



SUCCESSFULLY IMPLEMENTING

This article describes some of the common obstacles that challenge the success of TDABC implementation in health-care provider organizations and suggests potential remedies and preventive measures.

TDABC IN HEALTH-CARE PROVIDER ORGANIZATIONS

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The U.S. health-care industry is undergoing a pervasive transformation toward value-based health care, which aims at maximizing patient outcomes while containing costs.¹ Regulatory reforms, starting with the Affordable Care Act signed into law in 2010, have elevated goals such as expanding access, reducing costs, and improving quality of service; these are high priorities for all market participants. For example, the Centers for Medicare & Medicaid Services (CMS) has introduced several programs, such as the Merit-based Incentive Payment System (MIPS), Value-based Purchasing (VBP), Hospital Compare, and so forth.² These programs aim to measure and reward provider efforts to increase service value and improve trans-

parency and patient access to information about provider quality and prices. In addition, alternative payment models — such as bundled payments, capitation schemes, and recent innovations in contractual arrangements among providers (e.g., accountable care organizations) — further incentivize providers to improve outcomes and contain costs. The resulting downward pressure on prices and the expectation of higher quality services pushes providers to analyze how they provide their services and search for opportunities to improve efficacy and efficiency.

The statement generally attributed to Peter Drucker that “only what gets measured gets done” summarizes one of the major challenges health-care provider organizations face as they embark on their journey

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toward value-based health care.³ Improving outcomes and reducing costs requires adequate measures for each of these two performance dimensions. Historically, many hospitals have limited their systematic collection and reporting of outcome measures to relatively coarse and noisy metrics, such as mortality or readmissions. Fortunately, several initiatives — such as the International Consortium for Health Outcomes Measurement (ICHOM) and the Patient-Reported Outcomes Measurement Information System (PROMIS) — are making headway in the development of robust and widely accepted sets of measures capturing patient outcomes for many of the main conditions afflicting patients globally.⁴ By contrast, developing cost management systems should be a much faster endeavor, thanks to the availability of proven and widely accepted costing techniques that have operated for decades in most other industries.

Among the costing methods that one could learn by reading a management accounting textbook, time-driven activity-based costing (TDABC) has been shown to be particularly appropriate to the costing of service operations — in recent years, specifically in hospitals.⁵ Known benefits of measuring costs using TDABC include the discovery and elimination of costly non-value added activities or redundant steps in care delivery processes; the optimization and streamlining of workflows by eliminating unnecessary wait times; and the reduction in average treatment costs by downshifting certain tasks, where appropriate and safe for the patient, from high-cost providers (e.g., physicians) to qualified lower-cost ones (e.g., nurse practitioners). Step-by-step implementation processes are readily available, describing how to generate a process map, how to calculate the cost per minute for each resource involved in the care cycle, and how to combine process and unit cost information to calculate the total procedure cost. Most health-care management courses and programs in postgraduate and executive business education include costing in the curriculum. Nonetheless, hospitals remain slow in their adoption of TDABC. In several cases, the implementation does not proceed

beyond a pilot program, thus failing to produce the promised benefits, which are likely to come to fruition only at or beyond a certain scale.⁶

In the remainder of this article, we describe some of the common obstacles that challenge the success of TDABC implementation in health-care provider organizations and suggest potential remedies and preventive measures to reduce their negative impact. For brevity, we do not examine issues that are common to most other industries, such as potential biases introduced in the time equation due to cognitive limitations (for example, recency bias, desirability bias, outlier bias, etc.) or behavioral responses to change (e.g., inflating the time it takes to complete a task or “filling the shift” to hide potential sources of downtime or unused time). Instead, we focus on challenges that are either unique or particularly salient in health care.

Charges, reimbursements, and costs

Effective communication between clinicians and accounting professionals depends in part on a shared understanding of basic accounting concepts. For decades, conversations about health-care costs have centered around the concept of charges. Charges correspond to sticker prices, set at levels that are supposed to ensure the coverage of costs incurred in delivering the particular service and guarantee a margin. However, the process by which charges are set in hospitals is, in most cases, highly opaque and rarely involves clinicians’ direct input. Additionally, the margin target embedded in the calculation is rarely disclosed internally, and cost estimates rarely follow a rigorous and systematic calculation such as TDABC. Finally, charges convert into actual revenues or cash collected in a small minority of cases, as contractual agreements with health plans typically result in lower prices paid for members’ treatments. Therefore, in a way, charges are akin to MSRPs in the automotive industry. Nonetheless, the use of charges as a surrogate estimate of utilization costs has become common. This practice has been exacerbated by electronic medical records information systems, which are in many cases designed with billing in mind and not collection of cost information.

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To facilitate communication and collaboration between clinicians and accounting professionals, it is crucial to clarify the terminology and make clear distinctions between charges (i.e., sticker prices), reimbursements (i.e., revenues), and costs. The earlier in the process these clarifications are introduced, the better.

Why are we (clinicians) doing this?

Advocates for the adoption of TDABC have presented convincing arguments about the importance of clinicians' buy-in and active participation in the process mapping, data collection, and review of results. A key rationale underlying this requirement is that clinicians have the most direct and updated information about the steps involved in the care cycle, the resources needed to complete each step, and the time the steps might take. However, the benefits of directly involving physicians and clinicians in these activities go far beyond the accuracy of the data. Active participation engenders ownership and appreciation of the bigger picture. More and more health-care services rely on effective collaborations and teamwork. It is critical for better management to understand how decisions made along the cycle of care by each of the actors affect the choice made available to others and, ultimately, the outcomes and costs of the entire process.

A common obstacle to clinicians' buy-in is the misconception that costing is an accounting exercise geared toward financial reporting and, therefore, a responsibility of the accounting staff. We prefer the following interpretation: Costing is an exercise in expressing resources consumed in the care delivery process using a common unit of measure — money. This exercise allows us to compare quantities of resources of different natures and units of measure, thus supporting decisions that involve trade-offs or allocations of scarce resources. These decisions can (and should) only be made by physicians and clinicians while delineating the cycle of care that delivers the best possible outcomes for their patients. Project leaders must position the costing calculation within the value-based health-care framework to avoid perceptions among practitioners that cost reductions are prioritized over patient outcomes.

Variation in services offered and production processes

Most management accounting textbooks point out how investing in sophisticated costing systems, like TDABC, is appropriate if the organization exhibits variety in the products or services offered and in the associated production processes. In addition to those common to most other industries, two additional sources of variation influence the provision of health-care services. First, physicians' practices are influenced by their training and preferences, which often convert into different procedure lengths, staff and equipment requirements, and post-acute care treatments. Second, the patient is a source of variation. Not only is variation in patient characteristics generally met with adaptations of the care plan, but patients are also often expected to be active participants in their care (for example, adhering to medication, nutrition, exercise regimens, etc.). The complexity of health-care services, compounded by multiple sources of variation, may project the mapping of all the possible paths a particular treatment may follow as a formidable task and discourage its undertaking. Segmentation, averaging, and iteration are three approaches that may reduce the size of the challenge and the associated anxiety.

Health-care processes are often interrelated, and it may appear challenging to map the steps of all possible paths a care plan may take. Practitioners should break down the process into its phases and/or branches and focus on one segment at a time, ignoring the rest of the process until ready to tackle the next branch or segment. Over time, the puzzle will fill itself in. For example, patients undergoing a knee replacement may follow different paths in their postsurgical experiences. Some patients may remain in the hospital for post-acute care. Others may be discharged to skilled nursing facilities. Others may be discharged to their homes and periodically return to the hospital for physical therapy. These three possible branches of postsurgical care for knee replacement patients need not be costed simultaneously. Instead, providers should begin by focusing on the most common alternative and address the other branches in the process map later.

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Another health-care-specific complication resides in the frequent separation between the entity that employs the clinicians and the one that operates the facilities. Physicians are often employees of an organization or a specialty group, which contracts with the entity that owns and/or operates the facility. This separation influences the physicians' controllability over structural costs that participate in the cost of the care they provide. For example, contractual arrangements that are common in practice see the facility managing organization bill the physicians' organization for the utilization of the physical structure. In other cases, physicians' organizations forego a portion of their reimbursement revenues (i.e., technical fees) that are routed to the facility managing organization upon billing of care services provided to patients.⁷ These relations may prove complicated to capture in the costing process. As a result, providers must rely upon the expertise of accounting staff to disentangle cases of revenue sharing from instances of cost allocations.

Different providers carry different costs per minute. While the cost per minute can range as much as tenfold between the highest and lowest cost personnel, differences in available capacity among practitioners in similar roles and earning similar levels of pay may lead to material differences in cost per minute (e.g., surgeons involved in research and teaching activities may have a smaller available capacity compared with colleagues who dedicate most of their time to clinical work).⁸ The temptation to create a different process map for each provider may, again, unnecessarily complicate the task. Nevertheless, calculating average costs per minute for each role is a sufficient starting point to begin familiarizing oneself with resource consumption and identifying opportunities for health-care value improvements.

Incomplete processes and approximations often run contrary to the tenets of medical training and can cause significant intolerance and anxiety among providers. Iteration is, therefore, the keystone that allows process maps and cost estimations to be informative for decision-making. After a first approximation, providers must validate, repeat, and refine their mappings and associated cost calculations. TDABC can only succeed

if approached not as a temporary intervention but as an ongoing program. Iterations are essential to improve accuracy and keep up with changes in care protocols, techniques, and continuous improvement initiatives. Outdated process maps lose credibility and fail to support decision-making.

Availability of dedicated resources

If costing is a program, it must have a dedicated staff. In many cases, providers are discouraged by the considerable time they devote to the first iteration of process mapping and costing and will resist repeating the experience. The prospect of hiring dedicated administrative resources to coordinate costing efforts may be met with resistance, especially because of the downward pressure on revenues and the prioritization of cost reductions where possible. However, managers must keep in mind that spending time working on iterations of process mapping and costing calculation may be a suboptimal use of expensive resources (e.g., surgeons), who could use their available capacity to perform clinical activities that cannot be delegated to others (i.e., working at the top of one's license).⁹ Our recommendation is to minimize the involvement of clinicians in the process — notwithstanding our earlier suggestion to ensure their buy-in and active participation in the initiative — and delegate iterative and administrative tasks to dedicated, lower-cost resources.

An important task to delegate to the costing program staff is the documentation of the process — what we call “mapping the process.” Creating a playbook and documenting best practices used in the specific organization to collect and organize the information about processes, unit costs of resources, and calculation algorithms ensures repeatability, consistency, comparability of resulting estimates, and continuity of the program beyond changes in the staff composition.

Getting to scale

Concerns about distracting clinicians from patient care to invest time in costing exercises are often worsened by underwhelming results



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of pilot projects. The role of a pilot run is primarily to develop, learn, and test the process. Pilots involve especially simple cost objects (i.e., care procedures) to prevent their complexity from overwhelming the learning aspects of the experience. Consequently, even the most successful pilot runs rarely provide sensational process improvements and cost savings. Skeptics in the organization may argue that the disruptions incurred to obtain such small benefits may not be worth the cost. For this and other reasons, many costing projects fail to move past the pilot stage.

Getting past the pilot stage may be even more difficult than starting the pilot might have been. War stories about mistakes made, time wasted going down the wrong path, and not knowing what one was supposed to do can be very discouraging. Leaders must highlight the learning that was gained during the pilot phase, which will simplify the adoption in subsequent phases. It will also stress the importance of getting to scale so that the initial investment in learning — a down payment — may be capitalized and generate the expected benefits for the organization. The sooner one develops the confidence to take on a process that can offer material savings and improvements, the better.

TDABC is a powerful and versatile costing system that adapts well to production processes along a wide range of complexity and therefore fits well in health-care provider organizations. Accurate and timely costing information supports providers in making important managerial and strategic decisions that can increase value for patients by improving outcomes and optimizing resource utilization. However, as in any organization, implementing a sophisticated costing system requires significant investments of time and effort by those directly involved in the production process. In addition, as in any change management initiative, the disruption associated with the implementation must be actively managed to minimize the distraction of critical resources from their primary responsibilities and manage potential bias, fear, and resistance that may stem from low

trust in management and/or poor communication. In addition to these common issues, implementing TDABC in health-care provider organizations presents additional challenges rooted in the history and structure of the health-care industry. Actively and proactively managing these challenges is likely to set the organization up for success in implementing TDABC and reaping the many benefits associated with it. ■

NOTES

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- 6 Demeere, N., Stouthuysen, K., and Roodhooft, F., Time-driven activity-based costing in an outpatient clinic environment: Development, relevance and managerial impact, *Health Policy* (Amsterdam) 92, no. 2 (2009): 296–304.
- 7 Reimbursements based on relative-value units (RVUs) comprise a professional fee and a technical fee. The former is intended as payment for the physician’s time, effort, expertise, and training. The latter is designed to reimburse the consumption of resources, such as facilities and equipment.
- 8 Kaplan, R.S., Witkowski, M.L., Abbott, M., Guzman, A.B., Higgins, L.D., Meara, J.G., Padden, E., Shah, A.S., Waters, P., Weidemeier, M., Wertheimer, S., and Feeley, T.W., Using time-driven activity-based costing to identify value-improvement opportunities in healthcare, *Journal of Healthcare Management* 59, no. 6 (Nov/Dec 2014): 399–412.
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