Survey of Federal Opportunities for Telemedicine, Telehealth, and Mobile Health Research

Updated: July 2014

This memorandum provides a broad survey of telehealth and telemedicine-related research opportunities across the federal government. It is meant to help researchers, faculty, and organizational leadership be well-positioned to engage in federal telehealth activities.

The survey solidified expectations that federal agencies are interested in serving several different populations, ranging from rural populations, to underserved populations in urban areas, to soldiers in the field through telemedicine, telehealth, and mobile health. With the implementation of the Affordable Care Act, many anticipate a shortage of providers relative to those seeking medical care and think mobile health may provide a means to help meet this need.

Several of the opportunities surveyed allocate small amounts without clearly delineated guidelines for how to align one’s research interests with those of the agency. One way to potentially increase the likelihood of a successful application is to establish relationships with program managers by submitting white papers and proposals for feedback, and meeting with or speaking with those managers to discuss the research proposals in advance of submission. Program managers sometimes design funding opportunities with specific topics and projects in mind. It is important for investigators to understand how to align the research proposal with the agency agenda, particularly in these times of leaner funding.

This document is not a comprehensive survey, but rather is intended to highlight opportunities of potential relevance, representing a range of potential backgrounds and applications, to universities and non-profit research institutions. Lewis-Burke is happy to discuss these agencies and programs, as well as others, in more detail to describe specific funding processes with investigators upon request.

National Institute of Standards and Technology

Information Technology Laboratory
The National Institute of Standards and Technology (NIST) within the Department of Commerce largely funds intramural research. However, NIST puts out an annual solicitation with a broad list of the types of extramural research areas they are interested in funding. Within the Information Technology Laboratory (ITL), NIST has expressed an interest in healthcare information technology under the software and systems division. In advancing their priorities for fiscal year (FY) 2015 and beyond, they seek innovative technologies and network architecture that is cloud-based, measurement science for robust distributed system design, and the design and analytics for efficient communication technologies.
The FY 2014 federal funding opportunity was released on February 25, 2014. The applications are being accepted on a rolling basis; however, proposals received after June 2, 2014, may be considered for funding during this current fiscal year or in the next, depending on the availability of funds. The full federal funding opportunity is available at [www.grants.gov](http://www.grants.gov), funding opportunity number 2014-NIST-MSE-01. The ITL grant program contact is Kamie Roberts (kamie.roberts@nist.gov).

Additional information on ITL Health Information Technology topics is available at [http://www.nist.gov/itl/ssd/healthcare.cfm](http://www.nist.gov/itl/ssd/healthcare.cfm).

**Department of Defense**

**Telemedicine and Advanced Technology Research Center**
The mission of the Telemedicine and Advanced Technology Research Center (TATRC) is to innovate, adapt, and manage transformative medical technology ranging from basic research to applied development with a goal of translating military health technologies to civilian applications. The history of attempting to develop a mobile health support system dates back more than twenty years and the division has played an important role in developing advanced health information technologies. Recently TATRC’s budget has been waning, but they have increased partnerships within the Department of Defense (DOD), frequently administrating projects while funding comes from other areas, as well as other agencies. Given the increasing discussions about applying telemedicine to the diagnosis and treatment of neurological conditions such as traumatic brain injury and post traumatic stress for both the military as well as civilian populations, this is an area that presumably will continue to remain significant.

As with other DOD research entities, investigators are encouraged to submit a white paper to explore alignment with agency interests prior to submitting a full proposal. TATRC funds a limited number of small awards through unsolicited proposals which are reviewed on a rolling basis. White papers should be submitted to TATRC Chief Scientist Charles Peterson (Charles.Peterson@tatrc.org). The full federal funding opportunity is available at [www.grants.gov](http://www.grants.gov), funding opportunity number W81XWH-BAA-14-1.

Additional solicitations and information on TATRC are available at [http://www.tatrc.org/about_funding.html](http://www.tatrc.org/about_funding.html).

**Department of Agriculture**

**Distance Learning and Telemedicine**
The Distance Learning and Telemedicine (DLT) Grant Program was designed to aid rural communities seeking access to distance learning and telemedicine technologies, enabling residents in these communities to have contact with teachers, medical professionals, and others via a video conferencing facility when the distance would otherwise be too far to overcome. The DLT has been a leader in the telemedicine movement, creating access for rural communities for more than two decades, and since 2009 the government has invested nearly $150 million dollars in this effort. The USDA recently announced it will be providing up to $19.3 million in grants to fund rural training and healthcare resources, as well as education.

Award sizes will range from $50,000 to $500,000. Applicants may apply for a grant, a grant and loan combination, or a loan only. However, grant applicants must provide a minimum of 15 percent
matching funds, and those with greater funds may receive a higher rating. For complete eligibility and application information, see the listing in the Federal Register. We encourage all applicants to reach out to the program manager to make sure the grant application and agency priorities are aligned; Sam Morgan (sam.morgan@wdc.usda.gov) is the DLT program management analyst. The full federal funding opportunity is available in the Federal Register at http://www.gpo.gov/fdsys/pkg/FR-2014-05-22/pdf/2014-11700.pdf. Submissions must be received by July 7, 2014.

Additional information about the DLT Grant Program is available at http://www.rurdev.usda.gov/UTP_DLT.html.

National Science Foundation

Smart and Connected Health
The purpose of the Smart and Connected Health (SCH) program, an interagency initiative with the National Institutes of Health (NIH), is to help advance the healthcare transformation from an episodic, reactive to proactive process, leveraging new ways to improve preventative medicine by combining computational sciences with a biomedical approach. The NSF side is intended to emphasize digital technologies and engineering, as well as the social, behavioral, and economic sciences. The program envisions the individual at the center of a cluster of elements needed to provide proper comprehensive care, including precision medicine, integrated electronic health records, monitoring and sensing, and appropriate interventions. This program is intended to help fulfill the recommendations made by groups like the President’s Council of Advisors on Science and Technology (PCAST), the National Research Council (NRC), and the Institute of Medicine (IOM) to develop the next generation of health care research and products, utilizing a high-risk, high-reward structure. When considering the scope of the project, it may be helpful to reference the reports released on integrated health technologies released by the councils listed in the previous paragraph.

Two types of applications are being accepted; ones with a single focus referred to as Exploratory Projects, for which the deadline is October 10, 2014, and multi-disciplinary teams of researchers referred to as Integrative Projects have proposals due December 10, 2014. There is a strong emphasis on collaboration between academia, industry, and non-profits to better utilize the entire research pipeline, from discovery to deployment. The program with NSF is supported across the engineering, computer science, and social, behavioral and economic sciences directorates. Any proposals will need to emphasize the manner in which the project will contribute to the fundamental advancement of science as well the broader impact upon solving clinical health challenges. The coordinator, Misha Pavel (mpavel@nsf.gov), encourages anyone considering applying to contact him or someone else in program before crafting the proposal to make sure the application is in line with the objectives of the program. The NSF solicitation number is NSF-13-543.


Federal Communications Commission

Health Connect Fund
Last year the Federal Communication Commission announced a new grant program to expand their development of broadband networks intended to support telemedicine as a part of the scaling from pilot to full program. $400 million annually has been allocated to support the Health Connect Fund with
the intention of supporting consortium as well as individual health care providers to support broadband connectivity and networks to expand care options via telemedicine. The funding is designed to help increase access to broadband services and with a goal reducing health care costs and maximizing cost-effectiveness.

In order to be eligible for funding, the health care provider must belong to one of the following categories: hospitals, rural health clinics, community health centers, health centers serving migrants, community mental health centers, local health departments or agencies, post-secondary educational institutions/teaching hospitals/medical schools, or a consortia of the above. Additionally, health care providers must contribute 35 percent of the costs. There is a specific emphasis on serving rural populations, but non-rural agents may apply if they belong to a consortium that has at least 50 percent rural health care providers. Letters of agency are also required from members to seek bids for services as well as to apply for the program. For questions about determining the rural composition of the network or other concerns about eligibility, contact the Universal Service Administrative Company (USAC) at rhc-assist@usac.org.


**Department of Health and Human Services**

**Health Resources and Services Administration (HRSA)**
The Office for Advancement (OAT) at HRSA is the main HHS agency supporting non-research telehealth activities. The office supports three main telehealth grant programs. The Telehealth Network Grant Program (TNGP) focuses on demonstrating how telehealth programs and networks improve access to quality health care services in rural and underserved communities. Grantees may be located in rural or urban areas but must serve rural areas. Grants are awarded for three years and can be up to $250,000.

The Telehealth Resource Center Grant Program (TRCGP) supports “the establishment and development of Telehealth Resource Centers (TRCs) in order to: expedite and customize the provision of telehealth technical assistance across the country, while at the same time working together to make available a wide range of expertise that might not be available in any region.”

Lastly, OAT supports the Licensure Portability Grant Program (LPGP). According to HRSA, funding under this program helps state professional licensing boards carry out programs under which licensing boards of various states cooperate to develop and implement state policies that will reduce statutory and regulatory barriers to telemedicine. There are currently only two grantees, The Association of State and Provincial Psychology Board in Georgia, and The Federation of State Medical Boards of the Unites States Incorporated in Texas. Information on HRSA’s programs can be viewed here: http://www.hrsa.gov/ruralhealth/about/telehealth/.

In addition to the aforementioned grants, HRSA has also provided funding to Alaska, Montana, and Maine for a demonstration program to improve mental health for veterans in rural areas. Funding was provided in FY 2013 through the Flex Rural Veterans Health Access Program https://grants3.hrsa.gov/2010/Web2External/Interface/FundingCycle/ExternalView.aspx?&fc=43158d5-d373-4741-a2ba-afa530aad636&txtAction=View+Details&submitAction=Go&ViewMode=EU.
Agency for Healthcare Research and Quality (AHRQ)
AHRQ supports research on system-wide improvements to healthcare and quality. AHRQ has previously supported funding to examine how telemedicine can improve healthcare quality; however, its focus has shifted to more toward health IT. Currently, AHRQ is planning to support research programs to fill knowledge gaps about the safety of health IT. In addition, AHRQ is refining its focus to four priorities that include producing evidence to improve health care quality; make care safer; increase access to healthcare; and improve health care affordability, efficiency, and cost transparency. Although, AHRQ has a relatively small budget, about $463 million in program funding in FY 2014, the Agency does support investigator initiated research as well as special emphasis areas. In general, success rates for R03s at AHRQ are much higher than R01s, which are extremely competitive. Information on funding can be viewed here [http://www.ahrq.gov/funding/fund-opps/index.html](http://www.ahrq.gov/funding/fund-opps/index.html).

National Institutes of Health
Mobile health (mHealth) is the classification for research relating to telehealth, telemedicine, and mobile health at NIH. According to NIH, it has a history of funding investigators in developing and using mobile technologies to improve health and provides the following recent example: [http://www.gei.nih.gov/exposurebiology/index.asp](http://www.gei.nih.gov/exposurebiology/index.asp). Furthermore, NIH states that it uses mobile technologies as tools and platforms for health research and healthcare delivery. While telemedicine, telehealth, and mobile health projects could fall into several different areas at NIH, depending on the research, a noteworthy amount of the mHealth work falls under the National Institute of Biomedical Imaging and Bioengineering (NIBIB), which focuses on new technologies and techniques for healthcare delivery. Dr. Bill Heetderks, Director of Extramural Science Programs at NIBIB, states in a *Mobile Health* news article that “they’ve lately come to realize that mobile technology, with its propensity to address chronic conditions, is an area of a lot of promise — and one in which relatively few researchers are applying for NIH grants.” Currently there are R01 and R21 opportunities focused on *mHealth Tools for Individuals with Chronic Conditions to Promote Effective Patient-Provider Communication, Adherence to Treatment and Self-Management* which can be found here [http://www.nibib.nih.gov/funding/funding-opportunities](http://www.nibib.nih.gov/funding/funding-opportunities). The grants are through NIBIB and the National Institute of Nursing Research (NINR).

In addition, NIBIB and NINR, along with the National Institute on Aging (NIA), *Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)*, National Heart, Lung, and Blood Institute (NHLBI), and the Office of Behavioral and Social Science Research (OBSSR) are supporting R21s for Design and Development of Novel Technologies for Healthy Independent Living. The focus is on “novel technologies to monitor health or deliver care in a real-time, accessible, effective, and minimally obtrusive way.” OBSSR is specifically interested in mHealth activities because of the potential for mobile technologies to improve health outcomes. Information on OBSSR’s activities can be viewed here [http://obssr.od.nih.gov/scientific_areas/methodology/mhealth/](http://obssr.od.nih.gov/scientific_areas/methodology/mhealth/).

Patient-Centered Outcomes Research Institute (PCORI)
The Patient-Centered Outcomes Research Institute was funded as part of the *Patient Protection and Affordable Care Act* (ACA). The purpose of PCORI is to support patient-centered clinical comparative effectiveness research to assist patients, caregivers, and providers in making informed, evidence-based decisions about health care. Research should strive to provide information and answer real world questions that are important to patients and caregivers as they make healthcare decisions based on their circumstances and concerns. PCORI research also supports its National Priorities for Research and Research Agenda [http://www.pcori.org/research-we-support/priorities-agenda/](http://www.pcori.org/research-we-support/priorities-agenda/). PCORI funds both investigator-initiated and “targeted” PCORI Funding Announcement (PFA) mechanisms. Investigator-initiated proposals fall within five general PCORI priorities:
• Assessment of Prevention, Diagnosis, and Treatment Options,
• Improving Health Care Systems,
• Communication and Dissemination Research,
• Addressing Disparities, and
• Accelerating Patient-Centered Outcomes Research and Methodological Research.

Funding for the five general areas is funded through four cycles per year. In 2014 a new third path was created which combines aspects of investigator-initiated and targeted approaches to support comparative clinical effectiveness research through pragmatic clinical studies and large simple trials. PCORI has illustrated that it will fund telehealth projects that meet its criteria. For example, PCORI has funded Using Telehealth to Deliver Developmental, Behavioral, and Mental Health Services in Primary Care Settings for Children in Underserved Area at the University of California Los Angeles. In addition, funding has gone to researchers at the University of Rochester to among other goals, to demonstrate the feasibility of using telemedicine to deliver care into the homes of individuals with Parkinson disease who have limited access to care. Information on PCORI funding can be viewed here: http://www.pcori.org/funding-opportunities/landing/.