EVALUATING THE TRUE COST OF A PROXIMAL HUMERUS FRACTURE: THE IMPORTANCE OF INDIRECT COST AND PRODUCTIVITY LOSS

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INTRODUCTION:
Rising healthcare costs remain a big concern for patients, healthcare administrators and national policy makers. It is important to be able to analyze the cost impact a condition has to allow for prudent resource allocation while providing evidence-based healthcare. This cost analysis should include both direct and indirect costs for better quantitative understanding of the condition. Proximal humerus fractures are the third most common fracture in the elderly population. Whilst its management for surgical vs conservative remains controversial, we wanted to analyze the productivity impact the condition poses on the population affected by this fracture and the total costs (direct and indirect) over a 6-months period.
METHODS:
This was a prospective cohort study between July 2017 and March 2020 who had isolated proximal humerus fractures either operated or managed conservatively (n = 219). The patients were followed-up over a 6-months period and data was collected for direct and indirect costs based on hospital records and using the Work-Productivity-and-Activity-Impairment (WPAI) questionnaire. The questionnaire was administered at the 6 weeks, 3 months, 4.5 months and 6 months.
RESULTS:
Direct costs between unemployed and employed patients had no significant difference. However, indirect costs remained significantly higher in the employed group throughout the entire follow up ($p < 0.001$ across all time points). While direct costs declined over time ($4046.63 to $192.37), indirect costs remained high and contributed to a larger proportion of the overall costs over the follow-up ranging from (50.3% to 93.5% of total costs). Absenteeism costs show a steep decline between 6 weeks and 3 months ($7940.55 to $3523.39) and continue to decline over time. Presenteeism costs were overall lower but remained persistent over time. Presenteeism costs even surpassed absenteeism costs past the 4.5 months follow-up ($1500.35 vs $1361.17).
DISCUSSION AND CONCLUSION:
This study found that indirect costs play a significant part of the total costs for proximal humerus fractures. Defining only direct costs for such conditions will result in an incomplete picture of the cost impact and productivity loss. Productivity loss can be quantified objectively through the WPAI method and has shown that losses still incur even after the patient has gone back to work (i.e. presenteeism). Our study therefore highlights that on top of the obvious direct costs, patients are also significantly affected by indirect costs and productivity loss. It is therefore imperative to consider quicker return to work and better return to work programs to reduce the amount of productivity losses.