UPPER LIMB PROSTHETIC COMPETENCY AND CHARACTERISTICS AMONG SELF-ASSESSED NOVICES- INTERMEDIATES AND EXPERTS-SPECIALISTS

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INTRODUCTION
Due to the decline of self-perceived competence in upper limb in the US, many prosthetists are not providing care personally, but relying on remote visits from experts or specialists. While this service allows the practitioner to concentrate on higher volume prosthetic care, it generally decreases the effectiveness of the average practitioner to provide optimized upper limb care to increase patient acceptance. Although this has created a greater demand for experts and specialists especially for the initial fitting, a majority of prosthetists are increasingly unable to adequately serve the long term needs of the upper limb patient. There appears to be a number of fundamental reasons for this "learned helplessness” or lack of clinical self-efficacy with respect to approaches toward upper limb prosthetic care. These difference between the various experiential and work setting groups included attitudes toward innovation, componentry, interface design, consultation, and patient variability.

METHODS
An initial telephone interview of five practitioners from a variety of settings and experiences was conducted to provide a better understanding of the broad areas of concern most pertinent for a broader survey. The main areas identified were low volume, financial risk, access to training, and level of difficulty. A ten question on-line survey was then developed that was posted on a third-party survey administration website for over a month from March 13, 2013 to May 19, 2013. The survey had 152 respondents with 149 who completed the entire 10 question survey. The group self-assessed themselves as 2.0% non-providers, 22.8% Novices, 49.0% Intermediates, 12.8% Experts, and 13.4% Specialists. These group were compared as mutually exclusive dichotomous groups of the Novice-Intermediate (N-I) group with 71.8%, and Expert-Specialist (E-S) group with 26.2%. Also the groups were further subdivided into Institutional-Corporate (I-C) of 37.5% and Privately-Owned Clinic (P-O) at 59.7%.

RESULTS
In the N-I group 62.1% were at private clinics, but only 44.4% in the E-S group. The E-S group saw 24 patients per year while the N-I group saw 3 patients per year. The number of external collaborators was different with the N-I group at 1.76, but the E-S group had 3.42. Those in the E-S and I-C group had 4.85 external linkages. Greater numbers of the E-S group chose "Innovator" statements at 44% with the N-I group with 29%. The N-I group had a higher number of Laggard responses with 28% while the E-S group had only 2.7%. The distribution of the “Reasons for General Lack of Confidence” was ”Too few patients” for the N-I group, but “Personal Confidence” and “Materials” was slightly higher for the E-I group. The E-I group was more neutral about asking for help at 2.12 than the N-I group at 1.80. The E-I group was more confident when “Approaching new Upper Limb

DISCUSSION
In general the survey did seem to verify the existence of a higher lack of clinical self-efficacy from Novices-Intermediates than Experts-Specialist groups with respect to patient volume, clinical experience, and expert instruction. Differences seemed to be found in numbers of external heterophilic linkages, attitudes toward innovation, componentry, innate innovativeness, interface design, patient training and variation. Additional differences appear to be present between Privately-owned Corporate-Institutional settings with respect to financial risk and contextual learning. Additional statistical examination is required to examine the various sub-groups and determine the level of correlation between them. The delineating factors for proficiency in Upper Limb seem to be a higher number of external linkages, more clinical experiences, greater confidence with external power, proficiency with interface design, innovative attitude, and ability to address individual needs and training.

REFERENCES
2) Cheraghi, F. Int. Nursing Review, 56(2), 2009

DISCLOSURE
Author is employed by Ottobock Healthcare in Minneapolis, Minnesota.