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Category: Other

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Introduction/Purpose: The patient acceptable symptom state (PASS) is a validated question establishing if patients activity and symptoms are at a satisfactory low level for pain and function. Surprisingly, ~20% of foot and ankle patients at their initial visit present for care with an acceptable symptom state (i.e. PASS yes). These patients are important to identify to prevent over treatment and avoid excessive cost. It is also unclear what health domains (Pain Interference (PI), Physical Function (PF), or Depression (Dep)) influence a patients judgement of their PASS state (i.e. why they are seeking treatment). The purpose of this analysis is to document the prevalence of PASS state and determine the health domains that discriminate PASS patients and predict PASS state at the initiation of rehabilitation.

Methods: Patient reported outcomes measurement information system (PROMIS) computer adaptive test (CAT) scales PF, pain and Dep and PASS ratings starting in summer 2017 were routinely collected for patient care. Of 746 unique patients in this data set, 114 patients had ICD-10 codes that were specific to the foot and ankle. Average age was 51 years (± 18) and 54.4% were female. Patients were seen an average of 19.8(± 15.9) days from their referral and were billed as low (51.7%), moderate (44.7%) and high complexity (2.7%) evaluations per current procedural code (CPT) visits. ANOVA models were used to evaluate differences in PROMIS scales by PASS state (Yes/No). The area under receiver operator curve (AUC) was used to determine the predictive ability of each PROMIS scale to determine a PASS state. Thresholds for near 95% specificity were also calculated for a PASS Yes state for each PROMIS scale.

Results: The prevalence of PASS Yes patients was 13.2% (15/114). Pass Yes patients were significantly better by an average of 7.2 to 8.0 points across all PROMIS health domains compared to PASS No patients (Table 1). ROC analysis suggested that Dep (AUC=0.73(0.07) p=0.005) was the highest predictor of PASS status followed by PI (AUC=0.70(0.08) p=0.012) and PF (AUC=0.69(0.07) p=0.18). The threshold PROMIS t-score values for determining PASS Yes with nearest 95% specificity were PF = 51.9, PI = 50.6, and Dep = 34.

Conclusion: Surprising, yet consistent with previous data, 13.2% of patients at their initial physical therapy consultation rated themselves at an acceptable level of activity and symptoms. Health domains of physical function, pain interference, and depression were better in these patients and showed moderate ability (AUC~0.7) to identify these patients. The PROMIS thresholds suggest patients are identified by pain and physical function equal to the average of the US population (PROMIS T-Score ~50) and extremely low depression scores (34). Clinically it is important to recognize these patients and purposefully provide treatments that reinforce their self efficacy and prevent unnecessary costly treatments.

Receiver Operator Curves for Predicting Patient Acceptable Symptom State (PASS)

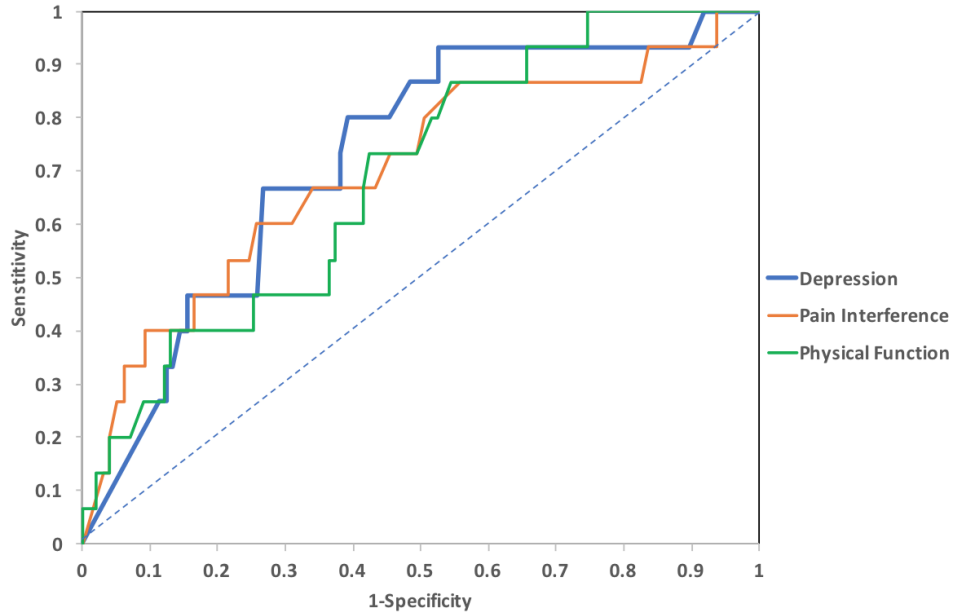


Figure 1. Receiver operator curves quantifying the ability of PROMIS depression, pain interference, and physical function to predict patient acceptable symptom state in patients at their initial visit to physical therapy. PROMIS = patient reported outcome information system

Table 1. Comparison of PROMIS scales between PASS Yes (n=15) and PASS No respondents (PASS = patient acceptable symptom state)

	PASS Yes	PASS No	Difference	p-value
PROMIS Depression	44.3(8.7)	52.3(10.)	8.0	0.004
PROMIS Pain Interference	57.0(11.0)	64.2(8.8)	7.2	0.005
PROMIS Physical Function	42.9(9.9)	35.1(10.7)	7.8	0.01