

Cost Analysis of Percutaneous Fixation of Hand Fractures in the Main Operating Room Versus the Ambulatory Setting

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INTRODUCTION: To date, there have been no studies identifying the cost differential for performing closed reduction internal fixation (CRIF) of hand fractures in the operating room (OR) versus an outpatient clinic setting. Our goal was to analyze the cost and efficiency of performing CRIF in these two settings and to investigate current practice trends in Canada.

METHODS: A detailed analysis of the costs involved both directly and indirectly in the CRIF of a hand fracture was conducted, including material and labour costs. Hospital statistical records were used to calculate efficiency. A survey was distributed to practicing plastic surgeons across Canada regarding their current practice of managing hand fractures.

RESULTS: In an eight-hour surgical block we are able to perform approximately five CRIF in the OR versus eight in an ambulatory setting. The costs of performing a CRIF in the ambulatory setting under local anaesthetic, not including surgeon compensation, is \$115.59 Canadian (CAD) compared to \$461.27 CAD in the OR, a 299% decrease in cost. The use of a regional block increases the cost to \$665.49 CAD, a 476% increase. This was due to a significant increase in labour costs, 1062% and material costs, 72%. The main barrier to performing CRIFs in an outpatient setting is the absence of equipment necessary to perform these cases effectively, based on survey results.

CONCLUSION: The use of the OR for CRIF of hand fractures is associated with a significant increase in cost and hospital resources with decreased efficiency. We conclude that for appropriately selected hand fractures, CRIF in an ambulatory setting is less costly and more efficient compared to the OR and resources should be allocated to facilitate CRIF in this setting.