

OBJECTIVES: No method exists for measuring cost-effectiveness of services rendered to patients throughout the continuum of care. Products categorized within the durable medical equipment (DME) benefit add another complicating factor in determining the economic value of therapies. The objective of this study is to determine the cost-effectiveness of V.A.C.[®] Therapy compared to standard wound treatment for a dehiscence chest wound patient treated across the continuum of care. **METHODS:** Treatment flows were determined through analyses of clinical literature and verified by physicians. An economic model was constructed using data from published literature to determine events and transition probabilities. Publicly available sources were used to determine clinical outcomes, hospital days, nursing time, and costs. A claims database was used for home care information. Meta-analyses served to integrate disparate data sources, (e.g., by calculating weighted averages). **RESULTS:** The economic model estimated the potential cost savings greater than \$8500 for treating dehiscence chest wound patients with V.A.C.[®] Therapy when compared to wet-to-moist dressings. The return on investment (ROI defined as potential savings divided by material costs for V.A.C.[®] Therapy,) is calculated to be \$6.68: \$1. This figure suggests that every dollar spent on V.A.C.[®] Therapy may be associated with more than \$6 potential savings. The largest factor contributing to the cost-effective outcomes of V.A.C.[®] Therapy was the number of hospital days. V.A.C.[®] Therapy was associated with an estimated 5.2 fewer days compared to wet-to-moist therapy. The difference in closure method (e.g., primary closure instead of flap, secondary closure instead of primary closure) was the second largest contributor to the model results. **CONCLUSIONS:** This study suggests that V.A.C.[®] Therapy for a dehiscence chest wound may provide a potential cost savings when compared to wet-to-moist treatments. These results highlight the importance of assessing wound therapy based on cost-effectiveness and ROI rather than on daily DME cost.

PSU2

ECONOMIC EVALUATION COMPARING FROM HOME TO OPERATION AND CONVENTIONAL PROCESS OF LAPAROSCOPIC CHOLECYSTECTOMY: PROSPECTIVE RANDOMIZED CONTROLLED TRIAL

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acteristics were similar. The mean health care costs in the FHTO (1695 EUR) were significantly lower ($p < 0.001$) than in the conventional arm (2234 EUR). The number of patients discharged on the first postoperative day was 27 (96.4%) and 15 (78.9%) with the number of infections being 2 (7.1%) in the FHTO group and 4 (21.1%) in the conventional group. A significant difference in QALYs gained (0.01742, $p = 0.030$) favouring the FHTO was observed between the two arms. Assuming a willingness-to-pay of 5000 EUR per QALY, the probability of FHTO falling below this threshold value was 99%. This result was robust to sensitivity analyses. **CONCLUSIONS:** The FHTO dominated the conventional process in LC. After the initial investments, a Finnish hospital performing 500 standard LCs per year may produce 8 more QALYs, introduce 69 fewer infections and experience potential cost savings of 280000 EUR or require 667 fewer hospital days with the FHTO.

PSU3

DEMOGRAPHIC PREDICTORS OF RESOURCE UTILIZATION AND COSTS OF SOLID ORGAN TRANSPLANTATION IN BRITISH COLUMBIA, CANADA

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OBJECTIVE: Increasing funding constraints have resulted in considerable pressure to improve the cost-effectiveness of solid organ transplant programs. Such efforts require an understanding of factors driving costs. To date, however, few investigators have examined the impact of patient characteristics on the resources utilized for transplantation. The aim was to determine the impact of demographic characteristics of patients on the mean direct medical costs of care during each of the two years post-transplant. **METHODS:** Using the Ministry of Health perspective, direct medical costs of all persons undergoing a transplantation of kidney, lung, heart or liver, were determined using data from British Columbia between 1995 and 2003. Health resources categories included inpatient hospital stays, outpatient visits, physician fees, laboratory and diagnostic tests and immunosuppressant medications. Multivariate analysis was used to model the impact of age, sex, and an indirect measure of median household income, on the costs of caring for patients during each of the two years post-transplant, after adjusting for calendar period. **RESULTS:** The percentage of women undergoing each procedure was 41% for kidney ($n = 876$ procedures), 40% liver ($n = 257$), 39% for lung ($n = 67$) and 23% for heart transplants ($n = 133$). After adjusting for calendar period, there was no impact of age or median household income on treatment costs during either the first or second years of follow-up after transplant. For persons undergoing lung transplantation, the mean costs of follow-up were significantly increased among men, with no differences in costs observed between women and men undergoing kidney, heart, or liver transplant. **CONCLUSION:** We observed that, among persons undergoing solid organ transplantation in BC, demographic characteristics did not have a systematic influence on the direct medical costs of post transplant care. Patient-specific clinical factors likely play a greater role in determining costs.