Seeking Solutions to Childhood Obesity—Fast-Tracking New Ideas

Employing an open-innovation approach to develop a new model for academic publishing

SUMMARY

Scientific publishing is undergoing rapid innovation. Between December 15, 2011 and June 30, 2013 a team at the University of California, San Diego associated with the American Journal of Preventive Medicine launched an experiment in attracting and publishing new solutions for pressing public health problems. Using an open-innovation platform, the journal encouraged submissions from sectors beyond academia, including the general public. The solutions could be interventions that may or may not be currently in use or incubated in multiyear studies. The focus was on publishing ideas that were at an earlier stage of development than ideas evaluated in a traditional randomized control trial.

The project team chose childhood obesity as the topic to test this new model for peer-review publishing, and sponsored an idea competition to solicit submissions.

Results

Project Co-Director Jill Waalen, MD, described the following results in a December 2013 report to the Robert Wood Johnson Foundation (RWJF) and in a 2014 interview.

- To solicit and publish innovative solutions to childhood obesity, the project team developed and launched a Web-based challenge platform that supported an idea competition named the Childhood Obesity Challenge. The challenge was held in three rounds, each with a different focus—invention combined with the potential for wide reach and immediate impact; policy; and clinical solutions—and each with first, second, and third place winners who received cash prizes. (See Appendix 1 for the submission and peer-review judging processes; see Appendix 2 for a list of challenge winners.)

1 In the first two challenge rounds, $2,500 was awarded to first place, $1,000 to second place, and $500 to third. In the round three challenge, first place winners received $5,000, the second place award was $2,500, and third place $1,500.
The website built on the platform, Childhood Obesity Challenge, is interactive and has the following features:

— The home page identifies the *American Journal of Preventive Medicine* and RWJF as the challenge sponsors; the purpose of the challenge; types of entry sought; submission deadlines; prize award amounts; and the names of the eight judges for each challenge.

— A logon page enabled registered users to submit ideas.

— Additional pages provide details of the rules; a submission gallery featuring submissions currently for the competition; additional information about the judging panel; a “community wall” for comments on the submitted ideas; and, for the first two challenges, a place for visitors to vote for a favorite idea.

● The Childhood Obesity Challenge attracted 166 submissions and the peer-review panels identified 10 winning entries across the three focus areas, with one focus area having two third place winners. See Appendix 2 for a chart of the winners. An analysis of website visits and idea submissions revealed the following:

— Between July 1, 2012 and May 13, 2013 the site received 70,715 visits.

— A majority of the visits were made from the United States (51,410). Significant visitation came from four other countries: Canada (1,030); Russia (1,090); Portugal (1,690); and China (2,410).

— Visitors accessed the site directly (36%), or via other websites including Google (9%) and Facebook (7%) where the project team placed ads.

— An overwhelming majority of the submissions (75%) came from authors outside academia, thereby expanding the *American Journal of Preventive Medicine*’s base of contributors.

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2 In the first round there was a tie for third place; in the third round there was a tie for second place, and no third place was awarded.
— Winners of the challenge offered a variety of solutions to childhood obesity including games, apps, large-scale community-wide programs, and model ordinances and policies.

— Challenge participants supported their three-page idea description with nontraditional documentation including: videos (42%); apps or online tools (20%); books; coloring pages; video games; and links to project websites.

**Communications**

An article describing the first place winners was published in both the print and online versions of the *American Journal of Preventive Medicine* immediately following each round (See the Bibliography.) accompanied by a full page, color advertisement on the back cover of the printed journal. The project team publicized the challenges with ads on Google and Facebook, and with an email to their journal’s contact list of approximately 10,000 names.

The project team mounted a poster describing the project at the Peer Review Congress in Chicago in September 2013. In May 2014 Project Co-Director Waalen also described the project in a presentation before the Council of Science Editors Annual Meeting held in San Antonio.

**Lessons Learned**

1. **Find a local information technology team with experience setting up and running a challenge website.** “Using a local IT vendor was critical given the fact that national companies that provide such service were cost-prohibitive, and we did not have the expertise or the time to set up our own website and work out the bugs,” said Co-Director Waalen.

2. **Enlist a strong, diverse judging panel of experts from a wide range of sectors, mostly outside academia.** Diversity ensured the project broke out of the traditional academic model, particularly when assessing the reach and feasibility of a practice idea. Diversity also gave the project credibility. (Co-Director Waalen)
3. **Partner with an established publication.** The *American Journal of Preventive Medicine* offered a ready-made infrastructure for peer-review, publicity, and dissemination. “It would have been difficult to come up with a listserv, potential reviewers, and overall legitimacy from scratch,” observed Co-Director Waalen.

**Funding**

RWJF supported this project from mid-December 2011 through June 2013 with a grant of $199,500 to the University of California, San Diego.

**Afterward**

The project ended with this grant.
APPENDIX 1

Submission and Peer-Review Judging Process

Submissions to the Childhood Obesity Challenge were accepted during a 45-day period followed by a 45-day review process involving American Journal of Preventive Medicine editors, peer reviewers, and a panel of eight judges. The judges are experts from diverse sectors including business, health systems, and venture capital in addition to public health and academia.

The submission process entailed the following:

- Site visitors interested in submitting an entry to the competition were invited to click on “accept the challenge” where they logged in as a registered user and were guided through the process of uploading a three-page description of their project along with supporting documents, photographs, videos, and apps.

- Submissions underwent review by journal staff for appropriateness before being published in the website’s submission gallery.

- Communication with the website administrator was available by email for technical assistance and answers to questions about the competition.

The peer-review process for rapid review developed for the project had the following steps for each of the three challenges:

- The guest editors (including the American Journal of Preventive Medicine deputy editor) selected 15–25 submissions to be sent to two to three reviewers each.

- Reviewers were instructed to critique the submissions on criteria of innovation, feasibility, and potential reach.

- Based on these peer reviews, the guest editors selected the top 10 submissions to be sent, along with their reviews, to the judging panel for selection of the 1st, 2nd, and 3rd place prizes.

- During the time of peer review for the first two challenges, the website was open for site visitors logged in as registered users to click on the “vote on submissions” button and select one entry in the submission gallery as their vote for “popular choice.” The popular choice winners were announced at the same time as the peer-reviewed selected winners.
## APPENDIX 2

### Challenge Winners

<table>
<thead>
<tr>
<th>Round</th>
<th>Place</th>
<th>Entry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1st ($2,500 prize)</td>
<td>“FoodCorps”</td>
<td>Nationwide team of AmeriCorps service members embedded in public schools to promote healthy eating</td>
</tr>
<tr>
<td></td>
<td>2nd ($1,000 prize)</td>
<td>“Caloric Calculator”</td>
<td>Tool for decision-makers to calculate effect of physical activity or dietary interventions on daily energy balance at the population level</td>
</tr>
<tr>
<td></td>
<td>3rd (tie) ($500 prize)</td>
<td>“Designing Healthy Corridors”</td>
<td>Models for altering city street infrastructure to promote physical activity (by adding activities along sidewalks) and consumption of healthy foods</td>
</tr>
<tr>
<td></td>
<td>3rd (tie) ($500 prize)</td>
<td>“Healthy Eating Design Guidelines”</td>
<td>Design guidelines for school architecture focused on creating optimal ‘healthy eating’ learning environments for children &amp; communities</td>
</tr>
<tr>
<td></td>
<td>Popular Choice ($1,000 prize)</td>
<td>“Home Cooked Meals”</td>
<td>A proposed business that delivers “meal kits” to parents in a package with exact quantities of prepped ingredients, to decrease cooking time and cleanup</td>
</tr>
<tr>
<td>2</td>
<td>1st ($2,500 prize)</td>
<td>“Healthy Kids Out of School”</td>
<td>Policies adopted by country’s nine largest out-of-school programs to promote healthy snacks, beverages, and physical activity</td>
</tr>
<tr>
<td></td>
<td>2nd (tie) ($1,000 prize)</td>
<td>“License to Kale”</td>
<td>Model ordinance setting minimum requirements for availability of healthy staple foods in retail food and beverage outlets</td>
</tr>
<tr>
<td></td>
<td>2nd (tie) ($1,000 prize)</td>
<td>“Movin’ After School”</td>
<td>Community-wide incentive-based program helping after-school sites improve children’s physical activity and dietary behaviors with support from university graduate students</td>
</tr>
<tr>
<td></td>
<td>Popular Choice</td>
<td>None awarded</td>
<td></td>
</tr>
</tbody>
</table>

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* The round two popular choice was “Protect Kids: Ban Processed Meat” legislation, but the judges did not award a popular choice prize because they deemed the submission not sufficiently related to the mission of the Childhood Obesity Challenge.
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<th>Round</th>
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</tr>
</thead>
<tbody>
<tr>
<td>3 (Clinical Solutions)</td>
<td>1st ($5,000 prize)</td>
<td>“Familias Activas y Saludables”</td>
<td>Multidisciplinary group medical appointment model for prevention and treatment of obesity in Latino children</td>
</tr>
<tr>
<td></td>
<td>2nd ($2,500 prize)</td>
<td>“Healthy Lifestyles Clinic”</td>
<td>Clinic-community care model to treat childhood obesity combining multidisciplinary clinic visits with health coaching and fitness activities at city parks &amp; recreation community centers</td>
</tr>
<tr>
<td></td>
<td>3rd ($1,500 prize)</td>
<td>“STAR”</td>
<td>Mobile and health information tools helping clinicians and parents use evidence-based strategies to improve childhood obesity management</td>
</tr>
<tr>
<td>Popular Choice</td>
<td></td>
<td>None awarded</td>
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**BIBLIOGRAPHY**

(Current as of date of the report; as provided by the grantee organization; not verified by RWJF; items not available from RWJF.)

**Articles**


**Communications or Promotions**