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### Eliminating Barriers To Prosthetic Use Following Lower Extremity Amputation

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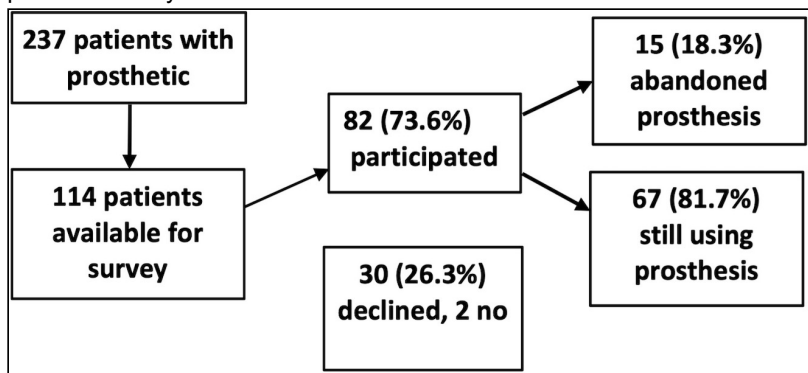
**Eliminating Barriers To Prosthetic Use Following Lower Extremity Amputation**

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**OBJECTIVES:** Approximately 60,000 lower extremity amputations (LEA) are performed annually in the United States and 38%-55% of those individuals are fitted for a prosthesis. The average price of a lower extremity prosthetic device alone is \$10,000, not including the associated costs of physical therapy and prosthetic fitting and maintenance. The most important factor influencing quality of life for individuals who have undergone LEA is the ability to ambulate with a prosthesis. The goal of our study was to investigate characteristics of individuals who abandon use of their prosthesis following LEA and identify any modifiable factors that may increase long-term successful prosthesis use.

**METHODS:** Electronic medical records were queried for patients who underwent LEA at our institution for any reason from January 2008-July 2018; 399 patients underwent LEA during this time period, while 237 patients received a temporary or permanent prosthesis. Data collected included demographics, comorbidities, laboratory studies and postoperative outcomes. A telephone survey was performed asking patients about prosthesis use and reasons for abandonment. Statistical analysis compared patients still using their prosthesis to those who were not. **RESULTS:** Patients were surveyed at a mean (SD) of 49.2 (19.8) months from the time of amputation. Of the 18.3% who abandoned their prosthesis, 53% did so within 6 months (see figure). Difficulty ambulating with the prosthesis, poor fit, poor healing, and expense all contributed to prosthesis abandonment. Patients who abandoned their prosthesis were also significantly older (P=.019), not married (P=.024), had a preoperative functional status requiring assistance (P=0.005) and lower preoperative albumin levels (P=.049). **CONCLUSIONS:**

Lower extremity prosthetic devices are essential to limiting disability and improving quality of life for individuals with a major lower extremity amputation. Although not all of the identified barriers to prosthesis use can be eliminated, lack of follow-up for fit and healing, lack of home assistance, and preoperative malnutrition are barriers that can be overcome to potentially prolong prosthesis use and limit patient disability and waste of healthcare resources.



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