EXECUTIVE SUMMARY

This report is an initial step in a collaborative systems-change endeavor⁵ 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 millennia⁷ 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." Since then, the concept of biofields has been extended to describe the behavior of cells, organs, plants, interpersonal interactions, and even the Earth. 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." 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 <u>Cochrane review</u> 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 <u>placebo effect</u>. Another <u>systematic review published in 2009</u> 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

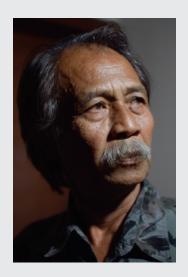


This past year I was privileged to be part of the Innovations in Care Grant at the Northport VA Medical Center on Long Island. The grant was part of a national movement toward wellness, health coaching and self-care for veterans. Richelle Rappaport, RN, MSN, AHN-BC, PMHCNS-BC, was responsible for writing 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

"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.

pain populations, and moderate evidence for reducing behavioral symptoms in dementia, mitigating anxiety in hospitalized populations, and reducing pain in hospitalized and cancer populations. Since theses 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. A 2015 Cochrane Review of Reiki for Treatment of Depression and Anxiety showed no evidence that Reiki was either beneficial or harmful. The Intercessory Prayer for the Alleviation of III Health Cochrane Review (although not all people would consider intercessory payer 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. 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 placebodefined 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."

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.

¹ Although not always considered a subtle energy and biofield healing modality, Intercessory Prayer was included in our literature database and <u>Landscape Map of Peer-Reviewed Clinical Studies</u>.

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. 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 heath 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 <u>comprehensive database</u> 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

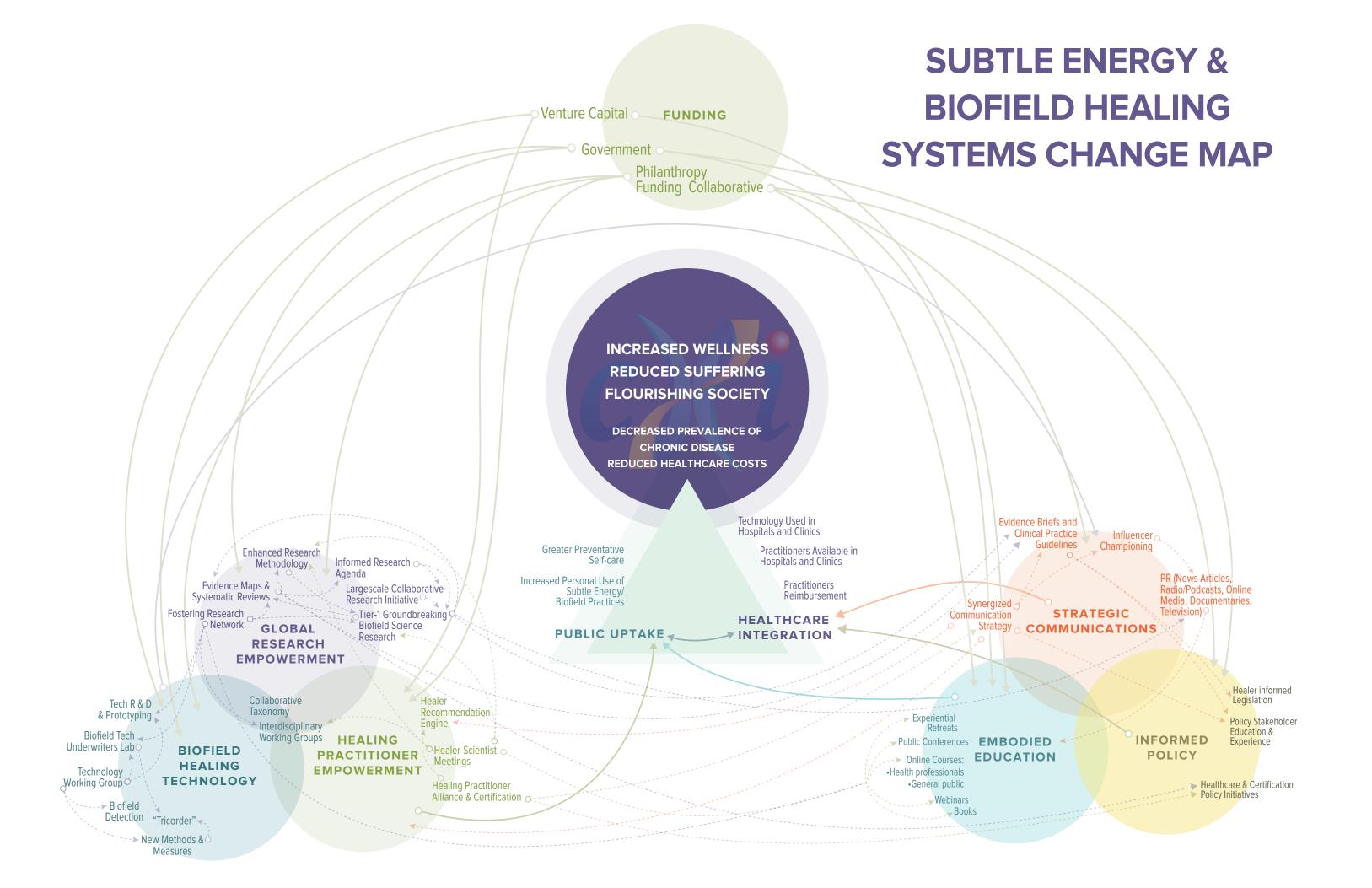
Subtle Energy & Biofield Healing Systems Change Map

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 evidencebased 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.



A Roadmap for Subtle Energy and Biofield Healing Systems Change

From this Systems Mapping Project, we have created a <u>Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action</u> 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 claimsIncrease 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

Learn more about these next steps in our <u>Subtle Energy and Biofield Science and Healing Roadmap for Systems Change and Plan of Action</u> 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 <u>healingreport@chi.is</u>.

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