

LOWER LIMB PROSTHETIC OUTCOME MEASURES: A TWO-YEAR RETROSPECTIVE CHART REVIEW

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INTRODUCTION

Outcome measures can provide valuable insights to help improve patient care in prosthetics. Additionally, these measures can help justify advanced technologies to third-party payers and other stakeholders. However, standardized outcome measures are still underutilized in prosthetics clinics. This study is a retrospective review of outcome measure data collected over a period of two years from patients with lower-limb loss at two prosthetic clinics.

METHODS

Outcome measures routinely administered since the beginning of 2015 at both clinic sites included the following: Timed Up and Go (TUG), Fast Walking Speed (FWS), Self-selected Walking Speed (SSWS), the Amputee Mobility Predictor (AMP), the Prosthetic Limb User Survey of Mobility (PLUS-M), and the PROMIS-29 v2.0, an instrument designed to measure health outcomes in 7 domains, Depression, Anxiety, Physical Function, Pain Interference, Fatigue, Sleep Disturbance, and Ability to Participate in Social Roles and Activities. Outcomes were assessed at baseline at least once prior to definitive prosthetic fitting and at follow up visits with a few weeks after the fitting (Initial assessment), 6 months post-fitting, and annually after that.

RESULTS

Outcomes data were collected from a total of 1172 lower limb subjects, 94 bilateral, average 56.1 years (range 3 to 97).

Row Label	Number of Subjects
TT Prosthesis	643
TF Prosthesis	287
TT Replacement Socket	148
TF Replacement Socket	107
Partial Foot	27
Syme	19
Knee Disarticulation Prosthesis	17
Replacement Foot	12
Hip Disarticulation Prosthesis	8
Foot	6
Toe(s)	4
TT Replacement Prosthesis	1
Supplies	1
TT Replacement Foot	1
TF Replacement Prosthesis	1
Grand Total	1282*

*Some subjects were in more than one category.

The number of lower limb subjects with both baseline and follow-up data by outcome measure are given in the table below.

Outcome	Subjects with Outcome Data	Subjects with Baseline & Follow up Data
FWS	535	118
SSWS	597	134
AMP	817	216
PLUS-M	768	74
Promis-29	813	85
TUG	524	108

Analysis of the data is ongoing and results will be presented showing the mean improvements for each outcomes by K-level and amputation level. Initial analysis revealed the following: (1) K3 and K4 subjects showed greater improvements in walking speed, (2) K1 and K2 showed greater improvements in AMP and PLUS-M scores and (3) transfemoral amputees showed greater improvements in physical function as measured by the PROMIS 29 instrument.

CONCLUSION

Routine outcome measurements in a prosthetic clinic is feasible and can provide valuable information that is useful for improving patient care and for justifying the use of technology to third party payers. This data may also provide important insights for the industry regarding the types of clinical improvements that can be demonstrated with prosthetic fittings.

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