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CORR Insights®: Time-driven Activity-based Costing More Accurately Reflects Costs in Arthroplasty Surgery

Peter Cram MD, MBA

Where Are We Now?

Recent studies [7, 9] have conclusively demonstrated that hospital administrators and physicians in the United States

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often are flummoxed by a relatively simple question: “How much will my [insert name of procedure] cost?”

Any reasonable person should be outraged, perplexed, and infuriated.

Call your local Wal-Mart and ask them for the cost of any item. You will get answer within seconds. Go online and you can quickly find the cost of a roll of toilet paper, a new car, or a round-trip bus ticket to Peoria, IL, USA. Yet most of us are unable to provide our own patients with reasonable cost estimates for the tests, procedures, and products we prescribe every day.

Akhavan et al. [1] used a rigorous accounting method (Time-driven Activity Based Costing [TDABC]) to examine the cost of TKA and THA procedures. The authors then compared the costs ascertained using TDABC with the traditional

accounting method used by virtually all US hospitals.

Not surprisingly, the authors found that methods matter. Specifically, the authors found that TDABC methods yielded “cost” estimates for TKA and THA that were approximately 45% lower than traditional accounting methods (USD 10,000 per case). These results have a number of important implications.

First, the results provide an explanation for recent research studies that indicated hospitals were unable to provide credible estimates of prices for many of the most routine services that they provide [2, 12]. If hospitals’ internal accounting systems are fundamentally flawed and inaccurate as Akhavan and colleagues suggest, it is no wonder that hospitals are unable to provide accurate pricing data to consumers [5]. We cannot excuse our healthcare system for dysfunctional accounting systems and its inability to know costs and provide prices, but this does at least provide an explanation for the problem at hand.

Second, the results have implications for hospital leadership when

P. Cram MD, MBA (✉)
Division of General Internal Medicine,
Toronto General Hospital, 200 Elizabeth
Street, Eaton 14th Floor, Toronto,
ON M5G 2C4, Canada
e-mail: peter.cram@uhn.ca

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setting priorities and mapping strategy. Virtually all hospitals use their internal traditional accounting cost estimates to determine which services are “profitable” and which are not. Services that are profitable are often seen as priorities for investment and expansion; unprofitable services are carefully considered with a focus on how these services fit with each institutions priorities, mission, and local community needs. If estimates of service-line profitability are incorrect—as the current analysis suggests—hospitals may be making strategic blunders.

Where Do We Need To Go?

While research in the area of hospital accounting and cost-to-charge ratios are somewhat limited, the available data are concerning [8, 10]. Evidence suggests that cost-to-charge ratios often vary between hospitals because of differences in internal accounting practices rather than true differences in either the complexity of patients or the resources “consumed” [3, 4, 6]. The current system leads to numerous problems including: (1) Inaccurate data to guide internal hospital decisions on which services to provide and invest in; and (2) inaccurate prices when customers including individual patients and insurance providers request information. At the most

foundational levels, cost-to-charge ratios are based upon faulty assumptions and odd mathematics. From the hospital perspective, the cost of providing a specific procedure—TKA, for example—would be the cost of all inputs required to perform this procedure; inputs would include consumable materials (implants, gloves, medications administered), labor (physician time, nursing time, janitor time), and indirect costs (space, heat, electricity) [11]. One option for accurately capturing costs appears to be TDABC, but there are certainly other options including relative-value-unit based accounting measures [11]. Either way, it is time to move beyond cost-to-charge ratios. As healthcare reform proceeds with increasing amounts of financial risk being transferred onto healthcare systems, it will be vital for to have accurate data.

How Do We Get There?

During the past 20 years, hospitals have invested heavily in information systems that allow us to measure and track many aspects of performance including mortality rates, length-of-stay, and adverse events.

We now need to do the same with respect to costs. Hospital administration and physicians need to go back to school. We will need research into and

implementation of new methods for how to measure costs. We will need to compare assorted costing measures as Akhavan et al. have done in this paper. We will then need to invest in systems that allow us to measure and track costs for assorted procedures and services. These data will allow delivery systems to make better decisions about which services merit expansion, which services should be avoided, and where improvements in efficiency are needed. Finally, we will need to learn how to disseminate cost information to physicians and other front-line personnel.

It will be a long journey best started today.

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