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Potent PARTNERships

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When economists talk about the value of a university to a community, they always mention its role in supporting innovation. Gather a group of smart people in one place, reward them for research, provide affordable labor from graduate students and, *voila*, amazing things happen. Like Google.

The page-rank algorithm that made Google the most popular search engine in the world was created by Sergey Brin and Larry Page, two graduate students in computer science at Stanford.

It was quite an idea, all things considered. In 2009, the company reported revenues of \$23.7 billion and net profits of \$6.5 billion. Not bad at all.

Assistant Professor Danielle Varda (PhD 2005) hasn't exactly hit the big time like Brin and Page. At least, not yet. But she has nurtured the development of the PARTNER software tool for performing sophisticated network analysis, and it's rapidly becoming almost Google-like in its popularity within the realm of public health systems.

PARTNER, which stands for Program to Analyze, Record and Track Networks to Enhance Relationships, was developed to meet a growing need to demonstrate the progress and benefits of collaboration to funders and other interested participants in public health service projects. Existing tools were insufficient to measure the effectiveness of collaboration.

"Funders and stakeholders expect agencies to collaborate with partners," Varda says. The objective is to get more bang for their buck and to produce evidence that the strategy is working.

In the past when budgets were flush, agencies prided themselves on their ability to hire the best people. In recent years, however, public health organizations have sought partnerships with other agencies, private companies and individuals who are considered influential leaders and experts in their fields to maximize the level of expertise available while minimizing costs.

For a long time, Varda says, people thought the calculus was simple: "The common assumption was the more people you were connected to, the better." But numbers alone didn't guarantee success.

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"The PARTNER model is built on the premise that more is not always better," Varda says. Some agencies with smaller networks seemed to operate more effectively and efficiently than others with large, impressive connections. The question was: What makes a network work?

Varda was at the Rand Corporation about four years ago when she received a grant from the Robert Wood Johnson Foundation to develop a tool to help public health departments measure and monitor connectivity with partners. "I decided that people needed a tool, something tangible, that they could use to put information in and get analysis out," she says.

"I never thought I would get into the business of programming computer software," but one thing led to another and before long, with the help of some very smart students, the social scientist was up to her elbows in computer code.

She joined the faculty at the School of Public Affairs in 2008 and "spent four or five months working on a plan for how to take PARTNER to the next level," she says. "The best thing I did was e-mail a computer science professor." She discovered that student teams were available to work on projects for credit. "I went to the class 8-1/2 months pregnant and presented to the students. I was lucky because the smartest, brightest team of students picked it up."

Dale Anderson, a student from the team, came to her house just weeks after her daughter, Olivia, was born, and the project to upgrade the PARTNER tool began immediately.



“It’s really a sophisticated database with links to an analysis tool,” Varda says. “And the students did this all for free.” One of those students, Michael Cooper, continues to help refine the system.

Mario Rivera, program evaluator at the Colorado Department of Public Health and Environment,

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explains how the tool has worked for him. He was asked to do a social network analysis for a coalition of public health teams in Jefferson County. “I was pretty overwhelmed at first,” he says.

Rivera worked with the two co-chairs of the coalition to customize the survey questions included in the tool. The 19 members of the coalition completed the survey; the results were loaded into the database; and then he worked with Varda to analyze them and develop a presentation for the group.

“PARTNER comes up with a pretty nice graphic display showing who connects with who,” he says. “It was a great find for me.”

Rivera says the Centers for Disease Control and Prevention is keenly interested in using social network analysis to evaluate coalitions in health care, and PARTNER makes it much easier to do.

“PARTNER looks at who’s at the table and if there are gaps or redundancies,” Varda says. “It can help users strategize about how to improve their collaboratives, for example, by reducing the number of meetings held and the number of connections, while continuing to

reap the collaborative advantage.”

She says that sometimes it is used to identify problems or to confirm an intuition about how coalitions are working. “It’s meant as a process tool and a strategic planning tool,” she says. It’s not designed to set goals for the groups or evaluate programs in terms of health outcomes.

As tight budgets require more collaboration in the public service sector, the demand for PARTNER has increased dramatically, pushing Varda, who teaches, does research and still wants to have time with her family, to the brink. “I thought about shutting it down last spring,” she says. “I couldn’t keep up with the demand for support.”

Then in July she won an ad hoc grant from the Robert Wood Johnson Foundation to hire Jessica Haxton, a post doc, to help PARTNER users. The

foundation wants to make sure PARTNER will be available to organizations that need it.

At the AcademyHealth annual research meeting in Boston last June, Debra Perez of the Robert Wood Johnson Foundation praised Varda for her “exciting work” in developing PARTNER and helping public health agencies become more “practice-oriented.”

While Varda’s innovation is hugely valuable to the organizations that use it, one thing it’s unlikely to do is make its creator rich.

“It’s hard for people to understand, but PARTNER is not meant to go big,” Varda says. “Its simplicity is what makes it so appealing to practitioners. It’s very much for applied use by real people.”

And best of all—at least from the point of users across the country—it’s free.

WONDERbabies tests networks for special-needs kids

While the PARTNER tool thrives as a useful tool for practitioners, Danielle Varda continues her network analysis research in numerous projects, including the evaluation of statewide systems of care for babies and young children with special health-care and developmental needs. In partnership with her co-investigator Ayelet Talmi, director of WONDERbabies, and the Center for Public Private Partnerships, Varda implements translational research by gathering data using PARTNER, analyzing this data, and providing technical assistance for quality improvement.

“We’ve collected data looking at organizations across the state and how it has coordinated care for this population. You see a lot of partnerships, and at first glance you would say that it seems that the money is well spent and children should be getting healthier and getting good care,” she says. “It looks terrific on paper.

“But when you ask the families, they say it’s very difficult to navigate these systems. Their real networks are their personal networks ... families supporting families.”

The research is moving into a second phase to evaluate the families’ personal networks. The final phase will implement Strategic Collaborative Management to recommend changes so the system will better meet the needs of the children.