Internal office use only:
Full Board ___ Expedited___

Institutional Review Board
Application to Conduct Research with Human Participants

Patient-Centered Outcomes Research Institute
Healthy Mind Healthy You: A Study of Mindfulness
Protocol #HMHY002

I. Personnel

Table 1: Coordinating Site

	Principal Investigator (PI)	**Other Investigators**	**Correspondent** (primary point of contact for correspondence, if applicable)
Name (First and Last, Degree)	Andrew Nierenberg, MD	(1) Louisa Sylvia, PhD (2) Thilo Deckersbach, PhD	(1) Sophie Greenebaum, BA (2) Alec Shannon, BS (3) Nevita George, BS
Organization and Department	Massachusetts General Hospital, Psychiatry	Massachusetts General Hospital, Psychiatry	Massachusetts General Hospital, Psychiatry
Mailing Address	50 Staniford Street, Suite 580 Boston, MA 02114	50 Staniford Street, Suite 580 Boston, MA 02114	50 Staniford Street, Suite 580 Boston, MA 02114
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Table 2: Recruitment Sites

PPRN Site	**Investigators**	**Correspondent** (primary point of contact)
Alzheimer PPRN (Mayo Clinic)	Ronald Petersen, PI Email: peter8@mayo.edu	Alex Alexander Email: Alexander.Alex@mayo.edu
ABOUT Network (University of S. Florida)	Rebecca Sutphen, PI Email: rebecca.sutphen@gmail.com	Beth Ann Clark Email: Beth.Clark@epi.usf.edu
AR-PoWER (Global Healthy Living Fdn)	Ben Nowell, PI Email: bnowell@ghlf.org	Ben Nowell Email: bnowell@ghlf.org
CCFA (University of North Carolina)	Millie Long, PI Email: millie_long@med.unc.edu	Anne Green Email: annegree@email.unc.edu
CENA (Genetic Alliance)	Sharon Terry, PI Email: sterry@geneticalliance.org	1) Andrea Goodman Email: agoodman@geneticalliance.org 2) Kathleen Murphy Email: kmurphy@geneticalliance.org
COPD (Kaiser)	Richard Mularski, PI Email: Richard.A.Mularski@kpchr.org	Cara Pasquale Email: cpasquale@COPDFoundation.org
Duchenne Registry	Ann Martin, PI Email: ann@parentprojectmd.org	Holly Peay Email: hpeay@rti.org

Health eHeart Alliance	Mark Pletcher, PI Email: Mark.Pletcher@ucsf.edu	Madelaine Faulkner Email: Madelaine.Faulkner@ucsf.edu
ImproveCareNow	Michael Seid, PI Email: Michael.Seid@cchmc.org	Melissa Mock Email: Melissa.Mock@cchmc.org
Interactive Autism Network	Kiely Law, PI Email: LawK@kennedykrieger.org	Paul Lipkin Email: lipkin@kennedykrieger.org
MS PPRN	Robert McBurney, PI Email: rmcburney@acceleratedcure.org	Sara Loud Email: sloud@acceleratedcure.org
PARTNERS PPRN	Esi Morgan, PI Email: Esi.Morgan_DeWitt@cchmc.org	Anne Paul Email: Anne.Paul@cchmc.org
Phelan-McDermid Syndrome Data Network	1) Megan O'Boyle, Co-PI Email: meganoboyle@gmail.com 2) Liz Horn, Co-PI Email: elizabeth.horn@gmail.com	Brittany McLarney Email: brittany@pmsf.org
PI Connect (Immune Deficiency Foundation)	Christopher Scalchunes PI Email: cscalchunes@primaryimmune.org	Sarah Rose Email: srose@primaryimmune.org
PRIDEnet	Mitchell Lunn Email: lunn@stanford.edu	Zubin Dastur Email: zdastur@stanford.edu
SAPCON	1) Susan Redline, PI SAPCON PPRN Email:	Rebecca Rottapel Email: rrottapel@partners.org

	sredline1@partners.org 2) Jessie Bakker, PI Cross-PPRN study Email: jpbakker@partners.org	
Vasculitis PPRN	Peter Merkel, PI Email: Peter.Merkel@pennmedicine.upenn.edu	Kalen Young Email: kyoung@vasculitisfoundation.org

a. PI has completed human research participant protections training (such as NIH or CITI) [Required]

☒ **Yes** ☐ **No**

b. Other key study personnel (co-PIs, project manager and/or study coordinator) has completed human research participant protections training [Required]

☒ **Yes** ☐ **No**

c. PI will benefit significantly (financially or personally) through this research.

☐ **Yes** ☒ **No**

If yes, please explain:

II. **Research Description** Regulation 45CFR46.111(1)(a)

Nature and Purpose of Proposed Study

a. Technical (Scientific) Abstract:

Background: Individuals with chronic diseases and their caretakers experience stress and decreased well-being. In 2011, the American Psychological Association (APA) conducted the "Stress in America" survey of over 1,000 individuals with chronic illnesses (e.g., depression, type two diabetes, obesity or heart disease, etc.), all of which are represented in the PCORnet patient-powered research networks (PPRNs). The survey found that 44% of participants reported being fair or poor at "preventing themselves from becoming stressed"

and 39% reported being fair or poor at "managing or reducing stress". The APA survey found that 44% of adults perceived that their stress continued to increase over the previous 5 years; 53% reported having physical health problems as a result of feeling stressed. Significance: Most Americans experience stress at some point in their lives, with nearly 50% of the US population reporting negative consequences from stress, such as, poor sleep, hypertension, heart disease, periodontal disease, and increased rates of breast cancer. Thus, it is imperative to have better methods to reduce stress and improve overall well-being.

Objectives/Hypothesis: The aim of this study is to examine what the briefest, least burdensome intervention (as perceived by the individual) is to effectively decrease stress and enhance one's overall sense of well-being.

Specific Aims: We will recruit and randomize at least 2117 adult participants from the several PPRNs involving individuals with over 100 conditions and special populations and caregivers. Specific aims: 1) to determine if standard (8-session) mindfulness-based cognitive therapy (MBCT) compared to a brief 3-session mindfulness intervention will improve well-being in participants, and 2) to explore the heterogeneity of treatment effects to both interventions. We hypothesize that the standard MBCT will be superior to mindfulness-light in increasing well-being, and functioning and mindfulness as well as decreasing stress, anxiety, and depression.

Participation will take 20 weeks and will involve up to 8 weeks of online MBCT treatment and a 12-week follow-up period. Participants will use desktop computers, laptops, tablet devices, or phones to participate in this study.

b. Research Design, Methodology, and Data Analysis:

Research Design and Methodology

Participants ($N \geq 2117$) will be recruited across all PPRNs and randomized to internet-based (1) standard 8-session MBCT or (2) 3 sessions of "mindfulness-light". Participation will take 20 weeks and will involve up to 8 weeks of receiving online MBCT and 12 weeks of follow-up. Participants will use desktop computers, laptops, tablet devices, or phones to participate in this study. These procedures are described in detail below.

Participants will enroll in this study via the MGH-hosted study platform. Each PPRN has been a part of this study since its conception. They helped to establish the research question, how to design a study to answer this question, and will be recruiting for the study. Additionally, they will assist in overseeing the study with the study team.

DESCRIPTION OF THE MGH-HOSTED STUDY PLATFORM

Individuals from all PPRNs will go through the same registration process on the MGH Study Platform. Participants already enrolled in the MoodNetwork registry (IRB Protocol #

2014P001346) will have the ability to enroll in this study as a part of the MoodNetwork PPRN. Prospective participants who are at least age 18 will be able to register for this study through the MGH-hosted study platform. All participants will first register with the study platform and then consent for the study. The eConsent process can be conducted via any electronic device that has access to the internet (e.g., cell phone, computer, tablet, etc.). Once each participant has read and electronically signed the eConsent for this study, he or she will be asked to complete a set of brief questions to provide additional information about their background as well as identify whether they are eligible to participate. These questionnaires include:

- Demographics questions
- Medical and psychiatric history questions
- Whether the participant has practiced mindfulness prior to the study
- Self-report which PPRN the participant is from
- Self-report how the participant is related to the PPRN (i.e., as a caregiver or patient)

The self-report PPRN questions will be able to determine whether the participant belongs to a PPRN as either a caregiver or patient/member of special population.

PPRNs that are recruiting for this study will also be given unique, PPRN-specific tokens that will each be added to specific website Uniform Resource Locators (URLs), or internet addresses. The MGH Study Coordination team will provide one of these unique URLs to each PPRN for them to distribute within their community. These PPRN-specific URLs will allow the study platform to link participants back to their recruiting PPRNs by "tagging" them as a member upon registration. Once participants consent to join the study and enter the randomization process, they will be assigned a unique participant ID that begins with a two-digit code specific to their PPRN. The eConsent process addresses the second exclusionary criterion, specifically "not able to read, understand, and/or participate in mindfulness exercises." It is made clear at the beginning of the eConsent process that the person completing the study must be able to do so on their own. In addition to determining eligibility, the data collected from these questions will allow for analysis after the study is complete to determine how different individuals were impacted by the interventions, and whether this impact was different between interactions.

Eligible participants will be randomly assigned to either the MBCT or Mindfulness Light intervention group through the MGH-hosted study platform. Randomization is performed using a stratified block randomization technique with a block size of 4 to maintain even distribution across each PPRN participant group. If the participant is not eligible to participate, they will receive a message saying that they are not eligible and thanking them for their interest in participating. If the participant is eligible for the study, they will click "next" which will bring them to the study interventions which are also hosted on the MGH study platform. Randomization is achieved through the MGH-hosted study platform.

Assessments administered for all study participants:

(1) **World Health Organization-5 Well-Being Index (WHO-5 Well-Being Index)**: a brief self-report (5-item) of positively-worded statements related to positive mood (good spirits, relaxation), vitality (being active and waking up fresh and rested), and general interests (being interested in things) over the prior two weeks.

(2) **Perceived Stress Scale (PSS)**: the most widely used psychological instrument for assessing perception of stress. This scale measures the extent to which situations in one's life are labeled as stressful.

(3) **Patient Reported Outcomes Measurement Information System (PROMIS): Emotional Distress-Depression Short Form**: an 8-item measurement of perceived depressive symptoms over the past week.

(4) **PROMIS: Emotional Distress-Anxiety Short Form**: a 4-item measurement of self-reported fear (fearfulness, panic), anxious misery (worry, dread), hyperarousal (tension, nervousness, restlessness), and somatic symptoms related to arousal (racing heart, dizziness).

(5) **PROMIS: Ability to Participate in Social Roles and Activities Short Form**: a 4-item measurement of the perceived ability to perform one's everyday social roles and activities. Higher scores represent fewer limitations (better abilities).

(6) **Five Facet Mindfulness Questionnaire (FFMQ) Abbreviated**: a 15-item assessment that examines two aspects of mindfulness: non-judging of inner experience and non-reactivity to inner experience. Both of these facets are represented in a different subscale.

PPRN-specific assessments:

AR-POWER:

1) **PROMIS Fatigue Short Form 8a:** This is an 8-item assessment that examines the effect of fatigue on a person's daily functioning.
2) **PROMIS Pain Interference Short Form 8a:** This is an 8-item assessment that examines the amount that pain interferes with a person's daily functioning.
3) **PROMIS Sleep Disturbance Short Form 8a:** This is an 8-item assessment that examines the effect of sleep quality on a person's daily functioning.
4) **PROMIS Physical Function Short Form 8b:** This is an 8-item assessment that examines how a person's health limits their ability to complete chores and perform daily tasks.

CCFA:

1) **Global assessment of current disease activity:** A single rating of the extent to which a person's IBD symptoms are active.

2) **Manitoba Index:** A single measure of the frequency of symptoms over the past six months.
3) **PROMIS Pain Interference Short Form 8a:** This is an 8-item assessment that examines the amount that pain interferes with a person's daily functioning.

COPD:

1) **COPD Assessment Test (CAT):** An 8-item assessment that evaluates ease of respiration.
2) **Modified Medical Research Council Dyspnea Scale:** A single measurement of ease of respiration.

IAN:

1) **Parental Stress Scale:** An 18-item assessment that measures perceptions about the experience of being a parent.

SAPCON:

1) **PROMIS Sleep Disturbance Calibrated Items:** This is an assessment that examines a person's sleep quality and restlessness.
2) **PROMIS Sleep Related Impairment Calibrated Items:** This is an assessment that examines the effect of sleep quality and restlessness on a person's daily functioning.

VPPRN:

1) **PROMIS Fatigue Short Form 8a:** This is an 8-item assessment that examines the effect of fatigue on a person's daily functioning.
2) **RAPID3:** An assessment of physical function in relation to pain.
3) **Patient Global Assessment:** A 2-item assessment that evaluates the severity of a person's vasculitis disease.

The MGH-hosted study platform does not have a built-out assent option to enroll minors. Therefore, we cannot recruit participants under 18 years old.

Both treatments will be administered on the MGH-hosted study platform in the format of online videos and activities that are broken down into short, digestible sections. The 8-session MBCT intervention is an evidence-based 8-session structured curriculum of guided meditation exercises, with 1 session administered each week for 8 weeks (e.g., mindfulness of the breath, mindfulness of breath and body, mindfulness of thoughts and feelings). Over the course of these exercises, participants learn to adopt an observing, accepting stance (mindfulness) towards difficult thoughts, feelings, and bodily sensations. Participants also learn to bring mindfulness to everyday situations and practice how to recognize and disengage from negative, ruminative thoughts.

The mindfulness light is an evidence-based 3-session structured treatment of mindfulness, 1 session administered each week over 3 weeks. The sessions focus on

teaching one single breath-awareness meditation exercise during which participants learn to focus on the flow of their breath.

Participants can print the content from the website if they choose. However, all interactive work must be entered into the website for changes and progress to be saved. There are worksheets completed during the interventions that are available to be printed if the participant desires.

Each participant will complete their weekly session and complete the outcome assessments every 2 weeks. Participants will be reminded via email that they should complete these self-report questionnaires every 2 weeks as well as log back in to access the intervention material.

After the 8 or 3 weeks of treatment (depending on randomization group), participants will begin a 12-week follow up period. During this time, participants will be asked to complete assessments monthly. Participants will be reminded via email that they should complete these self-report questionnaires every 4 weeks.

Specific Aims and Data Analysis:

Specific Aim 1: ***To determine if standard (8-session) mindfulness-based cognitive therapy (MBCT) compared to a brief 3-session mindfulness intervention will improve well-being in PPRN participants.*** Specifically, we plan to conduct a randomized trial comparing the impact of standard 8 sessions of MBCT or a brief, 3-session mindfulness intervention ("mindfulness-light") over the course of 8 weeks plus a 3 months follow-up period for participants in all PCORnet PPRNs including participating adults and caregivers and explore the impact on (1) self-reported well-being (WHO-5 well-being index, primary outcome), (2) stress, (3) anxiety, (4) depression, (5) quality of life, and (6) psychosocial functioning and (7) mindfulness (secondary outcomes).

Hypothesis 1: Because MBCT is the longer and more comprehensive intervention, we hypothesize that standard MBCT over 8 weeks will be superior to mindfulness-light in increasing well-being, quality of life and functioning as well as decreasing stress, anxiety and depression. Primary outcome measures will be the WHO-5 well-being index for the periods: a) baseline to 8 weeks; and b) baseline to 20 weeks).

Since the data for hypothesis 1 uses repeated measures on subjects, we will conduct analyses for hypothesis 1 using general linear mixed models that account for the covariance of observations within subjects (both for 8-week and 20 weeks). We will model a random intercept and slope for subjects and site and fixed effects for treatment, time, and potentially confounding covariates. The treatment by time interaction will be used to assert the statistical significance of treatment effects. Canonical links will be used to correctly model the distribution of dependent variables; Poisson regression models will be fit with the

Poisson family and the log link and for normally distributed data linear regression models will be fit with the Gaussian distribution and identity link.

To choose the correct model, we will use the Shapiro-Wilk test to assess for normality as well as the deviance statistic, the Akaike information criterion and the Bayesian information criterion to assess the best fitting model. We will compare nested models with the likelihood ratio chi-square statistics. When a treatment effect is significant, we will clarify its clinical significance by computing, for each time point, effect size statistics that convey the magnitude of treatment group differences. For effect size we will use the standardized mean difference for continuous variables. Our primary analyses for hypothesis one will use the well-being index as measured by the WHO-5 (primary outcome), and then the PSS, PROMIS Emotional Distress-Depression, PROMIS Emotional Distress-Anxiety, and PROMIS Ability to Participate in Social Roles and Activities (Functioning), and FFMQ.

Specific Aim 2: ***To explore the heterogeneity of treatment effects (HTE, predictors and moderators of treatment response) to both interventions*****.** This aim will allow us to *explore* who will benefit from either standard MBCT or mindfulness-light (predictors) and to determine the factors that can help match patients to either intervention (moderators or who will have better outcomes with standard MBCT versus mindfulness-light). Moderators include (1) PPRN site, (2) age, (3) role (patient, caregiver), (4) baseline levels of well-being (WHO-5 score), stress (perceived stress score), anxiety, and depression scores, as well as quality of life and psychosocial functioning and baseline mindfulness. Using the statistical methods described above we will assert the presence of an HTE when we find a significant three-way time by study group by heterogeneity variable interaction. A significant interaction would indicate that the heterogeneity variable moderates differences between groups in how quality of life, for example, changes over time. When an HTE is significant, we will clarify its clinical significance by computing, at each time point, effect size statistics that convey the magnitude of treatment group differences for patients above and below the median of the variable that moderates the treatment effect. For effect size we will use the standardized mean difference for continuous variables.

c. Lay Summary:

This study seeks to identify how a standard 8-session mindfulness-based cognitive therapy (MBCT) intervention will compare to a briefer, 3-session mindfulness intervention to reduce stress and increase well-being in participants. Participants will be adults who belong to one of several patient-powered research networks (PPRNs), or organizations that represent over 100 chronic conditions and include special populations and rare diseases. Participants may be patients or caregivers—both groups that have been demonstrated to experience higher levels of stress, which contributes to poor physical and mental health and, as a result, higher rates of disease and premature death. The goal of this study is to identify the best treatment length of mindfulness to reduce stress and increase well-being as well as allow clinicians and researchers to better personalize treatments across a variety of conditions.

For this study, participants will be recruited through the PPRNs and will be randomly assigned to participate in either the longer or shorter mindfulness intervention. They will be given access to new online material each week on mindfulness and meditation, and every two weeks they will complete self-report questionnaires that assess their overall well-being, stress, mental health, and mindfulness skills. After their intervention is over (either 8 weeks or 3 weeks), they will begin a 12-week follow-up period, during which they will be asked to complete the same self-report assessments monthly.

III. **Human Participant Protection** Regulation 45CFR46.111(3)

Research Population

a. Define the proposed age group of your target population:
Ages 18 years and older.

b. Define the intended number of participants:
At least 2117

c. Will you recruit from any of the following vulnerable populations?

☒ Pregnant woman
☐ Human fetuses
☐ Neonates
☐ Prisoners
☐ Decisionally impaired
☐ Children

Please provide justification for inclusion of the vulnerable population(s):

Pregnant women will not be excluded from participating in this study because there are no risks to participants associated with specifically being a pregnant woman. The study has the potential to benefit this population.

Explain how you will protect the rights and welfare of the individuals in these populations:

There are no additional precautions to take for the participation of pregnant women.

Identifying Research Participants

d. Check how will you identify potential research subjects and attach your outreach plan with additional details.

- ☒ Invitation from advocacy organization
- ☒ Invitation through the usual course of clinical care
- ☒ Self-referral in response to IRB approved ads or websites
- ☒ Referrals by clinical partners
- ☐ Database searches:
- ☐ Other:

e. Explain why you feel confident you will be able to recruit the population and number of subjects indicated in Section III-A: Research Population.

We are confident in our ability to recruit this population and number of subjects because the PPRNs were polled on the number of participants that they feel they will be able to recruit, and the populations of the PPRNs are diverse and sizeable. Specifically, each of the PPRNs proposed to recruit a specific number of participants as individual recruitment sites. Based on our smaller recruitment target, each PPRN is estimated to recruit the following:

PPRN Name	Site Leader	Recruitment Goals
MoodNetwork	Andrew Nierenberg	155
Health eHeart Alliance	Mark Pletcher	375
Population Research in Identity and Disparities for Equality Patient-Powered Research Network (PRIDEnet)	Mitchell Lunn	250
Community-Engaged Network for All (CENA)	Sharon Terry	36
National Alzheimer's and Dementia Patient and Caregiver-powered Research Network	Ronald Petersen	250
Interactive Autism Network	Kiely Law	125
Multiple Sclerosis Patient-Powered Research Network	Robert McBurney	75
PI Patient Research Connection, PI-CONNECT	Christopher Scalchunes	393
COPD Patient Powered Research Network	Richard Mularski	108
ImproveCareNow: A Learning Health System for Children with Crohn's Disease and Ulcerative Colitis	Michael Seid	100
American BRCA Outcomes and Utilization of Testing Patient-Powered Research Network (ABOUT Network)	Rebecca Sutphen	38

	ARthritis patient Partnership with comparative Effectiveness Researchers (AR-PoWER PPRN)	Ben Nowell	50	
	CCFA Partners Patient Powered Research Network	Millie Long	33	
	Duchenne Registry	Ann Lucas	35	
	Patients, Advocates, and Rheumatology Teams Network for Research and Service (PARTNERS) Consortium	Esi Morgan	38	
	Phelan-McDermid Syndrome Data Network	Megan O'Boyle	5	
	Sleep Apnea Patient Centered Outcomes Network	Jessie Bakker	38	
	Vasculitis Patient-Powered Research Network	Antoine Sreih	13	

f. What are the inclusion/exclusion criteria you will use to determine eligibility for your registry or study?

Inclusion:

- Age 18 years and older
- Belong to one of the several PPRNs as either a patient/member of special population or caregiver (family member or non-family member)

Exclusion:

- Under the age of 18 years
- Not able to read, understand, and/or participate in mindfulness exercises

g. Will subject recruitment be equitable? (Meaning: will all relevant ethnic/racial groups, genders/sexes, and populations have access to the study?)

☒ **Yes** ☐ **No**

If no, describe why your research population is limited by race, gender, or ethnicity or other factors:

h. Will you use recruitment materials such as advertisements, flyers, or brochures?

☒ **Yes** ☐ **No**

If yes, specify how the materials will be distributed.

Each PPRN will recruit through their own means and with their own specific materials. Recruitment for study participants from the PPRNs may include:

☒ Websites: Websites of each PPRN and their affiliated advocacy groups and organizations
☒ Email lists: Newsletters and PPRN member listservs
☒ Social media: Facebook, Twitter (any other social media platform utilized by PPRNs)
☒ Hospital/clinic
☒ Local communities: Communities around and within the PPRNs
☒ Newspapers
☐ Radio
☐ Television
☐ Other:

***NOTE*: Recruitment materials must be submitted for IRB review and approval before use and additional or revised materials must also be submitted for re-approval through a protocol amendment. While it is not necessary to submit the precise, final set of materials that you will use, you should provide a representative sampling of the messaging you will use for recruitment. The IRB will assess this material for any undue influence language or for any sensitive content.**

IV. Informed Consent Process

a. Describe the process for obtaining informed consent:

INFORMED CONSENT ON THE MOODNETWORK PLATFORM

The MGH-hosted study platform is approved by the Partners Healthcare IRB (Protocol # 2014P001346). Only participants 18 years of age and older will be enrolled into the study. Participants will be asked to go through the eConsent module for this study. In this eConsent process, participants will scroll through sections that detail:

- What the study is about
- Use of eConsent
- What is mindfulness
- The comparators of the study
- What will happen if the participant decides to participate in the study

- Descriptions of the baseline and follow-up surveys
- Details on the mindfulness programs
- Impact on the participant's time
- Information on reminders that participants will receive from the study
- Privacy and data safety information
- Potential benefits of participating in the study
- Notice that the participant will not receive payment or medical advice during participation
- Potential risks of participating in the study
- Details on how their information will be used and by whom
- Contact information if participants have questions

In the "Use of eConsent" section, the participant will click to agree to use the eConsent process rather than a written consent form. Participants will have to agree to use this eConsent form in order to participate in the study. A copy of the eConsent form will be saved in their profile. Participants are expected to only enroll in the study for themselves and not for anyone else.

Participants will be able to access the eConsent form via a computer, tablet, or mobile device. Participants will be provided the email address: healthyminds@partners.org and phone number 617-643-2076 to use to contact study staff should questions arise regarding the project. They will be able to triage questions to the appropriate study team member. The phones will be answered weekdays between the hours of 9:00am and 5:00pm, and participants can expect a response within 2 business days. They are also given the contact information of the Genetic Alliance IRB if they would like to speak to someone not directly involved in the study.

b. Will potential research subjects be provided with sufficient opportunity and time to consider whether or not to participate?

☒ **Yes** ☐ **No**

If No, please explain:

c. Parent/Guardian Permission and Assent:

Only adults (participants aged >/= 18) will be able to enroll in this study. Therefore, there is no parent/guardian consent on this platform.

d. Are there special issues in this study where there is a possibility of coercion or undue influence or transient impairment (e.g. recent pain medication, age, ICU inpatient) during the consent process?

☐ **Yes** ☒ **No**

If Yes, please describe, what steps will be taken to minimize this possibility:

e. Will this study screen and/or enroll participants or legally authorized representatives that speak a language other than English?

☐ **Yes** ☒ **No**

If Yes, describe and complete the question below.

If English is not the subjects' native language, will the consent process (information sheet and data sharing and access settings process) be translated into their native language?
☐ **Yes** ☒ **No**

If No, describe the process:

Participants who do not speak English will not be recruited for this study because all aspects of the study, including pre-recorded mindfulness interventions, will be in English. Participants must be able to speak, read, and understand the English language in order to be a part of the study.

f. Risks and Inconveniences:

This study poses minimal risks to participants. Participants may experience some discomfort or anxiety from discussing personal material and completing self-report questionnaires. If a subject feels uncomfortable responding to a question, he or she will not be required to give a response. Participants also are free to withdraw from the study and have their data removed at any time. A further risk is a breach of confidentiality. This breach could occur when personal health information is accidentally made visible to other researchers or to the public. The potential harm from this risk is psychological or social harm from having personal data made public.

g. Benefits:

Stakeholders across various Patient-Powered Research Networks (PPRNs) have identified low rates of well-being caused by high rates of stress, anxiety, and depression as the most significant problem across the more than 100 conditions and populations represented by the network of PPRNs. Thus, the proposed research study addresses the needs of a variety of patient populations and has the potential benefit of reducing stress and increasing well-being in people with chronic diseases, as well as their caregivers. Mindfulness-based treatments have been demonstrated as acceptable and effective interventions for improving overall well-being, and it is hoped that this study will determine the briefest and least burdensome

intervention to effectively decrease stress and enhance overall well-being. This is particularly of interest given the substantial amount of time and effort necessary to complete standard treatments. If we can shorten these interventions and achieve substantial treatment effects, we will be able to identify the best dose of mindfulness to manage stress and increase wellness, as well as determine which treatment (i.e. standard or light) works best for different subgroups within a large range of populations.

h. Risk/Benefit Analysis:

It is anticipated that the potential benefits to study participants, as well as society, will far outweigh the minimal risk of discomfort that may result from answering personal questions. Although participants may not be comfortable answering personal questions and self-report questionnaires, they are free to withdraw from the study at any time; if they choose to continue their participation, they will be delivered mindfulness interventions that have the potential to decrease stress and increase well-being. Furthermore, it is hoped that this study will yield results that allow researchers and clinicians to develop more personalized and time-efficient treatments.

i. Plan for Withdrawals:

Participants may withdraw from the study by contacting study staff to request their record be removed for them.

j. Plan to Compensate: Will participants be compensated or reimbursed?

☒**Yes** ☐**No**

If Yes, describe:

Five individuals will win $200 based on a lottery system ($1000 total).

V. Data Confidentiality

Describe how will you ensure the safety of participant data collected in this study:

The MGH-hosted study platform's data confidentiality and security has been reviewed by the Partners Healthcare IRB as well as the Research Information Science and Computing (Protocol # 2014P001346). The MoodNetwork PPRN will act as the National Coordinating Center (NCC) for the study, coordinating and collecting the data for the intervention portion of the project. Data drawn from and collected on the MGH-hosted study platform will be housed on the Partners Research Computing Cloud Infrastructure (DIPR and RFA). The Discovery Information Platform for Research (DIPR) provides a set of virtual services within the Partners secure data center and within the Partners network which consist of virtual servers for web or application hosting, file storage and database management. All systems are secured behind the Partners firewall and follow Partners Healthcare Information Security policies for authenticated, minimum access. All systems are patched,

monitored and scanned routinely for vulnerabilities and intrusions by the systems administrator and PHS Information Security. The web server and database server are hosted within the Partners Firewall. The web server makes use of standard 128-bit Secure Socket Layer (SSL) encryption to protect data in transit.

Randomized unique identifiers will identify all data. No data generated by this project will be inserted into MGH or Partners Healthcare medical records. Participant data will have been deidentified when drawn from the portal. Each participant will have been assigned a unique identifier.

Any data stored as a physical copy will be stored in a locked room within MoodNetwork PPRN study team's facilities located at the MGH Dauten Family Center for Bipolar Treatment Innovation. Names will not be included in computerized data files or in any published reports. Case records will be reviewed only by study personnel or, if necessary, by institutional, state, or federal regulatory personnel. All research personnel will have completed the Collaborative Institutional Training Initiative (CITI) Program on-line training and final exam, be well versed in Health Insurance Portability and Accountability Act (HIPAA) regulations and procedures and be approved as study staff by the IRB. All HIPAA guidelines will be followed and all research personnel will be educated about the importance of strictly protecting participants' rights to confidentiality.

VI. Future Data Use

Future Uses:

The MoodNetwork PPRN as the NCC for the study will handle the data management generated by the intervention. Research data will be stored for 7 years per Partners Healthcare regulations. Participants are also free to withdraw from the study and have the application removed at any time.

Participant data collected as part of this study will go into a research database, which will be reviewed for future analyses other than described here (see Data Use Agreement), if data sharing and access settings allow. Survey data will be collected and stored on MGH-hosted study platform for the duration of the study. Following the study, each PPRN will receive data from their participants (individuals recruited and identified as originating from their PPRN) in the form of a comma-separated values (CSV) file. To assist with data linkage between the MGH-hosted study platform and participants' data in the PPRN recruitment sites, we will use a three-tiered data linkage system:

- Tier 1: Subjects will be assigned a unique string of numbers, called a "study participant ID." This unique study participant ID will be generated by the study platform when participants are randomized. These unique study participant IDs will begin with a two-digit code unique to each PPRN to ensure participants are linked back to their recruiting PPRN. To obtain a study participant ID that accurately reflects a person's

PPRN affiliation, participants must first access the study landing page through a PPRN-specific URL that has embedded in it a PPRN-specific "token," or code (e.g., a111, b111, c111). These individualized website URLs can be shared in emails to PPRN members.

- Tier 2: Participants will be asked in recruitment emails and on the study's landing page to register for the study with the same email they used to sign up for membership to their PPRN. This will facilitate merging the Healthy Mind Healthy You Study data with PPRNs' existing data, as email addresses are designed to be unique identifiers.
- Tier 3: We will also be able to match Healthy Mind Healthy You users to existing PPRN members by comparing a set of the demographic values they enter into the Healthy Mind Healthy You demographics form with the demographic values they entered when registering for their PPRN.

We have also created a data use agreement (DUA) (see attachments) to describe how data will be shared between Massachusetts General Hospital and the recruitment sites/repositories, or PPRNs, that refer patients to the study. Given that the PPRNs have other data on participants that they refer to participate in this study, it is important that PPRNs can link the data collected in this study with data that they have in their repositories. For example, a PPRN focused on improving the care of people with Alzheimer's and dementia would be interested in merging these data collected as part of this study on mindfulness with the data that they have on these participants' cognition and course of illness to better understand the degree to which someone's cognitive function impacts their ability to practice and be impacted by mindfulness. We have included two key sections from the DUA below, specifying how the data can be used and its restrictions on use.

PERMITTED USE. The Study Coordination Team will provide the Data to RECIPIENT [PPRN recruitment sites] in the form identified herein, as a limited data set as indicated above. RECIPIENT agrees that it shall treat the Data in confidence and shall avoid disclosure of the Data to any other person, firm or corporation unless necessary to complete the Purpose. RECIPIENT shall have the right to use the Data only for its analysis related to the Project and not for any other purpose, including commercial use or otherwise. The Data may be shared with RECIPIENT's Project Team Members, or its employees, agents and subcontractors only on a need-to-know basis, and shall not be shared with any third party without the express written prior consent of the Coordination Team. In the event RECIPIENT discloses the Data to its authorized agents or subcontractors who have a need to use and access the Data to enable RECIPIENT to fulfill the Purpose, RECIPIENT will ensure that such agents or subcontractors enter into an agreement with no less restrictive terms than those contained herein including, but not limited to, those addressing data privacy, security, and breach notification.

RESTRICTIONS ON USE. RECIPIENT agrees that the Data it receives will not be used in any manner not allowed by the informed consent and/or authorization provided by individual subjects, if applicable, or in any manner inconsistent with the Purpose, or with the terms of RECIPIENT's IRB's approval of RECIPIENT's use and receipt of the Data. RECIPIENT further agrees that it, any Project Team Members identified herein, and any other employees, agents and subcontractors to whom it discloses the Data, will not use or further disclose the Data

other than as permitted by this Agreement, or as otherwise required by law or regulation. No license or additional rights are provided to RECIPIENT in connection with the Data under any patent applications, copyrights, trade secrets, or other proprietary rights of PCORnet, the Coordination Team, or the PPRNs.

THE PRINCIPAL INVESTIGATOR (PI) MUST SIGN IN BOTH PLACES. NO ONE CAN SIGN FOR THE PI.

The principal investigator confirms that:

☒ **Appendix of key study personnel, including NIH-style biosketches or CVs and documentation of human participant protections training, is attached.**
☒ **Survey instruments are attached.**
☒ **Intervention materials (questionnaires, participant information sheets, etc.) are attached.**
☒ **Outreach plan and sample outreach materials (screenshots, video links, PDFs, etc.) are attached.**

The principal investigator also confirms that:

I have read the PEER application to Western IRB and will require my staff do so as well.

_____ 7.8.19
Signature Date

By signing this document, the Principal Investigator attests:

I certify that I accept responsibility for the scientific conduct and design of the project. I assure that research staff assigned to this project has sufficient time and resources to conduct and complete the research. I have determined that the resources necessary to protect participants are present before conducting the research study and I agree to provide the required administrative reports if this application is approved and activated.

I agree to obtain permission, if necessary, from any department or institution that will provide services, resources, or space used in the conduct of this research.

I will conduct the study identified above in the manner described on the attached application. If I decide to make any changes in the study design or key personnel, I will obtain approval by the IRB prior to making the change. If a participant is injured, or if any unanticipated problems occur which involve risk or the possibility of risk to participants, I will immediately report such occurrences to the Genetic Alliance Institutional Review Board.

Signature

7.8.19
Date submitted

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