



# Federal Crowdsourcing Webinar Series

Episode Two

## **Federal Use of Prize Competitions: Challenge.gov**

***Jarah Meador, PhD***

Director of Challenge.gov

U.S. General Services Administration

***Jessie Buerlein, MSW***

Sr. Public Health Analyst and Prize Lead

Maternal and Child Health Bureau

Health Resources and Services Administration

Department of Health and Human Services

# Prize competition overview

Federal prize competitions have catalyzed advancements in areas such as autonomous transport and infectious disease forecasting, and stimulated research and investment in market sectors including solar energy and small business development.



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## *Benefits of Prize Competitions:*

- Pay only for success and establish an ambitious goal without predicting which team or approach will succeed.
- Reach beyond the "usual experts" to increase the number of minds tackling a problem
- Increase cost-effectiveness to maximize the return on taxpayer dollars.
- Inspire risk-taking by offering a level playing field with credible rules and robust judging.



# Prize Competition Types



## Analytics

Analytics, visualization and algorithm challenges focus on finding better ways to interpret or communicate data.



## Design

Creative design and multimedia challenges can help agencies capture, communicate and project a concept or aesthetic that would be difficult to achieve with a grant or contract.



## Entrepreneurship

Entrepreneurship or business plan challenges are competitions used by government, universities and private sector organizations to help train and equip entrepreneurs, as well as launch their ventures.



## Ideas

An ideation challenge supports new ways of understanding and framing problems, new processes to solve problems, and innovative implementations as solutions to problems.



## Scientific

Scientific challenges seek to promote the understanding of a problem, solution or outcome using empirical or measurable evidence-based practices.



## Software

In a software and app development challenge, an organization asks solvers to create a software application to solve an existing problem or draw attention to potential uses of available datasets.



## Technology

Technology demonstration and hardware challenges seek prototypes or fully developed solutions to catalyze and demonstrate breakthrough technical innovations.



# Historic Examples of Government-Sponsored Prizes



## Longitude Prize

Problem: Inability to accurately determine longitude caused the British Navy many accidents and impacted their naval superiority.

Year: 1714

Sponsor: British Government

Prize Amount: £20,000 (Today's value > £2,000,000)

Winner: John Harrison, a watchmaker



## DC Flag Design Competition

Problem: Over 100 years after the founding of the District of Columbia the capitol was still without an official flag.

Year: 1938

Sponsor: U.S. Congress

Winner: Charles A.R. Dunn, a flag designer, who produced a design based on George Washington's family's coat-of-arms



# Prize Competitions in the Federal Government

*By the Numbers:* More than **100 federal agencies** have run nearly **1,000 prize competitions** since 2010, offering **more than \$250 million in cash prizes** and other incentives.

Legal authorities used to issue prize competitions:

- Direct Prize Authority (DoD, NASA, DOE, NSF, USAID)
- Broad Prize Authority
  - 2010, America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Reauthorization Act (P.L. 111-358)
  - 2017, American Innovation and Competitiveness Act (AICA) (P.L. 114- 329)
- Other (procurement and assistance)

*“Each head of an agency, or the heads of multiple agencies in cooperation, may carry out a program to award prizes competitively to stimulate innovation that has the potential to advance the mission of the respective agency.”*

—COMPETES Act



# Challenge.gov

**Our Mandate:** Challenge.gov serves as a champion for open innovation in government.

GSA launched Challenge.gov in 2010 to deliver new tools and approaches to assist federal agencies in developing and executing successful competitions.

The Challenge.gov program:

- Offers resources, consultations, and training for the Federal Prizes and Challenges Community, such as:
  - An online Prizes Toolkit, developed in coordination with agency prize leads
  - A network of more than 730 prize practitioners across government
  - Individualized consultation to facilitate the use of public-sector prize competitions
  - In-person and virtual training to over 2,000 federal, state and local employees
- Provides the Challenge.gov crowdsourcing platform
  - A centralized site for federal agencies to post prize competitions

# Challenge.gov



**Challenge.gov**  
Government Challenges, Your Solutions

An official website of the United States government [Here's how you know](#)

 Challenge.gov  
Government Challenges, Your Solutions

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## All Challenges

### ALL CHALLENGES



National Institute of Standards and Technology  
**Expanding the SIM Card Use for Public Safety...**  
NIST challenges solvers to store credentials on a SIM card that can be accessed by a mobile app to provide simple, secure authentication for emergency

\$100,000 IN PRIZES

Open Until: 05/15/2019



National Geospatial Intelligence Agency  
**MagQuest**  
A \$1.2 million challenge to advance how we measure Earth's magnetic field.

\$1,200,000 IN PRIZES

Open Until: 05/16/2019



National Institute of Standards and Technology  
**Differential Privacy Synthetic Data Challenge**  
Propose an algorithm to develop differentially private synthetic datasets to enable the protection of personally identifiable information (PII) while maintaining a

VIEW THIS CHALLENGE

Open Until: 05/20/2019



Department of Defense  
**USSOCOM HF Geolocation Algorithm Challenge**  
Help the USSOCOM create an algorithm that utilizes the High Frequency (HF) reception capability of the DRT441 Software Defined Radio (SDR) to quickly ge-

\$27,500 IN PRIZES

Open Until: 05/20/2019



Energy Programs  
**FAST Commissioning for Pumped-Storage Hydropower...**  
Share ideas for reducing the time, cost, and risk for pumped-storage hydropower

VIEW THIS CHALLENGE

Open Until: 05/24/2019



General Services Administration  
**GEAR Center Challenge**  
Scale new solutions to boldly tackle government's most complex management challenges.

\$900,000 IN PRIZES

Open Until: 05/24/2019



An official website of the United States government [Here's how you know](#)

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## GEAR Center Challenge

Scale new solutions to boldly tackle government's most complex management challenges.

**>Status Update:** GSA will host a webinar May 13 to answer questions about the GEAR Center Challenge. Questions can be submitted in advance to [GEARCenter@gsa.gov](mailto:GEARCenter@gsa.gov). Register to participate at <https://www.eventbrite.com/e/gear-center-challenge-qa-webinar-tickets-61438330701>.

[Overview](#) [Rules](#) [Judging Criteria](#) [Prizes](#) [How to enter](#)

**Type Of Challenge: Ideas**

The Federal government would benefit from better access to a well-integrated set of partners representing diverse industries and sectors to help resolve our toughest management problems. How can the government improve collaboration with leading private sector organizations, state and local governments, researchers, academic institutions, Federal government representatives, and the public? We cannot keep solving problems the same way and expect different results.

**What is the GEAR Center?**

As described in the Delivering Government Solutions in the 21st Century reform plan, [A Government Effectiveness Advanced Research \(GEAR\) Center](#) could bring together experts in disciplines ranging from economics, to computer science, to design thinking, in order to take a creative, data-driven, and interdisciplinary approach to new possibilities in how citizens and government interact. The GEAR Center can help government modernize to close the gap between government and private-sector services and capabilities. This may also lay the groundwork for where Federal operations and services need to be in five, 10, or 20 years.

**What is the Challenge?**

This competition challenges "Solvers" (participating individuals, teams or legal entities) to demonstrate the usefulness of a GEAR Center model by describing how this model would tackle one or more of the major challenges facing government described in the current [President's Management Agenda](#) (PMA). For example, how should the government approach the introduction of artificial intelligence into operations? How can agencies more efficiently create a clearing house for matching government needs to relevant project ideas and researchers? Are there new ways to better connect diverse expertise across geographies with Federal agencies who can put that expertise to work in support of their missions? How can Federal agencies better prepare and recruit the Federal workforce?

Before the government invests in a future GEAR Center, it is important to first explore the feasibility of creating these types of partnerships and if they can produce the kinds of quality approaches to problem solving the government needs. This competition is designed to reward the top models and execution strategies that will demonstrate a use case of a potential GEAR Center project by building on existing similar efforts.

As a first step in formulating the vision for the GEAR Center, in December 2018, the interagency GEAR Team [shared the results of the Request for Information](#), in which over 40 entities submitted ideas for what a GEAR Center could be and how it might operate. Now, our goal is to recognize high-potential GEAR Center models by awarding prizes to those that can propose a workable GEAR Center model through a demonstration of how that model would creatively address one or more [PMA-related challenges](#) (pg. 4, 7-9).

**What is the Prize?**

GSA is offering up to three \$300,000 cash prizes to the top solutions proposed, as well as selecting up to five additional winners for public recognition.

**Prizes: \$900,000** [-]

 **\$900,000**

Up to three \$300,000 grand prize winners and up to five recognition winners. The recognition winners will not receive a cash prize. Solvers (individuals, teams, or legal entities) may submit more than one project proposal and are eligible to receive an award for more than one proposal. However, each individual proposed solution to a management challenge should be structured for an individual \$300,000 prize (e.g., a proposal is not eligible for a \$600,000 or \$900,000 award).

**Agency** [-]

**GENERAL SERVICES ADMINISTRATION**

# Challenge.gov



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Information and resources to guide federal employees working on challenges and prizes

[Get Started](#)

## Project Planning Phases

Find detailed information on every phase of project planning and execution.

Prepare   Develop   Conduct   Award   Transition   Project Timeline

## Challenge Types

Find detailed information on every type of challenge.

Analytics   Design   Entrepreneurship

Analytics, visualization and algorithm challenges focus on finding better ways to...  
Creative design and multimedia challenges can help agencies capture, communicate and...  
Entrepreneurship or business plan challenges are competitions used by...



## Contact us:



team@challenge.gov



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DIGITAL GOV

Articles on strategies, policies, use cases,  
impact and more...

And join our listserv: [challenges@listserv.gsa.gov](mailto:challenges@listserv.gsa.gov)

# **Challenge Prizes at HRSA's Maternal and Child Health Bureau**

## **May 14, 2019**

**Jessie Buerlein, MSW**

**Senior Public Health Analyst, Office of Policy and Planning  
Maternal and Child Health Bureau (MCHB)  
Health Resources and Services Administration (HRSA)**



# HRSA's Mission



**Improve Access to  
Quality Health Care  
and Services**



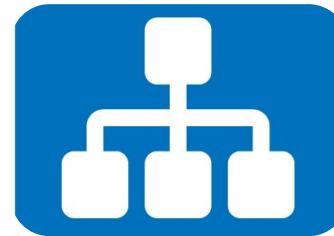
**Strengthen the Health  
Workforce**



**Build Healthy  
Communities**



**Improve Health  
Equity**



**Strengthen HRSA Program  
Management and Operations**



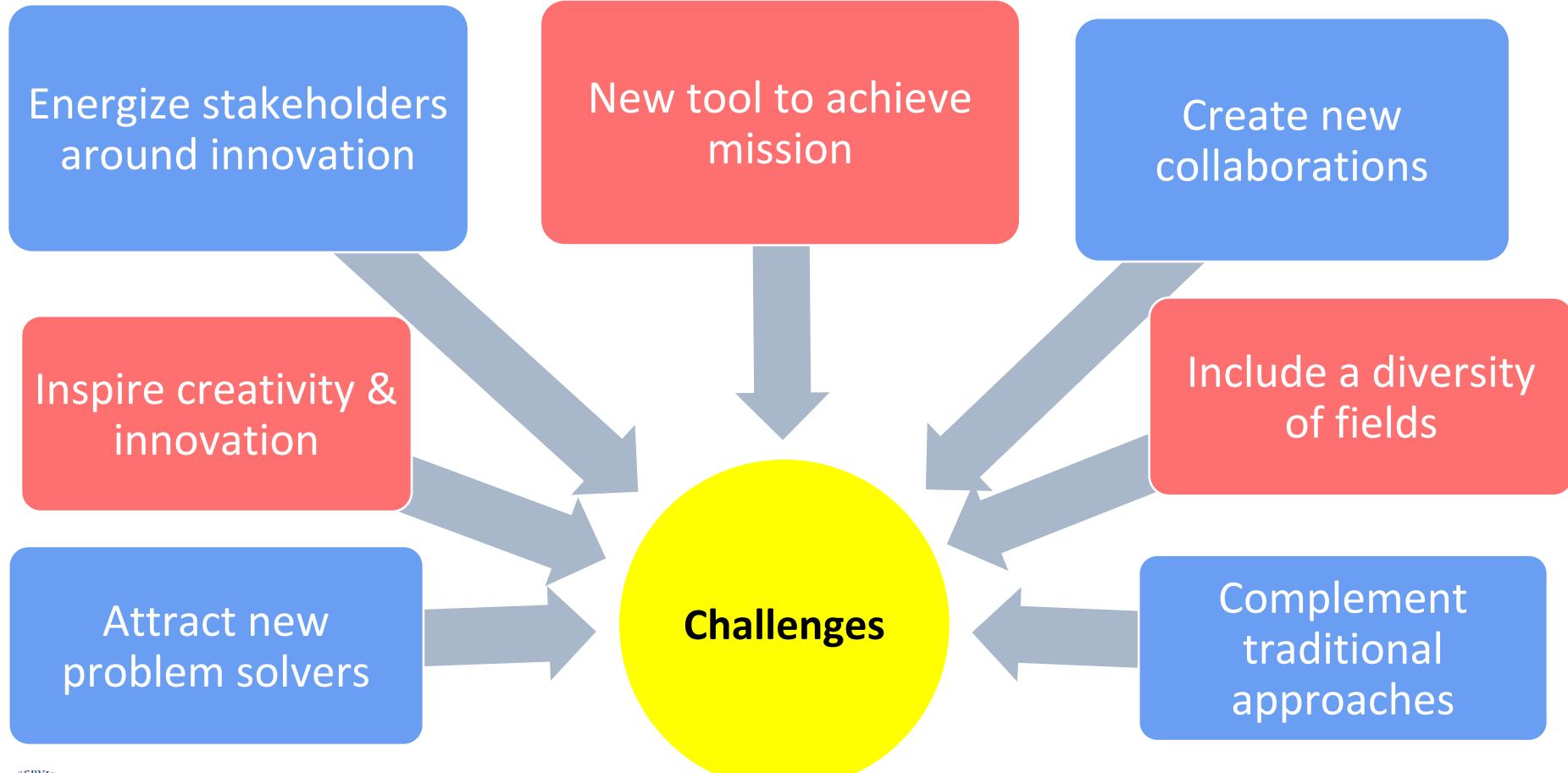
# Maternal and Child Health Bureau



**Mission:**  
**Improve the health of America's mothers,  
children, and families.**



# Benefits of Prize Competitions



# Bridging the Word Gap **CHALLENGE**



# What Is the “Word Gap?”

## The Word Gap:

A disparity between the number of words spoken as well as the types of messages conveyed BY ADULTS to lower-income children versus higher-income children by age 3, often affecting preschool and school-readiness, and future academic achievement.



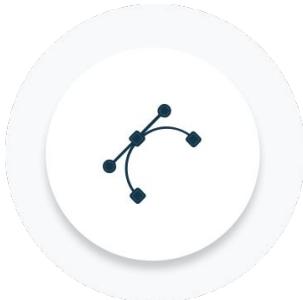
# Why Should We Focus on the Word Gap?

- Hearing words and language interactions are the fuel for almost all later cognitive development
- Vocabulary is a key to later literacy, school readiness and overall success, and later life outcomes
- Early gaps in vocabulary are very likely to widen over time without intervention



# MCHB Challenges

\$300,000 Total for Word Gap



## Phase 1: Design

7-10 winners

\$10,000 to each winner



## Phase 2: Development & Small-Scale Testing

3-5 winners

\$25,000 to each winner



## Phase 3: Scaling

1 winner

\$75,000 grand prize

# Bridging the Word Gap CHALLENGE

BOOTH EXHIBITION AND JUDGE DELIBERATION

September 22, 2016

Health Resources and Services Administration  
U.S. Department of Health and Human Services



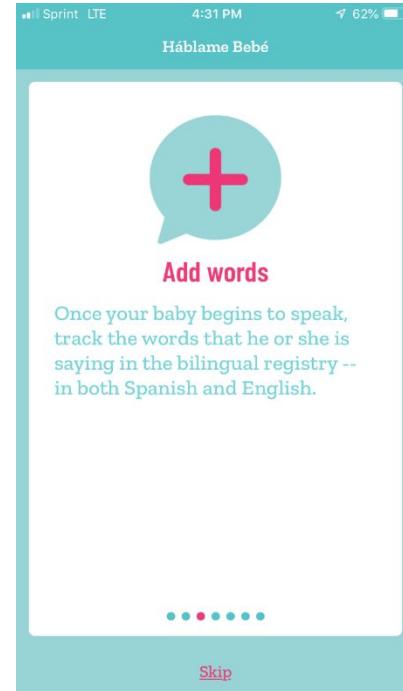
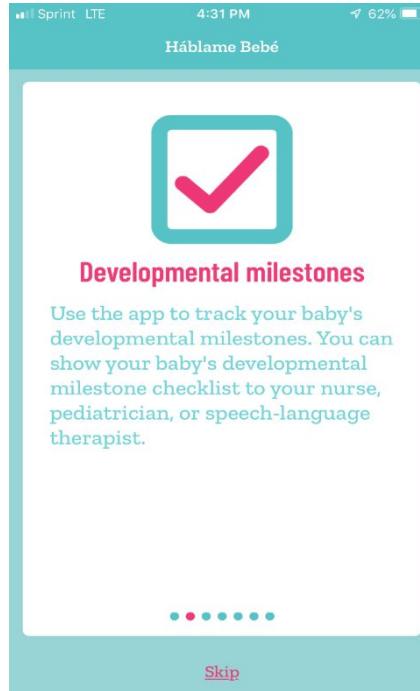
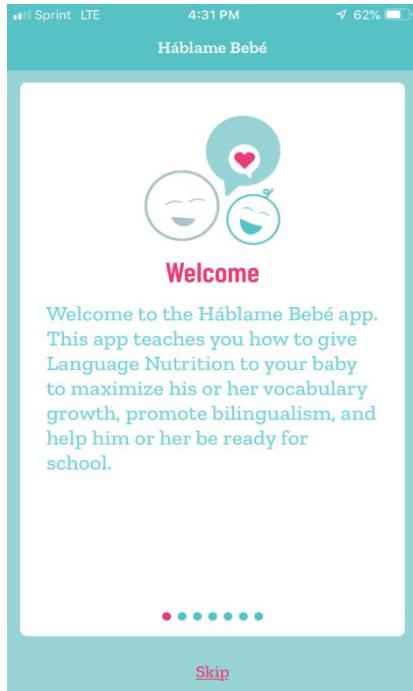
## Phase 3 Teams



# Starling



# Háblame Bebé



# HRSA Engagement Beyond Demo Day

Facilitate  
connections



Foster  
partnerships



Ensure access to  
target audiences



# Lessons Learned

- Challenge structure allowed for proliferation of solutions versus one final intervention
- Iterative process led to more user feedback and improved solutions
- Challenge winners represented diverse strengths and weaknesses; and created their own learning community
- Advisors and Federal Judges were key to Challenge success, and were non-monetary incentives for applicants
- Within government, challenges present multiple challenges



# MCHB Grand Challenges

## **HRSA Challenges**

Remote  
Pregnancy  
Monitoring



Care  
Coordination  
for CSHCN



Preventing  
Childhood  
Obesity



Addressing Opioid  
Use Disorder in  
Pregnant Women  
and New Moms



# Preventing Childhood Obesity

Challenge

- To empower low-income families to achieve and sustain healthy eating practices and healthy lifestyles.

Goal

- Make technology work for the family as a unit within the reality of their larger community environment.



Preventing  
Childhood  
Obesity

# Preventing Childhood Obesity

## Phase 1 Winners



ALASKA NATIVE  
TRIBAL HEALTH  
CONSORTIUM



TEMPLE  
UNIVERSITY  
College of Public Health



University of Arkansas for Medical Sciences



American  
Heart  
Association®



UNC GREENSBORO



University of California  
San Francisco  
*advancing health worldwide*

Geisinger



Children's Hospital  
of Philadelphia®



**HRSA**  
Maternal & Child Health

# Care Coordination for Children with Special Health Care Needs

## Challenge

- To improve the quality of care, enhance family engagement, & positively impact health outcomes for families CSHCN.

## Goal

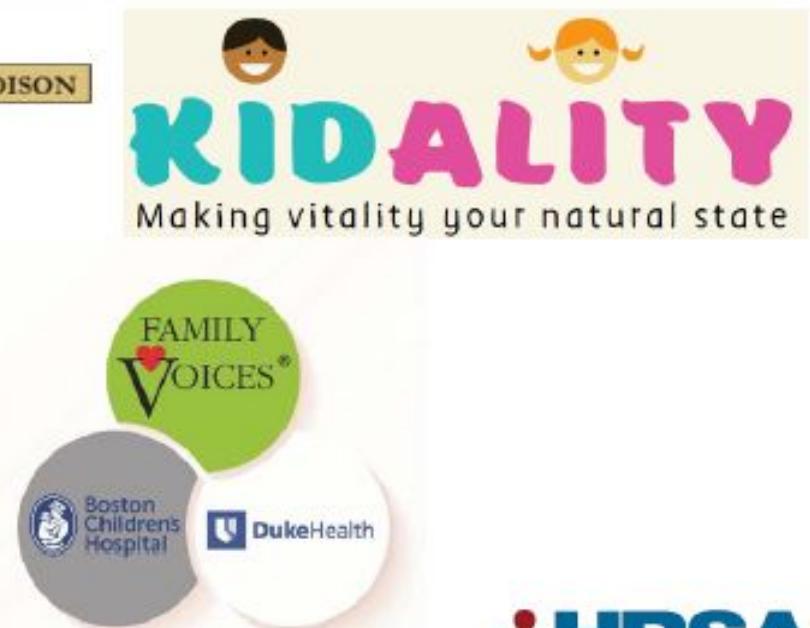
- To use health information technology to organize data from different sources into one cohesive patient-centered record.



**Care  
Coordination  
for CSHCN**

# Care Coordination for CSHCN

## Phase 1 Winners



# Addressing Opioid Use Disorder in Pregnant Women and New Moms

## Challenge

- To improve access to quality health care for pregnant & new mothers struggling with opioid use disorder.

## Goal

- To use technology to provide access to treatment & recovery services to keep women and their children healthy and substance use disorder-free.



**Addressing  
Opioid Use  
Disorder in  
Pregnant  
Women and  
New Moms**

# Addressing Opioid Use Disorder in Pregnant Women & New Moms: Phase 1 Winners



CENTER FOR  
TRANSLATIONAL  
NEUROSCIENCE



JBS INTERNATIONAL  
A CELERIAN GROUP COMPANY



Pacify

iTether



NATIONWIDE CHILDREN'S  
*When your child needs a hospital, everything matters.<sup>SM</sup>*



UMassAmherst



# Remote Pregnancy Monitoring

## Challenge

- Help providers remotely monitor the health of pregnant women.

## Goal

- For technology to allow women to experience the benefits of an ongoing relationship with a health-care provider.



**Remote  
Pregnancy  
Monitoring**

# Remote Pregnancy Monitoring:

## Phase 1 Winners



Rural  
Mamas  
Connect

bloomlife



# Feedback Quotes

“I wish more of the Federal Government were like this. In contrast to this experience, I’ve submitted super long grant applications with bizarre formatting requirements. The result is normally an unnecessarily complex explanation for what we’re working on. Due to their sheer length, I now disregard most such programs. In contrast, I have nothing but positive things to say about this experience. **If the government really wants to attract innovation from places like Silicon Valley this is how you should do it.**”

“My perception of HRSA and the U.S. Department of Health and Human Services has changed because I had the opportunity to meet the people working in these agencies. I see how much they care about babies and families in America. I had the opportunity to see firsthand their passion for providing the best start for the families they serve. It inspired me to share my app with as many families as possible.”



**Stay Tuned for Demo Day!**

**Demo Day will take place on  
September 12-13, 2019  
at HRSA HQ.**

**More details to come:**

**<https://mchbgrandchallenges.hrsa.gov/>**

**@mchbgrandchallenges**



# Contact Information

**Jessie Buerlein, MSW**

**Public Health Analyst, Office of Policy and Planning**

**Maternal and Child Health Bureau (MCHB)**

**Health Resources and Services Administration (HRSA)**

**Email: [jbuerlein@hrsa.gov](mailto:jbuerlein@hrsa.gov)**

**Phone: 301-443-8931**

**Web: [mchb.hrsa.gov](http://mchb.hrsa.gov)**





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# Coming Up...

2 p.m. ET, June 11:

## **Federal Crowdsourcing Webinar Series, Episode 3: The Opportunity Project**

A Conversation with Drew Zachary, director of The Opportunity Project and co-director of Census Open Innovation Labs, U.S. Census Bureau

2 p.m. ET, July 9:

## **Federal Crowdsourcing Webinar Series, Episode 4: Open Opportunities**

Inside Open Opportunities with Lisa Nelson, engagement manager for USAJOBS and director of strategic planning, Open Opportunities, Office of Personnel and Management

2 p.m. ET, Aug. 13:

## **Federal Crowdsourcing Webinar Series, Episode 5: History by the People**

A Talk with Lauren Algee, senior innovation specialist with the Library of Congress Labs



# Questions?

## Contact us:



team@challenge.gov



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