**Evaluating Patient Perceptions of Smart Phone Use for the Active and Passive Collection of Health Data**Romil Shah, MD1; Nitya Venkat, BA1; Prakash Jayakumar, MD, PhD1  
1 University of Texas – Austin: Department of Orthopedic Surgery

**Background**:Patient generated health data (PGHD) can help define a patient’s health status and patient outcomes. An increase in telehealth and widespread smart phone use has introduced the smart phone as a powerful device for gathering PGHD. The objectives of this study were to assess patient perceptions of using smart phones to provide active/passive health data to providers.

**Methods**:Adult (>18y) patients living in the United States were recruited from an online survey tool (Amazon mTurk). The survey asked for patient comfort on a 5-point scale on the following activities: downloading a smartphone application which would send data to their orthopedic provider, passive data transmission of social information (number of calls, texts) and physical activity information (time sitting, sleeping, walking), and actively sending questions/concerns to their orthopedic doctor via their phone. A multivariable regression to investigate factors associated with comfort with sharing health data was then performed.

**Results**:488 participants were included in the study, with an average age of 38 years old. 55-60%% of patients were comfortable sending passive information on their social and physical activity to their orthopedic doctor via their smart phone, and 59% of participants would allow their doctors to download an app on their phone to track their data. In regression analysis, younger participants (OR 2.0, p<0.05) and participants with increased education (OR 2.5, p<0.01) were more likely to be comfortable in sharing their data, and younger participants (OR 2.34, p<0.01) and patients of African American ethnicity (OR 2.7, p<0.05) were more comfortable with allowing an app to be downloaded on their phone. Patient’s with low comfort expressed concerns over data privacy and battery life in their open-ended comments.

**Discussion**:Overall, patients are comfortable in sharing their smart phone health data with their providers, but work is needed to build confidence in patients with lower education and older age.