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Jeff Houck

Jillian Santer

Judith Baumhauer

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Jeff Houck, PhD, Jillian Santer, DPT, Judith Baumhauer, MD, MS, MPH

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Introduction/Purpose: New instruments like the Patient Reported Outcome Information System (PROMIS) minimize the burden to patients and providers addressing significant barriers to adoption. Despite these advances provider adoption remains lackluster. Models of technology adoption suggest adoption is more likely to occur when PRO's directly improve patient care (performance expectancy) and it's easy to implement (effort expectancy). Problems with effort expectancy are dealt with by training and improving logistics (i.e. eHR presentation, alerts), where performance expectancy is addressed through research (i.e. validation of thresholds). The purposes of this study were to: 1) evaluate the proportion of orthopedic rehabilitation providers who use PRO's and how they use them; And, 2) to determine if performance expectancy, effort expectancy or provider burnout are related to provider use.

Methods: Fifty rehabilitation providers (physical therapist and athletic trainers) anonymously completed the electronic PRO Adoption Survey. Participants were 23.4±5.8 years old and 54 % were female. The purpose of the PRO Adoption Survey is to track adoption across health systems. The first section of the PRO Adoption survey includes whether providers use PRO's and asks them to detail how they use them (Table 1). A factor analysis supported the use of sets of questions to determine performance expectancy and effort expectancy (Table 1). Performance expectancy captures the health benefits the provider expects to experience. Effort expectancy captures the provider's expectations of how easy it will be to implement PRO tools. The validated Maslach-2 burnout scale (BO) was included as another a factor that may influence adoption. Proportions and chi square tests were used to describe provider use of PRO's and its relationship with performance expectancy, effort expectancy, and burnout.

Results: The profile of PRO use by rehabilitation professionals is that a majority know about PRO's (86%) however only 34% utilize PRO's during clinic visits (Table 1). The most common PRO used is PROMIS (83%), followed by generic measures (41%) and disease specific (29%) measures. Type of use indicated the most common use was to make clinical decisions (71%) with relatively few using it for research (12%). Interestingly, 47% of PRO users review data with patients. The average responses for performance expectancy were 3.9 ± 0.1. The average responses for effort expectancy were 3.2 ± 0.2 or "neutral". The average Maslach BO score was 4.6 ± 1.0. Chi square analysis suggested performance expectancy, effort expectancy, and burn out were not significantly associated with provider use.

Conclusion: PROMIS scales are currently available in the electronic medical record leading to high use (83%) by PRO users(34%). High performance expectancy scores (~4/5) and low BO suggest providers can be motivated to use PRO's. The survey also suggests that providers are neutral(~3/5) on how easy PRO's would be to implement. Lower scores for performance expectancy associated with "aggregate" PRO data (only 54% marked "Agree" for this item) suggests training on specific uses of aggregate data are also indicated. These data detail the real issues providers need addressed to effectively capitalize on the benefits of PRO's to improve clinical care.

Table 1. Results for each question on the Patient Reported Outcome Provider Adoption Survey

How do you use PRO data?	*Yes (%)	No (%)
Before you received this survey had you heard of PROs?	86	14
Do you utilize PRO measures during clinic visits?	34	66
Which of the following PRO measures do you use? *(Check all that apply)*		
PROMIS Domain Instrument	83	17
Generic PRO (i.e. SF-36, etc)	41	59
Disease specific PRO measures (WOMAC, PHQ-9, KCCO-12, etc)	29	71

How do you use PRO data? *(Check all that apply)*	*Yes (%)	No (%)
I look at the data only	41	59
I review the data and make clinical decisions based on the data	71	29
I review the data with the patient and make clinical decisions on the data	47	53
I use the data for research projects	12	88
I do not look at the data	18	82

Performance Expectancy*	Average Likert Rating*	Mode (Rating/%)
PRO use can improve the quality of care I provide.	4.0	Agree (72)
PRO use facilitates better patient care decision making.	3.9	Agree (70)
PRO results help me understand how my patient perceives his/her health.	4.1	Agree (70)
Access to aggregate PRO data is important to improve the quality of care I provide.	3.7	Agree (54)
Analysis of PRO data would facilitate better patient care decision making.	3.7	Agree (58)
It would be helpful to receive periodic reports on PRO data from my group.	3.9	Agree (68)
I would be interested in aggregate PRO data from my clinic.	3.9	Agree (70)
PRO analysis results should be available in the electronic medical record to aid clinical decision making.	3.9	Agree (66)
Average	**3.9(0.1)**	
Effort Expectancy*		
PRO data is easy to find and bring up in the electronic medical record.	3.1	Neutral (48)
The presentation of the PRO results in the electronic medical record is clear.	3.0	Neutral (42)
I can easily integrate PRO measures into a patient interaction.	3.4	Agree (52)
Average	**3.2(0.2)**	
Maslach-2 Burnout Scale#		
I feel emotionally drained from my work.	3.9	A few times a month (32)
I've become more callous toward people since I took this job.	5.3	A few times a month (20)
Average	**4.6(1.0)**	

*5=Strongly Agree, 3= Neutral, 1= Strongly Disagree
#7=Never, 4=A few times a month, 1=Everyday