



2018 Gleiberman Head and Neck Cancer Center Pilot Grant

Dysphagia home exercise program adherence and functional outcomes in patients with head and neck cancer: Comparing traditional and mobile device based delivery models

Liza Blumenfeld, MA CCC-SLP, BCS-S

Ryan Orosco, MD

Philip Weissbrod, MD

Scientific Abstract:

Patients with head and neck cancer commonly experience debilitating dysphagia resulting from their tumor and associated treatment. For this population, Speech Language Pathologists (SLPs) play crucial roles in comprehensive cancer care by helping to optimize swallow function. Based on each patient's unique case, a personalized Home Exercise Program (HEP) is designed to address dysphagia before, during, and after treatment. Patient adherence with HEP varies widely but is germane to attaining optimal swallow outcomes. To assess adherence, clinicians rely on patient self-reporting, and little is known about true adherence rates. Encouragingly, technology-based HEP intervention has been shown to improve adherence rates, though it has not been correlated with functional outcomes. We propose a prospective clinical investigation to compare adherence and functional outcomes between traditional HEP and a technology-supported HEP delivery model with a mobile device application (App) called *Swallow Rehapp*. We define true adherence as the adherence documented through the mobile App—technology-documented adherence (TDA).

Lay Abstract:

Patients with cancer of the mouth, throat, and voice box commonly have trouble swallowing. The cancer alters their anatomy and function, and so does the treatment for the cancer. For these patients, SLPs help to optimize swallow function before, during, and after their cancer treatment. Swallowing exercises are the mainstay of SLP interventions aimed at counteracting the effects of dysphagia. The SLP works with the patient's unique tumor characteristics, treatment plan, and dysphagia profile to craft a personalized home swallowing exercise regimen—a Home Exercise Program (HEP). To get the best possible outcome, patients must exercise every day. Like all exercise, it can be challenging to maintain the routine. Patients tell doctors and speech pathologists how much they are exercising, but we don't know how well this reporting corresponds with actual exercise time. Also, we don't know how varying amounts of exercise time relate to swallow function. Some research has shown that patients are more likely to follow their swallowing exercise regimen if they have help from a mobile application (App). We propose a clinical study to compare swallowing exercise behavior and swallowing outcomes between a normal HEP and a program supported by a mobile App.