Translational Medicine and Therapeutics (ITMAT)

"Connected Health and Population Health Improvement pilot program"
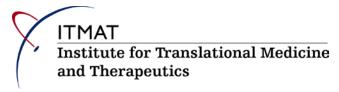
Submission Requirements

Overview

The proposal must center on novel approaches to testing and delivering interventions using connected health approaches to improve health outcomes or health behavior for people at high risk for suboptimal health outcomes. While we will accept and consider all applications, applications focusing on reducing the risks from **opioid addiction** or **atherosclerotic cardiovascular disease (ASCVD)** and applications investigating the use of **behavioral phenotyping** in behavioral interventions are particularly encouraged and will receive special consideration. Please refer to the CHIBE website for examples of connected health projects (https://chibe.upenn.edu/research/mhealth-wearables/). Behavioral phenotyping refers to the concept of using observable behavioral and psychometric data about individuals to better understand and predict behavior patterns and responsiveness to interventions. The purpose of this RFA is to support research teams to do quick turnaround studies focused on improving the management of population-based health within either clinical or non-clinical settings. These are designed to be relatively short-term projects to create a cycle for rapid learning and iterative improvement, with a planned intervention duration for each pilot of 3-6 months. Projects are expected to have an experimental or quasi-experimental design to pilot-testing the proposed interventions. This type of initiative is important to accelerating the rate of progress in preparing for the rapidly evolving shifts in health care financing towards health care systems taking on population risk, as existing governmental funding mechanisms typically have significant lag times between idea inception and funding. This type of academic work – in which promising approaches are tested in application to improving health among patients in our health system or in other populations – will help to rapidly develop evidence on how to efficiently manage population health that would be useful for Penn Medicine and for the nation.

Guidelines
- **The project period for this pilot program is 18 months; NO COST EXTENSIONS ARE NOT ALLOWED.**
- We strongly encourage proposals to use the Way to Health platform (https://www.waytohealth.org). Way to Health is a cloud-based research platform that integrates information from wireless technologies, communications tools, and other applications to allow investigators to test ways of improving health behaviors and helping people keep on track to better health. For more information about readily available features on the platform please refer to the WTH Platform Feature List (https://www.waytohealth.org/platform). We highly recommend scheduling an introductory consultation meeting with the WTH Team prior to grant submission. Please contact the Way To Health team at WayToHealth@uphs.upenn.edu to schedule a time to meet. We will provide the Way to Health platform free of charge for funded grantees provided you use core features. We will provide protocol design consultation, implementation assistance, training, technical support and general maintenance of the platform.
- ITMAT grants are available to registered members of the Institute for Translational Medicine and Therapeutics (ITMAT) including Associate Members who hold Instructor A or Research Associate positions. Any Penn faculty member can easily register to become a member at http://www.itmat.upenn.edu/membership.shtml
- Proposals must have at least two Co-Principal Investigators, ideally from different disciplines or Schools within the University of Pennsylvania. Novel collaborative applications between faculty located in different

Schools at Penn are encouraged. We also encourage teams to include clinical collaborators from within Penn Medicine.
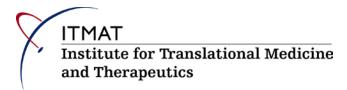
- We can assist with pairing behavioral scientists and clinicians upon request. Please let Joelle Friedman know if you are either a clinician who needs a social science collaborator or a social scientist who needs a clinical collaborator (email joellef@pennmedicine.upenn.edu).
- Projects can either be based within Penn Medicine or CHOP, a non-academic health setting (based at an institution that does not have their own CTSA), or in non-clinical settings such as health plans, fitness companies, employers, or consumer health companies.
- All proposals are due by **Monday December 17, 2018 at noon** for a project start date of **February 1, 2019.** *LATE SUBMISSIONS WILL NOT BE ACCEPTED NOR WILL EXTENSIONS BE GRANTED.*

Required Documents

- **Submission:** Please submit online at www.med.upenn.edu/apps/itmat/pg. *PLEASE ENSURE THAT YOU CHOOSE THE CONNECTED HEALTH AND POPULATION HEALTH IMPROVEMENT PILOT PROGRAM WHEN SUBMITTING YOUR GRANT.* Please refer to Document Submission Section for specific instructions related to this system.
- **Abstract Page:** The abstract text should be no longer than 250 words.
- **Budget:** Please use the excel template budget page and provide detailed expenses.
- **Budget Justification:** Please provide a short justification for all personnel, supplies, and equipment that will be expensed to this project. Please provide a distinct justification if resources are to be spent on services provided from outside Penn.
- **NIH Biosketch:** An NIH format biosketch must be submitted for the *PI and the Co-PIs only*.
- **Research Proposal:** The research proposal should be no longer than two single-spaced pages with one-inch margins and should include essential background information and a clear description of the study design, including a brief summary of power calculations. Please use Arial size 11 font. Please indicate the importance of this funding to the feasibility of your research proposal and potential for future funding. Please indicate if any other funds are available to you for the proposed research. Since we will prioritize funding intervention studies that are likely to be successfully implemented (whether in clinical or non-clinical settings), it will be important to identify a clinical operations leader from UPHS or CHOP or other health care system OR an operations leader from your collaborating organization (if not UPHS or CHOP) who will partner with you on your project. References should be attached to your research proposal and will not count toward your two page limit. Please provide a timeline of implementation to ensure meeting the end date of July 31, 2020. *NO OTHER SUPPORTING DOCUMENTATION WILL BE CONSIDERED.*
- Copies of **IRB approval letters** will be required if an application is funded. Funding will be delayed until these approval documents are received. Applicants are encouraged to submit documentation of IRB "approval in concept" along with their submission.

Budget Guidelines

- Budgets in the range of $25,000-50,000 will be funded in direct costs for a maximum duration of 12 months beginning on February 1, 2019 with an end date of July 31, 2020. All funds must be expensed by this end date. **NO COST EXTENSTIONS ARE NOT ALLOWED**. We expect to fund approximately 2-4 pilots through this initiative.
- We will consider projects with bigger budgets but they will have to be of higher quality/potential impact than projects with smaller budgets to be competitive
- Budgets must be submitted on approved excel template (which is located in the attachment section of the PDF).

- Please refer to the attached document which describes Way to Health functionality as well as a price list for the most commonly used devices.
- The free use of the Way to Health platform is for 18 months from the start of the grant period (e.g., February 1, 2019). If grants extend beyond the 18 month period, additional charges may be incurred.
- While the pilot program supports WTH website development, maintenance and project management, it does not include the research staff to run the projects on the platform.
- Include the cost of devices and any participant incentives in their project budgets.
- Name, title/role, percent effort, salary, and benefits must be defined in the budget for each grant participant. Note that salary support for faculty is discouraged. Applicants proposing faculty salary support should provide clear justification for why the pilot requires this. Please use the NIH salary cap limit.
- Supplies should be detailed by type and number in the budget and the budget justification.
- Equipment expenditures and service contracts should be detailed in the budget and budget justification. Please keep in mind that equipment is defined as any item costing more than $5,000 with an estimated useful life greater than one year.
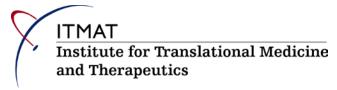
Other
- Any publications that are the direct result of this funding must reference:
    - **"Supported in part by the Institute for Translational Medicine and Therapeutics of the Perelman School of Medicine at the University of Pennsylvania."**
    - **"Research reported in this publication was supported by the National Center for Advancing Translational Sciences of the National Institutes of Health under Award Number UL1TR001878. The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH."**
    - **Refer to the Way to Health Platform in the methods section of any manuscripts that emerge from this work.**
- A progress report will be requested every year for 4 years so that we can track the success of supporting projects that result in the receipt of a grant, publication, or technology transfer. These summaries should be uploaded to ITMAT's Pilot Grant System at www.med.upenn.edu/apps/itmat/pg. You will need your PennKey logon and password to access this system.
- **You will be prohibited from applying for ITMAT pilot funding if you do not reference the funding support on publications and if you do not submit progress reports.**

Document Submission
All applications should be submitted via ITMAT's Pilot Grant System at www.med.upenn.edu/apps/itmat/pg.
PLEASE ENSURE THAT YOU CHOOSE THE "Connected Health and Population Health Improvement Pilot Program" WHEN SUBMITTING YOUR GRANT. You will need your PennKey logon and password to access this system. If you do not have a PennKey, obtaining one will take at least 48 hours so do not wait until the last minute. We will not accept applications late because of this. Once you start an application, you can proxy someone (grants manager, post doc, etc.) to finish it for you.
- Each investigator and Co-Investigator must be an ITMAT member.
- Each Investigator and Co-Investigator must have the approval of their respective Business Administrator.
- ***Penn Faculty should select the Business Administrator or Grants Manager that normally signs off on all of their research proposals.***
- ***CHOP Faculty*** must select Bernice Saxon, Prema Sundaram, Michael Campbell, or Robert DeNight as their Business Administrator. ***PLEASE ONLY CHOOSE ONE.***
- ***Wistar Faculty*** must select Jessica Blodgett as their Business Administrator.

- *University of the Sciences Faculty* must select Sarah E. Robinson as their Business Administrator.
- If your grants are managed by a division within the *Department of Medicine, please select Susan Wahl as your Business Administrator.* She will coordinate divisional/departmental approval.
- *Please ensure that the documents you upload are the final documents. ITMAT will not update or replace files. This means that prior to hitting the submit button, all documents must be final.*
- When contacting the ITMAT business office, please use the same discretion you would employ if contacting an external sponsor.
- Please ensure that you have liaised with all of the Co-Investigators on your application. This will avoid proposals being rejected by their Business Administrator.
- All documents must be uploaded by *noon* on the due date of the proposal to ensure time for all approvals. All approvals must be completed by *5 pm* on the due date. *We suggest you do not wait until noon to start uploading documents.*
- Once all approvals are completed, the grant will be received by ITMAT.

Application or Funding Questions
For programmatic or budget questions please contact Joelle Friedman, Managing Director of the Center for Health Incentives and Behavioral Economics (CHIBE), at joellef@pennmedine.upenn.edu.

For technical questions related to completing the online application please contact Jessica German, Bickhart@mail.med.upenn.edu or Charles Molli, cmolli@upenn.edu

Way to Health

Research & Clinical Protocol Management

https://www.waytohealth.org

Trusted by leading innovative researchers & organizations

Penn   HARVARD   Duke UNIVERSITY   COLUMBIA UNIVERSITY   CH

EXPERIENCE
106 total projects engaging 35,000+ participants

NATIONAL REACH
Patient recruitment from 45 states

NIH & PRIVATE
OVER $55 MILLION in grants supported.

Patient outcomes focus (sample studies)

RESEARCH

EMPOWER

Avoiding unplanned ER visits and readmissions among heart failure patients

Way 2 Text

Reduce BP with hypertensive patients. Tracking medication adherence via pill bottle and / or bi-directional text messaging

Process vs. Outcomes

Improve cholesterol levels in high risk CVD patients using pill bottle and with financial incentives

Diabetes Gamification

Tracking and gamifying activity to improve management of diabetes

Smoking Cessation

Improving smoking cessation rates using tracking and financial incentives

CLINICAL

Heart Safe Motherhood (HSM)

Reduced 7-day readmissions for hypertension among postpartum women and creating a national leadership model to meet new ACOG guidelines

Superutilizers

Lower cost by reducing unnecessary utilization of outpatient, inpatient and emergency room care while improving patient outcomes

ERAP (Engaged Recovery at Penn)

Reduce readmissions after surgery with colorectal surgery patients (pre and post-op), and OB/GYN surgery patients pre-op

Cirrhosis / Liver Transplant

Reduce the rate of readmissions in cirrhotic and post liver transplant patients using telehealth monitoring

Bridge

Improve show rates to follow up appts. post discharge

Key capabilities to empower research and clinical studies & subsequent deployments in practice

Core Research

Customized enrollment	Online and mobile participant enrollment and survey administration
Integration with biomedical devices	Ensure complete data at the point of collection via integrated devices
Automated randomization	Computerized randomization of participants, including the capacities for stratified, blocked, weighted, and adaptive randomization strategies
Flexible patient communication	Schedule communications with participants via voice, text, or email even with rolling enrollment
Built-in behavioral economic tools	Use a variety of financial and social incentive structures including basic and escalating lotteries, gamification (team or individual) using points, levels and medals
EHR integration	Epic HL7 FHIR

Incentive Models	Clinical Conditions	Device Integrations	Biomedical Measures
Lottery	Cholesterol	Wireless scales	Blood pressure
Gamification	Diabetes	Smart pill bottles	Medication adherence
Deposit contracts	Arthritis	Glucometers	Heart rate
Reminder	Insomnia	Pedometers	Nicotine metabolites
Peer Networks	Pediatrics	Heart rate trackers	Weight
Pre-commitment contracts	Hypertension	Blood pressure cuffs	Height
Rewards vs. Penalties	CHF	Sleep trackers	Steps
Loss vs. Gain framing	Preeclampsia	SMS based receivers	BMI
	Post-op Morbidity	Smart water bottles	Inhaler use
	Asthma		Cholesterol
	Hepatitis		Blood sugar
	Skin Cancer		Sleep
	Transplants		CPAP use