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ABOUT HPA THE CATALYST

MISSION STATEMENT
The mission of the HPA Section is to transform the culture of physical therapy through initiatives that enhance professionalism, leadership, management, and advocacy to foster excellence in autonomous practice for the benefit of members and society.

ABOUT US
A catalyst is a person or thing that precipitates change or a substance that accelerates action.
We are a professional association serving member physical therapists, physical therapist assistants, and physical therapy students.
We provide a community for professionals to advance the health and wellbeing of society through innovation, leadership and professionalism in physical therapy. HPA members practice in a variety of professional settings performing many different roles. Members work with patients across the entire lifespan and continuum of care.

VISION STATEMENT
By 2020, HPA The Catalyst will be the expert in integrating professionalism into the culture of physical therapy:
We will be sought by healthcare professionals, APTA components, and decision makers to influence social, political, and economic policies that impact physical therapy and health.
We will have created and delivered programs that develop professionals, leaders, managers, and advocates to foster excellence in physical therapy.
We will be leaders in promoting cultural competence, global health initiatives, social responsibility, effective application of technology, and health services research.

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Driving Change: Formation of a Rehabilitation-Based Literature Review Group and Its Impact on Practice

PRESENTED BY
Joshua Vogel

PURPOSE
This platform will discuss how the formation of an interdisciplinary literature review group (LRG) within the Rehabilitation Department of a large, urban, academic medical center was utilized to effectively integrate evidence based practice (EBP) into clinical service delivery.

DESCRIPTION
The need for increasing EBP has been well established. However, the process of translating academic research into standardized clinical practice has been difficult with a notable gap between available evidence and standard practice. To promote EBP clinical standards at University of Maryland Medical Center (UMMC), an interdisciplinary literature review group (LRG) was formed within the rehabilitation services department. With the support of department leadership, a core group of therapists were tasked with addressing clinical questions within the department and ensuring that new initiatives and process improvement plans would reflect the current literature. Inspired by a platform presentation at CSM 2015, entitled, “Acute Care Therapist Can Survive and Thrive in Uncertain Times,” by Hull and et al. LRG leaders devised a strategy to efficiently utilize a team approach to design a clinical question and then conduct a thorough review. The work was then summarized for department leadership and stakeholders. The implementation of this system and its continuous improvement through team feedback has allowed the LRG to quickly become an integral part of developing departmental clinical recommendations. Since its formation, the LRG has undertaken four distinct reviews which have led to evidence based proposals for policy change and pilot initiatives in areas including management of patients with deep vein thrombosis (VTE), orthopedic protocols, physical therapy in the Emergency Department, and nursing mobility screens. Through the LRG, therapists have gained a deeper understanding of the issues, the evidence, and have had increased levels of participation in organizational policy discussions.

SUMMARY OF USE
LRGs can be utilized as a strategy within the clinical setting for linking evidence to practice, thereby effectively integrating evidence based practice into departmental guidelines/policies. It has exceeded expectations in its ability to effectively spur clinical practice development and change.

IMPORTANCE TO MEMBERS
LRGs may assist rehabilitation professionals to drive evidence based change at department and organizational levels. This is particularly important in a healthcare climate that challenges therapists to find new ways to prove the value of their skills and services on a global level.
Feasibility of an Epidemiological Approach to Inform Population-Based Fall Prevention Programs: San Joaquin County, California

PRESENTED BY
Todd Davenport

PURPOSE/HYPOTHESIS
Novel payment methods for medical care is stimulating a move toward models of multi-professional collaboration and coordination to address health goals. One barrier to adopt novel payment approaches is uncertainty with assessing the health status of service populations. The purpose of this project was to assess the feasibility of using epidemiologic measures to assess the frequency and severity of injuries, using unintentional falls as an example.

NUMBER OF SUBJECTS
Unintentional falls data was analyzed that covered the cumulative resident populations of San Joaquin County, California (SJC; n=4,138,531), 8-County San Joaquin Valley Region (8VR; n=19,849,062), and State of California (n=224,982,727) between 2008-2013.

MATERIALS/METHODS
The California Department of Public Health’s EpiCenter database was assessed for occurrences of unintentional (accidental) falls between 2008-2013. Frequency, outcome, time of year, and associated patient characteristics were used to calculate stratum-specific incidence, risk ratios, and excess costs. These epidemiological statistics were calculated for SJC, 8VR, and State of California, in order to compare SJC averages with two geographic comparators.

RESULTS
Falls were the 3rd most common cause of unintentional injury mortality in SJC (5.6 per 105), and most common cause of non-fatal hospitalizations (NFH; 262.9 per 105) and non-fatal emergency department visits (EDV; 1,928.2 per 105). Fall-related outcomes generally were less frequent than the State of California average but more frequent than the 8VR. Fall-related mortality was most common in adults aged 45-64 years (3.6 per 105) and adults aged greater than 65 years (35.7 per 105). White individuals accounted for peak race-specific incidence of unintentional fall-related mortality (8.7 per 105), NFH (503.3 per 105), and EDV (2,924.0 per 105). Women accounted for more frequent mortality (4.6 per 105), NFH (314.7 per 105) and EDV (2,059.3 per 105) than men. Peak incidence of fall-related EDV occurred in August (176.7 per 105). Approximately 1,251 more EDV occurred secondary to unintentional falls in SJC compared to the 8VR average during the observation period in adults over the age of 45 years. Reducing EDV related to unintentional falls among adults aged 45 years and over to the 8VR average would save approximately $9.46 million in SJC health expenditures, given facility-weighted mean charges for EDV during the observation period.

CONCLUSIONS
Epidemiological methods are a feasible approach to assess relevance and demonstrate outcomes associated with population-based health programs. Important differences between SJC, State of California, and the 8VR in characteristics of unintentional falls were documented.

CLINICAL RELEVANCE
The methodological approach used in this study indicates physical therapists may use epidemiological methods to support the rationale and track outcomes associated with population-based health programs.
The Cultural Understanding of Doctor of Physical Therapy (DPT) Students at Different Stages in the Physical Therapy Program: A Follow-up Study

PRESENTED BY
Sonia Gawronski

PURPOSE/HYPOTHESIS
The vision of the American Physical Therapy Association (APTA) is to provide physical therapy and healthcare to all individuals equally. By demonstrating cultural understanding, physical therapists can reduce healthcare disparity. The purpose of this study is to determine if DPT students demonstrate improvement in their cultural understanding as they progress through the professional sequence of a full-time DPT program, delivered in a weekend format.

NUMBER OF SUBJECTS
50 DPT students (26 females, 24 males) aged 27.2±5.3 years old

MATERIALS/METHODS
The Cross Cultural Adaptability Inventory (CCAI) is a culture-general standardized instrument consisting of 4 subscales of cultural adaptability: Emotional Resilience (ER), Flexibility/Openness (FO), Perceptual Acuity (PAC), and Personal Autonomy (PA). In this cross-sectional follow-up study, the CCAI was administered to three DPT cohorts initially in June 2015 and the follow-up administration was completed a year later in June 2016. The informed consent and demographic information were collected at the initial administration. For each cohort (Class of 2015, 2016, and 2017), 19, 15, and 16 students completed the two surveys, respectively. A mixed design ANOVA was used to analyze differences within two data collection times and between 3 group differences.

RESULTS
Time 1 and time 2 average scores of 4 subscales were: ER: 76.8/78.3, FO: 75.8/77.7, PAC: 80.7/81.9, and PA: 79.8/78.2. There was no statistically significant time effect between two data collection points on the CCAI subscales (ER, FO, PAC, and PA) scores (p>0.05). There was no statistically significant time and cohort interaction for CCAI subscales (ER, FO, PAC, and PA) scores (p>0.05). Female and male subjects showed no time effects and no time and cohort interaction on the CCAI subscales (p>0.05)

CONCLUSIONS
The cultural understanding of three cohorts in the DPT Program did not significantly improve as the students progressed through the professional sequence of a weekend format DPT program. The subscales of CCAI scores did not differ between the three cohorts. A student’s background and personal exposure to other cultures may be a better indication of one’s knowledge and experience in understanding and dealing with people of other cultures. One point of interest is that 44% of the DPT students are diverse, which is an unusually high percentage. This fact indicates that diversity is evident and experienced in all Program activities

CLINICAL RELEVANCE
Using the CCAI as a measure provides essential information related to one’s cultural adaptability, and it is noted in this study that ongoing exposure and life experiences with cultural diversity may enhance one’s own abilities. Further research is recommended, including the use of: 1) a larger sample size and interinstitutional participation with other DPT cohorts with minimal diversity, 2) other cultural competence surveys, and 3) DPT student focus groups to determine other qualitative factors that may be relevant to cultural understanding and competence
Cost-Effectiveness Analysis of Preventative Physical Therapy Versus a Traditional Care Model for Breast Cancer-Related Lymphedema

PRESENTED BY
Stephen Patrice

PURPOSE/HYPOTHESIS
Randomized clinical trials have shown that a preventative physical therapy (PT) program can reduce upper extremity lymphedema (UEL) risk in breast cancer patients who have undergone axillary surgery compared to the standard management paradigm of impairment-based intervention. We evaluated the cost-effectiveness of adding upfront PT to the traditional model of care (TMC) for breast cancer-related UEL.

NUMBER OF SUBJECTS
N/A

MATERIALS/METHODS
Using a decision tree with embedded Markov process models a cost-utility analysis was performed to compare strategies of upfront PT followed by the TMC versus the TMC alone for hypothetical cohorts of patients status-post full axillary lymph node dissections (ALND) or sentinel lymph node biopsies (SLNB). The base case time horizon was 24 months; consistent with the maximum follow-up reported in the clinical trials, however the effect of a lifetime horizon was studied in scenario analyses. Patients entered the model in the alive without lymphedema health state (AWOL) and transitioned among health states of alive with uncomplicated lymphedema (AWUCL), alive with complicated lymphedema (AWCL) or dead, based on probabilities derived from the medical literature. The model parameters for lymphedema incidence were derived from a meta-analysis of international clinical trials, while the PT/TMC hazard ratio for UEL risk was obtained from the randomized trial by Lacomba et al. Costs were from a societal perspective and health state utilities were obtained via the Euroqol 5D instrument and standard gamble/time-trade-off methods. Incremental cost-effectiveness ratios (ICER) were calculated per quality-adjusted life year (QALY) using a 3% discount rate. Sensitivity analyses addressed uncertainty in key variables.

RESULTS
In the ALND base case analysis, adding PT resulted in a $239 cost increase and a gain of 0.02 QALYs, yielding an ICER of $11,319/QALY. In the SLNB base case, the addition of PT resulted in incremental costs of $1,428 and 0.01 QALYs, yielding an ICER of $223,015/QALY. Sensitivity analysis revealed the ICER to be most sensitive to variations in the PT/TMC hazard ratio for UEL risk and moderately sensitive to changes in utility values for the AWUCL and AWOL health states.

CONCLUSIONS
Using the maximum follow-up interval reported in the literature, adding PT to the TMC was cost-effective compared to the TMC alone for the ALND group using common willingness-to-pay thresholds with an ICER below that of many breast cancer-related treatments. Adding PT to the TMC is not cost-effective in the SLNB group.

CLINICAL RELEVANCE
In economies with limited budgets, cost-effectiveness analysis facilitates informed health policy decisions by providing an analytical framework to compare the net benefit of a new intervention to those benefits that others must forfeit as a result of reallocating resources. This is the first study to evaluate the cost-effectiveness of upfront PT for breast cancer-related UEL. Our results suggest that PT should be offered to all breast cancer patients who undergo ALND. Using the CCAI as a measure provides essential information related to one’s cultural adaptability, and it is noted in this study that ongoing exposure and life experiences with cultural diversity may enhance one’s own abilities. Further research is recommended, including the use of: 1) a larger sample size and interinstitutional participation with other DPT cohorts with minimal diversity, 2) other cultural competence surveys, and 3) DPT student focus groups to determine other qualitative factors that may be relevant to cultural understanding and competence.
Growth of Ambulatory Physical Therapy and Occupational Therapy Utilization and Expense by the United States Population, 2009-2013

PRESENTED BY
Robert Sandstrom

PURPOSE/HYPOTHESIS
The purpose of this study was to develop population estimates for the number of persons, the mean number of visits and the average therapy expense of persons in the civilian, non- institutionalized U.S. population who utilized ambulatory physical therapy and occupational therapy during 2009-2013.

NUMBER OF SUBJECTS
Approximately 15,000 households reported in the 2009- 2013 Full Year Consolidated Data File of the Medical Expenditure Panel Survey-Household Component (MEPS-HC). The MEPS- HC collects data using a complex, multistage, stratified sampling design in five rounds over two years from a “panel” of participating households obtained from prior year participation in the National Health Interview Survey.

MATERIALS/METHODS
The number of ambulatory physical and occupational therapy visits and the therapy expense variables in the MEPS- HC data files were used in the analysis: A dummy variable was created to identify persons with at least one ambulatory therapy visit. Using the survey analysis procedure in STATA, the number of therapy patients in the U.S population was estimated with a standard error of the estimate and a 95% confidence interval of the true estimate for each year (2009- 2013). I also calculated the total national expense, mean and median per person expense estimates with standard errors and a 95% confidence interval of the true estimate for the same period. Mean number of visits with standard errors and a 95% confidence interval of the true mean was also calculated for the same period.

RESULTS
Total number of ambulatory therapy patients grew 24.7% between 2009- 2013 to 13.2 million persons or 4.2% of the U.S. population. In 2009, about one in 30 Americans visited a physical or occupational therapist in an ambulatory care setting. In 2013, about one in 25 persons visited a physical therapist or occupational therapist in a U.S. hospital outpatient or office- based setting. Total national expense for ambulatory therapy grew from 13.2 billion dollars in 2009 to a peak of 18 billion dollars in 2012. Mean per patient expense was $1381 in 2009 and peaked at $1630 dollars in 2012. Median per patient expense varied from $700 to $794. Mean number of visits peaked in 2011 at 10.24 visits declining to 9.54 visits per patient in 2013.

CONCLUSIONS
Demand for ambulatory physical therapy and occupational therapy services increased at nearly a 6% annual rate between 2009- 2013. Total national expense increased 25% over the study period but mean/ median expense and the mean number of visits per patient did not increase at the same rate.

CLINICAL RELEVANCE
An increasing number of Americans in the civilian, non- institutionalized population is utilizing ambulatory therapy services. The therapist workforce needs to increase to meet this demand.
Social Media Use in Physical Therapy Facilities in New York State

PRESENTED BY
Pamela Bartlo

PURPOSE/HYPOTHESIS
Background: Social Media is an ever-growing phenomenon. Businesses in many arenas take advantage of social media for communication, education, and marketing of a larger audience. Around 97% of marketing businesses use social media.1 Studies looking at social media usage by neurosurgery centers and radiology groups showed 74% and 76% (respectively) used social media.2,3 There is no research available to show the amount that Physical Therapy (PT) facilities use social media or for what purposes. Purpose: The purpose of this study was to investigate the use of social media in PT facilities.

NUMBER OF SUBJECTS
Out of 165 surveys distributed, 56 were submitted for a 34% response rate. Of those submitted, 44 were complete surveys, and were therefore included in data analysis.

MATERIALS/METHODS
The study was conducted via electronic survey to PT facilities in New York State. Analysis of the correlational data used Pearson’s correlation coefficient to examine those PT clinics that used social media, which forms of social media they used most often, and what purposes they used it for.

RESULTS
The results showed that 45% of the PT facilities used some kind of social media. There was a perfect correlation between the use of social media and Facebook (r=1.0). There were weak, yet positive correlations between the use of social media by the facility with the following types of social media: Blogs, Twitter, LinkedIn, and Youtube (r= 0.46, 0.46, 0.46, and 0.36 respectively). The PT facilities used social media most often to promote upcoming events, increase their online profile, provide patient education, and solicit new referrals (84%, 79%, 63%, and 42% respectively). There was a strong correlation found between the facility’s patient education via the use of pictures for exercise and the use of blogs to discuss interventions (r= 0.58 for each), as well as use of blogs to discussion physical or medical conditions (r=0.52). The PT facilities felt that the use of social media for patient education could be beneficial (47% of clinics that used social media and 35 % of the entire population). The most common barriers to the use of social media were time constraints and patients being unaware of social media (59%, 23% respectively).

CONCLUSIONS
Social media was shown to be underutilized by PT facilities in New York compared with other industries. The results demonstrated that most facilities used Facebook and they most often used their social media platform(s) to promote upcoming events.

CLINICAL RELEVANCE
Social media use in physical therapy has the potential to grow in the next 5-10 based on how it is being used in facets of health care.
The Realities of Provision of Pro Bono Services By Physical Therapists: A Combined Quantitative & Qualitative Study

PRESENTED BY
Jason Denton

PURPOSE/HYPOTHESIS
The American Physical Therapy Association (APTA) outlines core values for physical therapists (PTs) that should be internalized for best practices that include altruism and social responsibility. These speak directly to “providing pro-bono services” and “promoting community volunteerism” and research indicates these to be the least integrated by PTs. The purpose of this study is:
1) to describe self-reported frequency of performance of pro bono services by PTs in USA and
2) to describe self-reported barriers to performing pro bono services by PTs.

NUMBER OF SUBJECTS
2,779 licensed PT’s provided answers to self-reported frequency data. 1,257 PTs answered qualitative open-ended question about barriers to performing pro bono services.

MATERIALS/METHODS
Two thousand seven hundred and seventy-nine licensed PTs participated in an online survey from ten states: Connecticut, Florida, North Carolina, New Mexico, Ohio, Oregon, Rhode Island, Texas, Utah, and Wyoming. States were selected on availability of PT e-mail lists, geographic and political diversity, and stratification of direct access levels. Participants completed a Likert scale self-ratings (1 = Never to 5 = Always) survey of how often they performed “Provide Pro Bono Services” and answered an open-ended qualitative question: “What barriers (if any) interfere with your ability to provide pro bono services or participating in achievement of societal health goals?”

RESULTS
Frequency results indicated that participants reported on average providing pro-bono services between rarely to occasionally (2.56) on Likert Scale responses. Also, individual state ratings ranged from 2.43 to 2.91. Negligible differences were observed between direct access levels of Limited (2.53), Provisional (2.55), or Unlimited (2.59). Additionally, APTA members had higher frequency of providing pro bono services compared to non-members (2.64 vs. 2.47) with Health Policy and Administration Section members having higher frequency of performance (2.82). PTs with more than 30 years of experience had highest frequency of performance (2.77) vs. those with 0-5 years (2.34). The quantitative responses indicated that most frequently cited barriers were time (44%), financial (13%) and company policies (12%). Detailed data & correlation, Chi-Square, and regression analyses will be provided in the presentation.

CONCLUSIONS
This study demonstrated that frequency of provision of pro bono services by PTs was not significantly impacted by level of state direct access restrictions. However, lack of time, and other factors may hinder PTs from engaging in pro bono work. Also, PTs with more years of experience or who are APTA members may be more willing to engage in pro bono services.

CLINICAL RELEVANCE
Individuals and organizations seeking to increase offerings of pro bono services in their area may consider collaborating with PTs with greater experience and/or who network through professional organizations. The primary barriers to providing pro bono services appear to be at the individual and local/organizational levels.
The Relationship Between Physical Activity Levels and Religious/Cultural & Exercise Beliefs/Attitudes in a Group of Female Refugees from Muslim-Majority Countries

PRESENTED BY
Jason Denton

PURPOSE/HYPOTHESIS
A significant number of refugees from Muslim Majority Countries (MMC) continue to resettle in the United States. Females of Islamic faith or from MMC are less likely to perform exercise or vigorous physical activities, which increases their risk of obesity and chronic such as Type II Diabetes Mellitus and Cardiovascular disease. Purposes:
1) To establish baseline physical activity levels of a group of female refugees of Islamic faith and/or from Muslim Majority Countries
2) To describe the relationship between A) physical activity levels and B) religious and exercise beliefs of a group of female refugees from MMC and/or Islamic Faith.

NUMBER OF SUBJECTS
Thirty-four female refugees between the ages of 18-65 of Islamic faith and/or from MMC participated in a survey study.

MATERIALS/METHODS
Participants completed the Global Physical Activity (GPAQ) to estimate global physical activity levels from the three following categories: physical activity at work, physical activity through transportation, and recreational physical activity. The participants also responded to an additional survey with yes/no, categorical, and Likert scale questions developed by the authors about religious, cultural and exercise attitudes and beliefs. Chi-square analysis was performed to test for differences in categorical data and t-tests were used for ordinal data.

RESULTS
Fifty-three % of participants were insufficiently active vs. 39.4% of a gender and age-matched U.S. group. Only 15% of female refugees attained sufficient activity levels through recreational/leisure time activity compared to 48% of a U.S. gender and age-matched population.

Characteristics negatively associated with physical activity included particularistic interpretation of Islam (Chi-square; p = .01), Afghan descent (p = .035), and reporting childcare needs (p = .006) or transportation (p = .042) as a barrier to exercise. Being Afghan was correlated with being younger and reporting childcare as a barrier in this group. The participants reported being less willing to exercise with men present ( p < .05) compared to other contexts such as women’s only fitness or swim areas, and walking with friends. Ninety-four % of participants agreed physical activity is important for physical health while 100% agreed exercise is important for mental health. Eighty-five % agree physical activity by women is supported by Islam, 15 % neither agree or disagree, while 0% disagree.

CONCLUSIONS
The participants were generally very open to performing exercise and their beliefs supported physical activity. Some religious/cultural beliefs do limit the potential exercise settings for some refugees, but pragmatic barriers (lack of childcare and transportation) to exercise were also common.

CLINICAL RELEVANCE
Physical therapists can work with refugee or Muslim female clients to identify barriers and find the preferred contexts to successfully promote a healthier lifestyle through regular physical activity.
Assessing the Impact of Bundled Payment on Outcomes in a Subacute Setting

PRESENTED BY
Emily Decker

PURPOSE/HYPOTHESIS
This study assessed the validity of the bundled payment program on overall patient outcomes compared to patients with traditional Medicare coverage in the sub-acute setting. Financial and clinical outcomes were compared between models for patients with like diagnoses to determine what impact this new payment approach has on overall outcomes and the quality of care.

NUMBER OF SUBJECTS
Data was collected at a 27-bed skilled nursing unit. Three comparator cohorts were established including pre-bundle Medicare patients from 2015 (n=141), non-bundled patients from 2016 (n=132), and Medicare bundled patients from 2016 (n=45) for the determined timeframe of the study (January-March for each year). Similar resource utilization groups (RUGs) were identified to ensure homogeneity across the cohorts and no significant medical differences between the groups.

MATERIALS/METHODS
This prospective study utilized patient financial and clinical outcomes data extracted from medical and financial records. Direct comparisons and appropriate statistical tests were conducted to assess any significant variances within the data.

RESULTS
Several significant differences were found between patients covered under traditional Medicare payment and those covered under the bundled payment model. There was a significant difference in length of stay across the groups (F=11.377, p>.001), with those covered by bundles spending less days in the subacute setting. The cost of care was reduced for bundled patients through decreased overall facility charges (F=9.985, p>.001) and overall therapy charges (F=9.361, p>.001). There was no significant difference between cohorts for patient outcomes as measured by RUG levels (x2=3.029, p=.553), gains of functional independent measures (FIM) (F=1.136, p=.239), and patient discharge destination (x2=4.416, p=.353).

CONCLUSIONS
Patients under the bundled payment model saw significant reduced in the overall cost of care to achieve the same outcome as those in non-bundled payment. As a result, the bundled model of payment appears to be achieving significant savings, through reduced stays, without having an adverse impact on the overall outcomes as determined by change in FIM and discharge destination from the sub-acute setting.

CLINICAL RELEVANCE
Under the new bundled payment model providers are incentivized to identify opportunities for efficiency and improved quality across the episode. As a result, downstream providers of ancillary and supportive services are being asked to critically evaluate the provision of services and identify new models of care which aligns with the “triple aim”. This research demonstrates the practical impact that payment changes may have in reducing cost per beneficiary without impacting overall patient outcomes. Applied understanding outcomes associated with alternative payment models will be critical in understanding their utility moving forward. Future investigation is necessary to determine optimal efficacy and efficiency without impacting overall clinical outcomes of patients in order to establish best practices across the post-acute care industry.
Effectiveness of a Group-based Culturally Tailored Lifestyle Intervention Program on Changes in Risk Factors for Type 2 Diabetes among Asian Indians in the United States

PRESENTED BY
Rupal Patel

PURPOSE/HYPOTHESIS
In the US Racial and ethnic minorities have higher prevalence of diabetes than Non-Hispanic Whites; Asian Indians (AIs) one of the fastest growing Asian subgroups are disproportionally burdened by Type 2 Diabetes (T2D). Higher prevalence of T2D among AI adults has been reported as compared to other Asian subgroups and the general US population. Lifestyle intervention has shown to be effective in preventing or delaying onset of diabetes for at-risk multiethnic American, Finnish, Chinese, and Indian populations. The purpose of this study was to evaluate the effectiveness of a group based culturally tailored lifestyle intervention program offered in a faith based community setting on changes in risk factors for diabetes among Gujarati AIs.

NUMBER OF SUBJECTS
70

MATERIALS/METHODS
This study used an experimental, pretest-posttest control group repeated measures design. Primary outcomes were reduction in weight, Hemoglobin A1c (HbA1c) and improvement in physical activity. Participants were screened for risk factors and randomly assigned to a 12 week group-based lifestyle intervention program (n = 36) or a control group (n = 34) that received standard print material on diabetes prevention. The study took place at a Hindu mandir (temple) and the weekly sessions were led by a Gujarati AI PT, who was blinded to all data collected. Participants completed clinical measures and self-reported questionnaires about physical activity, social and lifestyle habits at 0, 3 and 6 months. Mean differences in outcomes between groups were calculated using SPSS v23; Alpha was set at p < .05 and adjusted for simple effects; a priori power analysis (G*Power version 3.1.6): Power = .80, Significance α = .05, Effect size = 0.25; Minimum n needed = 40 for Mixed Model ANOVA

RESULTS
Mean age of participants was 53.26 ±11.49 years; majority (54.3%) were females, married (94.3%), reported English as their 2nd language (62.9%), lived in the US for more than 8 years (82.9%), and were college educated (77.2%). Two-thirds reported they worked full-time, and 75.7% followed a lacto-vegetarian diet. No significant differences between groups were noted at baseline. Due to attrition, at post-test, we dropped to n = 29 (intervention) and n = 30 (control). At follow-up, we dropped to 28 and 21, respectively. Data analyzed on the 46 participants for whom we had complete data over all 3 time points. While a significant decline in weight and increase in physical activity was observed in all participants, the intervention group lowered their HbA1c (p<.0005) and waist circumference (p = .04) significantly as compared to the control group.

CONCLUSIONS
Findings demonstrated that participation in a culturally tailored, lifestyle intervention program in a community setting can effectively reduce weight, waist circumference, and HbA1c among Gujarati AIs living in the US.

CLINICAL RELEVANCE
PTs can lead the effort of providing community based lifestyle modification programs that can help curb the diabetes epidemic.
Comprehensive Primary Care Models for the Management of Multiple Chronic Conditions in Older Adults

PRESENTED BY
Taylor Chapman

PURPOSE/HYPOTHESIS
To explore the effectiveness of 4 established comprehensive primary care models in reducing costs, improving care coordination, and providing high quality care: Chronic Care Model (CCM), Guided Care Model (GC), Program of All-Inclusive Care for the Elderly (PACE), and Geriatric Resources for Assessment and Care of Elders (GRACE).

NUMBER OF SUBJECTS
Adults ≥55 years of age with at least two chronic conditions other than depression, with frailty or nursing home eligibility

MATERIALS/METHODS
We searched PubMed, CINAHL and Web of Science from 1995 to 2016 for US conducted studies utilizing 1 of the 4 chosen models that targeted adults ≥55 years of age and published in the English language. Two independent reviewers reviewed full-texts against eligibility criteria, and disputes were resolved via discussion or a third reviewer. Data elements and outcomes concerned with health services utilization, costs, functional status, satisfaction, or quality of life were abstracted into a customized database and verified. Each article was assessed with Oxford Levels of Evidence.

RESULTS
Our search identified 999 citations of which 17 citations met eligibility criteria. The included citations were generally from high levels of evidence; ranging from 1b to 2c. The PACE model was the most studied with 4 citations, GRACE and GC each with 2, and CCM with 1. PACE resulted in significantly (p<0.05) less inpatient service, significantly fewer ADL limitations (p<0.05) and significantly (p<0.02) higher job satisfaction. GRACE found significantly (p=0.01) higher total costs for participants, but significant (p<0.05) improvements on the SF-36. GC studies found caregiver satisfaction to be significantly (p<0.001) higher with aggregate quality of chronic illness care and significantly higher satisfaction regarding patient/family communication and chronic care management. GC patients reported significantly higher scores on aggregate satisfaction (p=0.002), and were significantly more likely ((Odd Ratio= 1.66 (95% CI 1.02, 2.73)) to report “excellent or very good” access to telephone advice. CCM studies found a significant decrease in hospital admissions and mean hospital days of stay (p=0.001).

CONCLUSIONS
Across the 4 models examined there was considerable variability and inconsistency in the outcomes measured. Strengths in each of the models exist however no one model showed significant effects across all of the outcomes studied. These findings suggest that a combination of models or development of new models to address these outcomes among this population is needed. Additionally, we did not identify any studies that included the physical therapist as a key member of the model.

CLINICAL RELEVANCE
Improvements in the process of care for older adults are greatly needed. This review can inform healthcare systems of the effectiveness of comprehensive primary models for management of multiple chronic conditions in community-dwelling older adults. In addition, opportunities exist for physical therapists to be key members of comprehensive care models.
Physical Therapist Perspectives of Physical Activity Adherence in Patients with Knee Osteoarthritis

PRESENTED BY
Babette Sanders

PURPOSE/HYPOTHESIS
To understand clinicians’ perspectives on barriers and facilitators to physical activity (PA) in patients with knee osteoarthritis (KOA) and role of technologies used to increase PA adherence among these patients.

NUMBER OF SUBJECTS
Three focus groups including a total of 16 outpatient physical therapists (PTs).

MATERIALS/METHODS
Three focus group interviews, led by 1 moderator, consisted of outpatient PTs who treat patients with KOA in an urban setting. Two focus groups were conducted at clinical sites, while the third was a heterogeneous group of PTs recruited through alumni networks and conducted at Northwestern University Department of Physical Therapy. Focus group recordings were transcribed and coded using Dedoose 7.0.16: Two blinded researchers performed initial coding. Code definitions were refined based on discrepancies. The second round of coding occurred in pairs using consensus. The codes used reflect the factors that can influence PA: individual preference, physical and mental health, interpersonal factors, physical environment, and structural/organizational factors.

RESULTS
The data represents the PT’s perception of their patients’ ability to engage in PA. The most common code was interpersonal facilitator (34%) and the least was physical/mental health facilitator (0.5%). Interpersonal facilitators included influence from friends/family; however, consisted mostly of how PTs facilitate PA adherence. The weight of interpersonal facilitators indicates PTs’ tendency to identify extrinsic factors to PA adherence. The low frequency of interpersonal barriers suggests that PTs perceive their role as facilitatory, and despite being able to see other practitioners as interpersonal barriers, don’t consider themselves in that manner. PTs frequently cited their patient’s inability to independently find or think of appropriate PA options. PTs responded to questions of PA in terms of structured exercise. Technology was both a facilitator and barrier. For patients who initiate conversations about technology, PTs saw it as a facilitator. When patients do not initiate them, PTs are hesitant to discuss technology due to their own lack of knowledge, time constraints, perception of the patient’s interest, and patient age and financial status.

CONCLUSIONS
PTs perceive themselves as facilitators of PA, but tend to present PA in terms of structured exercise rather than the broader definition of PA. Clinician inclusion of technology depends on both PT and patient factors.

CLINICAL RELEVANCE
This study can help raise awareness of therapist’s potential biases and guide appropriate questions to ask patients regarding barriers and facilitators to PA adherence.
Does Unrestricted Access to Physical Therapy Reduce Health Utilization and Spending?

PRESENTED BY
Kenneth Harwood

PURPOSE/HYPOTHESIS
Back pain results in $90.6 billion in direct costs and $19.8 billion in indirect costs in the US. Opioids and imaging are common treatments for low back pain (LBP) but have been found to contribute to higher costs due to inappropriate use of imaging and over prescription of opioids. Limited evidence suggests that early treatment by physical therapists (PTs) may reduce costs as a result of earlier treatment and lower use of health services. Although all 50 states and DC allow direct access to PTs, over 32 states still have limitations that prevent unrestricted access to PTs. We investigated whether direct access to PTs results in lower utilization and healthcare costs for patients with low back pain.

NUMBER OF SUBJECTS
Commercial health insurance claims data from 2009-2013 of a non-Medicare population between 18 and 64 years living in six northwest states were extracted from the HCCI dataset. Patients with a primary diagnosis of LBP with at least six months of a “clean” period of no prior LBP or severe medical conditions were identified. A total of 148,866 claims were included in the analysis.

MATERIALS/METHODS
Patients were divided into three cohorts: 1) visited PT at first point of LBP, 2) visited PT but not at first point, and 3) never visited a PT. An instrumental variables approach that calculated the distance between the patient and first provider specifying the LBP diagnosis was used to predict: 1) access to PT at any point, and 2) access to PT as first point of care. We then predicted whether access to PT (first or any) was associated with significant differences in selected health care cost and utilization measures.

RESULTS
Patients with LBP (PLBP) seeing a PT at any point in time versus no PT had significantly reduced ED visits (32.2%), opioid prescription (87.6%), and MRI/CT (26.0%). PLBP who saw a PT first saw slightly larger reductions with 38.3% fewer ED visits, 89.4% fewer opioid prescriptions, and 27.9% fewer MRI/CT compared to PLBP who never saw a PT. PLBP who saw a PT first had significantly lower costs including out-of-pocket costs and PLBP who saw a PT at any point had significantly lower outpatient, pharmacy, and out-of-pocket costs than PLBP who saw another provider with a few exceptions.

CONCLUSIONS
The findings from this study suggest that seeing a physical therapist as the first point of care compared to seeing a physical therapist at a later point in time or no PT may reduce utilization of potentially costly services, which have an impact on health care costs across all settings.

CLINICAL RELEVANCE
Access to PT within state law may affect the amount of health care utilization and cost savings for PLBP. The potential reduction in opioid prescriptions is notable given the increasing awareness on the overprescription of opioids and the high risk of substance abuse.
These Blocks Are Made for Walking: A Group-Based Community-Walking Program To Increase Physical Activity and Social Cohesiveness in Chicago’s Austin Community

Presented by
William Healey

Purpose/Hypothesis
Racial health disparities play a significant role in the lives of people in Chicago, specifically within the Austin community, which is approximately 85% African American. The purpose of this community-based research study was to 1) enhance the prevalence of physical activity among participants; 2) improve social cohesiveness through the promotion of group physical activity; and 3) educate participants on health and wellness.

Number of Subjects
20 African-American Austin community members participated: 85% female, average age 43.9 years (range 17-69 years), average BMI 37.7 kg/m².

Materials/Methods
Five Austin community members were recruited through a Westside Health Authority community partner and designated as “Block Captains” for this 8-week program. Each Block Captain invited community members to participate. Block Captains were trained by physical therapy university faculty and students and provided with a manual about health and wellness (H&W). Groups were encouraged to walk at least one time per week as a group and record their steps daily via pedometers. During each week's group walk, the Block Captain led a discussion based on the H&W information. Each Block Captain was contacted weekly via telephone call or text messaging by a student research partner to discuss the progress of their walking group. Data was collected at baseline (pre-intervention), 8-week post-intervention and at a 7-week follow-up. Outcomes included heart rate and blood pressure physiologic measures and self-reported data from the SF-12, Self-Efficacy of Exercise Scale, and Survey of Social Cohesiveness.

Results
8-week (n=10) and follow-up data (n=7) was analyzed. Statistically significant changes were seen in systolic blood pressure readings between pre-, post-intervention, and follow-up (p=.0125) for the 7 participants who attended all three data collection sessions, and in the physical subscale component of the SF-12 between pre- and post- intervention, (p=.049) but not the total SF-12 score. Weekly averages for number of steps taken per day generally increased as illustrated by 8 participant walking logs. Week 1 daily average number of steps was 7,137 and week 8 was 8,766 steps, with a peak of 10,242 steps at week 5.

Conclusions
A group-based community-walking program can improve systolic blood pressure and perception of physical health status among participants in a medically-underserved neighborhood. Average number of steps taken per day generally increased over the course of the 8-week program. Block Captains who engage and lead their own family members may promote more adherence with a physical activity program. Future research should aim to recruit a larger number of participants and further promote adherence to the program.

Clinical Relevance
Increasing physical activity is a major goal of Healthy People 2020. As exercise and movement specialists, physical therapists must use their expertise to improve community health and fitness and reduce health inequity.
Are There Any Differences in Their Attitudes Towards Controversial Issues in Healthcare Policies between Physical Therapy Students at Public and Private Universities?

**PRESENTED BY**
Drew Snyder

**PURPOSE/HYPOTHESIS**
Physical therapists operate in an increasingly complex healthcare system with dynamic changes, which often involve controversial legislation at both the state and federal levels. Physical therapists need to be actively involved in the legislative process to promote social responsibility and advocate for physical therapy clients. A very important step in establishing active participation is to assess the attitudes of physical therapy (PT) students towards a number of representative controversial issues that may impact the health care system and the physical therapy profession. We previously found PT students at a public university had diverse attitudes towards some of the controversial issues that are quite different from the views of the general public. The purpose of the current study was to identify potential differences in attitudes between PT students at a private versus a public university.

**NUMBER OF SUBJECTS**
201

**MATERIALS/METHODS**
Purposive sampling was used to recruit subjects in a public university (n=106) in Northeast Ohio and a private university (n=95) in Western Pennsylvania. The research design was non-experimental survey research. The survey includes 9 Likert scale questions on representative controversial issues compiled from legislative efforts and media. Demographic information, including public vs private university (D0), gender (D1), the number of years in PT education (D2), socioeconomic status (D3), developmental domain (D4), and political affiliation (D5), were collected. Chi-squared test was performed to determine the significance of the association using Minitab version 17.

**RESULTS**
Shortened questions are listed with the percent of subjects who “strongly agreed” or “agreed” (private, public, and combined) followed by the demographic factors with statistically significant associations.

1. Healthcare is a human right: 89.5, 76.4, 82.6%; D0 (p=0.05), D2 (p=0.03)
2. The ACA was a good reform: 16.8, 18.9, 17.9%; D5 (p<0.001)
3. Healthcare disparities: 66.3, 64.2, 65.2%; D0 (p=0.05), D1 (p<0.01), D2 (p=0.01)
4. Medicaid expansion: 38.8, 43.3, 41.3%; D2 (p=0.02), D4 (p=0.02), D5 (p<0.01)
5. Mandatory vaccinations: 46.8, 43.4, 45.0%;
6. Physician assisted suicide: 52.6, 58.5, 55.7%; D5 (p=0.01)
7. Medical marijuana: 66.0, 66.0, 66.0%; D5 (p<0.001)
8. Recreational marijuana: 29.5, 30.5, 30.0%; D1 (p=0.05), D5 (p<0.001)
9. Disability benefits: 56.4, 50.0, 53.0%; D2 (p=0.01)

**CONCLUSIONS**
Students in private and public universities have similar views on most (77.8%) questions. The combined data revealed similar results compared to our previous study. Further, political affiliation appears to be the most significant factor in how student views these controversial issues.

**CLINICAL RELEVANCE**
The APTA Core Values include social responsibility in advocating for the health and wellness needs of society, including access to health care and physical therapy services. The data can inform strategies to design advocacy activities and to assess the area of professionalism in physical therapy curriculum.
Bailoterapia and Building Health: A Qualitative Study Describing the Experience of Ecuadorian Women Participating in a Culturally Relevant Dance Program

PRESENTED BY
Katelyn McNamara

PURPOSE/HYPOTHESIS
The purpose of this phenomenological study is to describe the shared experience of a group of Ecuadorian women who participate twice weekly in a culturally relevant dance program called Bailoterapia.

NUMBER OF SUBJECTS
11 female subjects ages 21 to 65

MATERIALS/METHODS
A 40-minute focus group interview occurred at the health outreach program site in Ecuador. Questions probed the participants to explore their motivations to engage in physical activity, their perceptions of the program and to identify the perceived barriers or facilitators to attending this program in their community. The interview was recorded then transcribed verbatim, translated into English, analyzed for themes, and validated.

RESULTS
Our findings naturally fit into two categories: perceived facilitators and barriers to participation in the program. From the two categories, our analysis described the textural and structural themes. Facilitators were found to include an understanding of physical activity, a motivation to participate (internal and external), and the impact of the program (both physiological and psychological). The barriers described were related to the culture (i.e., machismo and gender roles), the environment, and a lack of resources.

CONCLUSIONS
The benefits of physical activity perceived by the participants changed through their experience with Bailoterapia and motivated them to continue. Participants in the Bailoterapia dance group initially joined through influence from the local health clinic, spouses and peers. Participants perceived a need to lose weight or improve health. They remained active in the program as they noted additional benefits: enjoyment of group exercise and physical activity, weight loss, increase in self-esteem and energy as well as decrease in stress and pain in joints. Barriers such as lack of gyms, poor infrastructure, safety concerns, and the cultural influence of machismo hinder many women from participating in physical activities.

CLINICAL RELEVANCE
Our results suggest group physical activity programs supported by local community health facilities, such as Bailoterapia, have the potential to recruit and engage adult women with no prior physical activity experience in a peri-urban, low resource, and low-income area. The social support resulting from this community-supported program fosters self-efficacy in participants’ health management. As physical therapists move forward as leaders in community health and wellness, it is essential to be cognizant of the barriers and facilitators that hinder and promote health in our communities. In developing communities, organizations that provide outreach must promote community engagement to promote sustainable health and wellness programs. The results from this study highlight the importance of this health clinic-supported program as an outlet for physical activity for women in the community.
Rehabilitation Therapists’ Expectations During a Large Rehabilitation System Merger: A Qualitative Analysis

PRESENTED BY
Ana Lotshaw

PURPOSE/HYPOTHESIS
Mergers and streamlining can have positive or negative effects throughout an organization, and decision makers need to be aware of how their team is adapting. The purpose was to understand the staff response to leadership restructuring, and the expectations for development of staff enrichment, organizational missions, and general operations. The secondary purpose was to translate responses in relation to recruitment, retention, staff development and operations at the system manager/administrative level.

NUMBER OF SUBJECTS
169

MATERIALS/METHODS
We developed an online survey of 4 open ended questions about expectations of self, co-worker, department and system leadership asking for 100 character responses and general questions for group characteristics. Rehabilitation professionals responded (n=156) from a single large metropolitan rehabilitation system of adult acute care, inpatient and outpatient rehabilitation settings. Responses were coded using an inductive process and were imported into Wordle™ for visual analysis of planned comparisons (generations, job roles, disciplines, practice settings, years in practice, system tenure, education/certification). A focus group of 13 system leaders (managers/directors, representing all practice areas and disciplines, with at least 11 years of practice and < 1 to 20+ years of management experience) responded to the visual and written data with feedback on relevance of the data and current staffing and operations.

RESULTS
Participants were distributed as expected in their practice settings, job roles, gender and discipline, but older than anticipated. Planned comparisons showed similarities across the continuum with respect to staff expectation of self and co-workers to provide quality care, fairness from the department and system support of their employees but lacking support for high achievers and long term employees. Additional themes included communication, best and patient-centered practice, quality and excellence, and support from leaders and system. The management focus group valued communication and reinforcement of recruitment efforts to mirror organizational system values. These leaders also validated steps taken since the survey to improve staff development and communication, but identified gaps to meet needs of high achievers and longer tenured employees.

CONCLUSIONS
Considering workforce expectations has great value across all levels of an organization from individual team to system wide structures. Shared expectations consistent with organizational and personal visions are possible during organizational change. Periodic assessment of expectations may aid career development/advancement tools and determine the workforce’s support of common goals and visions.

CLINICAL RELEVANCE
Understanding a workforce's expectations is important in implementing staff development programs, communication, and recruitment/retention of a workforce with shared values. This method of assessing expectations may be beneficial to other institutions or healthcare systems undergoing mergers and restructuring.
An Analysis of the Organizational Culture in a Hospital: A Study Using the Organizational Cultural Assessment Instrument (OCAI)

PRESENTED BY
Alison Ramirez

PURPOSE/HYPOTHESIS
This study analyzed the culture amongst Physical Therapists (PTs) currently employed at Lenox Hill Hospital (LHH) and used comparisons between the data based on various demographics and differences between individuals. It was hypothesized that PTs with the longest time at LHH would have a more favorable view of the organization while PTs of different generations and/or paygrades would have dissimilar views on the current and preferred organizational culture.

NUMBER OF SUBJECTS
31

MATERIALS/METHODS
A convenience sampling was used as subjects were recruited from the rehabilitation department of a single hospital. Eligible participants needed to be employed as physical therapists at the time the surveys were administered. Physical therapy assistants, student physical therapist, other rehab professionals, and administrative staff were excluded. Data was collected in person over several meetings set up by the director of the department. Participants were required to fill out 2 surveys. One was a personal information questionnaire to obtain demographic information. The other survey was the Organizational Culture Assessment Instrument (OCAI). The OCAI was developed by Cameron and Quinn as a means of identifying an organization’s current culture as well as the preferred culture 5 years out. On the OCAI, individuals are asked to rate 6 key dimensions of organizational culture. Each of the 6 dimensions has 4 options, which represent 4 different types of organizational culture, and individuals are required to divide 100 points among the 4 options, first for their current view of organizational culture and second for their preferred organizational culture. SPSS version 23 was used to analyze data.

RESULTS
Data was collected from a total of 31 participants with a mean age of 30.7 (SD: +/- 5.5) years old. A paired sample t-test was conducted to compare average OCAI scores for current culture to preferred culture, and a statistically significant (p<0.05) was found for each of the 4 organizational cultures. A correlational analysis also found a small negative, statistically significant (p=0.042), correlation for current Adhocracy culture and number of years practicing as a PT.

CONCLUSIONS
The results of this study reveal that PTs currently employed at LHH would prefer a change to the current organizational culture. In addition, when comparing mean scores participants would like to see more aspects of clan and adhocracy culture and less aspects of market and hierarchy. These results could explain LHH's high turnover rate.

CLINICAL RELEVANCE
This research project provides LHH PTs the opportunity to evaluate the different perspectives amongst themselves and link a theory to the dominant culture and allows LHH administrators the means to successfully navigate change to further enrich their program. Additionally the data obtained from this study allows administrative leaders in this field the ability to understand how their organization functions and what values are important to their overall culture.
Collaborating with Community Health Workers to Meet the Needs of People with Disabilities in Ohio

PRESENTED BY
Cara Whalen

PURPOSE
Community health workers (CHWs) are health advocates working with underserved groups that lack access to care (CDC, 2014). Health disparities impact utilization of care, which limits positive health outcomes. Successful programs to decrease disparities strengthen the links between health providers & the community they serve (CDC, 2014). CHWs build partnerships with health systems, education systems, & community organizations to connect people with needed services (Lehmann and Sanders, 2007; DiClemente et al., 2002).

One such disparity is services for people with disabilities (PWDs). In Ohio, 59.5% of PWDs do not get needed care compared to 27% without disabilities (ODHP, 2013). As a result, PWDs report worse health outcomes & less utilization of preventative screenings (ODHP, 2013). As part of health transformation, Ohio is looking for innovative solutions to meet the needs of the population.

The purpose of this project was to involve PTs & other disability specialists to collaborate with CHWs & faculty to increase access to care for PWDs through launching standardized training in disability issues for CHWs in Ohio.

DESCRIPTION
The Medicaid Technical Assistance & Policy Program Healthcare Access Initiative partnership created an open source e-Learning Commons to support CHW learning, employment, & professional growth. The e-Commons is an innovative platform to connect stakeholders, provide access to resources, & promote dissemination of curriculum. As part of promoting professional development in the e-Commons, curriculum & continuing education courses were piloted for CHWs on how to work with PWDs in Ohio.

SUMMARY OF USE
CHW students were recruited to pilot existing continuing education modules on working with PWDs developed for health professionals to use as a training unit for CHWs & for CHW CEUs. CHW students worked with PWDs in the community, conducted focus groups, & worked with PTs, disability experts, & other stakeholders to adapt the existing modules & create new modules to fit the needs for CHWs working with PWDs. The key objectives for these revised courses for CHWs included identifying the barriers to healthcare for a PWD, how to overcome these barriers, & how educate health professionals in making adaptations to their examinations & treatments for PWDs.

IMPORTANCE TO MEMBERS
As part of the physical therapist’s role in social responsibility for the prevention, health promotion, & management of disease & disability, collaborating with CHWs to help address the social determinants of health is a natural partnership since physical therapists are a dynamic link between health & health services delivery (APTA, 2015) & CHWs are well positioned to understand the social/physical barriers that PWDs face in their communities. The e-Commons project in Ohio offers one model of how physical therapists can collaborate with CHWs to meet APTAs Vision 2020 of working together with other health professionals to achieve optimal health & wellness in communities & to reduce disparities & improve access to healthcare (APTA, 2013).
How G-Code Severity Modifiers Measure Up in Detecting Response to Physical Therapy Interventions for Pain-Related Diagnoses

PRESENTED BY
Christa Schutte

PURPOSE/HYPOTHESIS
Medicare requires physical therapists (PTs) to report G-codes and severity modifiers denoting the type and severity of the patient’s initial, goal, and discharge functional status. Physical therapy (PT) may be an effective treatment for chronic pain in older adults. However, G-codes may not directly relate to outcomes of patients presenting with pain-related diagnoses (PRD) where pain is the primary complaint rather than functional mobility. The purpose of this study was to determine whether patients receiving outpatient (OP) PT under a mobility G-code for a PRD differed from patients with non-pain related diagnoses (NPRD) on baseline characteristics and post-treatment change in severity modifiers and other outcome measures.

NUMBER OF SUBJECTS
56

MATERIALS/METHODS
PTs at an OP rehabilitation facility recorded diagnosis, G-code, severity modifiers and outcome measures including: The Timed Up and Go (TUG), Two Minute Walk Test (2MWT) and Limitations in Mobility Activities Test (LIMAT). Severity modifiers were coded as an ordinal variable ranging from 0 to 7, with 7 indicating the highest level of severity. At discharge, data for subjects with G-code “Walking and Moving Around” were entered into a de-identified data set. Change scores were calculated by subtracting discharge scores from initial scores. Strains, spine disorders and osteoarthritis were classified as a PRD. Diagnoses such as stroke, total hip or knee arthroplasty and hip fractures were classified as NPRD. Mann-Whitney U, Student’s t-tests and Chi-square statistics were calculated to compare the groups.

RESULTS
The PRD and NPRD subjects did not differ in age (70.6 v 75.2 yrs, p=.19) and % male (23.8% v 40%, p=.22). At baseline 19% of PRD subjects had a severity modifier score of ‘1-19%’ (1) compared to only 2.9% of NPRD (p=.04). The PRD group did not differ from the NPRD group on baseline 2MWT (287.6 v 212, p=.12) but had lower TUG times (15 v 34.1 sec, p=.0004) and LIMAT scores (35.1 v 52.4, p=.01). At discharge only 52.4% of PRD subjects had an improved severity modifier compared to 91.4% of NPRD subjects (p=.0008). The PRD and NPRD groups did not differ on change in 2MWT (64.8 v 75.5, p=.33) but the PRD group improved less in TUG (3.7 v 14.1 sec, p=.004) and LIMAT scores (12.7 v 20.1, p=.04).

CONCLUSIONS
On average the PRD group appeared less limited in mobility as measured by TUG and LIMAT. Because 19% of the PRD group had a low severity code, they were unlikely to improve. Currently, mobility-related outcome measures may not reflect changes in patients where pain is a primary reason for seeking PT.

CLINICAL RELEVANCE
While PT has been shown to benefit patients with PRD, the available G-codes and severity modifiers may not accurately reflect initial severity or improvement. PT is advocated as an alternative to opioids in treatment of chronic pain. A revision of the current G-codes may be required to document the status and progress of patients who have a PRD. Further research is warranted to determine the best way to document response to PT in patients with PRDs.
Investigating the sensitivity of various methods of determining G-codes for Claims-Based Outcomes Reporting

PRESENTED BY
Christina Durrough

PURPOSE/HYPOTHESIS
The purpose of this study was to compare several methods of assigning G-codes as functional modifiers in compliance with Claims-Based Outcomes Reporting.

DESCRIPTION
Medicare’s initiation of CBOR in recent years requires therapists in all settings to provide G-codes as functional modifiers upon initial evaluation, discharge, and every 10 visits during the episode of care. These functional modifiers can be linked to a number of standardized outcome measures. Mediserve provides an online tool to determine G-codes based on scores of these outcome measures. However, this website assigns modifiers based on arbitrary divisions into the functional levels (CH-CN). At Vanderbilt’s outpatient neurologic clinic, evidence-based guidelines have been developed to determine G-codes using values from the literature (normative data, MCID, MDC, etc.). A third method of assigning G-codes is using the AMPAC questionnaire, which was presented as the primary outcome measure to comply with CBOR at Vanderbilt. For a 10-month period, one PT and one OT recorded the G-codes that would have been assigned at initial evaluation and discharge for patients on their caseloads using each of the three methods for assigning G-codes.

SUMMARY OF USE
Complete data were available for 19 patients. Analysis regarding the magnitude of change captured by each of the G-code assignment methods was completed. Magnitude of change was defined as the number of functional levels improved or regressed during the plan of care (i.e., moving from a CK at initial evaluation to CJ at discharge would be considered a +1 change in levels). In summary, the AMPAC showed minimal responsiveness to physical or occupational therapy interventions, as 82% of patients were assigned the same G-code at initial evaluation and discharge and the remaining patients changed only one level. The Mediserve calculator captured greater change, although only one patient changed more than one level during the episode of care. The evidence-based guidelines reflected the greatest change with a distribution as follows: no change for 32% of patients, 1 level change for 26% of patients, and 2 or more level change for 42% of patients. The average change in functional levels during the episode of care was 0.059 using the AMPAC, 0.421 using the Mediserve calculator, and 1.000 using the evidence-based guidelines.

IMPORTANCE TO MEMBERS
This data suggests that the use of evidence-based guidelines to assign G-codes may be more sensitive to change in level of function for patients in rehabilitation settings than the AMPAC or Mediserve calculator. There is an increasing body of literature investigating outcome measures that aids in developing these guidelines. Accurate detection of change in patients’ functional status is critical for developing plans of care, providing justification for services, and facilitating reimbursement. As progress captured by G-codes becomes more linked to reimbursement, it is especially critical that our reported G-codes most accurately reflect patient progress.
Association Between Self-Rated Leadership Competencies and Experience in Physical Therapy

PRESENTED BY
Christina Wisdom

PURPOSE/HYPOTHESIS
The healthcare industry is experiencing changes due to advances in technology, specialization, and complex patient presentations which require medical professionals to fulfill leadership roles. Leadership competencies have been shown to be useful in the quantitative analysis of leadership in health care professionals. Information on leadership competencies for medical professionals, including nurses and physicians, is available, yet information is lacking within physical therapy. To fill this gap, our investigation evaluates the relationship between experience level and self-rating in leadership competencies in physical therapists (PT) and physical therapist students.

NUMBER OF SUBJECTS
The survey yielded 1127 PTs and PT students from various practice settings and institutions in the USA. Of the subjects, 20.7% were 1st year-, 26.6% were 2nd year-, and 24.2% were 3rd-year DPT students, and 28.5% were practicing PTs. The gender distribution was 27.1% male, 72.7% female, and 0.3% other. Average years of practice for licensed PTs was 18.4(± 12).

MATERIALS/METHODS
An online survey was distributed to current APTA board members, chapter presidents, chairs of CAPTE accredited PT programs, clinic coordinators, APTA Student Core Ambassadors, and via Twitter. Participants were asked to complete the survey and forward it to other PTs and PT students. The survey gathered demographics and data including years of practice. The survey was comprised of 22 competencies related to leadership in which participants rated their perceived capability on a 10-point ordinal scale. Participants were asked yes/no questions pertaining to feelings of academic preparedness and self-perception of being a leader. Descriptive statistics were tabulated for each category, and group differences were tested with one-way ANOVA in SPSS.

RESULTS
Average range for skills were 6.70(±1.82) for “delegating tasks to others” capability to 8.78(± 1.22) for “cooperating” capability. Not all categories showed statistical significance between groups, including cooperating, seeking improvement, openness to ideas, time management, and willingness to ask for help. Of the remaining 17 categories, there was statistical significance between students and those with 16+ years of experience, with those with more experience rating themselves higher. The only exception was in the category seeking feedback, comparing 3rd year students to those with 16+ years of experience, in which there was no significance. There were no statistically significant changes in self-ratings after 5 years of PT practice compared to those with more experience.

CONCLUSIONS
Increased experience level in physical therapy showed increased self-ratings on leadership competencies, with the most significant changes between students and those with 16+ years of experience.

CLINICAL RELEVANCE
Understanding a workforce’s expectations is important in implementing staff development programs, communication, and recruitment/promotion opportunities for leadership experience in physical therapy education and early clinical practice may help physical therapy meet the demands of the changing healthcare environment.
Community-Based Pro Bono Clinics: Challenges, Partnering and Early Service Learning Opportunities for Physical Therapy Students

PRESENTED BY
Crystal Miskin

PURPOSE
The purpose of this report is to explore first-year Doctor of Physical Therapy students’ early experience in participation and integration of didactic learning in a community-based pro bono clinic as part of a service learning course.

DESCRIPTION
The distribution of poverty varies by state and areas that have a larger impoverished population tend to have higher uninsured rates. There are many individuals who need the assistance of healthcare; however, they do not have access for such care due to lack of insurance, financial hardship, unemployment, disability, transportation or culture/language barriers. Many states and communities offer assistance to this population through pro bono clinics. However, one of the ongoing challenges is finding healthcare providers who can assist with such programs. Entry-level Doctor of Physical Therapy (DPT) students may be a viable option. Explicit feedback was summarized regarding the benefits and experiences attained from DPT students and clinicians’ participation at the community-based pro bono clinic.

SUMMARY OF USE
Six first-year DPT students participated in a service learning course that integrated didactic learning and service to the medically uninsured or underserved. DPT students were mentored by experienced physical therapists while assisting in a community-based pro bono clinic. Recurrent themes reported by DPT students’ early exposure in a clinical setting were: 1) opportunities to develop clinical reasoning skills, 2) to gain or improve confidence when working with patients, 3) assisting with the provision of evidence-based care, and 4) increased awareness of challenges that individuals experience when accessing healthcare. Further, DPT students observed that some individuals had additional psycho-social needs but due to language/cultural barriers, lack of insurance or other financial difficulties, these needs were often not discussed with their attending clinician. Interestingly, DPT students collaborated to create a directory of resources available within the community that provided either pro bono or reduced-fee for services including: 1) employment and interview coaching; 2) language tutoring; 3) addiction recovery; 4) additional healthcare needs; 5) transportation and 6) living and welfare accommodations. Participating clinicians reported that: 1) DPT students and clinicians were able to discuss and implement evidence-based care for individuals serviced, and 2) individuals who received care felt that their interaction with the DPT students provided them an opportunity to give something back for the services they received.

IMPORTANCE TO MEMBERS
Service learning early in DPT students’ educational experience provides opportunities for practical application of didactic learning, in addition to promoting self-efficacy and the development of professionalism. Future research may include exploring whether DPT students continue to participate in community-based pro bono clinics or support other pro bono opportunities upon graduation.
Development of a Power Soccer Program for People with Disabilities using a Health Promotion Program Planning Model during a DPT Student Led Service-Learning Project

PRESENTED BY
Dana Cherry

PURPOSE
Demonstrate use of the PRECEDE/PROCEED model to conduct a DPT student-led community health promotion service-learning project that addressed the needs of adolescent power wheelchair users participating in power soccer.

DESCRIPTION
The PRECEDE/PROCEED Model is a community-oriented participatory planning model with 8 phases. During phases 1 and 2, stakeholders were interviewed to determine needs and a literature review was conducted to assess relevant epidemiological factors related to disability and sports among adolescents. Lack of public awareness, lack of resources, and social benefits of participation in a sport emerged as themes. During phase 3, factors influencing physical activity behavior change were identified. Most important and changeable factors were converted to program objectives: increase team membership, develop community partnerships, and increase awareness and knowledge of game play. During phase 4, current resources and barriers were identified along with an assessment of policies and regulations. The primary areas identified for improvement included staffing, recruiting, and funding. Phase 5 occurred throughout the fall of 2015. Phase 6, process evaluation, occurred simultaneously with phase 5. Phase 7, impact evaluation, was assessed post-intervention. Phase 8, outcome evaluation, will be determined with next year’s service learning group.

SUMMARY OF USE
During phase 1, parents, and players were interviewed or administered surveys to assess needs. Results indicated there was interest in increasing funding for equipment, expanding to have a second team, increasing public awareness and the number of volunteers, and creating skill videos. Overall, parents and players were satisfied with the program, but they wanted skill videos and varied levels of competition. Barriers to participation in physical activity included: lack of supportive or social peers, inadequate or inaccessible facilities, lack of physical and/or social skills, negative perceptions of disability, and time constraints. In phase 5, there were many small-scale interventions that took place. These included: expanding fundraising, establishing relationships with local welders, increasing public awareness, developing an equipment catalog, updating player profiles, and creating skill videos. Positive feedback was received from program administrators, parents and players.

IMPORTANCE TO MEMBERS
DPT students successfully used the PRECEDE/PROCEED model to design and implement a health promotion program for the adolescent power wheelchair users involved in a power soccer program. Physical therapists could use this as an example of how to utilize an evidence-based participatory planning model to implement community health promotion programs to facilitate physical activity behavior change and participation in adaptive sports for people with disabilities that are often underserved.
Barriers to Implementation of Advanced Technology into Clinical Physical Therapy Practice

PRESENTED BY
Donna Zielke

PURPOSE/HYPOTHESIS
Increased availability of technology to treat clients with neurological conditions presents rehabilitation providers with increased pressure to implement technology into practice. In spite of increased access, wide spread adoption into clinical practice is not always present. The purpose of this study is to identify barriers to the implementation of two robotic devices, the KineAssst Mobility eXtreme Walking and Balance Exercise System and Ekso GT robotic exoskeleton into physical therapy practice at a free standing rehabilitation hospital.

NUMBER OF SUBJECTS
31

MATERIALS/METHODS
An online, anonymous, self-report survey to assess the influences on physical therapist’s adoption of these two specific pieces of technology was administered to 31 physical therapists at the inpatient and outpatient settings at a free standing rehabilitation hospital. Participants responded on a 5 point Likert scale regarding general feelings toward technology, experience with technology, social norms, perceived behavioral control, self efficacy, facilitating factors or barriers, and Intention to use technology. Scores of 4 or 5 on the Likert scale represented agreement.

RESULTS
The majority of the respondents (79%) believe utilizing technology is beneficial to improve functional outcomes. More than half of respondents (69%) felt technology was not easy to use requiring much effort to incorporate. A neutral feeling of the respondents to the expectations of their supervisors and coworkers regarding the use of technology was revealed in the social norms section. Responses to the perceived behavioral control questions suggested a belief that adequate knowledge and resources are in place to utilize technology. However the self efficacy questions revealed a lack of confidence amongst staff (48%) in the actual implementation of technology. The most commonly reported barrier (68%) to the use of technology was found to be time. Finally, the majority of respondents (70%) revealed a desire and intention to increase their utilization of these two particular pieces of technology.

CONCLUSIONS
This study provides support regarding the various factors influencing the implementation of technology into physical therapy practice. The next phase of the study will utilize small focus groups to further explore barriers. Feedback from these focus groups will be used to develop educational interventions to facilitate use of technology into clinical practice. Upon completion of the education, the survey will be re-administered to determine changes in clinical practice, attitudes, and beliefs related to technology that have been observed.

CLINICAL RELEVANCE
The results of this study are important because they provide insight into the relationship between barriers to implementing technology into physical therapy practice and the effectiveness of education interventions designed to address these barriers. The study findings can be used to re-examine education intervention practice guidelines as well as guide educational development to further encourage technology adaptation in order to promote best practice.
Knowledge and Perceptions of Physical Therapy in Nicaragua

PRESENTED BY
Evan Pucillo

PURPOSE/HYPOTHESIS
The World Health Organization (WHO) reports that 15% of the world’s population is living with disability. It has been estimated that nearly 80% of these persons can be found in developing nations. Disability unequivocally and disproportionately affects the poor and Nicaragua has been recognized as one of the poorest countries in the Western Hemisphere. A previous study investigating the perceptions of disability among caregivers in Nicaragua has noted limited access to rehabilitative services. Although some studies have examined these issues in other developing nations, the general knowledge and perceptions of physical therapy in Nicaragua remains unclear. We hypothesize that persons living in rural areas of Nicaragua do not have a knowledge or understanding of physical therapy services. Aim: Determine any relationships between age, gender, prevalence of musculoskeletal pain, disability, and participant’s knowledge of physical therapy services.

NUMBER OF SUBJECTS

MATERIALS/METHODS
A 9-question face-to-face questionnaire was conducted. Local Nicaraguan Spanish-speaking translators administered each survey in the absence of a clinician and prior to the participant’s encounter with therapy.

RESULTS
A total of 101 participants [16(15.8%) male, 85(84.2%) female] were surveyed. Mean(SD) age was 45.6(17.8) years, median age was 45 years, with a range of 1-87 years. A total of 70(69.3%) report having no knowledge of physical therapy, 79(78.2%) report no knowledge of anyone who has received physical therapy, and 89(88.1%) were unaware of any physical therapy services available to them. A total of 94(93.1%) report having musculoskeletal pain, and 89(88.2%) report that medications are better at treating their pain. Only 25(24.8%) report considering themselves disabled, and only 12(11.9%) report needing equipment or medical devices to help them move or walk around.

CONCLUSIONS
Our results describe the perception and knowledge of physical therapy in a unique region of Nicaragua. In large part, participants from this region have little knowledge of physical therapy and how these services may help them. A high prevalence of musculoskeletal pain was observed, and the vast majority of respondents reported medications were superior for treating their pain. A large female bias was observed and our results may over represent the general population. Increased involvement from physical therapists in developing nations may positively influence awareness and access to rehabilitative services.

CLINICAL RELEVANCE
As global humanitarian work continues to increase among healthcare professions, it is important for clinicians to understand the characteristics of the population they aim to serve. Education and advocacy should be a primary focus of future efforts to increase the awareness and understanding of the benefits of physical therapy for patients in developing nations.
Doctor of Physical Therapy Student’s Participation in Teaching Basic Science Concepts in the Community Outreach Program, Anatomy Academy

PRESENTED BY
Jason Adams

PURPOSE/HYPOTHESIS
Education is one way to serve the community, promote health, and develop the profession of physical therapy\(^{1-5}\). Doctor of Physical Therapy (DPT) students and faculty play an important role in removing barriers that prevent access to knowledge and information related to health promotion. By providing anatomy and health education, DPT students increase their learning of basic science concepts, improve teaching skills, enhance their respect for people of different communities, and enhance their abilities to become physical therapists.

NUMBER OF SUBJECTS
First-year graduate students in the DPT program at Briar Cliff University were invited to participate in this study. Participants included seven students, 57% of which were female.

MATERIALS/METHODS
This phenomenological study used reflective writings of DPT students who led Anatomy Academy activities in a community elementary school class room with a high enrollment of minorities. Reflections were gathered by survey from the DPT students after each of the six classes. The reflections provided descriptions of the lived experiences of the DPT students participating as mentors. Reflections were analyzed by the whole-parts-whole method outlined by Giorgi\(^{6,7}\).

RESULTS
Several themes emerged from the data analysis. These themes included: 1) personal growth of the DPT student participating as a mentor, 2) benefits of being a mentor, and 3) the importance of creating a learning community to facilitate the development of elementary students.

CONCLUSIONS
The lived experiences of the mentors indicated that they progressed in their own personal development, benefited from being a mentor, and learned the value of community. Mentors initially described anxiety with regard to interacting with the elementary students, but gained greater confidence in their ability to communicate and develop relationships with the students. Mentors benefited as their teaching abilities improved, and their understanding of anatomy, physiology, and nutrition was deepened. Mentors articulated the importance of their role and that of a community to combat challenging issues faced by the students regarding their health.

CLINICAL RELEVANCE
By better understanding the lived experiences DPT students have working with children in a learning community setting, DPT students may better understand how community educational programs may help themselves, those they serve, and the local community with these established programs.
Physical Therapists’ Knowledge, Perception, and Use of Telehealth in Physical Therapy

PRESENTED BY
Jennifer Collins

PURPOSE/HYPOTHESIS
Telehealth is the delivery of health related services via telecommunication technologies. Telehealth is projected to grow worldwide to 1.8 million users by 2017, according to the World Market of Telehealth. Yet, there is limited literature investigating the use of Telehealth in physical therapy. The purpose of this study was to investigate physical therapists’ (PT) knowledge, perception, and use of Telehealth in physical therapy. Researchers hypothesized that PTs have limited knowledge and use of Telehealth, but have a positive attitude toward using Telehealth in the future.

NUMBER OF SUBJECTS
Subjects were 65 clinical educators associated with one educational program in Upstate New York.

MATERIALS/METHODS
A survey and cover letter were emailed to clinical education coordinators, and the recipients were encouraged to forward the survey to other PT colleagues. Of 88 surveys returned, only 65 were complete and usable. The 36 item survey on Qualtrics contained closed and open ended questions. Logistical regressions and cross-tabulations were run using SPSS 19 software to examine the statistical significance between groups.

RESULTS
The majority of those who responded were female (87%), under 40 yrs old (67%), and had less than 15 years of clinical experience (65%). Regression found that PTs who are APTA members or younger than 40 yrs old are more likely than non-members or those over 40 to use Telehealth. PTs obtain their knowledge of Telehealth from the internet and other healthcare professionals and not from the APTA, academic institutions or other PTs. Open ended questions indicate that the top three perceived barriers to the use of Telehealth are loss of physical contact with patients, technology, and privacy related concerns, while the top three perceived opportunities for Telehealth are improvements in home exercise programs, communication with patients and other healthcare professionals, as well as access in rural settings.

CONCLUSIONS
Data suggests that APTA members may be more likely to pursue Telehealth as compared to non-members. Younger therapists may be more comfortable and willing to accept Telehealth into their practice. PT’s lack of knowledge of Telehealth may be related to inadequate education from the APTA, academic institutions, and other PTs. Despite the lack of PT’s knowledge of and the perceived barriers to Telehealth, opportunities for implementing Telehealth in physical therapy are recognized.

CLINICAL RELEVANCE
This study suggests that the physical therapy field is poised to move toward use of Telehealth in our profession, particularly to promote access in rural areas. Younger PTs are the most likely to take an active role in adopting Telehealth. The data suggests that further education from the APTA and academic institutions may be necessary to progress the knowledge, perception, and use of Telehealth. Identified perceived barriers to the use of Telehealth demonstrate that PTs perceive there are factors that need to be addressed before it will be an integral part of clinical practice.
Leadership Development Impact of Attending HPA’s LAMP Institute for Leadership in Physical Therapy: A Multi-Year Retrospective Review

**PRESENTED BY**
Jennifer Wilson

**PURPOSE/HYPOTHESIS**
The role of physical therapists is expanding in response to complex needs of clinical practice and evolving health care reform. The APTA furthers with a vision for the profession, “to transform society by optimizing movement to improve the human experience.” This magnitude of change requires physical therapists to display leadership skills that can be fostered through intentional leadership development. One formal method of leadership development is HPA’s LAMP Institute for Leadership in Physical Therapy course sequence. To better understand the impact of these courses toward furthering leadership skills of physical therapists, the purpose of this study was to identify participant perceived outcomes from the LAMP C1/C2 leadership development program series.

**NUMBER OF SUBJECTS**
20

**MATERIALS/METHODS**
The role of physical therapists is expanding in response to complex needs of clinical practice and evolving health care reform. The APTA furthers with a vision for the profession, “to transform society by optimizing movement to improve the human experience.” This magnitude of change requires physical therapists to display leadership skills that can be fostered through intentional leadership development. One formal method of leadership development is HPA’s LAMP Institute for Leadership in Physical Therapy course sequence. To better understand the impact of these courses toward furthering leadership skills of physical therapists, the purpose of this study was to identify participant perceived outcomes from the LAMP C1/C2 leadership development program series.

**RESULTS**
Themes emerged from the data including: (a) leadership is about learning how to change personal behaviors, not those of others; (b) personal leadership development is a journey that requires the practice of intentional behaviors to facilitate positive change; (c) using self-reflection and standardized self-assessment tools helps identify/modify communication/behavioral preferences most critical in leadership development; (d) relationships with others within different environments improved as participants developed newly acquired behaviors/skills; (e) skills to be confident catalysts for change in different environments were developed; and (f) leadership development is purposeful and takes energy. Sub-themes were also identified relating to these constituent themes.

**CONCLUSIONS**
Findings from this study reveal that attending both HPA’s LAMP Institute for Leadership in Physical Therapy C1/C2 courses influenced participant perceptions of leadership development and instilled confidence to use leadership skills within their practice environments.

**CLINICAL RELEVANCE**
Leadership skills are important to transforming society and evidence supports that leadership development has a direct impact on clinical outcomes and patient safety. The findings from this study provide a step forward in understanding the lived experience of physical therapists who obtained leadership development training through the HPA LAMP C1/C2 courses. Further studies in prevalence of perceived outcomes across a larger sample, across varied formats of leadership training, and with varied populations could assist in determining the most effective strategies for intentionally developing leadership skills that are vital to clinical practice.
A Survey and Analysis of Burnout Among Physical Therapist Assistants

PRESENTED BY
Haley Monson

PURPOSE/HYPOTHESIS
Occupational burnout is common among many healthcare practitioners and can be a factor with recruiting and retaining employees. Although several previous studies have focused on burnout among physical therapists, no previous study has researched burnout among physical therapist assistants (PTAs). The purpose of this study was to assess the level of burnout in PTAs and to analyze the relationships between burnout and subject demographic and institutional factors.

NUMBER OF SUBJECTS
A link to an online survey was emailed to 1499 licensed PTA's in Washington; and mailed to 290 PTAs in North Dakota and South Dakota (1789 total surveys were sent). 255 surveys were returned, for a response rate of 14.3%.

MATERIALS/METHODS
Subjects completed a survey which consisted of demographic information as well as the Maslach Burnout Inventory (MBI). The MBI, consisting of 22 questions, assesses burnout in three areas: emotional exhaustion, depersonalization, and personal accomplishment. T-tests and Pearson Correlations were used to determine significance between variables.

RESULTS
Subjects had moderate levels of emotional exhaustion, low levels of depersonalization, and high levels of personal accomplishment regarding their work. Subjects with over 10 years of experience as a PTA had significantly higher levels of depersonalization than those with less than 10 years of experience (p = .033). Subjects who worked in a department with a productivity standard had significantly higher levels of emotional exhaustion than subjects without a productivity standard (p = .001). No significant differences in burnout levels were found in regard to sex, APTA membership, or past experience as a clinical instructor. A significant positive correlation was found between hours worked per week and emotional exhaustion. No significant correlations were found between burnout levels and subject age. Results regarding burnout differences from different clinical setting will also be presented.

CONCLUSIONS
PTAs with a productivity standard and those who work longer hours are at increased risk for emotional exhaustion, while PTA’s with over 10 years of experience are at increased risk of depersonalization.

CLINICAL RELEVANCE
It is important for PTAs who work longer hours, those with a productivity standard, and those with over 10 years of experience to develop coping strategies regarding elevated levels of emotional exhaustion and depersonalization, which may assist with increasing retention rates in physical therapy departments.
Physical Therapist Demographics Who are Certified to Perform Dry Needling in Arizona

PRESENTED BY
Karen Donahue

PURPOSE
The purpose is to identify the characteristics of physical therapists who have completed the requirements to be approved to perform dry needling interventions within the State of Arizona. The State Board of Physical Therapy requirements for performance in practice include: course content approved by certified organization; education in sterile needle procedures, anatomical review, blood borne pathogens and contraindications and indications for dry needling, written and practical exam and minimum of 24 contact hours.

DESCRIPTION
The Arizona State legislature required minimum standards for dry needling interventions performing by physical therapist beginning July 1, 2015. All physical therapists were required to obtain approval to engage in the provision of dry needling. The following are representative of the demographics of the physical therapists who have been approved to perform dry needling in the State of Arizona. There are currently 3926 physical therapists (as of 6/1/16) who residential address is identified with residing within the State of Arizona.

SUMMARY OF USE
11.7% (460) Physical therapists have meet the requirements and are approved to engage in the provision of dry needling.

Of the 460 physical therapists:
58% (267) Physical Therapists were initially licensed between January 2010 and May 2016.

19.6% (90) Physical Therapists were initially licensed between January 2005 and December 2009.

12.6% (58) Physical Therapists were initially licensed between January 2000 and December 2005

9.8% (45) Physical Therapists were initially licensed prior to January 2000

* 58.8% were women
* 41.2% were men

* 48.9% were women
* 51.1% were men

* 46.6% were women
* 53.4% were men

* 22.3% were women
* 77.7% were men

IMPORTANCE TO MEMBERS
It is important to develop and understand physical therapist practice patterns and demographics in relation to the evolution of physical therapist practice. The data suggests that the majority of the physical therapists who are engaging in the provision of dry needling are new professionals within their first six years of practice. With significant decline, as correlated to initial licensure date, in the provision of dry needling by physical therapists who have been licensed greater than six years. Comparing the 2013 APTA Demographic Profile of men verses women members, 69.9% are women and 30.1% are men. In comparison, men, who are licensed in Arizona, represent a greater propensity of physical therapists who obtain dry needling approval with increase in percentage of approved physical therapists the older the initial license date.
The Knowledge of Low Back Pain Management Between Physical Therapists and Family Practice

PRESENTED BY
Kurtis Adams

PURPOSE/HYPOTHESIS
The purpose of this study was to compare knowledge in managing low back pain (LBP) between physical therapists and family practice physicians. We hypothesized that physical therapists would demonstrate knowledge levels that were equal to or higher than those of family practice physicians with respect to optimal patient management strategies and beliefs about LBP.

NUMBER OF SUBJECTS
Seventy-three physical therapists (mean age: 50.0 ± 12.8 years) and thirty family practice physicians (mean age: 50.7 ± 11.4 years), all of whom were randomly selected members of the Private Practice section of the American Physical Therapy Association and the American Academy of Family Physicians, respectively, completed standardized examinations assessing knowledge, attitudes, the usefulness of clinical practice guidelines, and management strategies for patients with LBP.

MATERIALS/METHODS
The examinations completed by participants in this study had previously been used by Buchbinder et al (2009) and Finestone et al (2009) to assess knowledge in managing LBP across a variety of physician specialties. The examination developed by Buchbinder et al consisted of 11 questions. Five questions assessed participant knowledge about the management of LBP, 4 questions assessed attitudes toward patients with LBP, and 2 questions assessed the usefulness of clinical practice guidelines. The examination developed by Finestone et al consisted of 5 questions which assessed management strategies for patients with LBP in areas of preferred drug treatments, imaging recommendations, and the importance of bed rest, patient encouragement/explanation, and spinal manipulation. The LBP beliefs of physical therapists and family practice physicians were compared using relative risks and independent t-tests. Alpha was established a priori at 0.05.

RESULTS
Scores related to knowledge, attitudes, and the usefulness of clinical practice guidelines were generally similar between the groups. In addition, there was no difference between the groups for knowledge regarding optimal management strategies for patients with LBP. However, physical therapists were less likely to have difficulty assessing motivation levels of patients with LBP compared to family practice physicians (64.6% vs 26.7%; relative risk: 2.41 [95% confidence interval: 1.30-4.48] and physical therapists were less likely to agree that interventions by health care providers have little positive effect on the natural history of acute LBP (17.8% vs. 50.0%; relative risk: 0.36 [95% confidence interval: 0.19-0.66]).

CONCLUSIONS
Physical therapists demonstrated knowledge levels that were equal to or higher than those of family practice physicians with respect to optimal management strategies and beliefs about LBP.

CLINICAL RELEVANCE
These results may have implications for health policy decisions regarding the utilization of physical therapists to provide care for patients with LBP without a referral including the potential placement of physical therapists in primary care clinics to initially manage patients with musculoskeletal conditions.
Longitudinal Effects of an International Service-Learning Experience on Six Cohorts of Physical Therapy Students

PRESENTED BY
Lisa Johnston

PURPOSE
WHO estimates that there are 650 million people with a disability worldwide, many of whom do not have access to rehabilitation. Physical Therapy (PT) students are becoming increasingly involved in addressing this global need for services by participating in international service-learning (ISL) experiences. The long-term effects post-ISL participation on PT students’ selection of employer, participation in professionally service activities, and cultural competence, are not well understood.

DESCRIPTION
The UNC PT Guatemala Project is an 8 day intensive, mentored experience. It focuses on meeting the community needs while simultaneously enhancing cross-cultural education among PT students. Under the mentorship of faculty students provide direct patient care in a hospital and community settings, peer professional educational, and community education through health fairs. Since 2010, 35.5% of the DPT student body has participated in this ISL. Of the ISL participants (n=60), 86.6% of the ISL participants have been female (n=52) and 13.3% male (n=8). Students were surveyed one-year post-ISL. The response rate is currently 35% (n=21) although surveys are still being collected and analyzed from the 2015 cohort.

SUMMARY OF USE
Preliminary findings indicate that ISL participants are more likely to select employment opportunities working with underserved populations and to continue professional service activities than their peers who have not participated in ISL. Using grounded theory, investigators independently coded narrative survey data to identify major themes before reaching consensus. Students’ responses varied from strongly disagree to strongly agree regarding the necessity of an ISL to advance cultural competence; however, most students agreed that ISL offered additional value if one was open to the experience. Students identified participation in local service activities might be advantageous for addressing local needs community needs and student development. Following ISL, students reported improvements in cultural knowledge, skills and attitudes that translated to their professional practice, including: developing strategies for non-verbal forms of communication in the presence of language barriers, improving the ability to use critical thinking skills in the absence of resources, and embracing experiential and reciprocal learning with a different culture.

IMPORTANCE TO MEMBERS
It is important to prepare and equip physical therapy students with the necessary cultural competence to address rehabilitation needs locally and worldwide. ISL may provide a unique opportunity for improving our student knowledge and skills. This data demonstrates how a short-term ISL experience as a student may have significant long-term impacts regarding career choices, future professional service participation, and the development of knowledge, skills, and attitudes related to cultural competency.
Use of the Activity Measure Post-Acute Care as an Outcome Measure in a Skilled Nursing Facility

PRESENTED BY
Mary McLaughlin

PURPOSE
Outcome measures have become increasingly important in hospital care. Patients, physicians, and insurers want to achieve the highest outcomes at the lowest cost. This report describes a performance improvement (PI) project at Willowcrest, a hospital based skilled nursing facility (SNF) in Philadelphia. The focus of the project was to select a functional outcome tool and use the data to report and track patient outcomes.

DESCRIPTION
Various outcome tools were considered for this project and there were pros and cons to each. Willowcrest is a short stay SNF with a length of stay of approximately 17 days. A tool was needed that would be sensitive to change in a short period of time. The Activity Measure Post-Acute Care (AM-PAC) was developed at Boston University and can be used in a variety of settings so this tool was chosen for the project. For inpatient settings the AM-PAC measures function in two domains, basic mobility and daily activities. Based on the nature of each domain, we determined that physical therapists would complete the basic mobility form and occupational therapists would complete the daily activity form. For each domain there are 6 questions that are scored on a scale of 1-4 with 1 indicating the patient is unable to perform the task or they need total assistance, and 4 indicating they do not need any help. Raw scores are converted to standardized scores using a conversion table. The tasks are all functional activities that would be performed during therapy so completing the forms would only take a few minutes during the therapy session.

SUMMARY OF USE
A 3-month pilot was initiated using paper forms with scoring being done on all patients by PT and OT on the initial evaluation, once a week (every Thursday), and at discharge. We chose every Thursday to make it easier to remember to complete the forms each week; the staff referred to Thursdays as “AM-PAC Thursday.” Data was collected by hand for the first 3 months (Nov 2014 to Jan 2015) and was used as a baseline. The average standardized score change for PT Basic Mobility was 10.79, and the average standardized score change for OT Daily Activity was 9.73. All scores were well above the reported minimal detectable change and the 3-month average for each domain was set as the initial target threshold. The tool was later built into our electronic documentation and a report was created to improve data collection. The average annual scaled score changes for the year 2015 were 12.12 for Basic Mobility and 10.38 for Daily Activity which remained above the target thresholds.

IMPORTANCE TO MEMBERS
Given the importance of outcome tracking at all levels of rehabilitative care, the AM-PAC was able to be effectively implemented in a short stay SNF and target thresholds for Basic Mobility and Daily Activity scores were established. This data is reported quarterly to the PI Committee. Other similar facilities could implement this outcome tool and track outcome data in a similar manner.
Perspectives on Technology to Support Exercise in Cancer Survivors

PRESENTED BY
Nancy Gell

PURPOSE/HYPOTHESIS
Exercise adherence minimizes the side effects of cancer such as fatigue, weakness, and decreased endurance. Yet, physical activity and exercise participation rates by cancer survivors are significantly lower than the general population. Innovative strategies are needed to support cancer survivors’ physical activity intentions that incorporate the breadth of communication preferences. The purpose of this study was to examine cancer survivor perspectives on technology to support physical activity and exercise adherence outside of a structured program.

NUMBER OF SUBJECTS
23 cancer survivors (19 females/4 males, average age 57.9 (range 31-78), 91.7% white non-Hispanic)

METHODS/MATERIALS
Individual structured phone interviews were conducted with participants following a 4-week pilot of a tailored text message, FitBit, and health coach intervention. Questions were developed based on literature review and researcher expertise. All interviews were audio-recorded and transcribed. A team iteratively coded transcripts from the interviews using thematic analysis.

RESULTS
Six themes were identified as impacting exercise and physical activity adherence, including: 1) accountability; 2) social support; 3) planning for barriers and obstacles; 4) maintaining habits; 5) comfort/convenience of technology; and 6) reclaiming ownership in health maintenance following a cancer diagnosis. Participants perceived that the text messages, FitBit, and health coach supported maintenance of exercise plans in the absence of a facility-based program.

CONCLUSIONS
A key intervention component that participants attributed to their progress was accountability enabled by technology. Participants expressed appreciation for having someone looking over their shoulder and encouraging them, rather than negative feelings of being watched. Results highlight that 1) tools that foster accountability may result in adherence to a home exercise and physical activity program; and 2) approaches delivered via technology (e.g., text message; Fitbit) are a potential option for disseminating an effective maintenance program for cancer survivors.

CLINICAL RELEVANCE
The implication of this study highlights the importance of accountability, support, and planning in exercise adherence, and the positive role that technology can provide toward these goals. Additionally, wearable technology can provide a renewed sense of influence to support cancer survivors to regain control over health outcomes.
Physical Impairments in Athletes with Intellectual Disability Participating in Fitness Screening

PRESENTED BY
Neva Kirk-Sanchez

PURPOSE/HYPOTHESIS
Through Special Olympics (SO) programs, large numbers of people with intellectual disabilities (ID) participate in sports activities, and clinicians must be prepared to understand and address common physical impairments (PI) found within this population. The purpose of this study was to describe PI in SO athletes and compare PI between athletes competing in different SO sports.

NUMBER OF SUBJECTS
Subjects were 2,132 athletes, ages 9-30 years (19.9 ± 4.7) screened during SO FUNFitness (FF) events at Regional and World Games from 2010-2015. Subjects competed in the following sports: Aquatics, Athletics, Basketball, Powerlifting, and Gymnastics.

METHODS/MATERIALS
Data was obtained from SO through a deidentified data set. The FF screening battery was performed by physical therapists and students, and included measures of the following: flexibility, strength, balance and aerobic fitness. Flexibility was measured with the modified Thomas Test, passive knee extension and ankle dorsiflexion, and modified Apley’s Test. Strength was measured with the 10 rep timed stand test, partial sit-up, grip test, and seated push-up test. Balance was measured with functional reach and single leg stance, and aerobic fitness was measured with the 2 minute step test including initial heart rate (HR), maximum HR, HR recovery, and self-reported exercise habits. Screeners indicated whether participants had PI in each area using standard cut points. Differences among sports in the percentage of athletes identified as having PI in each screening test were compared using chi-square statistics.

RESULTS
For all athletes, 23.6-45.6% had at least one flexibility PI, with gymnastics athletes having the lowest percentage and basketball athletes having the highest percentage of flexibility PI. For all athletes, 18.7-25.2% of individuals had at least one strength PI, with no significant differences found between groups. For all athletes, 24.5-36.1% had a balance PI. Basketball athletes had the lowest frequency of balance PI, and aquatic and powerlifting athletes had the highest frequency of balance PI. Mean HR change after aerobic exercise was 19.9-25.9 bpm, 2 minute HR recovery ranged from 17.7-21.2 bpm, with basketball athletes having the highest HR change with exercise, HR recovery after exercise, and number of steps. High frequencies of athletes (67-73%) reported exercise at least 3 days per week.

CONCLUSIONS
SO athletes in different sports showed different patterns of PI, consistent with the sports-specific skills required for participation. High numbers of SO athletes may be in need of education, referral, and intervention for PI that might be identified through FF screening.

CLINICAL RELEVANCE
It is important to assess athletes participating in SO sports in order to identify and prevent possible health complications. The clinician should be aware of common PI found with various SO sports and how to identify them. Increased knowledge of PI patterns can aid in the referral of SO athletes to appropriate and necessary medical professionals.
Initial Impact of Physical Therapy Advocacy Hashtags on Twitter: Feasibility and Descriptive Analysis

PRESENTED BY
Justin Scola

PURPOSE/HYPOTHESIS
A hashtag is a word or phrase preceded by a hash or pound sign (#) used to identify messages on a specific topic on many social media platforms. Hashtags are widely used on Twitter within tweets to organize ideas and assign meaning to phrases. Hashtags can be tracked for popularity, making them important to measure the effect of social media outreach and advocacy efforts used to educate professionals and patients. The purpose of this study was to analyze the initial impact of 5 common physical therapy advocacy hashtags as measured by total impressions, impressions per tweet and impressions per participant. We hypothesized the reach of physical therapy advocacy Twitter hashtags feasibly could be estimated by commonly available data.

NUMBER OF SUBJECTS
Data consisted of 83 tweets, 49 participants, and 362,056 impressions that were available for analysis.

METHODS/MATERIALS
Tweets containing the hashtags #getPT1st, #solvePT, #PTadvocacy, #choosePT and #PTtransforms were analyzed. Data from Symplur (www.symplur.com) was used to gather the amount of total impressions (number of times a tweet appeared on a user’s feed), tweets, and participants (number of users who tweeted using the hashtag) within the 60 days in order to compare the relative initial impact of each hashtag.

RESULTS
Out of this sample, #getPT1st had the largest initial impact within the first 60 days of its creation with the most numerous total impressions, second most tweets, and second most participants. #getPT1st contained 261,364 total impressions, 31 total tweets, 13 participants, 8,431.1 impressions/tweet and 20,104.9 impressions/participant. #PTtransforms had 46,647 total impressions, 4 total tweets, 4 participants, 11,661.8 impressions/tweet and 11,661.8 impressions/participant. #choosePT contained 29,265 total impressions, 36 total tweets, 22 participants, 812.9 Impressions/tweet and 1,330.2 impressions/participant. #solvePT had 19,751 total impressions, 8 total tweets, 6 participants, 2,468.9 Impressions/Tweet and 3,291.8 impressions/participant. #PTadvocacy contained 5,029 total impressions, 4 total tweets, 4 participants, 1,251.3 impressions/tweet and 1,251.3 impressions/participant.

CONCLUSIONS
Physical therapy advocacy hashtags feasibly can be analyzed based on publicly available descriptive data, and they differ in performance. #getPT1st had the most impressions and #PTtransforms had the most impressions/tweet. This variation suggests there may be best practices in social media advocacy for physical therapy, which should be the focus of additional research.

CLINICAL RELEVANCE
Initial excitement about a hashtag can be used to maximize education and coalesce stakeholder support around major physical therapy issues. Social media marketing campaigns for physical therapy advocacy issues and clinic marketing should begin to use analytics in order to evaluate performance, as well as identify and incorporate best practices that could be specific to the needs of the physical therapy profession.
Health Knowledge of Patients in a Pro Bono Setting

PRESENTED BY
Stan Dacko

PURPOSE/HYPOTHESIS
Although common in other populations, research on health attitudes and knowledge is limited for individuals of low economic status. This study aims to investigate three domains (nutrition, mental health, physical activity) of health knowledge among individuals of low socioeconomic status who are currently receiving treatment in local pro bono medical clinics. Low levels of understanding of health knowledge may contribute to unhealthy lifestyles found in this population. Understanding the level of health knowledge for those who are of a low economic status may aid in more directed patient education interventions.

NUMBER OF SUBJECTS
37 subjects completed the health knowledge questionnaire.

METHODS/MATERIALS
An 11-item multiple choice questionnaire on health knowledge representing three domains (nutrition, mental health, physical activity) was administered to consenting patients at two local pro bono medical clinics. Descriptive statistics was used to analyze the data.

RESULTS
The subjects surveyed were 37.5% male and 62.5% female with an average education level of high school/GED completion. The overall average score from all three categories of the health questionnaire was a 65.1%. The individual category scores resulted in 68.6% correct in nutrition, 51.9% correct in physical activity, and 81.0% correct in mental health.

When comparing the overall scores based on education, the individuals who completed some college or those who earned a bachelor’s degree scored the highest. Those who completed primary school scored an average of 47.7%, high school/GED 64.4%, some college 75.1%, associate’s degree 68.1%, and bachelor’s degree 72.3%. The positive association was also seen for level of education and the individual score for the three health domains measured. There were differences in the overall scores based on age. The participants who were aged between 31-35 and 46-50 scored the highest, 72.1%, 72.7% respectively. Participants who were aged 56-60 scored the lowest averaging a 59.1%. The youngest age group 21-25 average score was a 68.2% and the oldest age group 61-65 was 63.2%.

CONCLUSIONS
Generally subjects with more education and younger in age scored the highest on the health questionnaire. Interestingly the lowest score on average in a particular section of the questionnaire for all subjects was in the physical domain which focused on exercise and physical activity.

CLINICAL RELEVANCE
Many patients from pro bono medical clinics, as the case for this study, are referred to physical therapy pro-bono clinics. These results may underscore the importance of education as an intervention for patients who are of a low economic status.
Perceptions of Sexual Boundaries among Physical Therapy State Licensure Board Members in the United States

PRESENTED BY
Susan Roush

PURPOSE/HYPOTHESIS
The purpose of this study was to describe the perceptions of sexual boundaries among physical therapy state licensure board members in the United States.

NUMBER OF SUBJECTS
48

METHODS/MATERIALS
The University of Rhode Island’s IRB approved this study. Licensure board members’ names and addresses were obtained through the Federation of State Boards of Physical Therapy. An introductory letter and the Sexual Boundaries in Physical Therapy Practice survey were sent to 343 state board members via U.S. mail. The mailing also included a self-addressed, stamped envelop. A follow-up, reminder post card was sent two weeks later.

RESULTS
Forty-eight (14%) usable surveys were returned. The average respondent was a 50-year-old male, who was an APTA member practicing in an outpatient setting, treating patients with orthopedic conditions. The mean time serving on the Board was 3 years, with 35% of the participants serving less than a year. Seventy-five percent were physical therapists and 19% were physical therapist assistants. Forty-four percent of participants acknowledged feeling sexually attracted to patients and 8% reported they had dated a former patient. These results are generally consistent with previous sexual boundaries research in physical therapy. Results did not vary by gender, practice area or geographic region. The consistent gender differences seen in previous research were not seen in these data.

CONCLUSIONS
Perceptions of sexual boundaries varied among the participants, but confirmed that sexuality is part of the physical therapy practice environment for licensure board members. The variability in responses seen across this study’s participants may make it difficult for licensure boards to provide, or apply, consistent regulations related to sexual boundaries.

CLINICAL RELEVANCE
The results of this study can inform the profession’s conversation on sexual boundaries leading to greater understanding and decreased potential for violations.
Early Access to Physical Therapy and Specialty Care Management for American Workers with Musculoskeletal Injuries: A Cohort Study

PRESENTED BY
Tim Phillips

PURPOSE/HYPOTHESIS
There is little published on the effect of early access to physical therapy for musculoskeletal disorders in a workers’ compensation population.

NUMBER OF SUBJECTS
75

METHODS/MATERIALS
A prospective pilot was conducted from 2012-2013 in which injured workers with musculoskeletal complaints from a large integrated healthcare system in the Midwest were evaluated and treated by physical therapists (PTs) during the initial occupational medicine clinic visit, along with care coordination by a study coordinator to reduce administrative waste and close communication gaps. Two retrospective comparator groups were included in this cohort study: 279 musculoskeletal workers compensation claims from 2009 and 204 claims from 2012 that were not enrolled in the prospective pilot. For each of the major variables of interest, (duration of care in days, total cost of claim, cost of medical care, cost of indemnity, modified duty days, lost time days, number of PT visits, and time to first PT visit) differences between the three groups were tested using a one-way analysis of variance with post-hoc, pairwise comparisons for continuous variables using both parametric and nonparametric procedures.

RESULTS
When comparing 2009 data to the prospective pilot using parametric analyses, statistically significant differences were noted in favor of the prospective pilot for total cost per claim [$4,873 (12,597) vs. $1,436 (1734), p=.000], cost of indemnity [$3,108 (9,658) vs $160 (481), p=.000], therapy visits [19.7 (25.6) vs 5.1 (3.4), p=.000), and time to access PT [34.7 (32.4) vs. 0 (0.0) days, p=.000]. When compared to the 2012 non-pilot cohort, differences were not statistically significant at p=.05. The aforementioned differences between cohorts using nonparametric techniques were not observed except for PT visits and time to access PT. However, when considering the mean-to-median ratio as a measure of variation in outcomes, there were striking reductions in variation in the prospective cohort vs the 2009 and 2012 comparator cohorts for duration of care (1.8 vs. 4.2 vs. 4.2), total cost (1.5 vs. 4.9 vs.6.4), medical cost (1.5 vs. 4.3 vs. 4.4), and therapy visits (0.85 vs. 2.8 vs. 1.2).

CONCLUSIONS
Although nonparametric analysis of outcomes did not demonstrate any benefit of the prospective pilot, the lower mean-to-median ratios demonstrate that expedited access to physical therapy decreases variability in and reduces average duration of care, total cost of claim, cost of medical care, cost of indemnity, modified duty days, lost time days, number of physical therapy visits, and time to first physical therapy visit.

CLINICAL RELEVANCE
Physical therapy as a first-line provider for musculoskeletal injuries, in addition to a coordinator for expediting care and promoting effective communication, may result in substantial cost savings.
Barriers to the Implementation of the Physicians Quality Reporting System in Outpatient Physical Therapy Practices

PRESENTED BY
William McGehee

PURPOSE/HYPOTHESIS
The purpose of this study was to differentiate physical therapist participants and non-participants in the PQRS program, outline the factors that influence the decision to participate in the PQRS program, and describe the challenges to participation and the barriers to reporting quality measures in the PQRS program from the physical therapist’s perspective.

NUMBER OF SUBJECTS
242 individuals in 147 Physical Therapy Practices

METHODS/MATERIALS
This study utilized a retrospective, cross-sectional survey design. Data regarding barriers and challenges to implementing Physician Quality Reporting System (PQRS) measures in 2013 were collected from physical therapist practice owners and clinicians in those practices and were analyzed using descriptive statistics and factor analysis.

RESULTS
The respondents were representative of the sample in terms of geography, community size, and practice size as measure by the number of staff. However, the respondents, had a higher number of total visits, a higher number of Medicare visits, and a higher percentage of Medicare visits. Three of the factors were rated by a majority of participants as having a high degree of influence on their decision to participate in the PQRS program; Financial Penalty in 2015, Financial Incentive in 2013, and Auditing Requirements to Assure Successful Reporting. Seven items, all related to the administrative and staff burden imposed by PQRS reporting, were rated by a majority of participants as presenting a high degree of challenge to participation in the PQRS program. Nine of the survey items, related to the specific PQRS measures, were listed by a majority of the participants as being a high degree of challenge to participation in the PQRS Program. None of the factors that emerged from the factor analysis, Value of the PQRS Measures, Administering the PQRS program, and Professional Obligation, had a statistically significant impact on the odds of participation in the PQRS program.

CONCLUSIONS
The results of this study demonstrate the physical therapist are experiencing significant challenges and barriers to participation in PQRS. Further research on procedures and operational characteristics in practices that are successful participants in PQRS and other quality programs would be beneficial. The physical therapy profession should adopt a robust implementation science and knowledge translation research initiative to disseminate these best practices.

CLINICAL RELEVANCE
The purpose of this study was to examine the factors that influenced PT practices’ decision to participate in the PQRS program in 2013 and to characterize the challenges and barriers they experienced. As the consequences of not participating in the program become more severe, this information will be useful in determining activities that can increase participation of PTs in this quality reporting activity as well new quality initiatives.
Services Provided by Physical Therapists to Medicare Patients and Related Factors

PRESENTED BY
Xinliang Liu

PURPOSE/HYPOTHESIS
Physical rehabilitation services contributes to quality of life by restoring, maintaining, and promoting optimal physical function. Medicare covers outpatient therapy services including physical therapy under Part B. In 2011, Medicare spent $5.7 billion on outpatient therapy services provided to 4.9 million beneficiaries. Several reports commissioned by the Centers for Medicare and Medicaid Services (CMS) presented detailed information on the utilization and expenditures of outpatient physical rehabilitation services. However, little is known about what services are provided by physical therapists at the individual level and what factors affect the supply of services to the Medicare program. The purpose of this study was to examine the Medicare services provided by physical therapists in the private office setting and factors related to the supply of these services.

NUMBER OF SUBJECTS
186,297 physical therapists who billed the Medicare program using the National Provider Identifier (NPI) were included in the service utilization analysis. Due to missing values in provider variables, 163,058 physical therapists were included in the services supply analysis.

METHODS/MATERIALS
This was an observational study with a cross-sectional design. The primary data sources included the Medicare Provider Utilization and Payment Data for 2012 and Physician Compare data.

RESULTS
The five most commonly performed services were therapeutic exercises (97110), manual therapy (97140), neuromuscular reeducation (97112), electrical stimulation (unattended, other than wound care, G0283), and therapeutic activities (97530). The five most expensive services were therapeutic exercises (97110), manual therapy (97140), neuromuscular reeducation (97112), therapeutic activities (97530), and physical therapy evaluation (97001). Male gender, the number of years from graduation, the number of group practices, and accepting Medicare assignment were associated with a larger number of Medicare services and higher Medicare payments.

CONCLUSIONS
Physical therapists play an important role in providing Medicare beneficiaries with outpatient therapy services. Further research is needed to study why some factors are associated different level of Medicare services supply.

CLINICAL RELEVANCE
With aging of the population, the demand for physical therapy services will continue to increase. Findings from this study may inform policy interventions that encourage physical therapists to provide more services to Medicare beneficiaries.