



Hanger announces results of landmark study on individuals who have undergone lower limb amputation concluding meaningful prosthetic mobility is not prevented by comorbidities

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Published in the American Journal of Physical Medicine and Rehabilitation, MAAT II evaluates largest lower limb prosthetic data set to date

AUSTIN, Texas, Aug. 27, 2018 -- Hanger, Inc. today announced results of the second part of its landmark study of lower limb amputees known as the Mobility Analysis of Amputees (MAAT II). The largest analysis of its kind, the MAAT II study investigated the impact of those comorbidities comprising the Functional Comorbidities Index (FCI) and other notable comorbidities, and their influence on mobility among people living with lower limb loss. MAAT II findings demonstrated a person's overall comorbid health has little impact on mobility with a lower limb prosthesis as patients with multiple co-morbidities still benefit from a prosthetic device which provides meaningful mobility. The clinical research was peer reviewed and published in a Medline indexed journal, the respected *American Journal of Physical Medicine and Rehabilitation*.

"The continued rise in lower limb amputations is creating a need for improved means of identifying patients who will benefit from prosthetic rehabilitation and technology," stated James Campbell, PhD, CO, FAAOP, chief clinical officer, Hanger Clinic. "In the absence of strong research support to guide prosthetic rehabilitation, decision makers have been restricted in their options for identifying prosthetic candidates. Historically, comorbid health has been among the factors utilized, despite a lack of strong evidence to support this application, which necessitated further research."

Colleagues in the clinical and scientific affairs department of Hanger Clinic, including James Campbell, PhD, CO, FAAOP, Shane R. Wurdeman, PhD, CP, FAAOP, and Phil M. Stevens, MEd, CPO, FAAOP, performed a retrospective review of outcomes data collected within multiple clinics. The primary endpoint included within the analysis was the Prosthetic Limb Users Survey of Mobility (PLUS-M). Analysis included 596 current prosthetic users, aged 18 or older, with varying amputation levels, including both unilateral and bilateral lower limb amputation.

The results of the MAAT II study found only four factors to be significant predictors of mobility: age, history of stroke, presence of peripheral vascular disease (PVD), and anxiety/panic disorders ($R=0.388$). With compounding comorbid health conditions, mobility declines ($F7, 588 = 5.932, p<0.001$); however, after adjusting for age, history of stroke, PVD, and anxiety/panic disorders, there was no significant impact of comorbid health on mobility ($F7, 584 = 0.430, p=0.884$). The MAAT II study concluded the presence of comorbidities does not preclude meaningful mobility. Clinicians should consider age, history of stroke, PVD, and anxiety/panic disorders in formulating their plan of care to maximize patient mobility.

"We at Hanger are driven by evidence-based outcomes and are committed to conducting necessary research to better serve the patients we treat, and evolve our industry," stated Hanger President & CEO Vinit Asar. "We are very pleased with the publication of these important research findings, which will help professionals make informed decisions about the potential benefits of prosthetic care for those with limb loss and limb difference."

The MAAT II study is the second in a series Hanger Clinic is undertaking in support of the development of evidence-based care for individuals with lower limb amputation. The outcomes from the MAAT II study are set to be published in an upcoming hardcopy print edition *American Journal of Physical Medicine and Rehabilitation*, and are available via early release online here: https://journals.lww.com/ajpmr/Abstract/publishahead/Comorbidities_and_Mobility_in_Lower_Limb.98488.aspx.

About Hanger, Inc. – Built on the legacy of James Edward Hanger, the first amputee of the American Civil War, Hanger, Inc. (OTC PINK: HNGR) delivers orthotic and prosthetic (O&P) patient care, and distributes O&P products and rehabilitative solutions to the broader market. Hanger's Patient Care segment is the largest owner and operator of O&P patient care clinics with [approximately 800](#) patient care locations nationwide. Through its Products & Services

segment, Hanger distributes branded and private label O&P devices, products and components, and provides rehabilitative solutions. With over 150 years of clinical excellence and innovation, Hanger's vision is to lead the orthotic & prosthetic markets by providing superior patient care, outcomes, services and value. For more information on Hanger, visit www.hanger.com.

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