Executive summary
The Carolina Digital Health Research Initiative (CaDHRI), a partnership between the School of Medicine and Health Sciences Library, provides a catalyst for disruptive innovation in digital health research at UNC. It builds capacity by providing digital health expertise and tools, enabling rapid deployment of patient-centered clinical studies for UNC clinicians, faculty, and researchers. This initiative maximizes return on investment by focusing on the point of highest leverage: connecting existing resources in health and technology across UNC. As a complement to the Center for Innovation’s Digital Health Program, CaDHRI helps galvanize a network of digital health expertise on campus, sparking new innovations in healthcare by serving as the foundation for exploration in digital health research.
1.1 Background and significance
There is a growing need for innovation in clinical care and research to discover scalable, data-driven approaches that can improve outcomes while decreasing costs. Digital health technologies, paired with agile science methodology, are poised to be the drivers of health innovation.

The digital health revolution is well underway. Increasingly, health data will happen outside of the clinic. Chronic diseases and conditions are among the most common, costly, and preventable of all health problems. By collecting patient-generated data anytime and anywhere, mobile health technologies have the potential to improving the timeliness of medical decision making as well as engaging patients in the management of their health. Electronic health and mobile health solutions are emerging as important ways for clinicians and researchers to contribute to improving patient health outcomes.

Funding for digital health is growing, rising to nearly $6 billion in 2015. Nearly two-thirds of Americans owned a smartphone in 2015, and use of medical mobile applications is expected to rise to 142 million in 2016. Digital health solutions also reap cost savings benefits in health care. Potential savings are expected up to $100 million, with the largest savings in remote patient monitoring.

The Center for Innovation is well aware of the importance of digital health to making disruptive changes across the healthcare system, and the recent establishment of its Digital Health Program shows its commitment to the field. The Carolina Digital Health Research Initiative (CaDHRI) was designed in consultation with the Center’s staff to complement those efforts, providing a collection of digital health devices, expertise, and services focused on workforce development for digital health research.

CaDHRI will be the first digital health initiative to build a comprehensive and accessible digital health lending library, provide validation testing and expert consultation specifically for digital healthcare research, and host workshops and events for hands-on experiences with digital health devices.

1.2 Goals, outcomes, and metrics

Project goals
Support high impact research that could be improved by digital health solutions. Support research focused on topics important to the UNC Health Care System and the School of Medicine. Examples include research seeking to: improve individual patient and population health, contribute to healthcare quality improvement effort, improve chronic disease prevention and management, prevent hospital readmissions, expand diagnostic capabilities, increase patient engagement, or enable patient reported outcomes on pain, vital signs, quality of life issues, etc.

Anticipated outcome #1 - Provide services and expertise for 8-10 digital health research pilot studies by June 2017.
- Metric - Number of digital health research pilot studies for which CaDHRI has provided services or expertise. Satisfaction with support received by CaDHRI will be measured using brief satisfaction surveys administered to supported UNC researchers at the conclusion of their pilot project(s).

Activities that support outcome #1
- Consultation services
- Data management and application development services
- Validation testing group services
Anticipated outcome #2 - Creation of a comprehensive CaDHRI digital health device collection, housed at the UNC Health Sciences Library.

- **Metric 1** - By August 2016, acquire at least 50 different digital health devices for the overall collection, and devices needed for initial 3 pilot studies.
- **Metric 2** - By May 2017, at least 50 digital health devices and tools from the CaDHRI digital health collection will have been deployed. Brief satisfaction surveys will assess the collection’s breadth, depth, and utility.

Activities that support outcome #2

- Creation of a digital health device collection

Create connections that spark innovative partnerships among researchers across the UNC School of Medicine, Health Care System, and researchers from the UNC School of Public Health, School of Pharmacy, and other relevant departments. Collaborate with partners across UNC to cross-promote events and share knowledge of people, projects, and resources related to digital health.

Anticipated outcome #1 - Creation of a faceted database of people working in digital health on UNC campus

- **Metric** - Comprehensive digital health contact database created by May 2016 available on CaDHRI website.

Activities that support outcome #1

- Creation and maintenance of database by project coordinator.

Anticipated outcome #2 - Creation of a digital health user group to share knowledge, research findings, and resources. Creation of the CaDHRI Advisory Board to advocate for CaDHRI, provide strategic vision, fundraise, and provide ongoing and sustainable support.

- **Metric** - Digital health user group created by November 2017.
- **Metric** – CaDHRI Advisory Board created by June 2016.

Activities that support outcome #2

- CaDHRI Advisory Board
- Digital health user group

Promote an agile science approach to UNC health research, including an iterative process of rapid prototyping, optimization, and product release. 

Anticipated outcome #1 - Increased awareness and use of prototype or digital device validation testing among UNC health researchers.

- **Metric** - By December 2016, at least 80% of supported UNC health research projects learn about how to apply the agile science approach to their research.
- **Metric** - By March 2017, CaDHRI will deliver at least one workshop to UNC researchers on the benefits and use of the agile science approach to health and health care research.

Activities that support outcome #1

- Workshop #5 (Overview of agile science in digital health research)
- Consultation

Conduct digital health workshops, seminars, events, and outreach to promote digital health solutions to clinical and other health problems, increase exposure to the variety of tools and methods available, and encourage collaboration between clinical, academic, and technical experts at UNC.

Anticipated outcome #1 - UNC researchers, clinicians, and faculty will gain knowledge about and exposure to digital health tools and methods available to solve health problems.

- **Metric** - CaDHRI will conduct at least one digital health workshop, seminar, or event during each quarter between June 2016 and May 2017, surveying participants on impact on their research and clinical care.
- **Metric** - At least 50 UNC researchers, clinicians, or faculty will attend at least one CaDHRI digital health workshop, seminar, or event before May 2017.

**Activities that support outcome #1**
- Outreach and marketing
- Seminars and workshops
- Petting zoos
- Hackathons - Support Center for Innovation Digital Health Program and other partners in their efforts to implement special long-form events focused on developing innovative and scalable digital health solutions to problems of high impact to UNC Health Care.

**Anticipated outcome #2** - Creation and promotion of the CaDHRI website, providing information on digital health, showcasing the digital health collection, services available to UNC researchers, promoting CaDHRI events and seminars, and including links to related efforts by campus partners.
- **Metric** - CaDHRI website created by October 2016, with 1000 visits to the CaDHRI website by May 2017

**Activities that support outcome #2**
- Website - The website will be an internal UNC site, and will serve as the hub for CaDHRI’s news, information, events, and resources.

### 1.3 Project, approach, and methods

The Carolina Digital Health Research Initiative serves the researchers and clinicians of UNC Health Care, School of Medicine, and related departments at UNC Chapel Hill. The initiative will provide digital health services, expertise, and tools to UNC researchers, clinicians and faculty to enable and promote innovative use of digital health solutions to solve pressing patient-centered health problems. CaDHRI has five principal components:

**Digital health collection:** During the pre-implementation planning phase, we will identify the areas of greatest need for the digital health collection, as well as available sources from which we can purchase devices for the collection. The digital health device collection is housed in the UNC Health Sciences Library. In the first implementation phase during June - July 2016, we will build the collection. Donations from RTI and Validic are already underway. We will purchase digital health devices that will support pre-identified research studies as well as some devices that can provide a breadth of useful exemplars for education and research. The digital health collection will be made available to researchers prior to starting their research projects, to test out devices, applications, and other digital health options, as the researchers explore potential digital health solutions. Examples of digital health devices that could be available in the collection include wearable digital health devices such as FitBits or Jawbones, sensor devices, smartphones, etc.

**Services and Expertise:** CaDHRI will provide a variety of services in support of UNC School of Medicine research studies during the ideation and pilot phases. Should researchers choose to continue to receive services from CaDHRI while conducting their research study, we will require CaDHRI be written into the grant application and/or IRB application for their research. Services provided include consultation by an expert panel, data management support, application development, and testing/validation of researcher’s ideas for digital health solutions in their research.

- **Consultation** - CaDHRI will offer UNC researchers consultation with a panel of experts, (e.g. physicians, engineers, data analysts, programmers) recruited through existing partnerships at UNC. The initial consultation will be free to researchers, while additional ongoing consultation time must be grant supported. This service complements the Center for Innovation’s Digital Health Program’s consulting approach, focusing on digital health research rather than commercialization and application.
- **Data management and application development** - CaDHRI will offer support to UNC researchers in the development of customized mobile applications, mechanisms and devices to support data management and transfer, and development of websites or mobile-friendly website capabilities.
• **Validation testing group** - CaDHRI will recruit and retain a group of volunteers available to help with prototype testing. The validation testing group, recruited from interested UNC staff, faculty, or students. Members of the group will be available to test UNC researchers’ pre-pilot prototypes, such as mobile applications or wearable devices.

**Events and Workshops**: CaDHRI will provide expertise in digital health solutions to researchers, faculty, and clinicians who seek to use digital health devices or scientific methodologies in their research. We will recruit both external digital health experts and researchers working within UNC to speak at quarterly seminars, lead workshops, and facilitate hands-on “petting zoo” events.

- **Seminars** - Speaking events will be aimed at informing researchers, clinicians, faculty, and health science students on current and new research using digital health devices and modalities, and catalyzing innovative ideas in the field of digital health.
- **Workshops** - Workshops will provide the space and instruction for hands-on learning about such digital health resources as using open mHealth for aggregating data, platforms for creating mobile health application development, the Validic API to access patient data, Fast Healthcare Interoperability Resources (FHIR) standards for exchanging healthcare information electronically, etc.
- **Petting zoos** - Digital health “petting zoo” events will be quarterly events at which researchers, faculty, clinicians, and health sciences students gain hands-on exposure to a variety of devices and applications. Participants can observe, feel, use, and ask questions about a variety of digital health solutions from two sources: the digital health collection and those supplied by Validic. The events will be held at the Health Sciences Library and at UNC Health Care system locations.
- **Hackathons** - Special long-form events, in partnership with the Center for Innovation Digital Health Program and other partners, focused on developing innovative and scalable digital health solutions to problems of high impact to UNC Health Care.

**Detailed Description of CaDHRI Workshops**
A series of 5 workshops will provide UNC researchers who are interested in digital health a space to both learn about the steps, knowledge, and resources needed to conduct digital health research, and opportunities to dive deeper into specific domains and needs in digital health research. Workshops will be led by UNC researchers with extensive experience using digital health solutions in their research. Workshops (WS) will include didactic, interactive, and tactile learning experiences.

<table>
<thead>
<tr>
<th>WS #</th>
<th>Topic</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Overview of digital health and the UNC research context. This includes an overview of CaDHRI, discussion of digital health and mHealth solutions in research, and discussion of what researchers need to know to use digital health devices and solutions in their research.</td>
<td>2 hours</td>
</tr>
<tr>
<td>2</td>
<td>Deep dive into common, but diverse, digital health <strong>devices</strong> used in health research, such as wearable devices, biomedical trackers, etc. The workshop will include discussion of the clinical significance of digital health devices, and how to use digital health devices.</td>
<td>2 hours</td>
</tr>
<tr>
<td>3</td>
<td>API / application <strong>development</strong>. The workshop will include discussion of what researchers need to know to develop an application, use mobile health and connected devices in their research, and when to tap others’ expertise in API/application development.</td>
<td>2 hours</td>
</tr>
<tr>
<td>4</td>
<td>Deep dive into digital health <strong>data</strong> management. The workshop will include discussion of the unique data management requirements for digital health devices, including connectivity, confidentiality, data cleaning and device data wiping.</td>
<td>2 hours</td>
</tr>
<tr>
<td>5</td>
<td>Overview of <strong>agile science</strong> in digital health research. The workshop will include detailed instruction on how to take an agile science approach to digital health research, such as using an iterative process of rapid prototyping, optimization, and product release.</td>
<td>1 hour</td>
</tr>
</tbody>
</table>
**Community:** As part of the pre-implementation phase, already underway, we are creating a database of researchers, faculty, students, and staff who are working in digital health at UNC. Working with a variety of partners on campus, CaDHRI will map out the existing resources to accelerate new collaborations, foster outreach and marketing, and to make the greatest use of existing resources. This outreach will identify areas of greatest strength, need, and opportunity, while building a foundation for future efforts.

- **CaDHRI Advisory Board** - CaDHRI will recruit and convene members for an advisory board of digital health innovators at UNC. The board will serve as advocate of CaDHRI to increase exposure and interest in digital health, provide input on CaDHRI’s strategic vision, assist with fundraising efforts, and provide ongoing support to ensure a viable future for the initiative.
- **Digital health user group** - An interdisciplinary user group of UNC researchers working in digital health. The group will meet bi-monthly to discuss their research and new developments in the field of digital health, share ideas, present findings from their research, meet other people interested in digital health.
- **Outreach and marketing** - CaDHRI will engage in outreach to the campus community to develop partnerships, spur involvement in digital health initiatives, and promote events.
- **Website** - The website will serve as the hub for CaDHRI’s news, information, events, and resources, with links to partner websites and initiatives.

**Facilities:** The Health Sciences Library provides event space that can support events of up to 100 people, including large gathering spaces and breakout rooms for digital health speakers and hackathons. It also has two classroom spaces with 45 computers, designed for instructor-led workshops to support workshops, three video conferencing facilities, bookable conference rooms, and a coffee shop. The library is centrally located on the health affairs campus, a short walk from UNC Hospitals, the Schools of Medicine, Pharmacy, Dentistry, Public Health, and Nursing, and the TraCS and AHEC facilities. It provides the perfect location for interdisciplinary collaboration, and will donate cubicle space for winners of the Center for Innovation’s Digital Health Innovation Sprint.

### 1.4 Mission alignment

CaDHRI uniquely leverages UNC’s strengths as an ecosystem, while directly supporting the stated missions of all key partners. CaDHRI supports new technology deployment in both clinical and research settings, and provides new workforce development by providing access to devices and technical knowledge for those with health expertise, thus enabling mobile health interventions that would otherwise be out of their reach. Through these activities, CaDHRI aligns perfectly with the School of Medicine’s mission to be a leader in patient-care, research, and education. The initiative also embodies UNC Health Care’s mission to innovate in research, development, and implementation of new approaches to care, while also nurturing collaborative relationships with various health-focused entities across UNC.

By using a cross-disciplinary approach, CaDHRI draws on UNC’s expertise in clinical care (UNC Health Care) and health affairs (Schools of Medicine, Public Health, Nursing, and Pharmacy), fusing them with technical knowledge (Computer Science, Information Science). Finally, through its promotion of digital health, CaDHRI aligns with the Center for Innovation’s mission by sparking the initiation, dissemination, and support of disruptive innovations in care delivery that are not only patient-centered, but can improve health outcomes while lowering costs. CaDHRI was designed to work in tandem with the Center for Innovation’s own Digital Health Program, collaborating on events and workforce development, while specializing in different pathways of research and commercialization.

### 1.5 Project timeline

<table>
<thead>
<tr>
<th>Pre-implementation Planning</th>
<th>January - May 2016</th>
</tr>
</thead>
</table>


- Conduct needs assessment of UNC researchers to a comprehensive list of areas of greatest need
- Build database of key digital health experts and researchers
- Confirm list of pilot research studies for the implementation phase
- Determine CaDHRI focus areas for greatest leverage and impact.
- Prioritize common clinical problems gathered from needs assessment.
- Craft plan for digital health device collection based on need for key research studies
- Outline CaDHRI website’s content, structure, and implementation plan

- Implement pilot of the digital health device collection at Health Sciences Library to determine operations and use criteria
- Support and promote Center for Innovation’s Digital Health Innovation Sprint initiatives for Spring and Fall 2016
- Solicit donations of devices from UNC researchers
- Begin corporate partnership outreach
- Secure speakers for the speaker series
- Create CaDHRI Advisory Board and convene initial meeting
- Begin recruiting volunteers for feasibility testing

### Project Implementation

#### Phase 1: Launch

**June - July 2016**
- Support studies #1-2
- Begin project implementation period
- Purchase initial digital health collection
- Develop website based on specs from pre-implementation planning
- Finalize marketing/outreach plan for Fall launch of collection, website & events
- Launch CaDHRI website

**August - September 2016**
- Begin marketing/outreach campaign
- Conduct digital health workshop or event
- Convene CaDHRI Advisory Board meeting

#### Phase 2: Assess and Refine

**October - November 2016**
- Support studies #3-5
- Conduct digital health workshop or event
- Conduct initial assessment of CaDHRI impact
- Implement changes to project as needed
- Purchase additional devices for collection.
- Facilitate initial user group meeting.
- Support for Digital Health Innovation Sprint continues

**December 2016 - January 2017**
- Support studies #6-7
- Conduct digital health workshop or event
- Provide 6 month progress report
- Facilitate user group meeting
- Recruit validation testing group members

#### Phase 3: Sustain and Report

**February - March 2017**
- Support studies #8-9
- Begin consultation services for pay
- Conduct digital health workshop or event
- Facilitate user group meeting
- Convene CaDHRI Advisory Board meeting

**April - May 2017**
- Support study #10 and wrap up previous studies
- Complete award-funded activities
- Facilitate user group meeting

#### Post-implementation

**May - June 2017**
- Report final outcomes from Award
- Convene CaDHRI Advisory Board meeting

- Complete funding transition to self-sustaining consultation services
Anticipated challenges and alternate strategies: The challenges CaDHRI is most likely to encounter in its major activities are delays (such as website production, hosting events) and problems of coordination (such as launching user group, planning for workshops and events, or aligning with researcher timelines). We plan to actively monitor these issues on a monthly basis to ensure that the implementation is proceeding according to plan. We will make changes where necessary, such as expanding outreach to new partners, finding additional volunteers, or updating the project timeline to better adjust to unexpected situations.

1.6 Partners
Drew Schiller Validic Partner
Kellie Walters, MPH TraCS, SOM PHCI Partner
Javed Mostafa, PhD CHIP Program, SILS Advisor
Robert Furberg, MBA, PhD RTI CAHIT Advisor
Ashok Krishnamurthy, PhD TraCS, RENCI, Comp. Sci. Advisor

1.7 Sustainability and scalability
Sustainability
CaDHRI will be self-sustaining by the end of its first year (June 2017) through user-supported research consultation and development services, combined with lower costs for ongoing maintenance. Additionally, CaDHRI can expand beyond its initial scope by gaining financial support from individual donors, UNC entities, and corporate partners.

User support - Ongoing funding for the initiative will come from its digital health consulting services offered to clinicians and researchers. CaDHRI will adopt a freemium model, providing brief initial consultations with researchers for free, but charging for app development, data management, project management, and ongoing consulting services. Interested researchers can write these services into their grant applications, strengthening their proposals through expanded expertise. This funding model mirrors those successfully implemented at TraCS, CHAI Core, and other centers at UNC supporting health research.

Lower costs - After the award period many of the one-time costs associated with launching the initiative (such as the collection of devices, website, initial marketing campaign, and speaker series) will be greatly reduced, leaving only the cost of maintenance of those activities. The digital health collection will grow not only through purchasing devices, but also through physical donations from researchers and corporations, and can sustain the collection in the future. While the CaDHRI Research Assistant will coordinate events and workshops, work for hosting and marketing these groups and events fit within the job roles of existing employees across UNC, including library staff who host events and do outreach, faculty members who chair specialized work groups, and informatics support staff who plan and market events. University facilities are also freely available.

Outside funding potential - The Health Sciences Library plans to use CaDHRI as part of its outreach to library donors, and its director stated that the library would consider adding digital health items into its ongoing collections budget. Outreach to corporate donors and coordination with on campus partners offer additional funding options for expanding the initiative in the future.

Scalability
CaDHRI is a flexible initiative that can quickly scale using funding secured by working on multiple, ongoing digital health research grants. It is also well positioned to leverage the resources of university partners, and can utilize external entities such as mobile development firms as needed. CaDHRI benefits from low fixed costs and can flexibly support efforts at different scales, growing at the pace of innovation in the local ecosystem.

2. CaDHRI budget

2.1 Key personnel costs (salary and fringe)
<table>
<thead>
<tr>
<th>Role</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Coordinator (0.5 FTE)</td>
<td>$16,000</td>
<td>CaDHRI project management (need to figure out how funding works. includes fringe benefits)</td>
</tr>
<tr>
<td>Workshop Leaders</td>
<td>$2,000</td>
<td>4 on-site workshops with 3 internal and 1 external leaders</td>
</tr>
<tr>
<td>Speakers</td>
<td>$1,000</td>
<td>Honorarium for 1 external speaker</td>
</tr>
<tr>
<td>Supplemental API/app Developers</td>
<td>$3,000</td>
<td>External API/app developer to provide consultation as needed, if graduate students are not available</td>
</tr>
</tbody>
</table>

### 2.2 Equipment

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital health devices &amp; wearables collection</td>
<td>$3,500</td>
<td>Initial expenditure for a diversified collection, based on need identified through needs assessment and device “petting zoo”.</td>
</tr>
<tr>
<td>First supported research study. 4 FitBits (Charge HR $150 each), 1 Empatica E4 ($1,700*), 2 IMEC Sleep EEG headbands ($600 each?) Donations, or cheaper models possible. [*Academic discounts available. Overage could come from additional device budget below]</td>
<td>$3,500*</td>
<td></td>
</tr>
<tr>
<td>Initial device collection for 2nd and 3rd pre-approved studies (approved by July 1).</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>Additional device budget to expand collection for later studies</td>
<td>$10,500</td>
<td></td>
</tr>
</tbody>
</table>

### 2.3 Supplies

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event supplies</td>
<td>$3,000</td>
<td>Food for one 100-person event and two 50-person events.</td>
</tr>
</tbody>
</table>

### 2.4 Travel

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trainer travel costs</td>
<td>$1,000</td>
<td></td>
</tr>
<tr>
<td>Speaker travel costs</td>
<td>$1,000</td>
<td></td>
</tr>
</tbody>
</table>

### 2.5 Other costs

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miscellaneous supplies</td>
<td>$500</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Budget</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$50,000</td>
<td></td>
</tr>
</tbody>
</table>
Activities supported by award proposal budget | Activities funded externally or free
---|---
Project Coordinator position | CaDHRI Website
Digital health devices for collection / support research | Digital health device petting zoo
External speakers and workshop leaders’ honorarium | CaDHRI groups (Validation Volunteers, user group, advisory board)
Additions to digital health device collection; maintenance | Digital health people database
Event logistics (food, speaker travel, etc.) | Consultation for supported research studies
 | Support for digital health innovation sprint / hackathon
 | University-funded Research Assistant
 | Needs assessment, data collection, and data analysis

3. Budget justification

3.1 Key staff
CaDHRI is able to leverage the existing work of several key staff in order to keep costs on core activities low. The three principal staff members include:

- **Carlton Moore, MD** - Principal Investigator will lead the initiative, providing overall direction and expert guidance, and also serve as a consultant for research projects.
- **Brian Moynihan, MBA, MSIS** - CaDHRI Director, will lead operations for the digital health collection, services and expertise, as well as operational planning and execution.
- **Julia Hill, MPH Candidate** - Digital Health Research Assistant, will lead outreach and coordination for events, workshops, and community efforts.

*CaDHRI Principal Investigator and CaDHRI Director* - The costs for Brian Moynihan and Dr. Moore’s work will not come from the award budget. The cost for event space, collection storage, library services and equipment fit within the scope of existing services at the University, and will therefore be covered by the University.

*CaDHRI Project Coordinator* – This position is currently held by Julia Hill, is funded by the University, and is covering all pre-implementation activities.
This position will transition to the Project Coordinator position in June 2016. The cost for the CaDHRI Project Coordinator is included in the CaDHRI budget, and covers funding needed for 0.5 FTE personnel to manage implementation of CaDHRI. The position’s scope of work includes:

- Planning and coordination of “petting zoo” events, speaker seminars, and workshops. This includes recruitment of volunteers for events and device validation services.
- Creation and implementation of digital health collection policies and procedures, as well as solicitation of device donations and outreach for device purchase
- Plan and lead outreach efforts to solicit participation of UNC researchers and experts for CaDHRI research support, user group, and advisory board
- Coordinate consultation services for supported research projects
- Develop and maintain UNC CaDHRI website using WordPress
- Maintain digital health people database

The work of others on campus - such as those involved in assisting in hackathons, petting zoo events, expert literature searches, and facilitating the user group - will also fit within the normal scope of work for respective university staff, faculty, and students involved. Most of the people who will be performing this work have already been identified, such as students from the Carolina Health Entrepreneurship Initiative and Science and Business Clubs; support staff of the Carolina Health Informatics Program (CHIP) and the School of Medicine’s Program on Health and Clinical Informatics; librarians from the Health Sciences Library; and faculty in Informatics, Medicine, Public Health, and related fields.

3.2 Major budget items and support of project goals

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Speakers, workshop leaders, & associated travel costs: The majority of speakers and workshop leaders will be UNC researchers who have experience in conducting digital health research. No travel costs will be incurred. Outside experts will give one seminar and lead one workshop. Outside experts can provide a forward-looking and non-academic perspective of the digital health field, spur interest and spread key knowledge of digital health at UNC. They will seed interest, awareness, and excitement about the effort, and foster the skills needed to catalyze further research and development on campus. Travel costs are used entirely to support visiting speakers and trainers. Internal experts provide a view into the UNC-specific context of conducting digital health research and bring valuable experience to share with researchers new to the digital health field.

Digital health devices & wearables collection: The core collection supports awareness, exposure, research, and clinical applications of digital health solutions. Its budget is designed to balance breadth (a wide variety of devices to increase knowledge and exposure) with depth (collections related to specific studies, which will need multiple copies of relatively few devices). Devices will be purchased in phases to meet ongoing needs. The initial collection will be based on devices identified through the needs assessment, feedback from the first device “petting zoo”, and through pre-identified need for the first support research project (4 fitbits, 1 empatica E4, 2 IMEC Sleep EEG headband).

Supplies & other costs: These are used to provide food and miscellaneous supplies for large events to be held at the Health Sciences Library and UNC Health Care locations.

References