



How to use war games as a strategic tool in health care

For health care organizations facing uncertainty, war games can be an effective way to practice strategic decision-making in a risk-free environment — before choices have to be made in the real world.

**Elizabeth Bury,
John Horn, and
David Meredith**

In late 2010, senior managers and clinicians from the English National Health Service (NHS) gathered with colleagues from regional and city governments to deal with a problem all too familiar to health care executives elsewhere: to prepare for health care policy changes that the newly elected government was planning. To determine how best to respond, they used a technique widely employed in business but rarely utilized in health care — war games.

After one day of simulations, the participants gained several important insights. They discovered, for example, that how regulators interpreted the new policies permitting increased market competition would strongly influence how the reforms played out. They also realized that senior NHS executives would have to take a more active role in influencing how various areas of policy were interpreted.

A large national payor in the United States used a similar approach to determine how it could best respond to that country's health reforms. A war game helped the company realize that the objectives of for-profit and not-for-profit insurers would differ considerably under the reforms, as would the objectives of national and regional players. As a result, each group would likely make different choices in the face of regulatory changes. The game also identified a set of “no-regrets” capabilities that would help the payor thrive in the future, regardless of what strategy it adopted.

Given today's uncertainties, war games could be a useful tool for other health care organizations. The games could enable them to better anticipate the effect of regulatory changes, the influence of new technologies on care delivery and economics, and the impact of new entrants with different business models. The games could also help

health care organizations better prepare for negotiations with major suppliers.

How war games can help health care organizations

Strategic planning is inherently more difficult in health care than in many other industries because of the vast range of stakeholders that must be considered and the literally life-or-death nature of many of the decisions that must be made. Most health systems, regardless of how they are funded, contain multiple autonomous or semi-autonomous players, all of which pursue their own, often non-aligned, agendas. Strong regulatory involvement, frequent technological changes, and the lack of symmetric information between patients and providers increase the degrees of uncertainty affecting any scenario.

Furthermore, most strategic plans include assumptions — conscious or unconscious — about how other stakeholders will behave, and the success of those plans often depends on the actions that other organizations take. Yet few health system managers have been trained to think systematically about how others will respond to change. Consequently, even a strong strategic plan can fall victim to unpredictable events and unexpected reactions from others.

War games are a way around this problem. They enable an organization to gain a deeper understanding of the other players in the system and to better predict how those groups are likely to respond when changes occur. As a result, the games allow an organization to practice making strategic decisions in a risk-free environment before having to commit to its choices in the real world.

As their name implies, war games began as a military exercise. For almost 200 years, commanders have gathered their armies in

“War games force participants to think outside the box, make choices about how to act given specific market conditions, and react to the choices of others. As a result, participants gain a greater awareness of other players’ perspectives and a stronger ability to anticipate how those players will behave under changing conditions.”

the field to test how they would do in actual battle. Groups of soldiers are assigned various roles to play — both allies and enemies — in a simulated battle to understand the armies’ strengths and weaknesses before they are subjected to a real fight.

The concept of war games has since been adopted by the corporate world. Many companies have found war games to be invaluable when they are facing uncertainty, the objectives of the other organizations they must interact with are unclear, and it is unlikely that those objectives are aligned.

A defense company, for example, recently used a war game to sharpen its strategy after its government announced potential cutbacks in defense spending. The company, whose main client was one branch of its government’s military, did not know how large the cutbacks were likely to be or what weapons systems the military would focus on in the future. The war game helped the company understand where it had strengths, how it could partner with other organizations, and what strategic moves it had been overlooking.

A high-tech company used a war game to evaluate which of its product segments were likely

to be commoditized in the near future. The game also helped the company determine which potential industry entrants were the biggest threats to its future and whether a wave of mergers was on the horizon.

Pharmaceutical and medical device companies are also using war games. One pharmaceutical company, for example, played a game to understand how pricing decisions and generic competition would affect its ability to gain market share for a new drug. A medical equipment supplier, faced with cost pressures and increased competition, used a war game to strengthen its negotiating strategy before entering contract-renewal discussions with a large customer.

What war games entail

War games are interactive sessions with a defined sequence and clear rules (Exhibit 1). Teams are assigned to play the role of different stakeholders — in a health system, these might include payors, hospitals, physician groups, regulators, and suppliers. In the game’s first round, the teams are asked to respond to a given challenge; the actions each team can consider are stipulated by the game’s rules, which are based on what is permissible within the system. (A hospital, for

Exhibit 1

War games are a useful tool for developing strategy**War games...**

- | | |
|-------------|---|
| What | <ul style="list-style-type: none"> • Are interactive workshops that help an organization understand the interactions among market stakeholders and thereby clarify its strategic options |
| Why | <ul style="list-style-type: none"> • Provide vital insights into key questions in strategic situations (in most cases, far better than the insights that can be gained from static analyses) • Help align an organization's management • Are a great learning experience for developing strategic planning skills |
| When | <ul style="list-style-type: none"> • Are useful to run when new strategies are being developed and when major strategic reactions need to be made; tactical implementation plans can then be developed based on the insights from the war game • On rare occasions, may be useful for important tactical questions (e.g., pricing negotiations) |
| Who | <ul style="list-style-type: none"> • Bring together expertise and knowledge from throughout the organization • Enable participants to play a range of roles, including their own organization, its competitors, and other significant stakeholders (e.g., customers, regulators), thereby gaining deeper insight into the perspectives of all stakeholders |
| How | <ul style="list-style-type: none"> • Involve a three-step process: preparing the workshop, conducting the game, and then debriefing and synthesizing insights • Require anywhere from two weeks to several months for development (depending on the games' complexity). The workshops may last anywhere from one half-day to several days, including at least one hour (and often more) for debriefing participants |

example, could not decide to ignore tendering regulations.) In subsequent rounds, each team reacts to the moves the other teams have already made.

Ground rules are determined before the game is begun. They stipulate not only how many teams there will be, what roles the teams will play, and what actions the teams can take, but also the likely impact of a given action (again, based on what is realistic in the system).

In some war games, a winner is declared: the team that outmaneuvered all others. In most cases, though, the goal is not to uncover a winner but rather to develop new insights. War games force participants to think outside the box, make

choices about how to act given specific market conditions, and react to the choices of others. As a result, participants gain a greater awareness of other players' perspectives and a stronger ability to anticipate how those players will behave under changing conditions. They also develop a much deeper understanding of their own organization's strengths and vulnerabilities.

Practical tips for health care organizations that want to use war games are presented on pp. 36-37.

Case example: English NHS

In 2010, the UK government changed parties for the first time in 10 years. The new government announced a sweeping set of reforms to the NHS. It planned to expand the role of competition

Exhibit 2

Participants in the NHS war game played a variety of roles

Commissioning Board

- Allocates NHS resources to other participants
- Provides commissioning leadership and performance management

Northlees Clinical Consortium

- Large consortium covering more than 300,000 population
- Has historically been an innovative commissioner
- GP/primary care performance is generally strong, but there are a few problem practices

Dukes Hospital

- Large academic medical center with research and teaching facilities
- Significant deficit (£2 million/month)
- Despite operational improvements, struggling to overcome low utilization rates and high borrowing costs

BlueSun Partners (private investors)

- Considering market entry
- Selecting investment strategy among different model options (e.g., primary/community care, hospital, commissioning support)

Walkerdale Local Authority

- Relatively affluent council in an urban area; until recently, was easily able to deliver needed services
- Is now facing increasing financial pressures, particularly for elderly care costs and residential care provision

Thripbeck Local Authority

- Rural council in a former mining area
- Must cope with significant local deprivation and population health outcome challenges

Royal Trueman Hospital

- Large, financially stable hospital that merged with a nearby community provider two years ago
- Merger was very successful; the two organizations integrated quickly
- Community care now accounts for 30% of activity

Grayscombe Clinical Consortium

- So far, has been financially strong and relatively innovative, but its small scale has limited its ability to invest in major programs
- Relatively strong GP/primary care performance, which has been enhanced by its small size (permits greater oversight of specific practices)

St Anthony's Hospital

- Large hospital with significant financial concerns that are hindering its ability to operate
- Management team was replaced six months ago; interim team has been given 18 months to bring the hospital to a break-even point

Hamlington Clinical Consortium

- Midsized consortium covering about 250,000 population
- Currently operating at a small loss (roughly a £2.6 million annual deficit on top of an allocation of £250 million)
- Some significant primary care issues (contains a large number of subscale, single-GP practices and substandard buildings)

● Hospital ● Consortium ● Private investment fund

GP, general practitioner; NHS, National Health Service.

within the system, abolish the primary care trusts (PCTs) that had been responsible for planning and paying for care, replace the PCTs with new organizations run by family doctors (clinical commissioning consortia), and alter many of the regulations governing care provi-

sion. All of these changes would be implemented in the context of tight controls on overall spending.

Although the government's goals were clear, transition planning had only begun in late 2010, and the roles that many organizations — both

within and outside of the NHS — would play after the changes were implemented were left unclear. Senior NHS executives and their local government colleagues therefore decided to use a war game to better prepare themselves for the road ahead.

Structure of the game

Set in a fictional area of England, the game was designed to allow regional health and social care leaders to test their thinking about how services would be delivered in a few years' time, to determine what relationships and interactions would be needed to make the future system work, and to identify potential risks and opportunities during the transition. To enable a wide range of leaders from throughout the country to take part, the game was held several times; each game included roughly 30 to 60 people. The participants were divided into ten teams, each of which was given a different role to play (Exhibit 2).

The game had two rounds. The first focused on how out-of-hospital health and social care would be delivered in March 2013. Among the challenges the teams had to consider were variability in the quality of primary care services, strong concerns about the quality of community care services, sharp budget reductions (especially for social care), severe financial problems in one clinical commissioning consortium, and the possible entrance of new private providers.

The second round focused on challenges the area's hospitals would face one year later. Most hospitals, for example, would see their revenues decrease as services were shifted to community settings; some hospitals (especially those with low quality scores) would find that greater patient choice reduced their admission rates.



What was learned

The two rounds gave the teams a clearer understanding of where the greatest areas of ambiguity lay. For example, the participants realized that the changes would, at least initially, leave a void in regional leadership that local political issues might exacerbate. Furthermore, they discovered that there was little clarity about who would have the autonomy to make significant decisions in the new system, or how local organizations would interact in the future with national regulatory and planning agencies.

“Slight changes to policy rules could produce big changes in outcomes. For example, the attractiveness of market entry depended strongly on how easy it would be for new private providers to appeal decisions if payors declined to commission services from them.”

However, the game also made it clear that local organizations would have to take on greater responsibility. In the new system, for example, local authorities would have to play a larger role in helping hospitals drive quality improvements, not simply react after problems arose.

Another issue the game uncovered was the mixed messages many of the stakeholders were receiving. The teams role-playing as hospitals, for example, felt barraged by the conflicting directives that different organizations were giving them. In particular, they were concerned about how they could make the necessary budget cutbacks while improving quality rapidly, given political and local concerns around service reconfiguration, demands to increase patient choice, the tendering rules imposed, and the possibility of greater market competition.

All the teams discovered that they would have to interact with new stakeholders in the future and provide those stakeholders with far greater transparency into their activities. As a result of this discovery, NHS executives are working with all stakeholders to help them develop relationships with each other and understand how greater transparency can be used for the benefit of all.

Because the game was played a number of times with different participants, the executives gained

insights that they might not have learned from a single game. In particular, they discovered how sensitive the NHS (like all health systems) is to some of the rules under which it operates. Slight changes to policy rules could produce big changes in outcomes. For example, the attractiveness of market entry depended strongly on how easy it would be for new private providers to appeal decisions if payors declined to commission services from them. Findings such as this made it clear to NHS executives that they will have to identify where these pivot points are and ensure that they are aligned in such a way that the right outcomes are achieved.

The executives are now working with regulators and national policymakers to clarify how the new system will run and resolve several other important areas of ambiguity. They are also collaborating with those other organizations to help them think through the impact their decisions will have on local providers.

Case example: US health insurer

In 2010, the US Congress passed President Obama’s signature domestic legislation: the Affordable Care Act, which stipulates a number of health reforms that will go into effect over the next few years. This law will greatly widen the availability of individual (as opposed to employer-sponsored) health insurance coverage, and it

mandates a system of state-level public exchanges, through which people will be able to shop for and purchase health insurance for themselves and their families.

Although the law outlines the basic requirements for individual health insurance changes, those requirements do not go into effect until 2014, and the specific regulatory rules governing how the exchanges will operate have not been finalized. Therefore, payors are facing uncertainty about whether they should offer insurance on the exchanges, what types of individual policies they might want to develop, and what will distinguish winners from losers once the exchanges open.

No payor can make decisions about these issues without considering what other payors are likely to decide along the same dimensions. A large national payor therefore decided to use a war game to help it clarify its strategic options.

Structure of the game

The game was designed to address two sets of strategic choices:

- Once the exchanges open in 2014, how should the payor compete? What strategic moves should it make in terms of product portfolio, distribution, pricing, and marketing?
- Were there any investments in capabilities the payor should undertake in the next 12 to 18 months to better prepare it to compete on the exchanges?

The payor brought together about 75 of its top executives and divided them into eight teams. Each team was assigned to play a role as the sponsoring payor, a national payor, a local payor, or new entrant to the market.



The game had two rounds. In the first, the teams made investment decisions about how to position themselves in advance for the exchanges. The second round, which simulated the time after the exchanges were opened, was designed to explore the impact that the as-yet-undecided regulatory rules would have on the competitive choices the players made.

What was learned

The war game taught the participants several key lessons. First, the regulatory rules very

Practical tips for using war games

Health systems, payors, and providers that are considering holding war games should ask themselves five questions¹:

Is a war game the right tool to use?

These games are most helpful when an organization wants to answer one or two specific questions and the level of uncertainty is moderate. The games become far too complex if they attempt to address too many issues at once. Similarly, if the level of uncertainty is extremely high, it will be far too difficult for the game planners to develop rules for all possible outcomes. We recommend that health care organizations that want to use war games to understand the impact of health reforms focus on a few potential implementation options and a subset of all the available strategic levers.

What kind of game should be played?

War games can help with either strategic or tactical decisions; however, two factors argue in favor of using

them primarily for strategic issues. First, the expense involved in running a game can be considerable. Second, although strategic decisions have a greater impact on organizations, they tend to involve a fairly small number of options, and thus a war game can investigate those options carefully. Conversely, tactical decisions can sometimes involve a large number of small choices that can be difficult to cover effectively in a war game. In our experience, war games are particularly valuable for highly regulated organizations that need to exercise their strategic muscles – an apt description of many health care organizations today.

Who should design the game?

When tactical issues are being investigated, the sponsoring organization usually has enough data on hand to develop the game on its own. But when the questions raised are strategic, most organizations find it wiser to use an outside group to design the game. Outsiders provide an objective

¹ For more information about how to ensure that war games are used effectively, see “Playing war games to win” in the March 2011 issue of the *McKinsey Quarterly*.

strongly influenced how each of the teams chose to play; the strategies the teams selected in the second round differed considerably depending on the specific regulatory decisions used. The regulatory rules also had a dramatic effect on how attractive it would be for the payor sponsoring the war game to compete on the exchanges and which competitive strategies were most likely to be successful.

However, the participants also discovered that a few strategic options (from both rounds) were consistently wise choices for the sponsoring payor, regardless of what regulatory decisions were made. In the war game, the team playing as that payor had not always chosen these “no-regrets” options because it did not always correctly predict what the other teams were likely to do. In the debrief session, however,

the participants realized that the sponsoring payor team should always have chosen those options, and they therefore agreed that their company should pursue the options systematically.

In addition, the participants came to appreciate how significantly the different objectives of the different teams (for-profit versus not-for-profit insurers; national versus regional companies) influenced the choices they made, often in ways that made some rivals less of a competitive threat. The sponsoring payor had assumed that if it thought the individual insurance market looked attractive, then the other payors would find the market equally attractive. This is a common fallacy that war games can expose: different stakeholders can look at the same situation in very different ways. When a rival

perspective that eliminates the risk that the sponsoring organization's assumptions bias the game's rules and results. And given the wide range of stakeholders health care organizations must deal with, the insights of outsiders can help keep the game realistic. Furthermore, outsiders often have the sophisticated analytic capabilities needed to model the outcome rules for a strategic game (for example, market share calculations and profit-and-loss estimates) – skills that the sponsoring organization may lack.

Who should play the game?

Although tactical games need participants from only a small number of departments, strategic games require a wide range of people from throughout the organization. Having a large, diverse group of participants ensures a lively debate during the game; it also helps build widespread support for the strategic direction being developed. Among the people who should be included in a war game

run by a private health care organization are representatives from government relations, customer relations, physician relations, marketing, and business development. When the war game is run by a public-sector health care organization, it should include clinicians, managers, policy-makers, regulators, and representatives from local payors, providers, and relevant government agencies.

How often should the game be played?

Most war games are run only once. However, in some circumstances (as in our NHS example), it may make sense to hold a game a second or third time. A repeat game with the same participants can be helpful when conditions are changing rapidly (for example, when regulatory or political winds keep shifting) or when a team is preparing for a major contract negotiation. Re-running the game with different participants may be a useful way to build additional support for the strategic direction being developed.

is contemplating its strategy, what matters is what it thinks is best for itself – not what others think is best for it.

Third, the participants realized that there was a core set of capabilities that predicted whether a team would have a successful second round. If the sponsoring payor invested to develop these capabilities in the next 12 to 18 months, it would strengthen its ability to compete effectively in the future, regardless of the regulatory decisions ultimately made.

Overall, the game enabled the payor to gain a more realistic assessment of its own situation and to view the ongoing market uncertainty from its competitors' perspectives. As a result, it is better prepared to make strategic decisions as the regulatory rules unfold.



Given current events, most health systems, payors, and providers are likely to face ongoing uncertainty for at least several years. War games have been used by a wide range of organizations in other industries as an effective way to cope with uncertainty. They can be equally helpful in health care. ○

Elizabeth Bury, an associate principal in McKinsey's London office, specializes in strategic and organizational issues for health care payors and providers. **John Horn**, an expert in its Washington, DC office, focuses on the business application of economics and game theory (especially war games) to corporate and business unit strategy. **David Meredith**, an associate principal in its London office, specializes in strategy for health systems and payors.