

**INSTRUCTIONS FOR
AOPA AND CENTER FOR LEARNING
FINAL REPORT ON RESEARCH PROJECT**

Recipient Name _Shane Wurdeman, PhD, CP_____

Original Study Name _Improved mobility with lower limb prostheses: the establishment of a national multi-site outcomes database_____

Institution Name _Hanger Clinic_____

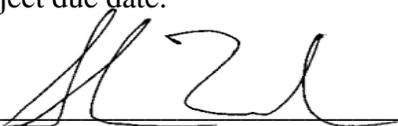
General Items:

1. If human subjects or patient information is used – please provide IRB number/certification and any forms/documents approved by the IRB for use with patients. (“Describe in Separate Attachment Titled– IRB Information”)

2. How have funds been used to date? _Funds were used to cover expenses of a study coordinator. However, the study coordinator resigned halfway into the project (January 2017). We then were able to re-fill the position in a fairly timely manner without consequence to the project.

3. How will remaining funds be used? _Funds were used to pay the study coordinator.

4. Please provide a 2 to 3 page description of the accomplishments of the project to date including where the work is being conducted, who the participants are, what progress has been made to date and what work remains until the project due date.

Signed  Date 12-15-17
Grant Recipient

Signed _____ Date _____
Grant Recipient’s Immediate Superior

Please Return Completed Form to Lauren Anderson, landerson@aopanet.org

Accomplishments of project to date:

We consider the project to be a huge success. We placed large emphasis on growing the network of clinics collaborating to collect outcomes data for lower limb prosthesis users. As of the 12-1-17, the list of clinics that have submitted at least 1 patient to our registry exceeds 400 clinics. The registry has enrolled 6500+ unique lower limb prosthetics patients, and we have approximately 500+ patients for which we have multiple data points which is the groundwork for longitudinal analyses. Our registry blankets the entire continental United States, also providing large geographic diversity.

At this point, we are busily working to begin extracting information from the registry. This began with an initial manuscript that has now been published:

Wurdeman SR, Stevens PM, Campbell JH. (2017). Mobility Analysis of Amputees (MAAT 1): Quality of life and satisfaction are strongly related to mobility for patients with a lower limb prosthesis. Prosthet Orthot Int. [Epub ahead of print].

The main findings of this work was confirmation that mobility indeed plays a strong role in the quality of life and satisfaction of patients that have a lower limb amputation. Previous work had not directly investigated this relationship in lower limb prosthesis users. This study was performed in a population of 509 patients, far exceeding any other studies that may have indirectly discussed the impact of mobility on quality of life for patients with a lower limb amputation.

We additionally have 2 other manuscripts in review and a fourth that is in draft format. The purpose of our second analysis is to examine the impact of comorbidities on a large scale. Our results show through regression analysis that history of peripheral vascular disease, stroke, and anxiety/panic disorders along with age are the only factors that were significant. Surprisingly more commonly thought comorbidities such as COPD, diabetes, hypertension, and several others were not significant factors for mobility. We expect this to be published early 2018. In our third analysis, we have been able to go back through approximately 2500 patients and match patients based on comorbid health and amputation level. This has never been done due to the large number of patients that are necessary to allow any significant matching. We specifically match individuals with and without an MPK based on comorbid health rather than a subjective, arbitrary assignment like K-level. By matching groups of 150 patients, and also including patients with BK that are matched based on comorbid health, we are able to see that indeed advanced knee technology closes the functional gap in terms of mobility between patients with AK and patients with BK. We expect this to be published early 2018 as well. In our fourth analysis, which is in draft format, we have looked at nearly 800 patients with lower limb amputation due to vascular disease/diabetes. We grouped patients into various time periods removed from amputation (e.g. 0-3 months post amputation, 4-6 months post amputation, and up to the longest group of 85-108 months post amputation), as well as dividing out based on whether they have ever received a prosthesis or not. This is cross-sectional analysis we get the initial look into the “life” of the diabetic/dysvascular amputee and we see that indeed receipt of a prosthesis yields higher quality of life,

satisfaction and well being, and this remains as far out as 7-9 years. Additionally, we show that, contrary to certain beliefs, mobility is consistent across groups carrying out to the 7-9 years post amputation group.

In order to allow for retrospective analysis of the prosthetics registry, we have obtained IRB approval from Western IRB. The protocol was reviewed and approved for continued data aggregation, analysis, and dissemination of de-identified data.