

44566 - COSTS OF DRUGS, DISPOSABLES AND VOLATILE AGENTS IN ROUTINE ANESTHETICS

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INTRODUCTION: The aims and objectives of this study were to determine the costs of the Drugs, Disposables and Volatile Agents used for a routine anesthetic.

METHODS: This is a retrospective, observational, economic cohort study being carried out in a single centre (a tertiary and referral level- University teaching Hospital) in Canada. In the preliminary pilot study, 20 routine, elective cases under General Anesthesia were analyzed. Cardio-Thoracic, Vascular, Pediatric and Regional Anesthesia were excluded. The Anesthetist was interviewed after the case and this was used to complete the list and costs of the Drugs, Disposables and Volatile Agents used.

RESULTS: The mean cost of the Drugs used per case was \$ 34.46 (range 14.76- 48.00 SD 7.605). The mean cost of the Disposables per case was \$67.93 (range 3.72- 251.02 SD 68.2). Volatile Agent costs were a mean \$ 26.95 per case (range 7.00- 78.08 SD 18.19). Overall, the mean total cost per case was \$ 129.32 (range 32.21- 335.62 SD 82.37) and mean cost per hour was \$38.36 (range 14.53- 60.46, SD 14.61).

DISCUSSION: With the introduction of newer Drugs, Disposables and Volatile Agents and changing practices; there have been no recent studies in Anesthesia estimating the cost per case and the average cost per hour of these in Canada.

There were certain important findings from this cost analysis study. Disposables make up over half of the total costs. The first hour of anesthesia is the most cost intensive. Overall, the cost per hour appeared to be related to the duration of surgery. Though short cases cost more per hour than longer cases; at the arbitrary 2 hours cut-off, these differences did not achieve statistical significance ($p=0.13$). The expected difference in cost per hour between short duration cases and longer cases may be offset by the complex nature of the long cases requiring increased use of disposables.

The limitation of this study is that it was carried out in a single centre and thus may reflect on the local practices and “culture”. Further, in this study, while there is no assessment of efficiency (quality, outcome or complication) - it still calculates the direct costs incurred for the service provided.

Economic evaluation is now widely applied to all branches of medicine and as the delivery of Anesthesia enables other procedures to be carried out, it is not an end in itself. Calculation of “cost per case” will lead hospitals to find more cost effective methods of treatment. We believe that this study is an important step in this direction, as its data and findings reflect current practice.

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TABLE 1: Based on duration, the cases were divided into less than 2 hours and those 2 hours or more. All values are in Canadian Dollars.

DURATION	MEAN COST PER HOUR	RANGE	STANDARD DEVIATION
LESS THAN 2 HOURS(n=8)	45.02	27.62- 60.42	10.24
2HOURS OR MORE(n=12)	33.87	14.53- 59.69	15.74

p=0.13