THE METHODOLOGY IN CREATING A STEWARDSHIP SYSTEM OF PHARMACEUTICAL COSTS FOR ANESTHESIA PROVIDERS

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Introduction: Healthcare expenditures have increased over the last decade, including anesthetic-related costs. The same time period has seen the advent of more advanced intra-operative electronic records and automated data collection systems. These improved technologies provide the ability for accurate and timely communication of anesthetic-related costs to anesthesia providers.

As part of a multi-center effort with the ultimate goal of decreasing the average cost of anesthesia for surgery, we are creating an automated cost display within a specific AIMS system. Here we describe the methodology for using AIMS data and pharmacy cost information from two large academic medical centers to facilitate this effort.

Methods: The projects received IRB approval from both institutions. We began by obtaining acquisition costs of all intra-operative medications from the institutions' pharmacy. Next, a spreadsheet was manually created to demonstrate a cost calculation for a small sample of patients. We manually entered patient weight, totals of medications given by bolus, rates and durations of medications given by infusion, and expired concentration of inhalation agents for fifteen-minute epochs along with fresh gas flow rates for each epoch. Costs were then determined as a total for each case and a cost-per-minute for each case.

Next, our programming team used the sample patient set to create a set of SQL queries program to automatically obtain and calculate cost per case using the institution's AIMS databases. Specific parameters allowed extraction of data regarding amount of drug given by bolus, infusion, or inhalation. These drug amounts were then indexed with the drug-acquisition cost, providing automated total cost-per-case and cost-per-minute data.

Results: We have now developed at two centers a methodology for automatically determining the drug cost per case.

Discussion: The next phase will be implementation of a real-time display of ongoing cost during a case. We anticipate better stewardship as providers realize what effect their practice patterns have on cost. We also will use selected CPT codes to determine the institution's average cost-per-case for a given CPT, and then provide practitioners with their own average cost-per-case data. .

References

1. Dion P. Can J Anaesth. 39(6):633. 1992