

Crowd-sourcing technology tools used to improve health

HHS Office of National Coordinator for Health IT to stimulate innovation through challenges

Background: The America Competes Act, enacted in December 2010, permits any federal agency head to carry out a program to award prizes competitively to stimulate innovation. Under this authority, the Office of the National Coordinator for Health Information Technology (ONC) announced the creation of the Investing in Innovation ("i2") program June 8, 2011.

ONC's i2 Program is the first-of-its-kind government effort to use prizes and challenges to stimulate and accelerate the development of solutions to targeted health care problems. The i2 program is part of the General Services Administration's Challenge program, which states:

“A government challenge or contest is exactly what the name suggests: it is a challenge by the government to a third party or parties to identify a solution to a particular problem or reward contestants for accomplishing a particular goal. Prizes (monetary or non-monetary) often accompany challenges and contests. Challenges can range from fairly simple (idea suggestions, creation of logos, videos, digital games and mobile applications) to proofs of concept, designs, or finished products that solve the grand challenges of the 21st century. Find current federal challenges on Challenge.gov.”

Using competitions to find solutions to a wide range of issues has a number of potential benefits. Under the right circumstances, they allow the government to:

- Establish an important goal without having to choose the approach or the team that is most likely to succeed;
- Pay only for results;
- Increase the number and diversity of the individuals, organizations, and teams that are addressing a particular problem or challenge of national or international significance;
- Stimulate private sector investment that is many times greater than the cash value of the award; and
- Further a federal agency's mission by attracting more interest and attention to a defined program, activity, or issue of concern.

ONC Challenge Program Criteria: Under ONC's i2 Program, competitions focus on using the Challenge.gov criteria and providing incentives that will help in the development of innovations that support:

- The goals of the Health Information Technology for Economic and Clinical Health Act (HITECH Act) and HHS efforts to achieve widespread health IT adoption and its meaningful use through the CMS Medicare and Medicaid Electronic Health Record (EHR) Incentive Programs, and through ONC HITECH programs such as the State Health Information Exchange Cooperative Agreement Program and the Regional Extension Center (REC) Program; and
- The achievement of a nationwide learning health system that improves quality, safety, and/or efficiency of health care.

ONC Challenges: Since ONC's i2 Program began, a number of challenges have been completed, including:



- One in a Million Hearts Challenge: A multidisciplinary call to innovators and developers to create an application that activates and empowers patients to get healthy and improve their heart health. See the winners, announced March 25, 2012, at <http://www.health2con.com/devchallenge/one-in-a-million-hearts-challenge/>
- popHealth Tool Development Challenge: An effort to create applications that leverage the popHealth open source framework, functionality, standards, and datasets to improve patient care and provide greater insight into patient populations. See the winners, announced Feb. 20, 2012, at <http://www.health2con.com/devchallenge/pophealth-tool-development-challenge/>
- Ensuring Safe Transitions from Hospital to Home Challenge: To improve care transitions by generating an intuitive and easy-to-use application to empower patients and caregivers and that fits into existing ways that providers communicate. See the winners, announced Dec. 13, 2011, at <http://www.health2con.com/devchallenge/care-transitions/>
- Using Public Data for Cancer Prevention and Control Challenge: Toward development of innovative software applications that address challenges faced by consumers, clinicians, or researchers at one or more points on the cancer control continuum. See the winners, announced Jan. 4, 2012, at <http://www.health2con.com/devchallenge/using-public-data-for-cancer-prevention-and-control-from-innovation-to-impact-2/>
- Discharge Follow-Up Appointment Challenge: ONC challenged developers to create an easy-to-use tool that will make post-discharge follow-up appointment scheduling a more effective and shared process for providers, patients, and care givers. Winners were announced June 5, 2012, at www.health2con.com/devchallenge/discharge-follow-up-appointment-challenge/

Several challenges are also open and seeking submissions, including:

- EHR Accessibility Module Challenge (submission period ends July 23, 2012): This challenge tasks developers with creating an application that makes it easy for people with disabilities to consume and interact with their health data, is easy to use and install, and can download data from EHR systems.
- Reporting Patient Safety Events Challenge (submission period ends Aug. 31, 2012): This challenge seeks to address the difficulties providers have with reporting patient safety data and events to Patients Safety Organizations by creating an application to make it easier to report these events, with more data, and to more organizations.
- Blue Button Mash-Up Challenge (submission period ends Sept. 5, 2012): In conjunction with the Department of Veterans Affairs, this challenge builds on the VA's Blue Button feature that allows patients to download their health information and share it with health care providers, caregivers and others. The challenge requires the development of a tool that will help individuals to use their health information, combined with other types of information, such as cost data or comparative health data, to better understand their own health status and make more informed decisions regarding their health care.
- Ocular Imaging Challenge (submission period ends Sept. 5, 2012): A multidisciplinary call to innovators and software developers to create a health IT application that improves interoperability among office-based ophthalmic imaging devices, measurement devices, and EHRs. The output from this challenge will ideally make it easier for Ophthalmologists to use EHRs to improve the care they give their patients.
- HDP Metadata Challenge (submission period ends Oct. 2, 2012): Through the use of HHS' HealthData.gov Platform (HDP), this challenge asks for the development of an



application that would use existing data to make HDP more useful and better at integration, analysis, and interpretation of health information. The challenge would enable analysis of the complex interactions of health and health care services.

- HDP Simple Sign-On Challenge (submission period ends Oct. 2, 2012): This challenge asks developers to provide HDP users access and the ability to leverage existing data and allow collaboration across their communities in an effort to help improve care, health or lower costs.

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