

# Measuring Process Adherence with the Low Back Pain Treatment-Based Classification System

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#### BACKGROUND

The Low Back Pain (LBP) Clinical Practice Guideline recommends that therapists utilize a classification system to subgroup patients in the evaluation and treatment of LBP. Compliance to guidelines in healthcare is generally poor *(McGlynn 2003)*. The purpose of this implementation study was to measure the effect of a regular audit and feedback process on therapist adherence to the Treatment-Based Classification (TBC) system.

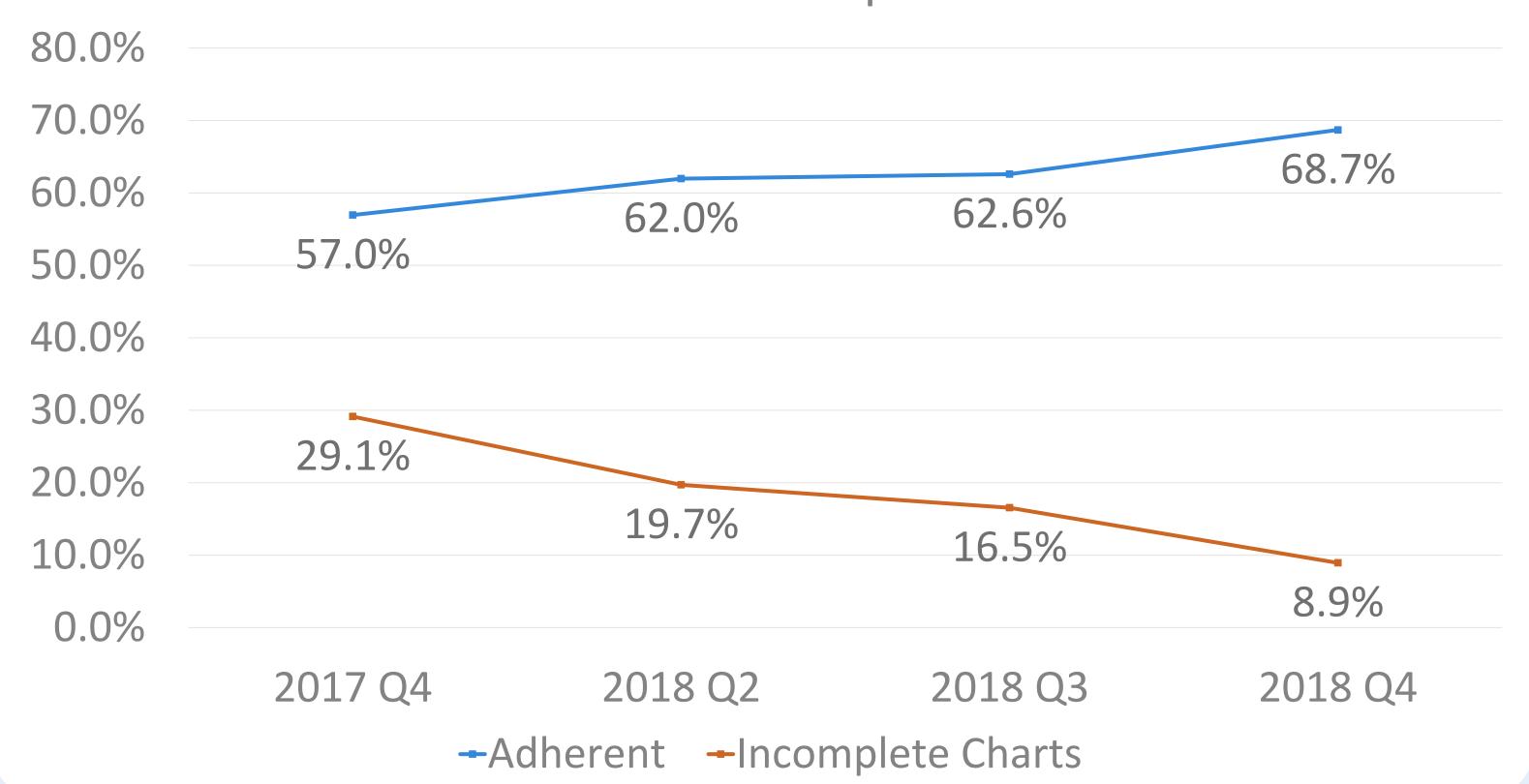
		EVALUATION														
ntermountain <sup>®</sup> Healthcare	Algorithm Complete form from L→R until column O populates					Best Fit Criteria										
herapist Classifications: Sp Ex Extension							other Extension	ı	other	other traction	other stabilization					
Sp Ex Flexion Manipulation	- O Báinninn -				Does the (-)	Does the (-) NRC patient			manipulation criteria:	criteria: sx extending to	criteria: Hypermobility,					
Traction Stabilization Must be entered exactly		Does the patient:	Does the patient:	Does the +NRC	NRC patient have :	-	extending to buttock/legs, ↓	other flexion	hypomobility, pain with	buttock/legs, inability to	increasing episode				Correct	
wiust be entered exactly	Does the	Centralize	Centralize	patient:	symptoms	ROM >90, age	pain with ext,	criteria: 🗸	mobility testing,	centralize w	frequency, 3+			Therapist's	Classification	
	patient have:	with	with	peripheralize	<16 days AND	<40,	preference for	pain with flx,	FABQw<19, hip	repeated mvmt,	episodes,			Classification	AND Treatment	
Therapist's	Nerve Root	repeated	repeated	with ext or	no symptoms	abberrant	walking /	>50 years old,	IR>35, no	leg intensity>	generalized	1st Treatment	Correct	Decision	Adherence	Total
tient MRN Classification	Compression	extension	flexion	have +XSLR	below knee	mvmts, +PIT	standing	spinal stenosis	peripheralization	back	flexibility	Adherent?	Classification	Correct?	Match?	Compliance

**Significance:** Once a classification system for evaluating and directing treatment of low back pain (LBP) is implemented there is limited evidence on therapists' continued adherence to the system. "Matching" treatment with the classification system can improve patient outcomes *(Fritz 2007)*.

## METHODS

Patients with 3+ visits for LBP were audited for adherence to the TBC system in 2017 Q4 and 2018 Q2-4 (n=749) for 35 outpatient orthopedic clinics. Adherence was defined as a therapist making a correct classification and matching the first treatment to that classification. At the end of each quarterly audit, feedback was provided to each clinic manager for individual clinician performance reviews. Overall adherence was measured each quarter for the health system. The Modified Low Back Disability Questionnaire (MDQ) was measured at every visit and used to determine whether a Minimal Clinically Important Difference (MCID = 6 points) was met during the episode of care.

Treatment - Based Classification of LOW Back Pain Have signs of nerve root compression? ositive straight leg raise test OR weakness OR sensation loss OF ? Does your patient... vporeflexia OR symptoms distal to the kne ? Does your patient. Does your patient... SPECIFIC Centralize with lumbar Centralize with lumbar extension / peripherilize with EXERCISE extension? umbar flexion? Extension Centralize with lumbar Have a decrease in pain intensit flexion? with lumbar extension? SPECIFIC EXERCISE Centralize with lumbar flexion / Hexion peripherilize with lumbar extension? Does your patient. OR Have a decrease in pain Have symptom duration <16 Intensity with lumbar flexion? MANIPULATION AND Have no symptoms distal to the knee? Does your patient. TRACTION Peripheralize with extension? Does your patient. OR Have a positive crossed straight Have at least 3 of the followin leg raise test? Average SLR ROM > 90°? (no) Are loss than 40 years?



## Adherent and Incomplete Charts

? Where does your low back pain patient best fit?							
SPECIFIC EXERCISE	MANIPULATION	TRACTION	STABILIZATION				
EXTENSION • Symptoms extending to buttock(s) or leg(s) • Decreased pain with extension • Self-report preference for walking or standing FLEXION • Decreased pain with flexion • > 50 years old • Evidence of spinal stenosis in older patients,	<ul> <li>Hypomobility</li> <li>Pain with mobility testing</li> <li>FABQW &lt;19</li> <li>Hip Internal ROM &gt;35°</li> <li>No peripheralization of symptoms</li> </ul>	<ul> <li>Symptoms extending to buttock(s) or leg(s)</li> <li>Inability to centralize symptoms or decrease pain intensity with movement testing</li> <li>Leg pain intensity greater than low back pain</li> </ul>	<ul> <li>Hypermobility</li> <li>Increasing episode frequency</li> <li>3 or more prior episodes</li> <li>Generalized flexibility</li> <li>Intermountain Healthcare</li> <li>Healthcare</li> </ul>				

Classification	MCID Success	MCID Failure	Total
Adherent	337	137	474
Not Adherent	166	109	275
	503	246	749

Pearson  $X^2$  (1) = 9.09, p = .003

## RESULTS

TBC adherence increased each measurement quarter: 2017 Q4 = 57.0% (n=151), 2018 Q2 = 62.0% (n=213), Q3 = 62.6% (n = 139), Q4 = 68.7% (n = 246). The difference between the first and last quarters was statistically significant (Pearson  $X^2$  (1, n = 397) = 5.56, p=.02) and represents a 11.7% improvement in adherence over the year. Adherent care was associated with achieving an MCID on the MDQ: Pearson  $X^2$  (4, n = 749) = 9.09, p=.003.

## CONCLUSION

The initial adherence rate of 57% is consistent with other research auditing adherence to standard care processes. Adherence was successfully increased by 11.7% over 1 year of conducting an audit and feedback process. Improvement in adherence appears to be related to conducting a more complete evaluation. Patients who received adherent care were more likely

## to achieve an MCID improvement on the MDQ.