchers in the domain with related journals, conventions, and information sharing. The wisdom of creating a formal association remains to be seen, as it may be more effective to create special interest groups within existing scientific and medical/healthcare associations to avoid positioning limited to the alternative/complementary landscape. Helping to connect and support a diverse and geographically broad network of rigorous researchers, via a collaborative backbone, as well as with services such as fundraising, communications coaching, and connections with healing practitioners, will go a long way toward fostering meaningful collaborations and research between biofield researchers across the globe.

IV.1.C Systematic Review and Evidence Map

The evidence base for subtle energy and biofield healing has grown over the past ten years. However, a synthesized understanding of the most promising research directions, as well as which modalities warrant more research for specific clinical conditions, is needed to drive clinical practice guidelines, policy changes, and healthcare integration. The most recent comprehensive review of biofield therapies is 10 years old, while the last broad review of biofield therapies for pain appeared in 2008. Additionally, in previous reviews, biofield therapies used by energy psychologists (such as Thought Field Therapy, TFT and Emotional Freedom Technique, EFT) were not included, and a substantial number of clinical studies have focused on trauma and, to some degree, pain.

This report has conducted an initial screening, organization, and [Landscape Map of Peer-Reviewed Clinical Studies](#) conducted on subtle energy and biofield healing to date. The report indicates that a considerable number of studies on biofield therapies have been conducted. However, an up to date understanding of the impact of biofield therapies on specific clinical outcomes is still needed.

There appears to be enough evidence in particular clinical areas of importance (for anxiety and pain, for example) to be synthesized. However, clear systematic reviews and evidence summaries must be provided to influence policy and practice guidelines.

A credible assessment of the evidence to date requires a formal systematic review and evidence map that uses gold-standard methods. This will help to 1) choose informed outcomes, measures, and modalities with the greatest potential for success; 2) identify best-bet funding and investment opportunities for biofield science research; 3) guide clinical, funding, and policy decision making; and 4) provide the basis for communication and professional training in evidence-based subtle energy and biofield healing modalities. Initiatives such as the [Acupuncture Evidence Project](#), designed to map the evidence on acupuncture, have helped to achieve the above and move the field of acupuncture forward by clearly demonstrating the evidence in support of the use of acupuncture for a number of clinical conditions.

Both an evidence map and a systematic review of biofield therapies are critical at this juncture. An [evidence map](#) will provide stakeholders and researchers with a better understanding of the scope of peer-reviewed research conducted to date, and will help to identify best-bet funding and investment opportunities for biofield science research.⁴⁹ A selective and [systematic review](#) critically assessing the quality of peer-reviewed studies and synthesizing results for a specific clinical condition will provide a detailed view of clinical impact that will shape evidence-based practice guidelines and policy decisions.⁵⁰

IV.1.D Conduct Cutting-Edge High Quality Research Studies

There is a need for adequately powered, well-controlled, mixed-method clinical studies examining the effects of subtle energy and biofield therapies on subjective and objective outcomes. Triangulating conventional controlled trial designs with qualitative, quantitative, physiological, basic science, and observational techniques should reveal a more complete understanding of the phenomena.

An exemplar individual research study was recently completed by the Institute of Noetic Sciences and the [Emerald Gate Foundation](#) under the direction of molecular biologist Garret Yount (see figure below). More studies like this should be conducted, using first, second, and third person measures, questionnaires, interviews, surveys, and objective physiological outcomes, measures of potential mechanisms, and attempts to measure environmental indications of the purported subtle energy or biofield.

To integrate biofield therapies into healthcare, nothing is more important than conducting appropriately funded, well-designed, and adequately controlled and powered clinical studies, and replicating them. For example, energy psychology has been more rapidly integrated into mainstream organizations, such as the Veteran Administration, by standardizing the meridian tapping intervention (Emotional Freedom Technique) and demonstrating positive results in repeated clinical trials for post-traumatic stress symptoms.

It is also important to note that the science of subtle energy and biofield healing will likely require the development of new research methods, tools, protocols, and statistical models that go beyond the randomized controlled trial, but remain rigorous (or exceed the RCT in terms of scientific merit and academic rigor). Studies emulating conventional drug trials may not be the ideal method for studying the nature and effectiveness of subtle energy and biofield healing. The field is challenged to innovate new, and even more rigorous methods of determining to what degree these modalities warrant inclusion into mainstream healthcare.

While we don't believe under the rubric of "extraordinary claims require extraordinary evidence" that subtle energy and biofield studies should be subjected to different criteria than any other study, it may be advisable to create self-imposed guidelines for research that increase rigor. For example, in the field of acupuncture, the [STRICTA](#) (Standards for Reporting Interventions in Clinical Trials of Acupuncture) reporting guidelines, [first published in 2001](#), "were designed to improve the completeness and transparency of reporting of interventions in controlled trials of acupuncture, in order that such trials may be more accurately interpreted and readily replicated."⁷⁹

There is also a need for continuing basic science studies on detecting/measuring purported subtle energy and biofields and examining the effects and mechanisms of action on physical, environmental, molecular, cellular, and organism-level outcomes. As the current medical zeitgeist is to believe something is real when physical changes occur, basic science studies help explore effects of subtle energy and biofields on physiology without debates on issues such as placebo effects. Basic science studies with biofields will also help with further device development, which will also help patients. While this report and the accompanying resources focus primarily on clinical applications of subtle energy and biofield modalities in humans, a similar synthesis might be useful to advance the basic science.

With these goals in mind, we are emulating the work done in the field of mindfulness. Researchers and stakeholders used a rigorous, empirical, and strategic collaborative approach to validate mindfulness-based methods to enhance well-being and quality of life. People have engaged in mindfulness practices for millennia, and while they originated in spiritual traditions, these practices are amenable to secularization and generalization for the medical and healthcare community. Mindfulness training is now routinely included in most major medical centers, and is beginning to be included in schools, businesses, and general approaches to wellness.

Finally, scoping reviews, systematic reviews, and meta-analyses are important to conduct once a body of literature of sufficient quality and adequate reporting of effect sizes exists. Many healthcare practitioners who are pressed for time will refer to Cochrane or other reviews when attempting to quickly assess the state of the evidence. These reviews should be a strategic goal of researchers in the field.

IV.1.E Emulate NIH U01 Collaborative Research Funding Mechanism

In addition to individual research studies, we recommend developing a coordinated research program akin to the National Institutes of Health U01 program. In these initiatives, funding is provided for 8-16 large research groups with perhaps another 8-16 small exploratory grants, that work independently on projects to advance our understanding, but also meet periodically to share methods, measures, challenges, and solutions. This will require a case statement, a set of topics, and highlighted research areas for which there is a request for proposals and a team of skilled reviewers and program officers to coordinate the overall program. In the clinical domain, the [ORBIT model of behavioral intervention development](#) may provide a helpful model for subtle energy and biofield therapies.⁵¹ While most subtle energy and biofield modalities are not behavioral in nature, they lend themselves more to a behavioral development model than a drug development model. This overall initiative would become a large-scale, multisite, targeted research program to enhance scientific support for biofield therapies a necessary step for further integration of these therapies, into healthcare delivery and policy.

IONS Exceptional Healer Pilot Study

The long-term objectives of this line of research are to: 1) discover and/or develop objective ways to measure the shifts in subtle energy during energy modality interactions (transmission); 2) evaluate the mechanism of action by which improvements in the human body occur as a result of these interactions (biologically mediated objective outcomes); and 3) identify practical applications of these modalities that are scalable with global reach. As a first step toward these long-term objectives, this pilot study evaluated a selected set of exceptional healing practitioners, with a special focus on developing a standardized suite of subjective and objective measures. In 2019, led by biofield science researcher Garret Yount, PhD and clinical researcher Helané Wahbeh, ND, MCR, the Institute of Noetic Sciences evaluated a selected set of 17 energy medicine practitioners reputed to have exceptional skills treating human participants with pain who administered a 30-minute session to 193 participants with carpal tunnel pain. Measures were collected before and after the session and again 3-weeks later. The primary outcome for the study was self-report pain rating. Subjective measures included Pain Numeric Rating Scale, expectancy, well-being, general health, affect, compassion, creativity, transformation, demographics, personality, and the Noetic Experience and Belief Scale. Biophysical measures included: nerve conduction velocity, heart rate variability, heart rate synchrony (between the participant and practitioner); and salivary neutrophils were collected for epigenetic analysis. Environmental measures included potential changes in: water pH, water conductivity, water evanescence, quantum noise, magnetic field, and psychic perceptions. There was a statistically and clinically significant decrease in pain scores across the three measurement points ($p < 0.00005$). Sleep quality ($p = 0.01$), compassion ($p = 0.001$), and self-transcendence ($p < 0.00005$), interconnectedness with nature ($p = 0.0021$), interconnectedness with others ($p = 0.0045$) also improved. There was no discernible improvement in nerve conduction velocity or gene expression. The heart rate variability measure changes consistently reflect an increase in parasympathetic activation during the sessions. The quantum noise generator data showed that the “spacetime” metric (cross and auto-correlation) were significantly different than control periods reflecting increased coherence in spacetime during the energy medicine sessions. Analysis of distilled water directly treated by the practitioners revealed a difference in the measure of evanescence between treated and untreated samples $t = 2.191$ ($p = 0.049$). Similarly, the same analysis applied to the distilled water samples held in proximity to the practitioners during the sessions showed significant differences at 3200 wavenumber compared to control conditions ($t = -3.8$, $p = 0.00016$). This indicates that the water samples absorbed more infrared after the session, suggesting that a property of the H-O bond was influenced, causing the bond to stretch. More complex analyses of the dataset revealed that the changes in pain were not a result of the participants level of expectancy or credibility of the modality. This is especially important to note in studies where placebo effects can be high. There was also a relationship between the HRV and water measures with each other and also with the pain scores, perhaps reflecting that the underlying mechanism involves the autonomic nervous system in some way. The reductions in pain with biofield therapies and provocative results for water and environmental measures supports the collection of multiple outcome measures while studying effective energy medicine practices in the laboratory setting. Results from each measure warrant more in-depth analyses to better understand the commonalities and differences in effects and mechanisms of action due to different energy medicine approaches.

IV.1.F Best-Bet Topics for Subtle Energy and Biofield Healing Research

There is a need to more deeply investigate the effects of biofield therapies on physiological processes associated with costly and sometimes seemingly “incurable” diseases. There is some evidence from Tier 1 research institutions suggesting that biofield therapies are helpful for cancer patients including [mitigating fatigue, and depression and impacting biomarkers in clinical cancer populations](#).¹¹ There is also initial evidence from well-controlled studies in animal models at top-tier research universities and hospitals suggesting that biofield healing can reduce cancer tumor size and affect [inflammatory markers associated with tumor progression](#).^{19, 20} However, the number of studies is minimal and, currently, governmental and philanthropic funding for these studies is relatively non-existent. This makes it difficult to determine both the robustness and extent of effects, and to more deeply understand the “biofield physiology mechanisms” by which these healing approaches affect tumor progression at the cellular level.

In addition, the field may benefit from focusing on clinical studies on unmet needs and treatment-resistant conditions. It may be useful to target areas where current approaches are either costly in terms of quality of life or dollars, simply lacking, or fit the “anything goes” category such as end-of-life or “incurable” illness (a fruitful approach taken in the early stages of the revival of FDA-approved psychedelic research in the 1990’s and early 2000’s, which has now resulted in approvals for some common conditions). Another opportunity may lie in the examination of biofield approaches to diagnosis (e.g., medical intuition) for populations where conventional medical diagnosis is costly, invasive, unreliable until too late in disease progression, or other unmet needs.

It is also important to note that the science of subtle energy and biofield healing will likely require the development of new research methods, tools, protocols, and statistical models that go beyond the randomized controlled trial, but remain rigorous (or even exceed the RCT in terms of scientific merit and academic rigor). Studies emulating conventional drug trials are likely not ideal for studying the nature and effectiveness of subtle energy and biofield healing. The field is challenged to innovate new, and even more rigorous, methods of determining to what degree these modalities warrant inclusion into mainstream healthcare.

Based on our assessment of current evidence and biofield healing practitioners’ accounts, prioritized areas of study include: pain, trauma, and “mystery illnesses” of a somatic nature that have not been adequately addressed by allopathic medicine. These include highly prevalent population symptoms, such as stress, stress-related illnesses, and fatigue.

Our initial mapping of key researchers, laboratory resources, and promising research directions has yielded a grid of recommended investigators and research areas across the United States and abroad who are poised to carry out successful studies in biofield science, including investigating biofield therapies and devices. Studies include those with clinical and practical application, as well as studies exploring biological and mechanistic processes.

For a more detailed set of recommendations, please see the [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#).

IV.2 Future Directions in Subtle Energy and Biofield Healing Practice

Leading biofield healing practitioners from both indigenous cultures and traditions, as well as those using more modern approaches, have shared enthusiasm for collaboration to meet common goals, including licensure, policy integration, education, research, and technology. We suggest aligning practitioners who are specifically interested in projects that will move the field forward, including but not limited to:

- **Engaging with scientists and other stakeholders to create a healing taxonomy and communication strategy for stakeholders and the public**
- **Engaging with other healers and scientists to compare and communicate methods used for healing trauma and pain – this will inform future research and provide public education**
- **Contributing to a comprehensive database of healer training programs worldwide, and helping to form an accurate estimate of healing practitioners in the United States and worldwide**
- **Exploring and co-creating healer certification programs and informing policy decisions regarding healthcare integration**
- **Co-creating a healer and search recommendation engine**

We expect the workforce and market share for biofield healing to increase along with significant upward trends seen in the overall wellness market (currently estimated at \$4.2 trillion based on 2017 figures).⁵² Significant market, share and impact may also be gained via public education and connection platforms, as well as through biofield devices, many of which are already in market. The biofield healing workforce, market and impact is poised to grow in a manner similar to that already seen in the mindfulness industry, provided that the necessary steps in communication, research, biofield device validation, and education are carried forth.

A cautionary note is that scientific research and healthcare system or general public adoption of subtle energy and biofield healing modalities that have been extracted from their cultural context can have unintended consequences. High quality practitioners and modalities can be edged out by less expensive, less well-trained, and more superficial approaches. Cultural appropriation can leave traditional healers behind and co-opt their traditions and their livelihoods. Some of these issues can be witnessed in the current re-emergence of psychedelic medicine. It is important that a protective set of ethics and guidelines, as well as proactive precautions against unintended consequences, be enacted in parallel with advancing the field and promoting adoption.

IV.3 Future Directions in Subtle Energy and Biofield Healing Communications

Representatives from the policy, practitioner, education, community, and research domains noted that one of the main barriers to advancing the field is lack of ability to communicate effectively and coherently about subtle energy and biofield healing and science. Emerging from our research was a strong need for a strategic and coordinated approach to communicate to the public about subtle energy and biofield healing and science.

Stakeholders emphasized that to advocate for integrating subtle energy and biofield approaches into their respective domains, they need to be better able to communicate the nature of the biofield and its impact on health. Stakeholders in the domains of policy and education emphasized that providing direct experiences with subtle energy and biofield therapies to key influencers would assist in helping these influencers better understand the impact of such therapies and their unique benefits. Stakeholders also agreed that it would be highly beneficial to educate the public on the nature and evidence base of biofield approaches to better augment self-care practices and to increase patient demand of evidence-based biofield therapies in their healthcare settings. Furthermore, once a subtle energy or biofield modality is in the process of being approved for use, or incorporated into healthcare settings, publishing “[practice guidelines](#)” can be a very useful contribution in terms of demystifying the modality, educating practitioners, quality control, research protocol guidance, and communication to the field at large. An example is the [practice guidelines](#) published for the use of Emotional Freedom Technique with PTSD.⁸⁰

Specifically, stakeholders emphasized an immediate need to create/receive the following:

- **Clear, lay-friendly language to share with legislators, clinical administrators, and those in medical leadership organizations about what biofield/subtle energy is, how biofield therapies work, and what the evidence to date says about their effects**
- **Creation and dissemination of both scientific and lay summaries of the evidence for subtle energy and biofield therapies**
- **Domain leader and working group collaboration and agreement on terms to describe subtle energies and the biofield, and subtle energy/biofield therapies and technologies for stakeholders in varied domains**
- **Consensus language to be used by practitioners for explaining the processes of healing and the nature of the biofield in healing, for the public**
- **Scientific discussion papers that attempt to bridge the materialist-non-materialist divide in an effort to open the conversation and consideration of evidence behind biofield therapies;**
- **Development of a communication strategy with a seasoned PR firm that is well-versed in areas of consciousness science and integrative medicine**
- **Identification and recruitment of the best key influencers to deliver messages across a variety of archetypes and domains (e.g. business, science, medicine, general public)**

Our stakeholders report a large degree of taboo/stigma within the scientific, academic, and medical community toward subtle energy and biofield healing. The peer review process has yielded to similar biases, and our respondents shared that, even when reviewers recommend publication, at times editorial staff may reject or even retract articles on subtle energy and biofield healing due to the controversial nature of the topic. Approval for continuing education credits for licensed healthcare professionals have been withdrawn or removed, despite content being backed by peer-reviewed evidence. Most recently, some have suggested that Google and other social media platforms such as Facebook have changed their algorithms in a manner that effectively buries many integrative and alternative health sites.^{53, 54}

While it appears that there exists some bias against this field of inquiry as a whole, the field of subtle energy and biofield science, healing, and technology must take responsibility for some of this climate. The field is, unfortunately, rife with overstated conclusions from less than rigorous studies, unsubstantiated claims of subtle energy and biofield practitioners, and confusing anecdotes and associating correlations with evidence and causation.

The opportunity that presents itself is to 1) work to differentiate the field from, and to actively discourage, fraudulent or exploitive claims, 2) strengthen the scientific “arm” of the overall subtle energy and biofield community, and 3) develop a cohesive communication effort that unites stakeholders in integrative and “alternative” medicine. There is a need to both 1) accurately describe the state of the evidence; 2) engage in rigorous theoretical work on the underlying ontology/frameworks that underlie these therapies (beyond symptom reduction and pathogenesis); and 3) use concepts including the biofield and salutogenesis to explain the effects of not only subtle energy and biofield healing practices, but integrative medicine (IM) modalities as a whole. This could help to unite stakeholders in the Integrative Medicine field around a need for communication strategies and release subtle energy and biofield therapies from marginalized status to help provide valued frameworks that are useful to the Integrative Medicine community.

Finally, some stakeholders emphasized the need to improve the rigor and discernment of communications in their own field. Training scientists and practitioners to make clear distinctions between when they are talking about theory vs. evidence, learning to avoid over-promises and claims, learning about their own cultural or religious biases and how that could impact their scientific or clinical objectivity, and speaking in clear and jargon-free language could be helpful to the overall field.

IV.4 Future Directions in Subtle Energy and Biofield Healing Devices and Technology

A large number and variety of biofield devices are now marketed to the public. Many of these devices deliver electric currents, electromagnetic fields, pulsations of light and sound, purported subtle energies, etc., which the scientific evidence suggests can have both beneficial and negative impacts on health and wellbeing. However, the substantial majority of devices summarized in the devices database are not supported by peer-reviewed scientific evidence and have not been assessed for safety and efficacy by the FDA or other regulatory authorities. Manufacturers’ claims, which are often anecdotal, unproven, or pseudoscientific, are the dominant, and often the only, sources of information available to the public about particular devices.

As a result, the public currently has few sources of reliable and scientifically validated information regarding the safety, efficacy, and appropriate uses for devices. A clear need thus exists for the impartial evaluation of biofield devices, coupled with a means for making this information readily available to the public.

Further, to reiterate one of the lessons learned from the Research and Device databases: to date, no technology has been confirmed to directly measure subtle energy. While biological fields, such as biophoton emissions, bioelectric activity, etc., can be measured, their relevance to healing is not well understood. A number of devices purported to measure subtle energies or biofields have been suggested by the manufacturers listed in the devices database, yet these remain inadequately validated. Validated maps of human biofields will encourage further research and are a necessary step toward a broader public understanding of biofield science.

Developing meaningful, validated measures of subtle energies and biofields is of the highest scientific priority at this time. A comprehensive means of measuring biofields is needed, and work is needed to fill gaps in present knowledge (e.g., assessment of device claims, contraindications, risks, long-term device usage, etc.), and help inform the FDA or other regulatory authorities.

To begin this effort, we recommend that the most promising device technologies and scientific methods listed in the research and devices databases be identified by consensus by a selected group of experts.

In order to provide a transdisciplinary perspective on device technologies and biofield mapping, we recommend that subtle energy and biofield healing practitioners who are experienced using devices be included in this group. This will make it possible to make connections between device measures and the first-person perceptions of healers and clairvoyants and to integrate these into a unified model for subtle energies and biofields.

We recommend convening biofield “mapping” and technology working groups of technical experts and subtle energy and biofield healing practitioners to:

- Identify “state of the art” technologies for biofield mapping (e.g., electromagnetic fields, biophotonics, infrared imaging, acupuncture meridian system analyses, near infrared spectroscopy, fMRI, electrophysiology (EEG/HRV/GSR), etc.)
- Create images of biofields informed by both healer/clairvoyant and device/sensor methods. Focus on changes in human biofield during healing sessions, health, stressed conditions, and disease states. Gather biomarkers for mechanisms.
- Identify and seed studies on therapeutic technologies with greatest promise for further study, (e.g., devices for pain in an elderly population).
- Seed validation studies on key technologies claiming to measure or modify the biofield.
- Develop a 5-year plan for a technology development and device testing collaborative.
- Establish an X Prize/Moonshot program to engineer a realtime sensor which measures the biofield, like the recent Qualcomm Tricorder XPrize, but for a Biofield Tricorder.

IV.5 Future Directions in Subtle Energy and Biofield Healing Education, Training, and Certification

In order to realize the power inherent in the subtle energy and biofield healing practitioner workforce, practitioners would benefit from aligning under an umbrella organization that provides clear certification across modalities and, therefore, can help drive legislative efforts toward adoption of biofield practitioners into healthcare sectors. Dr. Melinda Connor has been working hard at these efforts and has established National Alliance of Energy Practitioners. This nascent organization needs initial support in terms of messaging, communication with policy and research stakeholders, and internal analysis and classification of healing domains to achieve its aims. In addition, leading stakeholders (such as Dr. Leonard Wisneski and Dr. Lissa Rankin) are attempting to bring together energy and biofield healing practitioners grounded in indigenous, spiritual, and religious traditions to help understand the impact of healing on trauma and pain. Opportunities exist to connect these people and groups for a greater understanding and collective impact.

In academia, there are multiple opportunities to increase subtle energy and biofield science and healing education. To overcome taboos and knee-jerk discrediting, strategies might include:

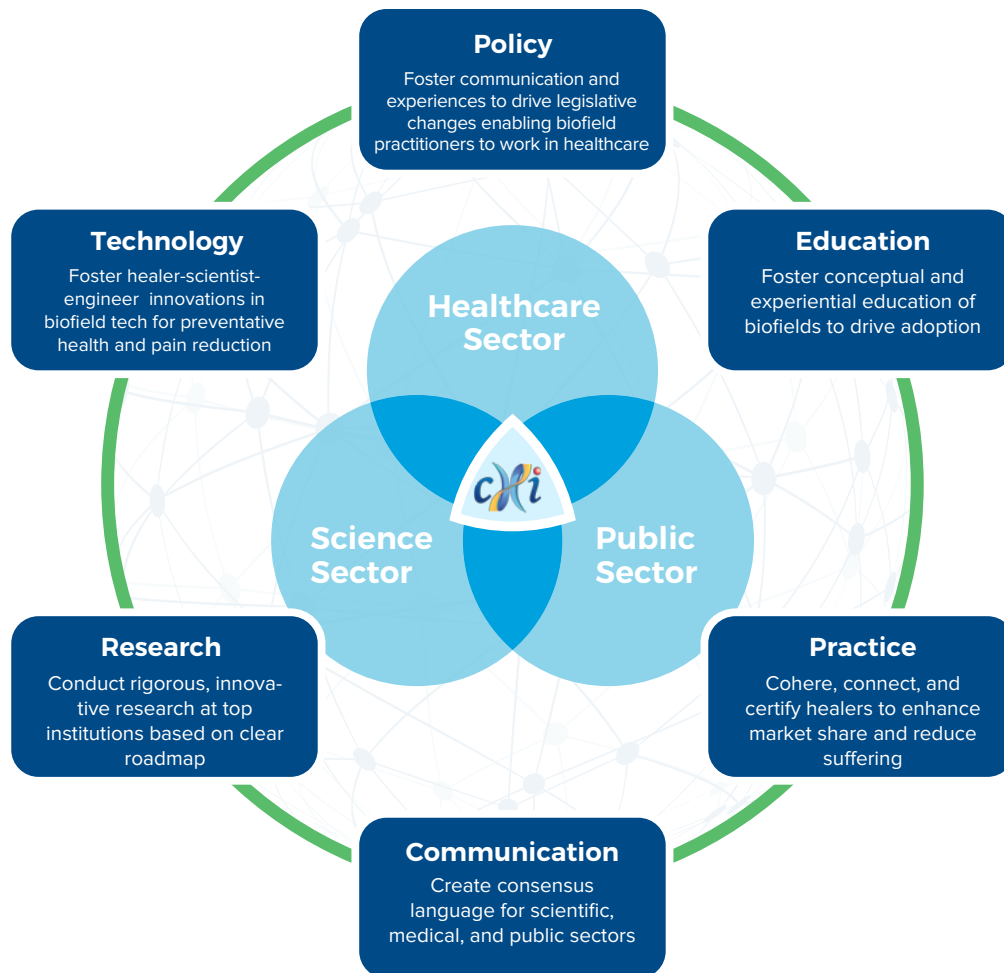
- Fund Fulbright scholarship/tenured chairs at universities
- Provide small grants for thesis and dissertation work

- Author a definitive/foundational textbook
- Develop and provide online course curricula for graduate programs for healthcare professionals

IV.6 Building the Collaborative Framework for Systems Change

A key finding of the Systems Mapping project confirmed our initial beliefs: there is a need to connect, cohere, and synergize efforts across domains in the subtle energies and biofield healing and science sector. Recommendations that emerged from one domain were echoed in other domains, and many needs expressed from one domain could be addressed with help from other domains.

A comprehensive approach to advancing the understanding and application of subtle energy and biofield healing would ideally spring from coordinated collaboration among the domains listed in the figure below:



IV.6.1 The Consciousness and Healing Initiative: A Collaborative Accelerator

A collaborative backbone/hub is essential to foster communication and collaboration amongst scientific researchers, healing practitioners, and stakeholder organizations globally. Because domain leaders and representatives need regular opportunities and reliable methods to communicate, we (the authors of this report) created CHI, a “collaborative accelerator.” Inspired by the collaborative backbone approach, CHI exists to evolve the scientific understanding and real-world application of consciousness and healing practices, so that individuals and societies are empowered with the knowledge and tools to ignite their healing.⁵⁵ CHI facilitates communication and engagement between organizations to increase the impact and global understanding of consciousness and healing, including the role of subtle energy and the biofield in healing.

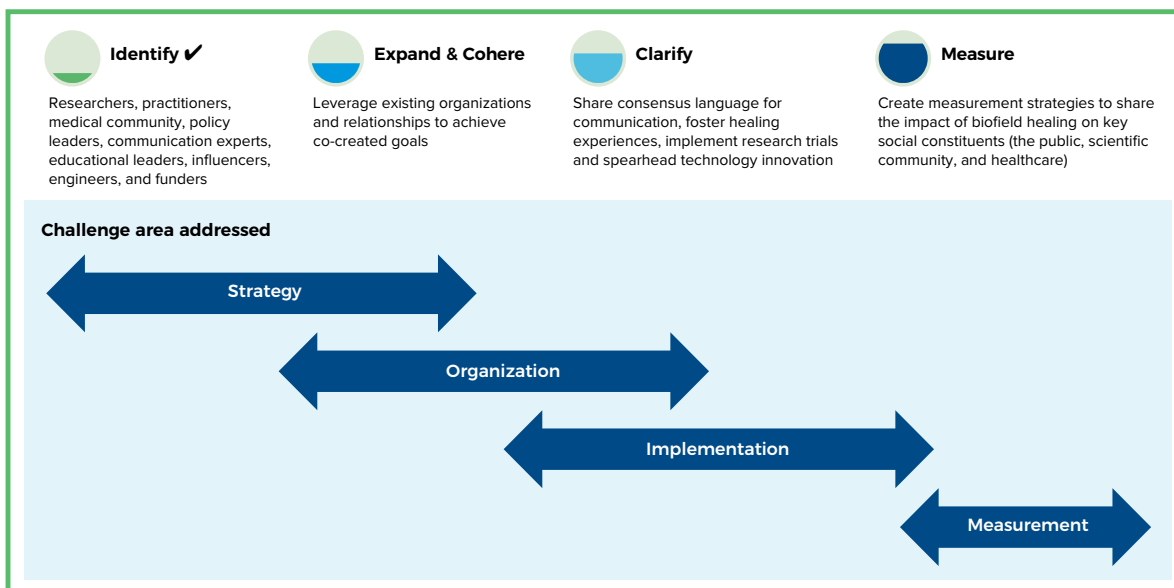
There is also a need to continue to expand the network and its assets, and continue to identify key players (funders, influencers, and research institutions) whose involvement is required for the success of the endeavor. Assets, including researchers, healing practitioners, and organizations, need input and buy-in secured for a clear plan of action. Cultivating this network is crucial to a coherent and collaborative research agenda and further integration of evidence-based subtle energy and biofield science and healing into the mainstream.

Our recommendation now is to establish a Subtle Energy and Biofield Science and Healing Coalition: a transdisciplinary alliance of individuals, groups, and organizations representing each of these domains that would work together to foster ongoing communication and collaboration, collectively mobilize funding, and collectively implement the systems change recommendations, by both personal and organization efforts, as well as supporting each other’s endeavors toward this systems change.

Specific next steps for creating the Coalition include:

- Create an infrastructure (including regular teleconference, project management systems, and in-person gatherings) to foster consistent communication to synergize efforts in multiple domains, including policy, practitioner, research, technology, healthcare integration, communication, and education
- Continue to assess capacity and resources needed for domain leaders, aid domain leaders in key areas needed to move forward
- Expand and empower the network of subtle energy and biofield researchers, practitioners, and organizations worldwide

Our strategy is to move systematically through identification and engagement of key stakeholders to implementation and measurement of impact. The figure below provides an example of how such a process would be executed:



IV.6.2 Increase Funding and Investment

Lack of funding is one of the key barriers to advancing the science and practice of subtle energy and biofield healing. Comprehensive, synergistic, and collaborative funding strategies in both for-profit and nonprofit sectors are needed. Long-term, just like with other major scientific and translational efforts, there will be a need to integrate philanthropy, venture capital funding, government, and corporate support to move the needle.

In short, implementing any part of this plan requires funding. To this end, the funders of this report are creating a **Subtle Energy and Biofield Funding Collaborative**, to encourage the interest of individuals and foundations who might feel more comfortable providing funds if joining a collaborative, and who would be able to have more impact by combining and leveraging their funds with others. Collaborative, larger-scale funding will move the field beyond small, incremental grants and underpowered projects which are well-intentioned, but also an Achilles heel for the field. The funding collaborative will use the [systems change approach](#) to invest in impact-driven activities.⁵⁶ Emulating funding strategies such as the U01 Collaborative Research mechanism at NIH may be useful, in which funders act as allies of biofield scientists, and also offer useful strategic, pacing, and accountability support from their expertise in the start-up and entrepreneurial world.

Experience from the Mind and Life Institute, Fetzer Institute, Templeton Foundation, broad-reaching field formation initiatives in the fields of Awe, Gratitude, and Spiritual Transformation, and U01 groups demonstrate that beyond just funding the work, such a collaborative funding mechanism can serve to unify researchers toward a common cause.

IV.6.3 Plan for Subtle Energy and Biofield Science and Healing Systems Change

To encourage such funding, we have developed a [Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action](#) to accompany this report. Informed by this report,

previous research, and the larger community, it includes a strategy for advancing the field of subtle energy and biofield science and healing, and a specific set of key projects in each domain. The goal is a persuasive and well-informed, large-scale agenda, ready to share with partnering funders/foundations/government agencies/healthcare organization/insurance companies. Some of these recommended projects have associated groups, or who are interested in completing the work. Others are projects that could be funded through a request for proposals (RFP) from interested groups. The purpose of this roadmap and funding plan is to demonstrate an integrated, comprehensive, and strategic “well thought out” approach that would be supported by existing funders and excite matching funds from others. Our perception is that many may have been interested in supporting projects in this domain, but have shied away from contributing because they were at a loss regarding what to fund or accurately perceived the field as being somewhat scattershot.

V DISCUSSION AND CONCLUSION

This report is a snapshot in time and will be outdated as soon as it is printed and posted online. However, every Systems Change effort requires moments where those involved step back, take an honest look at the state of the field, assess whether continuing to advance a new field is warranted, and outline next steps. This has been our attempt to do so, and while we interviewed, surveyed, and reviewed the work of many colleagues and stakeholders from multiple domains, we have not thoroughly reviewed the work of dozens more. We recognize this limitation, and would be happy to hear from you if you'd like to be included in future work, or have feedback.⁵⁷

We intend to continue to expand the databases of [research groups](#), [healing practitioner organizations](#), devices, and [peer-reviewed publications](#) as well as using the Landscape Map of Peer-Reviewed Clinical Studies to lead to a more thorough evidence map and systematic review. Additionally, we intend to use this report to guide our future efforts. We are taking an open-source approach, and hope others will use it to guide their work, strategic planning, and funding priorities as well. In addition, the accompanying Roadmap for Subtle Energy and Biofield Healing Systems Change is a living document that we anticipate will be revised and course-corrected periodically.

We also recognize that subtle energy and biofield healing is an area of inquiry that may or may not be able to be understood or explained 100% via the scientific method. It remains to be seen whether all subtle energy and biofield healing phenomena will eventually be amenable to integration into the mainstream scientific and healthcare domains. It is possible that subtle energies and biofields are no more than a way of framing mind-body, expectancy-based (placebo) effects. It is also possible that these subjectively reported effects are ontologically real, but are nonphysical, idiosyncratic, unpredictable, and capricious — more suitable for application in religious/spiritual settings and more amenable to an anthropological research approach.

We would not have engaged in this project or made recommendations for next steps if we did not propose/hypothesize that there is enough promise in the randomized controlled trials, quasi-experimental studies, qualitative literature, and anecdotal reports to-date to warrant serious scientific attention. Some subtle energy and biofield healing modalities may have enough evidence to be integrated into clinical practice, especially for anxiety, pain, trauma, and treatment-resistant illnesses.

We live in a time of needless suffering. This truth is reflected by our current healthcare system's failure

to address suffering from chronic ailments such as pain, depression, heart disease, cancer, and other treatable medical conditions. The failure to address poor mental and physical health has led to both a diminished lifespan and quality of life, in addition to financially burdening society. Preventable diseases have, in some cases, been made worse through an attachment to a materialistic medicine, which views life mechanistically and is therefore prone to emphasizing chemical and surgical solutions. This model of medicine can leave patients feeling like passive recipients of healthcare, rather than full collaborators in their health and well-being.

The consequences of an over reliance on chemical approaches to symptom reduction have been noted by mainstream healthcare organizations, who are now recommending non-pharmacological treatments for ailments such as pain, in attempts to curb damage that has already been done with opioids as first-line treatments.

This emphasis on materialist medicine to the exclusion of other approaches is not in line with current data in psychoneuroimmunology, mind-body health, and placebo research, which all point to the latent power of consciousness on the healing process. However, to-date, holistic forms of healing and spiritual practices such as yoga, meditation, acupuncture, and more, have been relegated to materialist-based perceptions, resulting in materialist-guided science, and never fully addressing the question of consciousness itself in guiding the healing process. “Mechanisms” have been relegated to brain process, and actual healing occurrences are conjectured to be “spontaneous remissions” or “placebo”, with no clear scientific explanation that can explain these frequent experiences of healing, nor create a system to replicate them.

In contrast, for millennia, ancient healing traditions have been based upon whole-person approaches to restoring and maintaining health that recognize the role of spiritual practices for enhancing the body's innate ability to heal. Indigenous healing traditions are often based upon concepts of subtle energy systems comprised of living energies (e.g., Qi, Prana, the acupuncture meridian system, etc.), where mind, body and spirit all contribute to health and healing.

Expanding our models of salutogenesis (the processes that create health) is key to the future of healing. We can look both to the past and the future to do so. Subtle Energy and Biofield Science and Healing is a growing field of inquiry among scientists worldwide; this reflects both a scientific and practical model of examining fields of energy and information that guide our health. Subtle Energy and Biofield Science and Healing oriented disciplines examine how fields of energy and information might impact the healing process and whether they may provide the “missing link” to help explain the role of consciousness in the healing process.

Biofield Science is emerging as the next step forward from an overemphasis on chemistry-based biology and medicine. Biofield Science provides an emerging paradigm that integrates scientific investigation of indigenous-based subtle energy healing practices as well as modern research investigation of the impact of weak electromagnetic fields on biological processes and health, describes life in terms of biological fields, or biofields: fields of energy, information, and consciousness. Biofield Science provides a necessary framework for a deeper understanding of systems biology, mind-body practices, and the diversity of healing therapies in widespread use today. From the biofield perspective, healing can be seen as fostering our innate ability to return to a state of wholeness and wellbeing, by bridging consciousness with the healing process.

Scientific research demonstrating the effectiveness of subtle energy-based practices, such as acupuncture, qigong, and others is contributing to gradually increasing clinical adoption and acceptance of these healing methods. And as more is understood about the nature of healing and salutogenesis, the innate ability of the whole self (body, mind, and soul) for sustaining and returning to health, a new scientific paradigm

for medicine is emerging. Nevertheless, research on subtle energy-based practices has primarily been conducted within a materialist-based scientific and healthcare paradigm that examines these practices for symptom reduction and brain changes, rather than seeking to more deeply understand the role of subtle energy in igniting the innate healing system.

Despite the barriers, the potential payoffs to society are enormous. The promise of engaging in a collaborative systems change endeavor in the arena of subtle energy and biofield healing includes:

- Profoundly decreasing human suffering from pain and related mental health issues for billions of people worldwide by using biofield based therapies and biofield based self-care
- Dramatically reducing health care costs and improving quality of life for pain patients and those suffering from trauma-related illnesses
- Development of biofield technologies that lead to early detection and prevention of disease
- Development of biofield technologies that can assist in treating persistent symptoms or illness without side effects of current approaches
- A coherent, robust network of healing practitioners that will realize its full potential in contributions to society and the wellness economy
- A new paradigm in science and medicine that recognizes the role of consciousness and the biofield in driving biological processes, as well as fostering whole-person health across biopsychosociospiritual dimensions
- An empowered human society that is awake to their tremendous healing capacity and utilizing biofield-based approaches to enhance their wellness as well as greater societal harmony

We thank you for your time and care in reading this report and invite you to join us to help lead humanity to heal ourselves.

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VI RESOURCES

[Systems Mapping Resources](#)

[Roadmap for Subtle Energy and Biofield Healing Systems Change](#)

[Subtle Energy & Biofield Healing Publications Library](#)

[Peer Reviewed Clinical Studies of Biofield Therapies](#)

[Peer Reviewed Clinical Studies of Biofield Therapies Landscape Map](#)

[Subtle Energy & Biofield Healing Network Map](#)

[Healers Survey](#)

[Researchers Survey](#)

[Subtle Energy & Biofield Healing Publications Library – Search String and Screening Rulebook](#)

[Systems Mapping for Healing Evolution July 17, 2019 Invitational Meeting Summary](#)

[Subtle Energy & Biofield Healing Systems Change Map](#)

CITATIONS

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ABBREVIATIONS

ACEP	The Association of Comprehensive Energy Psychology
AIHM	The Academy of Integrative Health & Medicine
APA	American Psychological Association
CHI	Consciousness and Healing Initiative
DO	Doctor of Osteopathy
IHPC	Integrative Health Policy Consortium
IONS	Institute of Noetic Sciences
MD	Medical Doctor
NAOEP	National Association of Energy Practitioners
NCCAM	National Center for Complementary and Alternative Medicine
NCCIH	National Center for Complementary and Integrative Health
NIH	National Institutes of Health
TCM	Traditional Chinese Medicine