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## **DEPARTMENT OF HEALTH AND HUMAN SERVICES**

### **Health Resources and Services Administration**

#### **Bridging the Word Gap Competition Challenge**

**AGENCY:** Health Resources and Services Administration (HRSA, Department of Health and Human Services (HHS))

**ACTION:** Notice

**SUMMARY:** The Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB), announces the funding opportunity for the Bridging the Word Gap Incentive Prize Challenge.

MCHB is sponsoring the Word Gap Challenge (Challenge) to spur innovative solutions to promote the early language environment and address the “word gap,” the large difference in exposure to language for children from low-income families as compared to children from higher-income families. This Challenge will reward the development and testing of scalable innovations that drive behavior change among parents and caregivers.

The goal of the Challenge is to develop a low-cost, scalable technologically-based intervention that drives parents and caregivers to talk and engage in more back-and-forth interactions with their young children (ages 0-4).

This Challenge, structured in three phases, with a narrowing of applicants through each phase to result in one final winner, will reach a diverse population of innovators and solvers, including coders, public health experts, individuals affiliated with academic institutions, research and development communities in the private sector, and others.

All submissions will be evaluated; separate prizes will be awarded for each of the three phases below.

Phase 1: Design

Phase 2: Development and Small Scale Testing

Phase 3: Scaling

The statutory authority for this challenge competition is Section 105 of the America COMPETES Reauthorization Act of 2010 (COMPETES Act, [Pub. L. 111-358](#)).

**Estimated dates for each phase are as follows:**

Phase 1: Effective on September 30, 2015

Phase 1 Submission ends: December 31, 2015, 11:59 p.m. ET

Phase 1 Judging Period: January 1-January 31, 2016

Phase 1 Winners Announced: February 10, 2016

Phase 2 Begins: February 11, 2016

Phase 2 Submission Period Ends: July 11, 2016

Phase 2 Judging Period: July 12 – August 12, 2016

Phase 2 Winners Announced: August 20, 2016

Phase 3 Begins: August 21, 2016

Phase 3 Submission Period Ends: February 21, 2017

Phase 3 Winner Announced: March 1, 2017

**FOR FURTHER INFORMATION CONTACT:**

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**SUPPLEMENTARY INFORMATION:**

Subject of Challenge Competition

There is evidence that socioeconomic status (SES) is a strong indicator of school achievement, and that children from lower SES backgrounds exhibit a delay in early literacy skills, a slower vocabulary acquisition rate, and lower school readiness rates.<sup>1</sup> Once American children enter kindergarten, there is a significant, prevalent gap between children from higher versus lower SES

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<sup>1</sup> Suskind D., Kuhl, P., Leffel, K.R., Landry, S., Cunha, F., & Necherman, K.M. (2013). *Bridging the early language gap: A plan for scaling up*. (A White Paper prepared for the White House meeting on “Bridging the Thirty-Million-Word Gap).”

backgrounds in average oral language skills,<sup>2</sup> referred to as the “word gap.” There is also growing evidence that early language exposure for children may not only have a significant influence on language development and school achievement, but on the overall trajectory of

children’s lives, including later academic and occupation success.<sup>3</sup> Existing literature reveals several key themes in addressing the language gap, including the significant role of the caregiver in the home, and the effectiveness of engaging parents in language interventions.<sup>4</sup> A significant influence on children’s language development is the context of parenting and parent responsiveness to children’s early language acquisition.<sup>5</sup> Research in this area shows that both the quality and quantity of speech spoken at home during daily interactions influences the relationship between SES and child language skills at school entry.<sup>6</sup> However, research also shows that interventions engaging parents and increasing their knowledge of child development and the importance of child-directed talk may be an effective route to preventing and addressing the SES language gap.<sup>7</sup>

The research base has improved markedly over the last two decades, making a strong case that addressing the word gap is a critical social challenge that may help promote equitable

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<sup>2</sup> Rowe, M.L., Suskind, D., & Hoff, E. (2013) *Early language gaps: Sources and solutions*. (A White Paper prepared for the White House meeting on “Bridging the Thirty-Million-Word Gap).”

<sup>3</sup> Suskind D., Kuhl, P., Leffel, K.R., Landry, S., Cunha, F., & Necherman, K.M. (2013). Bridging the early language gap: A plan for scaling up. (A White Paper prepared for the White House meeting on “Bridging the Thirty-Million-Word Gap).”

<sup>4</sup> Roberts, M.Y., & Kaiser, A.P. (2011). The effectiveness of parent-implemented language interventions: A meta-analysis. *American Journal of Speech-Language Pathology*, 20, 180-199.

<sup>5</sup> Suskind D., Kuhl, P., Leffel, K.R., Landry, S., Cunha, F., & Necherman, K.M. (2013). Bridging the early language gap: A plan for scaling up. (A White Paper prepared for the White House meeting on “Bridging the Thirty-Million-Word Gap).”

<sup>6</sup> Hoff, E. (2009) *Do vocabulary differences explain achievement gaps and can vocabulary-targeted interventions close them?* (Prepared for the National Research Council workshop on the Role of Language in Education.)

<sup>7</sup> Ibid.

opportunity for all children. The frequency and quality of child-directed talk and back and forth interactions between children and their parents have consequences for what is learned and is associated with significant disparities in vocabulary size, school readiness, and long-term educational outcomes.

Technologies now exist to support low-cost, broadly scalable approaches to helping parents and caregivers focus on the early language environment, and the technical expertise exists to address the issue in creative ways. This challenge aims to cultivate an environment to attract a broad array of innovators from outside disciplines to propose inventive, creative, and effective ideas to address the word gap by encouraging higher frequency and higher quality interaction between parents/caregivers and children. This is an opportunity for applicants to get national visibility, by the leading experts and organizations in the field, for new ideas on solving this problem of national importance. This is also an opportunity for applicants to access testing environments and design expertise as they move forward through the Challenge phases.

When developing submissions, participants should consider the context of the user. The submission should be easily utilized by those of diverse cultural, socioeconomic, and literacy level backgrounds, including parents and children who are dual language speakers.

### **Eligibility Rules for Participating in the Competition**

To be eligible to win a prize under this challenge, an individual or entity—

(1) Shall have registered to participate in the competition under the rules promulgated by the Health Resources and Services Administration and the U.S. Department of Health and Human Services.

(2) Shall have complied with all the requirements under this section.

(3) In the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen or permanent resident of the United States.

(4) May not be a federal entity or federal employee acting within the scope of their employment.

(5) Shall not be an HHS employee working on their applications or submissions during assigned duty hours.

(6) May not be employees of HRSA or any other company, organization, or individual involved with the design, production, execution, judging, or distribution of the Challenge and their immediate family (i.e., spouse, parents and step-parents, siblings and step-siblings, and children and step-children) and household members (i.e., people who share the same residence at least 3 months out of the year).

(7) In the case of a federal grantee, may not use federal funds to develop COMPETES Act challenge applications unless consistent with the purpose of their grant award.

(8) In the case of a federal contractor, may not use federal funds from a contract to develop COMPETES Act challenge applications or to fund efforts in support of a COMPETES Act challenge submission.

(9) Shall not be deemed ineligible because the individual or entity used federal facilities or consulted with federal employees during a competition if the facilities and employees are made equitably available to all individuals and entities participating in the competition.

(10) Must agree to assume any and all risks and waive claims against the federal government and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from my participation in this prize contest, whether the injury, death, damage, or loss arises through negligence or otherwise.

(11) Must also agree to indemnify the federal government against third party claims for damages arising from or related to competition activities.

(12) Shall not be currently on the Excluded Parties List (<https://www.epls.gov/>).

## **Submission Requirements**

**The Challenge has three phases.**

*Phase I – Design*

The first stage of the prize competition aims to attract a large set of ideas and innovators. The target product of the first stage will be the conceptualization of the most promising innovations to help support parental and caregiver behavior change around the early language environment. The submissions should aim to demonstrate that the proposed intervention will be accessible across diverse backgrounds and easily implemented by users.

The Phase 1 Submission shall include:

1. A comprehensive description of the proposed intervention in 5 pages or less, including:
  - a. A one-paragraph executive summary that clearly states the question to be solved;
  - b. Background information linking the evidence to support the intervention;
  - c. A descriptive analysis of how the applicant arrived at their idea;
  - d. Descriptions of the methods and technologies involved in implementation of the intervention; and
  
2. An assessment describing the applicant's ability to execute the proposed solution in Phase 2 and 3.

*Phase 2 – Development and Small Scale Testing*

The winners of Phase 1 of the prize competition will then advance to a second stage focused on prototyping the intervention, and testing the effectiveness of the intervention. Using support from the Phase 1 prize funding, intervention developers will test the efficacy of their models to show that the proposed intervention demonstrates an impact on the outcomes of interest for children and families. The applicants should demonstrate both the evidence base for the intervention and its usability. Mentors will be made available to help solvers design appropriate testing methodologies and learn more about the evidence base.

### *Phase 3 – Scaling*

The winners of Phase 2 will move to the final phase of the Word Gap Incentive Prize, which will involve testing the most promising models at greater scale through rollout at the program or community level. This will test the scalability of the device at low-cost, the feasibility of implementation, and the impact on the intended outcomes. Applicants will be assisted in matching their submission with a community or program.

### **Registration Process for Participants**

Participants can find out more information at <https://www.challenge.gov/list/>.

### **Prizes**

- **Total: Up to \$300,000 in Prizes**

- Phase 1: 7 – 10 winners, up to \$10,000 each
- Phase 2: 3-5 winners; up to \$25,000 each
- Phase 3: 1 winner; up to \$100,000

### **Payment of the Prizes**

Prize will be paid by HRSA's Maternal and Child Health Bureau.

### **Basis for Winner Selection**

The challenge entries will be de-identified and then will be judged by a review panel composed of HHS employees and experts in compliance with the requirements of the COMPETES Act and

the Department of Health and Human Services judging guidelines:

<http://www.hhs.gov/idealab/wp-content/uploads/2014/04/HHS-COMPETITION-JUDGING-GUIDELINES.pdf>. The review panel will make selections based upon the following criteria:

#### **Phase 1**

In Phase 1, proposed interventions to be judged on the following criteria:

##### *Accessibility.*

- Is the proposed intervention able to be easily utilized by parents of diverse economic, social, and cultural backgrounds? Is it functional across disciplines/users?

##### *Measurability.*

- How easily will the proposed intervention be evaluated in order to determine its efficacy (in both lab testing and in the real world)? Is the proposed intervention measurable among various audiences?

*Sustainability.*

- Is the proposed intervention “sticky?” Does it fit into daily life? Is it fun to use?

*Impact.*

- Does the applicant present a theory or explanation of how the proposed intervention would inspire behavior change?

**Phase 2**

In Phase 2, interventions will be judged on the following criteria:

*Impact.*

- How did the intervention impact target outcomes for parents/caregivers and children?  
What did the data show?

*Evidence base.*

- Is the intervention grounded in existing science related to the word gap, behavior change, etc.?

*Sustainability.*

- Was the intervention “sticky” among users? Did users want to continuously engage with the program?

*Implementation.*

- How feasible is the intervention? How much support for implementation will the intervention require (estimated financial and time commitment)?

**Phase 3**

In Phase 3, interventions will be judged on the following criteria:

*Impact.*

- How effective was the intervention when implemented at scale? Did the impacts on parents/caregivers from Phase 2 remain consistent?

*Implementation.*

- How feasible was the intervention on a larger scale? How much support for implementation did the model require (financial and time commitment)? How challenging was the actual program implementation?

*Scalability.*

- How costly was the intervention in a real-world setting? How likely are cost efficiencies for program delivery at greater scale? Can the device be used in existing platforms?

In order for an entry to be eligible to win this Challenge, it must meet the following requirement:

**Additional Information**

General Conditions: HRSA reserves the right to cancel, suspend, and/or modify the contest, or any part of it, for any reason, at HRSA's sole discretion.

The interventions submitted across all phases should not use the HHS or HRSA logos or official seals in the submission, and must not claim endorsement.

### **Intellectual Property**

- Each entrant retains full ownership and title in and to their submission. Entrants expressly reserve all intellectual property rights not expressly granted under the challenge agreement.
- By participating in the challenge, each entrant hereby irrevocably grants to HRSA a limited, non-exclusive, royalty-free, worldwide license and right to reproduce, publically

perform, publically display, and use the submission for internal HHS business and to the extent necessary to administer the challenge, and to publically perform and publically display the submission, including, without limitation, for advertising and promotional purposes relating to the challenge.

- Record Retention and FOIA: All materials submitted to HRSA as part of a submission become HRSA records and cannot be returned. Any confidential commercial information contained in a submission should be designated at the time of submission. Submitters will be notified of any Freedom of Information Act requests for their submissions in accordance with 45 CFR 5.65.

Dated: September 14, 2015.

James Macrae,

Acting Administrator.

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