



Strategies to Quicken the Pace of Medical Research

Using online gaming to generate ideas that help accelerate the pace of medical research and drug development

SUMMARY

In 2020, a rampant virus threatens to trigger a new neurological disease in as many as 100 million people worldwide. The president of the United States has formed a commission to accelerate medical research to find a treatment or cure. As a member of the commission, you can remove any obstacle to such research. What would you do?

In fall 2010, the Myelin Repair Foundation held an online gaming event called Breakthroughs to Cures that postulated just such a scenario. The game aimed to spark participants to propose strategies for quickening the pace of medical research to produce new treatments and cures.

The Myelin Repair Foundation is a nonprofit foundation devoted to accelerating the discovery of treatments for multiple sclerosis. (For information on its Accelerated Research Collaboration model, which applies best practices from business to disease-focused scientific research, see [Program Results Report](#).)

For this project, the foundation subcontracted with the [Institute for the Future](#), based in Palo Alto, Calif., to design and build the game interface. The foundation also subcontracted with [Sloane & Company](#), based in New York, to help draw participants and observers to the event, and obtain media coverage of the results.

Key Results

The project team cited these results in a report from the Institute for the Future (available [online](#)) and a report to the Robert Wood Johnson Foundation (RWJF):

- The gaming event, held October 7–8 and November 9–10, 2010, drew more than 400 players on five continents. Players included insiders—leaders in medical research, drug discovery and the media—as well as outsiders: software developers, patients and students who brought a fresh perspective to the problem.

The players used cards with 140-character ideas and micro-forecasts on how best to organize medical research, and responded to the ideas and forecasts of other players. Guest experts guided the game by highlighting the best ideas, giving awards to participants and blogging key themes as they emerged.

- The players offered some 3,000 ideas ranging from specific technological innovations to larger social and cultural changes to speed the discovery and availability of disease treatments and cures. These included:
 - Demolishing the traditional walls around medical research by allowing nonscientists to contribute. For example, the pharmaceutical industry could create a “botnet” composed of 100 million personal computers to aid in computational drug analysis. Other ideas focused on using gaming and social spaces to facilitate discussion, interaction and brainstorming in less pressure-filled and more open ways.
 - Using mobile lab sites, Skype video, in-home telemonitoring and body sensors that automatically report information to centralized data repositories to enroll patients and obtain results in large-scale clinical trials.
 - Creating X Prize–style contests that promise a significant monetary reward for the discovery of treatments and cures for intractable diseases.
- **Games for Change**, which promotes the use of gaming to tackle social problems, named Breakthroughs to Cures among the top-10 social impact games of 2010.¹ The project received coverage in national media, the biotech trade press and the gaming trade press, including the Huffington Post and GamePro.com.

Lessons Learned

1. Gaming is useful, but only up to a point. The game format did not allow players to develop their ideas to the point of making them operational. “Taking the next step would require considerably more work and a core of leaders committed to exploring the strategies,” said Carol Menaker, Myelin Repair Foundation director of communications and project co-director.
2. Match the game format to the desired outcome. Developers limited participants’ responses to 140 characters—emulating the Twitter model—to quicken the pace of the game. However, some players could not convey their ideas in such a short format, and responded by playing a sequence of cards that for some was hard to follow. Giving players more, but not unlimited space might allow them to develop better ideas. (Project Director Menaker)
3. The biggest challenge is convincing people who can make a difference to play the game. There was benefit from and interest in the game and its outcomes but the game

¹ For more information on Breakthrough to Cures, see RWJF’s [website](#).

format proved somewhat foreign to heavy hitters in medical research, according to Menaker. Some of those who did play brought conventional attitudes to the unconventional event, asking questions such as: “How long is this going to take?” and “What am I going to get out of it?”

A more user-friendly interface—and more open-minded heavy hitters—would have made a big difference, Menaker said.

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