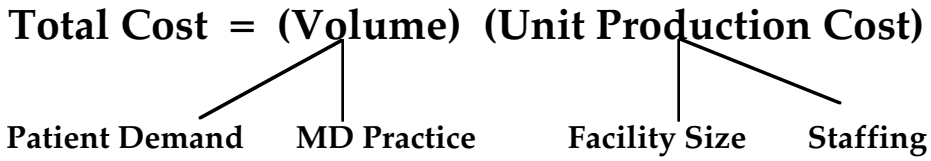
"It's the Capacity, Stupid!"

Building the Next Generation of Executive Decision Support Tools

Executives in most industries understand that, to be successful, capacity must be actively managed. Why is capacity so important? Willie Sutton put it best when asked why he robbed banks, "because that's where the money is!"

In other industries, competitive markets force executives to manage their cost function. While the health care market is increasingly competitive, health care executives seem to be less successful in bringing costs under control.



To control total cost, both the volume of work and unit production costs must be managed. When producing health care services, the volume of work depends on patient demand and provider practice patterns. Unit production cost primarily is a function of capacity investment which includes facility size and support staffing. To control total health care costs, the cost implications of decisions driving patient demand, physician practices, facility size and staffing must be understood.

To date, managed care executives have not benefited from sophisticated decision support tools necessary to deal with the complexities of managing capacity. Many health care executives have assumed that a reduction in the volume for health services will be translated into lowered costs. However, with 70 percent or more of total costs locked in capacity investments in facility and staff, most of the expected reduction in costs depends on reducing capacity. To realize significant cost savings, strategies to reduce volume must be linked to specific actions to reduce investment in facilities and staff.

We need to build a new generation of executive decision support tools which are sophisticated enough to help manage the complexities of balancing volume and capacity. To be effective, the decision support tools must address the following concerns:

Integrate the Production Function Decisions - The decision support tools must encompass the four cost drivers of patient demand, practice patterns, facility size, and staffing. Accordingly, the tools must, at a minimum, support and integrate decision-making of key individuals involved in strategic planning, marketing, clinical medicine, administration and nursing. <u>If any of these decision makers are excluded, then the decision tool will not be very effective in managing cost or quality</u>.

Link Strategic Objectives with Operational Policy - The decision support tools must help to link levels of decision-making in the organization. Patient volume forecasts, physician practice pattern targets, and facility design should be linked to the number of nurses scheduled to work at 8 am on Monday. Strategic objectives must be linked to operational capacity decisions in order to meet cost objectives.

Product-Line Specific - The decisions support tools must reflect the uniqueness of different patient product-lines. The tools required to manage the delivery of obstetrical services are quite different from those needed for medical or surgical patients. While medical and surgical patients are normally scheduled arrivals, obstetrical patients arrive at the inpatient unit randomly. Facility sizing and staff scheduling tools designed for randomly arriving patients will be different from those needed for other types of patients.

Anticipate Future Events - One does not drive a car by looking only through the rear view mirror and one should not lead a health care organization by focusing on the past. Success depends on anticipating the management actions required to respond to future events. For example, it would be useful to estimate in advance the staffing and capacity ramifications in the event that managed care contract changes cause patient volume to increase or decrease significantly. Simulation modeling is a technique which is extremely useful to understand the interactive impact of demand, practice pattern, facility, and staffing decisions on total cost. Decision support tools should include sophisticated techniques to help understand the system performance implications of anticipated changes.

Meeting performance targets for a health services delivery organization is a difficult challenge. Much of the difficulty can be traced to the complexity of trying to balance the volume of appropriate health care services with the correct mix of capacity resources. Complex problems require complex solutions. Controlling health costs requires sophisticated decision support tools to unlock capacity resources. Willie Sutton would have loved these tools!

Bio

Tim McKee, Ph.D. is a principal with Health Services Engineering, Inc., a health care consulting firm in Bethesda, MD.