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Bring game-theory concepts into play

By Mark Harrison
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Although game theory emerged decades ago, its continuing application to an ever broadening range of problem-solving and cognitive processes give it the quality of a surprisingly enlightening and “new” way of thinking. Game theory’s framework and perspectives create this “newness,” particularly as applied to highly complex strategy in a very dynamic marketplace—a perfect construct for healthcare strategy during the reform transition.

Game theory is based on the fundamental notion that the model of marketplace competition can be treated as a game. The players of the game all contribute to and extract value from the sum total value of the game—much in the same way the pot works in a poker game. The game is governed by its elements—the players, the value added by each of the players, the rules, the tactics used by the various players and the scope or boundaries of the game. Players can both play the game and change the game at the same time by strategically changing the elements of the game.

Let us use the example of the emergence of electronic health records and the evolution of health information technology. Various players will use this dynamic environment to change their value added, their tactics and the complex rules relating to health information to extract more value from the game. This example also drives home the point that increasing value added does not always translate into extracting more value without changing other elements of the game.

Another example is the battle over the yet-to-be-defined rules relating to healthcare reform. The definition of these rules will affect player value both added to and extracted from the game. Yet another example is mergers, acquisitions and divestitures that will be used to change the players of the game—again to add and extract more value. “Changing the game” is one of the most central and valuable themes of game theory in forming strategy.

Of course, all of the players are engaged in playing and trying to change the game. This is the second valuable contribution of the game theory framework: a focus on all of the player perspectives, rather than only your organization’s perspective. Players must anticipate player actions and reactions as the game is being played. This multidimensional perspective is essential to understanding who the competition really is and why.

For example, in the 1990s, many hospital organizations focused primarily on their hospital competitors rather than the competitors who were having a bigger impact on them—managed-care organizations. The insurers changed the players (by a wave of insurer consolidation) and the tactics (creation of capitation-based payment mechanisms designed to lower utilization and shift utilization risk) to increase their value added to and extracted from the game.

Many elements of healthcare reform will create similar goals. Will the game be played differently this time?

Lastly, game theory introduces the notion of changing the game by engaging other players in cooperation and competition in a fashion that produces “win-win” rather than “win-lose” outcomes. Health reform creates many opportunities for hospitals, physicians and insurers to partner together in this way. Game theory offers the perfect construct to test the strategic desirability of these alternatives and to design new structural relationships that “change the game” for the better.

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