and steadily increasing since 2000. In addition, the number of physical activity research publications incorporating accelerometers grew exponentially since 1996, increasing by 1251% between 1996 and 2015, and culminating in 16.26% of all articles in 2015. Among the three PM&R-specific journals, physical activity research comprised the highest percentage (11.8%) of all research articles in 2012. In all other years between 1996 and 2015, physical activity comprised 1 to 5% of articles and did not exhibit a growth trend over time.

Conclusions: In the general medical literature, physical activity comprised an increasingly greater proportion of all research articles indexed on PubMed. Accelerometers were increasingly utilized within this physical activity research, with their appearance rising over twelve-fold since 1996.

**Level of Evidence:** Level IV

**Poster 27:**
**Introduction of 3D Scanning into the PM&R Practice**

Michael Hagen, MD (Montefiore Medical Center/Albert Einstein, Bronx, NY, United States), Matthew N. Bartels, MD, MPH, FAAPMR, Stephanie E. Rand, DO, FAAPMR

Disclosures: Michael Hagen: I Have No Relevant Financial Relationships To Disclose

Objective: Clinicians are constantly seeking new technologies to assist in providing efficient, timely patient care. One such technology is 3D scanning, which while still in its infancy is already providing clinicians with the ability to generate computer models or anatomic recreations which can then be used for a myriad of clinical and research applications. Our group is currently exploring the utility in 3D scanning in the physiatric and rehabilitation practice, focusing upon applications intended to be of particular use in populations with little or no access to regular health care services.

Design: Descriptive

Setting: Academic Medical Center

Participants: Prosthetists, Physiatrists, Therapists, Residents, Students

Interventions: Infrared and visible light scanning in clinical settings

Main Outcome Measures: Assessment of accuracy of physiologic and anatomical clinical models and cost benefit between scanning solutions.

Results: Current projects include generating models of orthotics and prosthetics to allow “as-needed” printing, experimenting with providing the frame work to produce models of limbs to aid in prosthetic design as well as exploring the possibility of scanning limbs to assist in producing customized prosthetics and orthotics. Produced images show fidelity to the original objects grossly. Gross fidelity analysis shown by comparing ratios of each object’s X-Y-Z dimensions normalized back to the original object range from between 5%-13.6%, regardless whether generated from a scanner retailing for $19,999 or a free iPhone app.

Fine detail increases with scanner cost, although so does processing time, and operator skill. Challenges encountered during these projects include staff training in both image generation and post-processing, determining appropriate scanning equipment for each task while minimizing costs, and generating 3D printing interfaces.

Conclusions: Low cost scanning is cost effective, but may sacrifice fidelity for many applications. Future areas of inquiry involve methods of quality improvement of low cost solutions while reducing the costs, process streamlining, and improving post scan processing to improve the final projects.

**Level of Evidence:** Level V

**Poster 28:**
**Post-Stroke Rehabilitation: Factors Predicting Discharge to Acute versus Subacute Rehabilitation Facilities**

Neal K. Rakesh, MD (New York - Presbyterian Hospital - Columbia, New York, NY, United States), Daniel Boiarsky, Medical Student, Ammar Athar, MD, Shaliesha Hinds, BA, Joel Stein, MD

Disclosures: Neal Rakesh: I Have No Relevant Financial Relationships To Disclose

Objective: To examine predictors of discharge of hospitalized stroke patients to either an acute inpatient rehabilitation facility (IRF) or subacute skilled nursing facility (SNF).

**Design:** Retrospective Cohort Study

**Setting:** Urban Academic Medical Center

**Participants:** All individuals hospitalized for stroke between 01/01/15 to 12/31/15 at a single academic medical center who were discharged to either an IRF (n=81) or a SNF (n=54).

**Interventions:** Not applicable

**Main Outcome Measures:** Activity Measure for Post Acute Care (AMPAC) for basic mobility scale and daily activity scale, admission and discharge mRS, admission and discharge NIHSS and CCI (P < .05).

**Level of Evidence:** Level IV

**Poster 29:**
**TRC-FRAP, Thai Red Cross Fall Risk Assessment and Prevention**

Kwanunya Sukonthamarn, MD (Thai Red Cross Rehabilitation Center, Samutprakarn, NY, Thailand), Anamon Tangjade, MD

Disclosures: Kwanunya Sukonthamarn: Research Grants - Ratchadaphiseksomphut Endowment Fund

**Objective:** Primary objectives: To reduce the incidence and serious complication of fall in Thai Red Cross Rehabilitation Center by using TRC-FRAP. Secondary objectives: To assess the satisfaction of medical personnel using TRC-FRAP.

**Design:** A prospective cohort study

**Setting:** Rehabilitation Center

**Participants:** Inpatients age from 18 years old who were admitted in Thai Red Cross Rehabilitation Center during June 2016 to May 2017.

**Interventions:** 282 inpatients were evaluated within 24 hours by using Queensland Fall Risk Assessment Tool (QFRAT), Thai version recommended from Elderly Medicine Institute Department of Medicine The Ministry of Public Health. Each patient will receive fall prevention program according to their risk: low, moderate or high. The incidence of fall, detail of fall (cause, time, place) and complication were collected. The multivariate analysis was carried out using logistic regression to evaluate the risk factor of fall. Satisfaction of using TRC-FRAP was evaluated by nurses at the end of research.

**Main Outcome Measures:** Total 10 patients (3.5%) fell and had no serious complication. The Fall rate was 1.3 per 1000 occupied bed days.

**Results:** The factor that has significantly associated with fall in the multivariable analysis was younger age (P = .032, 95%CI = 0.934-0.997). Most of falls (80%) occurred during daytime, by bedside (40%) and while transferring (30%).

**Conclusions:** TRC-FRAP may reduce the incidence of falls and serious complications. Fall prevention programs should be focused on younger and more active patients which may increase the risk of falling in Thai Red Cross Rehabilitation center.

**Level of Evidence:** Level IV