



Simulating a Better Health Care System

Written by:



Per Stahle
Senior Vice
President, BTS

"The health care system in the U.S. is broken — we know that," said Scott Wallace, a professor at the Darden School of Business at the University of Virginia. "We can get less care, spend more or find a way to get more value for our money by improving the ratio of healthy outcomes to dollars spent."

With that idea in mind, Humana Inc. and the Santa Fe Institute invited health care professionals from organizations such as the American Medical Association, the University of Chicago and other regional hospitals to participate in a simulation program last February in Santa Fe, N.M. Humana partnered with BTS, a leading global strategy implementation firm, to create one of several Health Economy Simulator (HES) events. Five teams of doctors, hospital administrators, government administrators and payer representatives teamed up to compete against all Humana customers from the region over two days in a race to improve the health of their particular region's population by 2015.

Humana, headquartered in Louisville, Ky., is a Fortune 100 health care company that offers insurance products and health and wellness services. With 35,000 employees, Humana serves more than 17 million health plan members in the U.S.

The Humana Leadership Institute, the company's internal leadership development organization, created the HES to help accelerate health care innovations in the market, region by region.

Within minutes of arriving for a simulation, Humana customers, health care providers and local health economy stakeholders are assigned a team and a role — hospital administrator, doctor, payer, government administrator or employer — and immersed in an experiential learning environment designed as friendly competitions with five teams of five to seven members.

Once engaged in the simulation, the participants work together to make dozens of choices for their region, including setting health care taxes and pricing, and investing in various programs and policies for hospitals, doctors and patients. The simulation software allows each team to explore the system-wide benefits by choosing

different variations of the aforementioned decisions. They receive immediate feedback on how these decisions impact key performance indicators.

Next, the facilitators introduce ideas that may be helpful for the simulation and in real life. They then debrief and discuss the group's results and the decisions made. Armed with the knowledge of what worked and what didn't, the groups go into the next year of decision making. This iterative learning process is repeated for two more "years."

Participants communicate and collaborate with other team members who are health care economy leaders with whom they might ordinarily only negotiate contracts, as opposed to building consensus. Within a simulation, a business year is compressed into a day or less. This means participants are able to prioritize issues and witness the impact that would ordinarily occur during several months in a matter of hours.

Change Perspective, Encourage Collaboration, Innovation

The Health Economy Simulator is meant to foster collaborative relationships with an eye toward the future and to demonstrate that no one group can change the health care system alone.

"We all know what's going on with the transformation of the health care system — or, rather, the lack of transformation," said Deb Gmelin, corporate director of Humana's Leadership Institute. "Humana wanted to be part of the solution in terms of bringing leaders together in a community to understand what's possible through a learning experience when we're collaborating and working together for the well-being of that community. People's perspective can change rapidly when you use experiential learning."

During the past two years, Humana has hosted 10 of these sessions in different parts of the country. The communities have ranged from large cities to smaller communities. The session in collaboration with the Santa Fe Institute was the Health Economic Forum, where health care providers got together with the academic community to discuss and explore what can be done.

At the core of the HES is a computer simulation that enables participants to see how a single action can ripple through the health ecosystem — sometimes with dramatic effect and unintended consequences. For example, when a team changes the way employers offer benefits, the simulation calculates the decision's impact on everything from hospital profitability to population growth and from business recruitment to overall community well-being.

Leaders evaluate and discuss different strategies to improve local health economies. As they implement the strategies they observe through the computer business simulation, they see how their decisions affect the entire health care system. After spending up to three hours reviewing their simulated decisions, the participants have a discussion session to delve into different possible solutions, such as team-based and value-based care.

At the end of each of three simulated years — or two real days — the organizers and facilitators reveal the results, comparing the fiscal and actual health of each team's fictional region and how they were able to achieve their results. For

instance, a group that changed the way employers offered benefits found it had affected everything from hospital profitability to population growth and business recruitment. Similar after-effects were recorded when other teams chose to raise taxes or hire more nurses; even small investments in health promotion translated into future cost savings.

A variety of data is measured, and to win the simulation, a team must show improvements in:

- **Population wellness:** Delivering improved overall health with fewer chronic conditions.
- **Public satisfaction:** Increasing consumer engagement and satisfaction.
- **Health outcomes:** Improving health outcomes and patients' quality of life, including better managed chronic conditions.
- **Cost per capita:** Reducing health expenditures.
- **Economic growth:** Providing a better local health care system with healthier, more satisfied people and more profitable companies to attract more employers and promote economic growth.

"The goal of the Humana Health Economy Simulator is not to solve the health care crisis in two days, but to lay the foundation for real change, real solutions and real reform," said Scott Wallace, former president and CEO of the National Alliance for Health Information Technology. "By creating teams of multiple health care stakeholders and presenting them with unfamiliar challenges and responsibilities, this simulation requires a new level of collaboration and empathy among groups that are often thought to have competing interests."

A Simulation in Action

At a simulation offered in Chicago, many teams chose a long-term strategy — spending more on IT, infrastructure and research into wellness programs. Those teams didn't fare well in the first year of the simulation. Other teams chose to cut costs and improve savings, while still others chose to increase taxes. These teams wound up on top in year one. But over time, consumer satisfaction, quality of care and unforeseen costs often came back to haunt them.

The teams that chose to invest in a system-wide, coordinated IT infrastructure with incentives and initiatives to improve quality and coordination of care offered one example of long-term versus short-term strategy. Teams that put money toward standardization of health records experienced cost issues in year one. But in a simulation anything is possible, and when the simulated government required standardization, the teams that didn't invest in IT in year one were forced to scramble. They lost the opportunity to gain integration benefits in their simulated community and ended up with a medical cost 5 to 10 percent higher than the other simulated communities.

Overall, the Chicago teams that did best had a value-based insurance policy. They were looking at the value of a patient's treatment and based their prices on that. Something that could save a life would be free, for example. But drugs for restless leg syndrome would be more expensive, because those aren't responsible for keeping a patient alive.

"I really like the computer tool," said Don Hall, a principal at Delta Sigma, a national health care consultancy composed of former nonprofit health care CEOs.

"You're looking at a health care market and you can make decisions about changes you want to make in that market and you can immediately see what the impact is. Then to be able to look out three years — frankly, in health care, that's a lifetime."

In Chicago, at the end of two days, former adversaries were using terms such as understanding and trust, and trying to create ways to meet after the simulation to continue their collaboration.

"It's a very unique situation for us to bring in our provider community, our benefit partners and our clients into one common, central setting and experience a discussion that removes their daily job barriers and engages them in collective problem solving in regards to the health care economy," said Dan Oftedahl, president of Humana of Colorado.

At the conclusion of the session each team had created a three-year plan that, if implemented by all the parties, would cut costs, increase preventive care, cover a population majority and enhance revenue.

"While all participants left the session with new ideas to consider within their community, the real value came from the insight that through collaboration real change can take place within the health care system," said Ray Vigil, former chief learning officer at Humana.

Anecdotal evidence shows the impact of these sessions and the changes to the level of collaboration to build a better health care system continued after the events concluded. In several of the communities, Humana initiated follow-up breakfast meetings, and participants used online social networks to keep the conversation and momentum going.

About BTS

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