Treatment Based Classification for Patients with Low Back Pain

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BACKGROUND

Low back pain is the most common diagnosis seen in the outpatient physical therapy arena; affecting nearly 80% of all individuals at least once in their lifetime. Despite the number of clinical trials on low back pain, there is no conclusive evidence proving effectiveness of one clinical intervention over another. Physical therapists routinely use an eclectic approach which combines didactic academic knowledge, skills learned from continuing education, clinical experience, and information gathered from the literature.

The Boston Medical Center (BMC) main campus physical therapy clinic receives over 200 low back pain referrals per month. Based on the demographic of the patient population at BMC, many have psychological risk factors, which may impact their ability to make improvements in physical therapy. As in the profession, there is little consistency in the evaluation and treatment for patients receiving physical therapy for low back pain, and thus there is no standard departmental approach to the evaluation and management of this patient population, nor a method to screen for such risk factors. Physical therapy plays a significant role in delivering high quality care at a lower cost, thus it would be beneficial to standardize treatment for this population to result in improved functional outcomes.

AIM

Improve functional outcomes, as measured by the Oswestry Disability Index (ODI), by 20% for patients receiving physical therapy in the outpatient Preston clinic with low back pain, by September 15, 2018.

METHODS

- Assemble team of five physical therapists (PTs) and one physical therapist assistant (PTA) with experience in treating this patient population to assess current practice models and consult the literature for Clinical Practice Guidelines
    - Evidence-based practice recommends Treatment Based Classification (TBC) as an effective method to improve functional outcomes in patients with low back pain. TBC utilizes information from the history and physical exam to place patients in distinct sub-groups to guide their treatment approach
    - Updated TBC embraces the biopsychosocial model of back pain management, including the importance for risk assessment and the need to address psychological factors, regardless of the rehabilitation approach
- Choose TBC approach with psychological screening to manage patients referred to the clinic with low back pain
- Administer ODI to all patients referred to clinic with LBP to measure functional outcome.
- Collect ODI data re-evaluation (10 visits or 1 month after evaluation) and discharge, if applicable

SOLUTIONS .

- Educate team of five PTs on TBC evaluation and treatment methodology and Psychologically Informed Physical Therapy (PIPT) intervention to address psychosocial factors
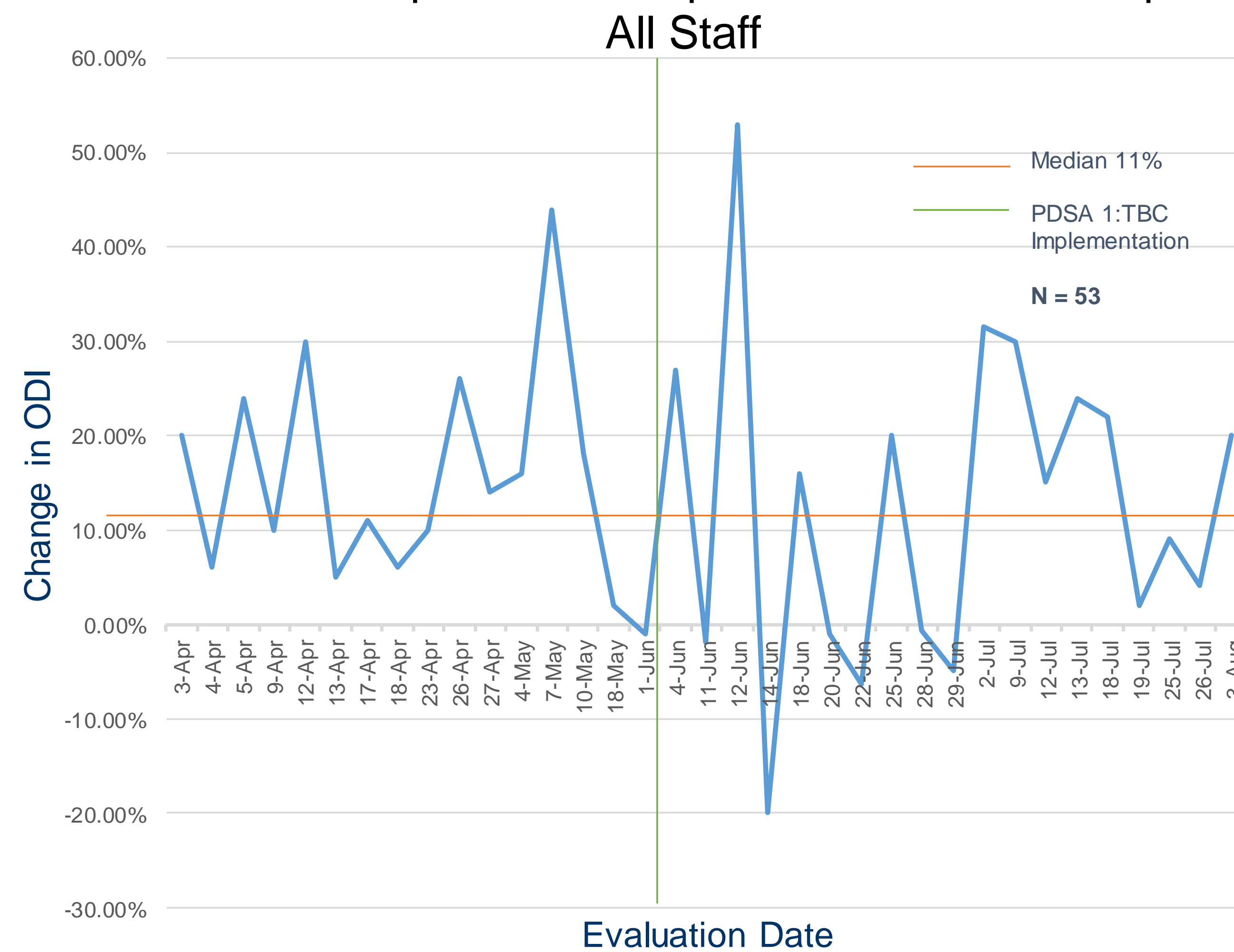- Develop Smartphrasing for patient classification on evaluation, re-evaluation and discharge

Classification Variables	Symptom Modulation	Movement Control	Functional Optimization
Oswestry Score	41-100%	21-40%	0-20%
Pain Rating (0-10 scale)	7-10	4-6	0-3
Clinical Status*	Volatile	Stable	Well-Controlled
Treatment Modifying Variables			
STarT Back score			
PIPT indicated?			
Comorbidities			

- New patients evaluated by team complete STarT Back questionnaire, identifying risk of poor treatment outcome
- Patients scoring "medium" or "high" risk, receive Psychologically Informed Physical Therapy (PIPT), in addition to TBC recommended interventions
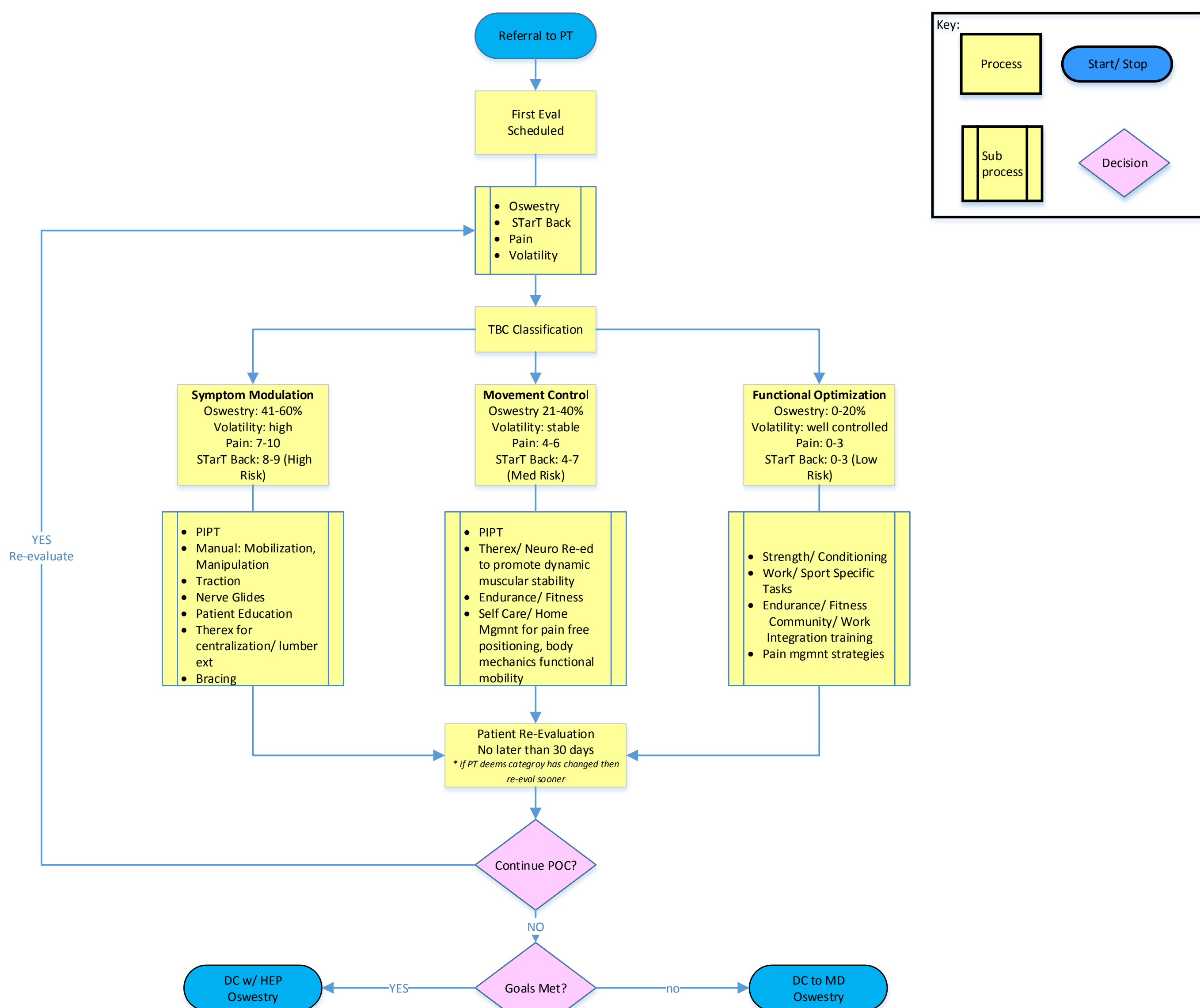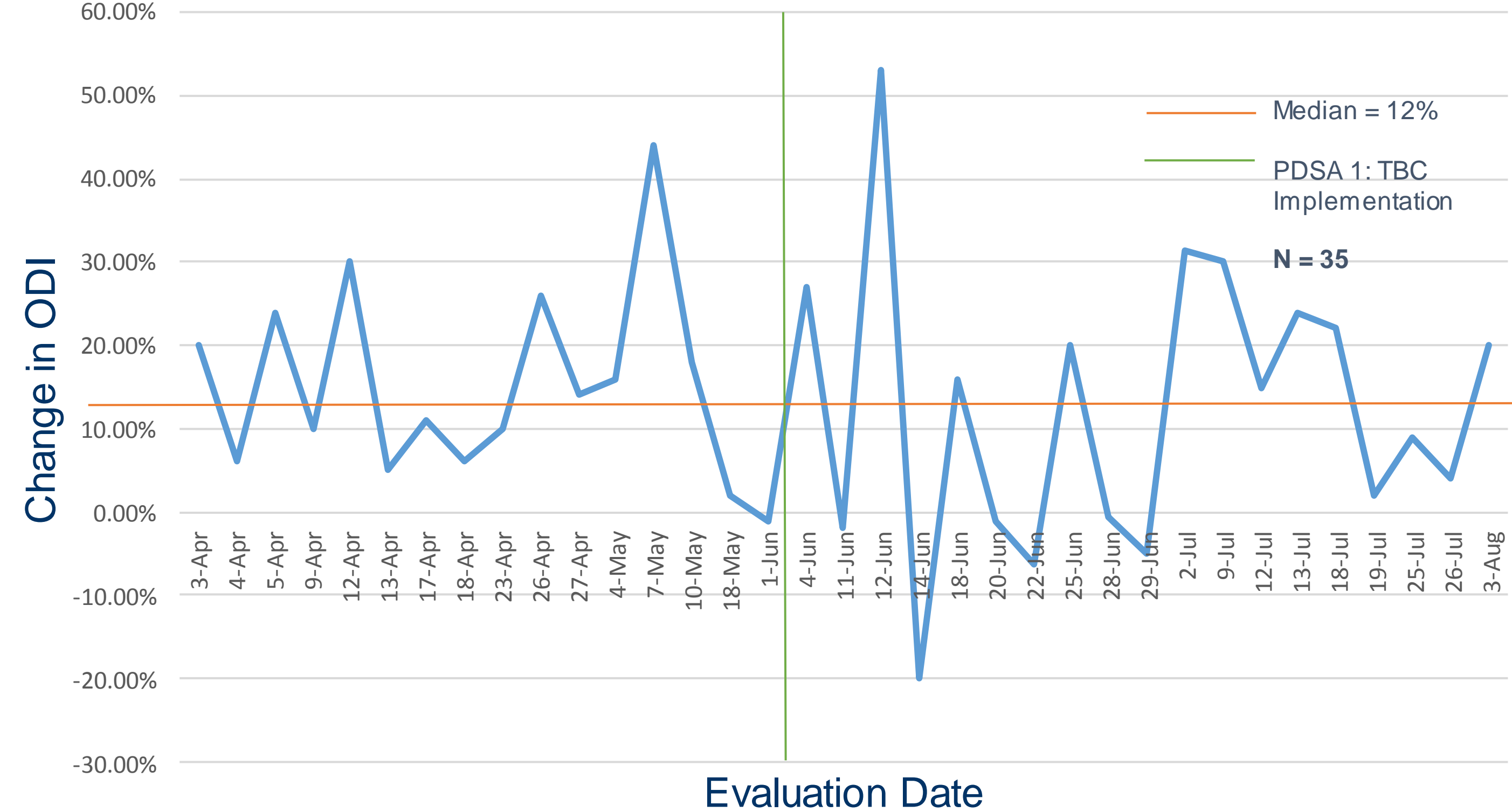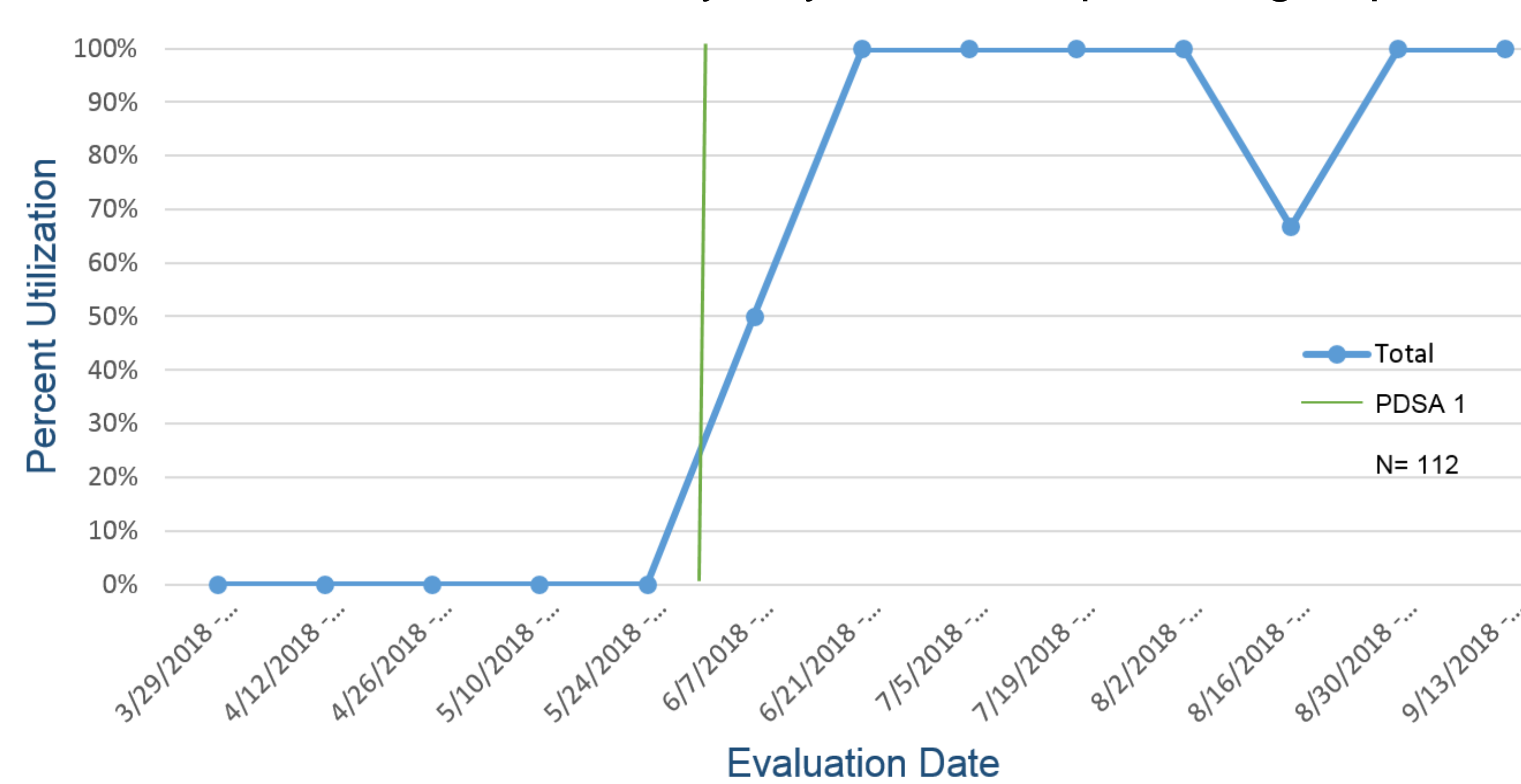
RESULTS

Functional Improvement in patients with low back pain All Staff

Median 11%
PDSA 1:TBC Implementation
N = 53

Functional Improvement in patients with low back pain QI Team of 5 PTs

Median = 12%
PDSA 1: TBC Implementation
N = 35

Utilization of TBC by Physical Therapist Subgroup

Total
PDSA 1
N= 112

Average # of Visits (completed entire episode per POC)	
Pre-implementation (n=9)	8.3
Post-implementation (n=8)	6.9

CONCLUSIONS

- All patients improved, regardless of approach
- Those receiving TBC attended fewer visits than those not receiving TBC
- Risk factors play key role in functional outcome improvement
- High adherence of team in implementation of TBC
    - Employee engagement
    - Leadership involvement in patient care
    - Regular meetings with deliverables
- Few patients completed recommended episode of care with ODI score at evaluation, re-evaluation and discharge

NEXT STEPS

- Need more data
- Patient factors play huge role
    - Condition/comorbidities
    - Patient attendance
    - Completion of episode of care
    - Completion of ODI
    - Psychological factors impact outcomes
- Next PDSA cycle
    - Measure outcomes based on risk stratification for psychological factors (STarT Back score)
    - Determine if low risk patients achieve better outcomes with TBC than high risk patients
- Five champions will educate all outpatient staff on TBC for patients with low back pain
    - Preston (Main Campus) Clinic
    - Winthrop (Satellite) Clinic
- Team will share Smartphrases to document in EPIC (electronic medical record)