



Center for Health Information Technology &
Innovative Care Delivery

Announcement for Grant Applications

mHealth

The Maryland Health Care Commission (MHCC) is seeking grant applications for innovative ways to use mobile health (mHealth) technology to promote patient engagement and improve patient outcomes. Use of mHealth is emerging in new care delivery models. These models generally place greater emphasis on patient engagement as a way to enhance quality of life and appropriateness of care.

Grant ID Number: MHCC 17- 006
Issue Date: August 4, 2016
Title: Improving Patient Outcomes using mHealth Technology

Letter of Intent Due: August 25, 2016
Final Application Due: September 29, 2016

Application and information on MHCC mHealth grants available at:
<http://mhcc.maryland.gov/mhcc/pages/home/procurement/procurement.aspx>

Table of Contents

I.	About the Maryland Health Care Commission.....	1
II.	Background	1
III.	Aims	1
IV.	Proposal Request.....	1
V.	Overview.....	2
VI.	Requirements.....	3
	A. Required to be considered for an award.....	3
	B. Key tasks following an award.....	4
	C. Key tasks required throughout the duration of award.....	5
	D. Change in Scope Request.....	5
VII.	Required Qualifications.....	6
VIII.	Key Tasks and Due Dates.....	6
IX.	Staffing and Personnel Requirements.....	6
X.	Term of Grant.....	7
XI.	How to Apply.....	7
	A. Requirements for Letter of Intent.....	8
	B. Requirements for Application.....	8
XII.	Conditions of Award.....	12
XIII.	Attachments.....	12

I. ABOUT THE MARYLAND HEALTH CARE COMMISSION

The Maryland Health Care Commission (MHCC) is an independent regulatory agency whose mission is to plan for health system needs, promote informed decision-making, increase accountability, and improve access in a rapidly changing health care environment by providing timely and accurate information on availability, cost, and quality of services to policy makers, purchasers, providers and the public. The Center for Health Information Technology and Innovative Care Delivery (Center) is one of four Centers within MHCC, and is responsible for advancing health information technology (health IT) statewide. The Center's role is to advance a strong, flexible health information technology ecosystem that can appropriately support clinical decision-making, reduce redundancy, enable payment reform, and help to transform care into a model that leads to a continuously improving health system. In addition, the Center fosters innovation in a way that balances the need for information sharing with the need for strong privacy and security policies.

II. BACKGROUND

Mobile health (mHealth) technology has a potential to strengthen the health system through better access to knowledge and information. Emerging mobile device applications are enabling physicians and patients to better manage and monitor health information. Health care delivery is no longer limited to face-to-face encounters; mHealth offers the potential to increase patient engagement in their own health and lifestyle management as devices are readily available to collect information and are connect to the Internet. The MHCC seeks to award grants to use mHealth to demonstrate its value in promoting patient engagement and improving patient outcomes. Findings can be used to support the advancement of mHealth.

III. AIMS

The proposed projects should utilize mHealth to improve health outcomes. Projects should aim to achieve **one or more** of the following goals:

- Increase access to health care services;
- Improve communication between consumers and health care providers;
- Improve public health;
- Increase consumer access to health information and education;
- Enable consumers to take more responsibility in managing their health; and
- Reduce health care costs.

Submissions that utilize an electronic health record (EHR) and/or the State-Designated Health Information Exchange (HIE), the Chesapeake Regional Information System for our Patients are encouraged.¹

IV. PROPOSAL REQUEST

The MHCC intends to competitively award one or more grants to demonstrate the impact of using mHealth to promote patient engagement and improve patient outcomes. The total funding amount for this grant announcement is \$100,000 for an 18-month time period; applicants are required to provide

¹ CRISP enables clinical data to be available to appropriately authorized and authenticated health care providers. For more information on CRISP, refer to their website: crisphealth.org.

a 2:1 match of funds. Demonstrated sustainability of the project is a requirement of applicants. The MHCC has funded various telehealth use cases, which are described on the [telehealth grant webpage](#). *This grant announcement is intended to support innovative ways to promote patient engagement and improve patient outcomes with mHealth and not intended to fund a telehealth use case.*

A Letter of Intent (LOI) and a completed cover page (Attachment A) is required prior to completion of the full application. After review of the submitted LOI's, MHCC will extend invitations to select applicants to submit a full grant proposal. The criteria for the full grant proposal is included with this announcement. Applicants should review the entire application prior to submitting an LOI and completed cover page. Questions related to the grant application should be sent to justine.springer@maryland.gov. Questions and answers will be posted, through the application deadline, on MHCC Procurement webpage at: <http://mhcc.maryland.gov/mhcc/pages/home/procurement/procurement.aspx>.

V. OVERVIEW

Cover page	A completed cover page (Attachment A) must be completed and submitted with the Letter of Intent (LOI)
Letter of Intent	LOIs will be screened for responsiveness and fit to mHealth grant goals. Only those selected will be invited to submit a full grant application.
Summary	The MHCC intends to competitively award one or more grants to demonstrate the impact of using mHealth to promote patient engagement and improve patient outcomes. Demonstrated sustainability of the project is a <u>requirement</u> of the applicants.
Applicant Resources	The proposal should be a new use case that is not similar to MHCC's telehealth award use cases, which are described on the MHCC's telehealth grant webpage at: http://mhcc.maryland.gov/mhcc/pages/hit/hit_telemedicine/hit_telemedicine_grants.aspx mHealth Grant Announcement: http://mhcc.maryland.gov/mhcc/pages/home/procurement/procurement.aspx Attachment A is available here: Attachment A The required Excel attachments are available here: Attachments B-E
Key Dates	Announcement Published: August 4, 2016 LOI and Attachment A Deadline: August 25, 2016 Notification to Apply: September 9, 2016 Full Grant Application Deadline: September 29, 2016 Announcement of Award(s): October 20, 2016 <i>*Deadlines are at 5 pm (EDT)</i>
Maximum Project Budget	\$100,000
Funding Requirements	1. 2:1 Match 2. Maximum of 20% of match in-kind IT services or non-reimbursable clinical hours 3. Match may not include other grant funds
Project Period	18 months
Overview of Grant Elements	1. Unique mHealth use-case (not previously funded by MHCC) 2. Identify three (3) measurable goals 3. Demonstrate project sustainability
FAQs	You can review answers to grant FAQs here .
Contact	For more information and answers to additional questions, please email justine.springer@maryland.gov or call (410) 764-3777. All questions and responses will be posted and updated weekly on the MHCC Procurement webpage .

VI. REQUIREMENTS

An applicant must identify the prime recipient of the grant award and the participating organizations (collectively, the applicant). The application must specify the use case to be implemented, the product name and description of the technology to be used in the project. During the grant period, grantees will be required to present on the progress of their use case to MHCC and at any events showcasing the mHealth grants held by MHCC. Grantees will also be required to participate in monthly progress meetings, which may include a combination of in-person and virtual meetings, and scheduled on-site visits with MHCC staff. At the conclusion of the grant, awardees will be required to submit a report to MHCC that evaluates findings from the project, including the impact of using mHealth on the target population, lessons learned, and sustainability approach after the grant period ends.² The report is intended to serve as a framework for the adoption and meaningful use of mHealth. The MHCC will provide grantees with a guidance document on the report content and structure.

A. To be considered for an award, an applicant is required to:

1. Propose an mHealth use case that meets the following requirements:
 - a. Utilizes HIPAA compliant mobile technology (i.e. smartphones, tablets, wearable devices) and mobile applications for health care or population health services;
 - b. Addresses one or more aims outlined in Section III;
 - c. Is unique from previous MHCC telehealth award use cases, which are described on MHCC telehealth grant webpage at:
http://mhcc.maryland.gov/mhcc/pages/hit/hit_telemedicine/hit_telemedicine_grants.aspx; and
2. Secure a 2:1 financial match with a maximum of 20 percent of the match being: 1) in-kind technical professional hours provided by information technology (IT) staff or consultants; 2) clinical care hours attributed to work on the project in cases where the clinical care hours cannot be otherwise reimbursed through standard methods, such as carrier reimbursement, when applicable; or 3) a combination of (1) and (2) above. Other grant funds cannot be used as a match.
3. Go-live with the implemented mHealth technology and developed protocols for the selected use case within six months of the award date, which includes enrolled participants/patients.
4. Identify and track at least three measurable goals of the project that can be evaluated pre-and post-implementation (including at certain intervals during the implementation) of mHealth. Quality measures for each goal should be clear and verifiable, and align with project objectives. An example is provided below.

Goals must:

- a. Include measure(s), key definitions for all terms of each measure, and a baseline definition (see table below for format); and
- b. Include a numerator and denominator, and identify how the numerator and denominator will be calculated. Some goals may be a target whole number that would not require a numerator and denominator.

² Report length is approximately 10 pages, which does not include appendices.

Goals [Example: Use of a mHealth to track medication adherence for patients with Type II diabetes.]		
Measure <i>EXAMPLE</i>	Key Definitions <i>EXAMPLE</i>	Mechanism to Measure <i>EXAMPLE</i>
Percent [increase/decrease] in [specific measure] <i>Suggested Denominator:</i> Total number of patients [that meet the use case participation requirements] within the [defined timeframe] <i>Suggested Numerator:</i> Number of patients [that received the intervention] <i>Percent Change:</i> A month performance period minus a month base line performance period from the prior year	Type II Diabetes³: <ol style="list-style-type: none"> 1. A1C of 6.5% or higher 2. Fasting plasma glucose of 126 mg/dl or higher 3. Oral glucose tolerance test of 200 mg/dl or higher mHealth application: Application software designed to operate on a mobile device, such as a smartphone or tablet.	Denominator: How the project participants plan to calculate the denominator including source of the data (e.g., Total number of participants with diabetes utilizing the diabetes medication adherence application) Numerator: How the project participants plan to calculate the numerator including source of the data (e.g., number of participants acknowledging medication reminders on the mobile application)
[Whole number example] Total number of participants using the technology and/or frequency of use by participants	mHealth Use: Identify a whole number target on how many participants will use the mHealth application and/or how the frequency with which information is transmitted using the mHealth application.	Describe how you will record utilization of the mHealth application.

5. Identify and report monthly project milestones including specific process measures, which MHCC will request be demonstrated at monthly progress meetings. An example is provided below.

mHealth Project Monthly Technology Milestones		
Monthly Technology Milestones	Process Measures	Responsible Lead
Month 1: Project set-up	Assess set-up of mHealth technology, including server, download, etc.	Name, Title (Project Manager, Technical Manager)
	Assess additional equipment set-up	Technical Manager
	Assess data collection methods	Project Manager
	Share draft of marketing materials	Project Manager

B. Key tasks following an award:

1. Participate in a kick-off meeting with MHCC staff.

³ American Diabetes Association. *Diagnosing Diabetes and Learning about Prediabetes*. Available at: <http://www.diabetes.org/are-you-at-risk/prediabetes/?loc=atrisk-slabnav>

2. Submit monthly milestone reports detailing items, which MHCC will request be demonstrated at monthly progress meetings.
3. Submit a final assessment report at the conclusion of the grant that includes:
 - a. A description of the mHealth project, including technologies and applications that were used, including EHRs, HIE services, etc.;
 - b. Lessons learned, including impact on the target population;
 - c. Project implementation challenges, mitigation strategies, and results;
 - d. Demonstrate the cost effectiveness of the implemented use case;
 - e. Results of the assessment;
 - f. Progress in achieving project goals and other agreed upon or requested metric(s) collected as part of the assessment;
 - g. Sustainability model; and
 - h. Provide recommendations for how the project could be replicated in other populations, including suggested population, and suggested methods for implementation and use.

C. Key tasks required throughout the duration of award:

1. Participate in monthly progress meetings with MHCC to demonstrate progress in meeting monthly milestones. These meetings may occur in-person or virtually; MHCC staff may conduct on-site visits, and request demonstrations of the technology being utilized;
2. Review MHCC comments on the monthly progress meeting assessment form, provide responses as indicated on the form, and return completed form to MHCC by the date indicated;
3. Respond to any actions requested by MHCC;
4. Participate in educational events, meetings, or webinars to showcase and/or demonstrate the work of the project as requested by MHCC;
5. Submit reimbursement requests and all applicable supporting documentation as often as monthly and no less than quarterly; and
6. Submit monthly written updates demonstrating progress with implementation and use of mHealth, and achievement of monthly milestones and project goals in a format specified by MHCC; these updates will serve as an audit trail for both the grant award and matching funds.

D. Change in Scope Request:

If a grantee is interested in making changes to their program that differ from what is stated in their original application, a change of scope request with justification and any modifications to budget items must be submitted in writing by the grantee to MHCC for approval. The MHCC will approve requests at its discretion.

VII. REQUIRED QUALIFICATIONS

The applicant must have the following qualifications:

1. Demonstrated knowledge and experience with mHealth;
2. Experience in the delivery of health care or public health services;
3. Proof of partnership relationship between all participating organizations; and
4. Ability to employ and/or contract with the required staff included in Section IX of the announcement who demonstrate at least five years of relevant experience.

VIII. KEY TASKS & DUE DATES

Grant Tasks	Due Date
Submit draft monthly milestone and quality measures report	10/24/16
Kick-off meeting to discuss draft project plan	11/1/16
Submit final monthly milestone and quality measures report, including project baseline and goals	3/30/17
Use Case Project	
Begin technology assessment, development, and installation	11/1/16
Go-live with mHealth project protocols	1/30/17
Conclude implementation of the project	3/16/18
Final Report	
Draft	2/1/18
Final	3/16/18
MHCC Compiled Report Final Draft	4/30/18

Note: Grant tasks/due dates are tentative and subject to change at the discretion of MHCC, after discussion with the awardee, and are not listed within the table in any particular order.

IX. STAFFING AND PERSONNEL REQUIREMENTS

An applicant may propose to augment or revise the following list of required personnel.

Labor Categories	Description
Project Manager	A senior level individual that will coordinate all aspects of the work and take responsibility for meeting the schedule of tasks.
Technical Manager	A management level individual with experience in managing mHealth technology development and deployment that can ensure staff training and utilization of the mHealth among all participants.
Clinical or Public Health Consultant	A qualified clinical or public health professional with experience relevant to the proposed project that will provide consultation to the Technical Manager to increase the effectiveness of the use of mHealth.

X. TERM OF GRANT

The grant begins on or about **October 21, 2016** and will end **18 months after the grant award date**. Awardee submission of reimbursement requests may be submitted as often as monthly and no less than quarterly on the invoice template ([Attachment E](#)) provided by MHCC, and must include a description of the completed tasks in accordance with the Key Task Schedule in Section VIII, the date and the time period billed for and supporting documentation for requested funds and match contribution. The supporting documentation must be of a quality that will withstand an audit. The match contribution within each reimbursement request must reflect a 2:1 match for that time period. The MHCC will not reimburse all equipment costs in one lump sum; reimbursement requests for equipment costs must be equally distributed throughout the timeframe of the grant. All tasks and work performed, and all reimbursement request documentation included must be to the satisfaction of MHCC for reimbursement approval. Reimbursement requests for any outstanding award funds must be submitted by the 15th of the month after the grant ends or the end date of an authorized extension of the grant period.

If it becomes necessary to revise this announcement for grant applications before the due date for applications, amendments will be announced on MHCC's website. Multiple and/or alternate applications will not be accepted. The MHCC will not be responsible for any costs incurred by an applicant in preparing and submitting an application or in performing any other activities relative to this grant notification. The MHCC reserves the right to cancel this announcement for grant applications, accept or reject any and all applications (in whole or in part) received in response to this announcement for grant applications, to waive or permit cure of minor irregularities, request additional information or modification to an application, and to conduct discussions with all qualified or potentially qualified grant applicants in any manner necessary to serve the best interests of MHCC and to accomplish the goals of this grant announcement.

Prior to an entity conducting business in the State, it must be registered with the Department of Assessments and Taxation, State Office Building, Room 803, 301 West Preston Street, Baltimore, Maryland 21201. It is strongly recommended that any potential applicant complete registration prior to the due date for receipt of applications.

XI. HOW TO APPLY

An LOI and completed cover page (Attachment A) must be emailed to justine.springer@maryland.gov by 5:00 pm Eastern Daylight Time on **August 25, 2016**. The MHCC will extend invitations to selected applicants to submit full applications by September 9, 2016.

An applicant who is invited to submit a grant application must follow the requirements detailed below. Grant applications are due to MHCC by 5:00 pm Eastern Daylight Time on Thursday, **September 29, 2016**. Applications must be submitted via email to christine.karayinopulos.@maryland.gov.

All questions regarding this announcement for grant applications should be submitted via email to justine.springer@maryland.gov; all questions and responses will be posted on MHCC's mHealth website at http://mhcc.maryland.gov/mhcc/pages/hit/hit_mHealth/hit_mHealth.aspx.

A. REQUIREMENTS FOR THE LETTER OF INTENT

The LOI must be prepared in a clear and precise manner and address all requested items, as described below, in **approximately 4.5 pages** and **must not exceed 2,500 words**. Original and creative approaches to using mHealth are encouraged. The LOI **must** contain the following sections:

1. **Cover page:** A completed template cover page in [Attachment A](#) to this grant announcement
2. **Title of the project:** (One line)
3. **Objective** (0.25 page): State the objective of the proposed mHealth project.
4. **Project description** (3 pages): Describe the proposed mHealth project and briefly outline tasks required to complete the project. Include the following elements in the project description:
 - What will the project do?
 - What is the overarching purpose of the project?
 - Who is the targeted population?
 - How will you define who will be project participants?
 - What technology will you be using and what are the capabilities?
 - How will the technology be developed and/or set up?
 - Describe the key programmatic components of the project, such as: (1) marketing and education for potential users, (2) training for implementers and participants on how to use the technology, (3) how the technology will be used and deployed, and (4) assessment of the program.
5. **Program Metrics** (0.25 page): Indicate the program metrics you will be collecting.
6. **Outcomes** (0.25 page): Indicate the aims and expected benefits of the project
 - If the project is successful, what results will you be able to report at the end of the project?
 - What longer-term benefits do you expect for the target population and the broader population?
7. **Sustainability** (0.25 page): Describe your plan for ensuring the project will continue once the grant term is completed.
8. **Qualifications** (0.5 page): Briefly describe the organizations' experience in implementing mHealth initiatives or other relevant activities. You may include a link to your organization's web pages.

B. REQUIREMENTS FOR APPLICATION

An application must address all requested items, as described below, in 15 or fewer pages. Items that were addressed in the LOI should be expanded upon with more detail to assist the

evaluator in understanding specifically how the project will be implemented. Attachments B and C should be completed and submitted with this application.

1. *Scope of Work:*

- a. Scope of work and strategy. This section should describe the proposed mHealth project. It should address the requirements for each task and describe how the proposed services, including the services of any proposed sub-awardee(s), will meet or exceed the requirement(s). It should include a concise and detailed description of the scope, breadth, and plans/approach for completing each task described in Requirements for the applicant (Section VI. A above), *including how the applicant plans to complete the tasks to the highest level of quality and in a timely manner.*

The application should be structured using the sections detailed below, where relevant, technical diagrams should be used to illustrate the application use in the mHealth project. Information submitted as appendices should be specific to support the application, and not technical brochures. Material in the appendices are not included in the total page count. The MHCC may request additional material, if needed for clarification, during evaluation of grant applications.

i. Project Description

- a) Describe the mHealth use case to be deployed. What will the project do? What is the overarching purpose of the project? Who are the participants?
- b) Describe the current conditions that the mHealth use case is expected to address. Explain the current relationship between the participants and the expected impact of the mHealth project.
- c) Who is the targeted population? Why is this population being targeted for this project? How did you identify this population? What is the target number of participants to be recruited for this project?
- d) Describe the role of the individuals involved in the project and what their role will be in the project? Who are the mHealth champions?
- e) What technology will you be using, what are the specifications (specs), and what are the capabilities and shortcomings? How will the technology be developed and/or set up?
- f) What are the key programmatic components of the project including: (1) marketing and education for potential users; (2) training for health professionals and patients on use of the technology; (3) implementation of mHealth; and (4) assessment of the program?
- g) What are the benefits and measurements of success? If the project is successful, what are the visible, tangible, objectively verifiable results that you will be able to report at the end of the project? What longer-term benefits do you expect for the target population and the broader population? What is the envisioned benefit of implementing mHealth?

- h) Will the funds be used to support initial technology investment(s) or expansion of existing mHealth initiatives?
 - i) Demonstrate the applicant's ability to be able to go-live with proposed mHealth protocol for the selected use case no later 180 days of the award date.
 - j) How will the project be sustained after grant support ends? Will the project require ongoing external support after the proposed grant ends?
- ii. Project Plan
- a) What is the timeline for accomplishing specified tasks? As an example, prepare a Gantt chart or other timeline listing project tasks, the time period over which these tasks will be undertaken, and monthly milestones. The work plan chart may be attached as an appendix item to the application.
 - b) The specific methodology and techniques to be used in executing the tasks should be included in this section.
- b. Applicant qualifications. Describe the qualifications of the organization(s) that will be participating in the tasks under the grant. Include all participating organization's experience in performing similar work and, if applicable, work performed specifically related to assessing, developing, and managing mHealth application programs. The applicant must demonstrate how it meets the requirements detailed in Section VI. A, above; please limit to one page.
- c. Experience and qualifications of the proposed staff. Describe the experience and qualifications of the proposed staff in performing similar work and, if applicable, work performed specifically related to deploying programs using mHealth. The grant applicant must demonstrate how its proposed staffing model meets the staffing requirements and required personnel described under Staffing and Personnel Requirements (Section IX, above) and, if applicable, as augmented by the applicant. Other essential staff, their roles in the project, and their relevant qualifications should be identified; please limit to one page.
2. *Proposed Milestones:* Using [Attachment B](#), identify at least six months of milestones that will be demonstrated at the monthly program meetings. The proposed milestones attachment is not included in the Scope of Work page count.
3. *Proposed Measures:* Using [Attachment C](#), identify at least three measurable goals of the project that can be evaluated pre-and post-implementation (including in certain intervals during the implementation) of mHealth. The proposed measures attachment is not included in the Scope of Work page count. The quality measures for each goal should be clear and verifiable, and aligned with a project objective. The goals must:
- Include measure(s), key definitions for all terms of each measure, and a baseline definition (see table below for format);

- Include a numerator and denominator, and identify how the numerator and denominator will be calculated; and
 - Include the source of the data that will be used.
4. *Additional Documentation:* An applicant must include the following as an appendix to the application. Appendices are not included in the Scope of Work page count.
- a. *Financial Proposal:* The financial proposal must include the costs to develop, acquire, and implement the mHealth technology proposed under the grant and the fully-loaded hourly rate for the work to be performed. Include an estimate of the total number of hours required to complete each task. Submit a budget for both award funds and matching funds using [Attachment D](#). The financial proposal attachment is not included in the Scope of Work page count.
 - b. *Letters of Commitment:* Letters of commitment to work on the project from personnel from each organization must also be included as an appendix (appendices are not included in the Scope of Work page count) to the application. The letters of commitment should contain a brief description (approximately one paragraph) of the work to be performed for the project by that individual.
 - c. *Proof of partnership relationship* between all participating organizations must also be included in writing as an appendix.
 - d. *Resumes:* An individual resume or detailed biography for each of the personnel who will be assigned to the project if the applicant is awarded the grant.
 - e. *Role of Sub-awardees:* Sub-awardees if any, must be identified; a detailed description of their contributing role(s) relative to the requirements must also be included in the application.
 - f. *Privacy and Security:* Provide documentation of HIPAA compliance for all mHealth applications and technology. Include a plan for how human subjects and their related health data will be protected, if applicable.
 - g. *Disclosure:* Applicant must disclose any substandard quality of care level deficiencies, CMS admissions ban, and note any outstanding health and safety violations.
 - h. *Demonstration of Technology:* Applicant must be prepared to demonstrate, if requested by MHCC, the mHealth application or related technologies it proposes to deploy as part of the project.

XII. CONDITIONS OF AN AWARD

In the event that MHCC determines that an awardee is not complying with the grant terms and requirements set forth in this application, MHCC may take one or more enforcement actions. These range from actions designed to allow the awardee to take corrective action, such as withholding payment or temporarily suspending an award, disallowing costs, recouping payments made, or terminating an award. Different processes apply depending on the type of enforcement action. If an enforcement action is planned, MHCC will notify the awardee via email and indicate the effect of the action. Additionally, MHCC may authorize a no-cost extension of the grant period in the event that more time is needed to demonstrate project objects. *Applicants are required to acknowledge the conditions of an award in their grant application.*

MINORITY BUSINESS ENTERPRISES AND SMALL BUSINESSES ARE ENCOURAGED TO RESPOND TO THIS GRANT ANNOUNCEMENT

XIII. ATTACHMENTS

Attachments can be found at:

<http://mhcc.maryland.gov/mhcc/pages/home/procurement/procurement.aspx>