

Orthopaedic Surgeons Don't Care How Much It Costs: A Discrete Choice Experiment on Femoral Locking Plate Choice

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Purpose: Hospitals are interested in implant stewardship, encouraging surgeons to consider cost when choosing one implant over another. However, other factors can influence the implant decision-making process for orthopaedic surgeons. We aimed to determine what factors had the strongest influence on orthopaedic surgeons when selecting a plate and screw construct for distal femur fixation.

Methods: We performed a discrete choice experiment to assess the relative importance (ri) of the following factors: implant cost, familiarity with the implant, ease of instrumentation, modularity of screw and plate options, and implant representative support. Each factor was described by one of three levels ranging from most to least desirable. We recruited OTA members through the association's websites to complete the discrete choice experiment. Each participant was presented with 15 hypothetical construct options described by the five factors with varying levels. We used multinomial logit modeling to assess the relative importance of the factors on a scale of 0 to 100% as well as the utility derived from the levels on an absolute scale centered on a grand mean of zero, with higher values indicating greater utility and lower values greater disutility.

Results: In total, 63 OTA members participated in the study, 73% in academic practice. Support from company representatives was the most important factor (ri, 44%). Surgeons' familiarity with the implant was the second most important attribute (ri, 31%). Ease of use of the construct (ri, 15%) and modularity of the implant (ri, 8%) were of lesser importance. Implant cost was least important (ri, 1%). Surgeons indicated the most utility from simple-to-use plate systems (utility, 2.33), with which they were very familiar (utility, 2.00), those for which representative support was available (utility, 1.37) or knowledgeable (utility, 0.52). Surgeons would avoid constructs they were unfamiliar with (utility, -2.25) and those with unavailable representatives (utility, -1.90).

Conclusion: The findings suggest surgeons are not cost-conscious when selecting distal femur implants. Representative support and implant familiarity were the most influential factors. Hospitals may need to consider targeted strategies to change surgeon behavior and promote implant stewardship.