Scenario Planning:
Optimizing your inpatient capacity ‘glide path’
in an age of uncertainty
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Examining a range of potential outcomes and envisioning their solutions in advance enables providers to take action with confidence despite a lack of clarity about the future of healthcare delivery

By Mark L. Coughlin

When airplane pilots are trained, flight simulators are often used to allow the trainees to see and experience a wide range of “real-world” scenarios. Scenario-based training teaches would-be aviators to identify and analyze unfamiliar situations, develop ranges of alternatives, select the most appropriate responses, and evaluate their decisions. By examining multiple scenarios they are prepared for any eventuality, from unpredictable weather to shifting payloads.

Today, many healthcare providers might feel like they are unprepared and flying blind. From the stormy battles of healthcare reform to the shifting “payloads” of unpredictable patient utilization rates, it is a challenge to chart the right course. The Patient Protection and Affordable Care Act (PPACA), which expands Medicaid eligibility, requires employers to provide health insurance and/or individuals to purchase health insurance. Recent estimates call for a short-term volume increase of as much as 15 to 20 percent. But is this volume increase sustainable given the economics of healthcare?

As we look at utilization, we also need to make sure that it is effectively intertwined with operational efficiency and appropriate location. The biggest question on everyone’s minds is, “How do we avoid shortages today and overcapacity in the future?” and, “What should be our ‘glide path’ for the safest, smoothest and softest landing possible, whether it’s a steep trajectory, or a gradual, gentle approach?”

Making and executing a plan in this uncertain environment can be so overwhelming that some might wonder how they can possibly plan at all. However, that is precisely why planning is needed more than ever. But that planning must be different, more flexible and more robust than in years past.

Like pilots, healthcare executives cannot predict the future. However, also like pilots, providers can use the power of scenario planning to anticipate a range of opportunities and challenges, and to develop comprehensive, real-world responses to prepare for every probable eventuality.

Charting your “glide path”
Scenario planning is a time-tested, effective strategy that optimizes your inpatient capacity glide path. It is a process that enables you to envision a wide range of possible outcomes and devise strategies to effectively address them.
It’s all about risk management and improved decision making - thinking through the “what-ifs” and having effective responses ready, regardless of what the future holds.

In the past, healthcare executives could generally count on historical data to forecast future results. Service areas, market share, patient volumes and other factors were fairly stable and predictable. There was often a reliable, formulaic solution that made it relatively easy to predict what would happen next. Today, while we can’t count on that same trends, or know exactly what healthcare reform will do to change utilization rates, we can use scenario planning to reveal what is possible, prepare for a wide variety of eventualities, and further increase the chances that our chosen path will be the right one.

One of the most vexing challenges for today’s healthcare providers is predicting future inpatient utilization. Those projections are vital to properly plan for optimal bed capacity. A shortage of capacity can lead to market share declines, reduced revenues and departures of physicians. But overcapacity can have a negative financial impact to the bottom line, with an insufficient patient base to cover fixed overhead costs.

Strategic navigation of an effective glide path between the two extremes is essential. To accomplish that, we need to understand the competing forces at work.

Why are patient volumes increasing?
Some of the factors exerting upward pressure on patient volumes include coverage changes, physician integration, ambulatory development, strategic development, mergers and acquisitions (M&As), and demographic changes.

The most obvious driver of increased patient volumes will be the PPACA, which will bring new or expanded healthcare insurance coverage to tens of millions of additional Americans. That change in coverage is sure to boost volumes in most markets, although the impact will be muted in states without Medicaid expansion and higher percentages of illegal immigrants.

The PPACA is also spurring a drive toward accountable care and physician integration. As physicians more closely align with one system or another, past “splitter” behavior where physicians admitted patients to more than one hospital is likely to decrease significantly.

Healthcare reform is also increasing pressure to reduce costs, which is accelerating the migration of care to outpatient settings. This is driving a surge of ambulatory development which can increase patient volumes through geographic expansion and downstream referrals.

Other strategic developments, such as service line development, can also increase market share and patient volumes.

The many mergers taking place in the healthcare industry can also result in greater patient volumes as health systems grow. Those combinations can result in expanded market share, increased capital investment and elimination of competition - all of which can bring more patients to your doors.

In addition to these less familiar factors largely driven by healthcare reform, patient volumes can also be affected by traditional factors like demographics. For example, volume growth can be caused by population increases or the aging of existing populations.

Why are patient volumes decreasing?
Capacity planning would be much easier if all the changes taking place in healthcare were driving increased patient volumes. Unfortunately, it’s not that simple. When it comes to understanding what is affecting utilization, we also find some key factors that are exerting downward pressure on volumes. They include:

- Reductions in Average Length of Stay (ALOS) and increases in operating efficiency are “unlocking” hidden current capacity;
• Quality efforts targeting readmission rates are expected to yield as much as a 15 percent reduction in inpatient volume;
• Technology, payer strategies and greater competition in the outpatient arena are causing the shift in patient volume to outpatient settings and off campus; and
• Improved medical management of patients, especially those who are chronically ill, translates to a lesser need for acute services.

Taking beds into consideration
In addition, there are other factors at play that affect utilization including varying bed types.

In most hospitals, there is still a mix of private and semi-private beds, which provides swing capacity. Outdated bed units - those that are thirty to forty years old - can provide swing capacity as well, because they are most likely operationally inefficient and not up to the standards of modern healthcare. Different types of beds have different occupancy targets, depending on things like patient acuity, volume variability and the impact of lack of availability.

Another thing that can affect types of beds is service line market share. “Centers of Excellence”, depending on their service line strategy, can impact different types of beds. Additionally, the length of stay by bed type can greatly impact forecasting, with length of stay reductions typically impacting routine beds more than critical care beds.

Finally, efficient unit size is crucial. Determining appropriate size depends on variables such as staffing and span of control policy. Most unit sizes these days range somewhere from 30 to 36 beds, but increasingly there are more combinations consisting of two 24-bed units.

Other things to factor in
Variation in volume and seasonal fluctuations are common in locations all over the country. Fluctuation can also occur by time of day and time of week. Getting a firm grasp on the patterns and distribution of this volume will ensure adequate capacity. Additionally, when calculating capacity, it is important to take into consideration the observation status of patients. There are many instances where outpatients, (patients who are under observation, for example) may occupy an inpatient bed. These types of situations should be taken into account.

The mechanics of Scenario Planning
The basics of scenario planning involve the development of base, best, and worst case scenarios using tools like benchmarking. Benchmarks used include estimations gleaned from healthcare reform that has already taken place in states like Massachusetts or have significant managed care penetration like California, and understanding how their utilization rates can inform us as to where utilization rates on a national scale might go.

• A base case, or the best estimate of the future state of things (vs. the current state of things applied to the future), is developed, creating a foundation on which scenarios are tested
• Scenarios are developed using factors such as population, utilization rate, market share, ALOS and occupancy standard
• Those scenarios are then utilized to assess things like the timing and impact of different factors, creating flexibility to deal with the greatest risks
• A range of outcomes are developed and used to guide discussions and fine-tune strategy on the best solutions to various scenarios
• The resulting glide path allows a health system to react accordingly by adding capacity (new beds, observation beds) at same time capacity is likely to be needed (coverage expansion, strategic initiatives/physician alignment) and reducing capacity (bed privatization, replace older beds) as volume decreases (medical management, length of stay reductions)

Scenario planning success stories
Florida hospital uses scenario planning tools to overcome bed shortage.
A hospital in Florida recently enjoyed the inherent benefits of increased market share due to alignment with a key physician group - a healthy market share jump to 31 percent from 25 percent. However, that increased market share, coupled with an emergency department (ED) expansion that fueled additional inpatient volume, led to a critical bed shortage at the hospital. Scenario planning tools came to the rescue. A successful scenario planning strategy was employed to create a flexible capacity plan that allowed the hospital to accurately identify bed quantities and types, and confidently adjust to a variety of scenarios, based on market factors and timing.
New York-based medical center improves market position using scenario planning.
A medical center bolstered its market share and was prepared for the ripple effect it caused by effectively using scenario planning. The New York medical center employed several scenario planning tools, including an ALOS analysis that determined ways to "unlock" capacity; effective business development and physician alignment strategies to increase market share; identification of the optimal physician mix; and a combination of bed reclassification and incremental private bed addition to stave off bed shortages.

Scenario planning eliminates fear, provides certainty and direction toward a smooth landing
Scenario planning means overcoming fear in a time of uncertainty and being prepared for any eventuality while maintaining quality in healthcare and containing costs. Focusing on those significant factors and developing an effective and strategic game plan now will guarantee smooth and happy landings later.

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