Treat the Patient, Not the Pain: Using a Multidimensional Assessment Tool to Facilitate Patient-Centered Chronic Pain Care

Dale J. Langford, PhD[1], David J. Tauben, MD, FACP[1], John A. Sturgeon, PhD[1], Daniel S. Godfrey[1], Mark D. Sullivan, MD, PhD[2], and Ardith Z. Doorenbos, RN, PhD, FAAN[3]

[1]Department of Anesthesiology and Pain Medicine, University of Washington, Seattle, WA, USA; [2]Department of Psychiatry and Behavioral Sciences, Seattle, WA, USA; [3]Department of Biobehavioral Nursing and Health Informatics, Seattle, WA, USA.

THE NEED FOR MULTIDIMENSIONAL CHRONIC PAIN ASSESSMENT

Chronic pain is common, complex, costly, and distressing to patients, families, and clinicians. Despite multiple national initiatives,[1],[2] improvements in chronic pain management have been limited. In fact, an estimated 40–60% of patients with chronic pain have inadequate pain management.[3] This lack of progress may partly be due to the multidimensionality of chronic pain, which is not routinely incorporated into its assessment and management. A patient-centered approach—that accounts for patient-specific goals and patient-reported outcomes and can be implemented in a congested, time-limited primary care clinic setting—is needed to achieve the primary goals of chronic pain management, including reduction of pain impact and improvement of function and quality of life.[3,4]

A QUESTION UNASKED IS AN ANSWER UNLEARNED: USE OF A PATIENT-REPORTED OUTCOMES TOOL TO PROVIDE MULTI-MODAL CHRONIC PAIN CARE

To facilitate individually tailored, comprehensive chronic pain care and patient engagement in pain management, clinicians and informaticists at the University of Washington (UW) Center for Pain Relief developed an online patient-reported outcome measurement tool, called PainTracker™. New patients seeking care at UW's Center for Pain Relief receive unique login information to complete the online PainTracker assessment prior to their clinic appointment, and data are accessed by clinic intake staff through the PainTracker provider portal. As described in Table 1, intake assessments include questions about treatment history, treatment goals and expectations, as well as pain (e.g., pain intensity, interference, pain-related disability, problems with pain medications) and non-pain (e.g., anxiety, depression, health-related quality of life) domain questionnaires. In addition, a body diagram and supplemental questionnaires aid in the diagnosis of specific pain conditions (e.g., radiculopathy versus widespread pain that may indicate fibromyalgia). Providers are alerted when patients' risk or symptom severity scores exceed established threshold values (see Fig. 1), and so support clinical decisions addressing key patient psychosocial problem areas (e.g., referral to behavioral health, sleep specialists).

Prior to each follow-up appointment, patients complete a subset of core outcome questions (see Table 1). PainTracker displays longitudinal data graphically for providers *and* patients to quickly visualize areas of improvement or continued difficulty and tailor treatment accordingly. This systematic multidimensional assessment allows for the delivery of dynamic, individualized pain management and accurate evaluation of response to treatment(s). Review of PainTracker graphs with patients allows providers to demonstrate that improvement in sleep, function, and mood often occurs before improvement in pain (see Fig. 1). Identification of treatment goals and expectations is a critical component of PainTracker that engages patients as active participants in their care, facilitates patient-provider communication, promotes individually tailored benchmarks for improvement, and ensures realistic treatment expectations.

An evaluation of aggregate PainTracker data illustrates the necessity for multidimensional pain assessment. A substantial proportion of more than 4000 adult patients exceeded clinically meaningful threshold values for depression (57.4%), anxiety (33.3%), and post-traumatic stress disorder (27.7%). Most patients were severely disabled or worse (64.7%) and many

Table 1 Constructs and Outcomes Measured by PainTracker™ at Intake and Follow-up

Construct/outcome	Measure	Alert triggering score (if applicable)
Intake only: treatment history, expectations, and risk assessment		
Treatment history	No. of visits with provider types; efficacy of past treatments	
Treatment expectations	Top 3, ranked	
Risk for opioid misuse	ORT	≥ 8
Post-traumatic stress disorder screen	PC-PTSD	≥ 3
Prescription opioid difficulties	PODS	
Alcohol use disorder screen	AUDIT-C	≥ 3 (women) ≥ 4 (men)
Fibromyalgia screen	FS: body map (no. of pain sites based on WPI) + SSS	≥ 13
Intake and follow-up: pain, pain interference, disability, mood, QOL medication problems, and treatments		
Treatment goals	Top 3, ranked	
Pain intensity and interference with enjoyment of life and general activity	PEG	
Pain interference with sleep initiation and maintenance	NRS (0–10)	
Difficulty with patient-specified activity	NRS (0–10)	
Pain-related disability	ODI	$\geq 41\%$ (severe)
Pain locations (worst and other)	Body diagram	
Depression	PHQ-9	≥ 10
Anxiety	GAD-7	≥ 10
Panic attack	Yes/no	
Global health-related QOL	PROMIS Global	
Side effects of pain medications	Yes/no	
Risk for obstructive sleep apnea	STOP	≥ 2
Days when more pain medication was needed	None, 1–2, 3–4 5 or more	
Procedures/treatments	Types and start dates	
Treatment satisfaction	NRS (0–10)	

References and more detailed description of most instruments described elsewhere[5]
Abbreviations: AUDIT-C Alcohol Use Disorders Identification Test; FS fibromyalgia symptoms; GAD-7 Generalized Anxiety Disorder 7-item scale; NRS Numeric Rating Scale; ODI Oswestry Disability Index; ORT Opioid Risk Tool; PC-PTSD Primary Care-Post-traumatic Stress Disorder screener; PEG Pain intensity and interference with Enjoyment of life and General activity; PHQ-9 Patient Health Questionnaire (depressive symptoms); PODS Prescribed Opioids Difficulty Scale; PROMIS Global Patient-Reported Outcomes Measurement Information System-Global Quality of life; SSS Symptom Severity Score; STOP Snoring, Tiredness, Observation of stopped breathing; high blood Pressure; WPI Widespread Pain Index

were identified as moderate-high risk for opioid misuse (40.1%) and high risk for obstructive sleep apnea (56.7%) (unpublished data). Knowledge of these problem areas can save patients and providers valuable time and frustration from disappointing treatment failures.

ROLE OF PRIMARY CARE

Primary care physicians play an integral role in the successful coordination of chronic pain care and the implementation of standardized, multidimensional assessment is necessary for the provision of effective multi-modal patient-centered care. Such measurement is essential for establishing clinical practice guidelines for coordinated inter-specialty care of patients with chronic pain, such as measurement-based "step care."[5] Importantly, a sample of primary care providers ($N = 30$)

found an early version of PainTracker easy to use (70%) and believed it helped patients to participate in their pain management (77%),[6] providing evidence of the acceptability, feasibility, and utility of incorporating measurement-based chronic pain care into the primary care setting. While PainTracker is not currently available outside the University of Washington system, the instruments included are freely available and can be adopted for use in the primary care setting. A paper version can suffice as an early adoption strategy.
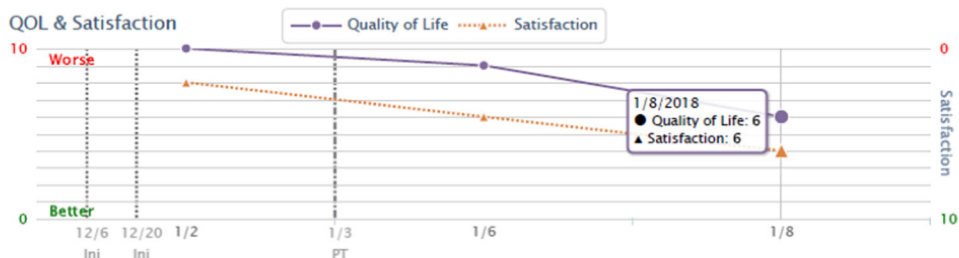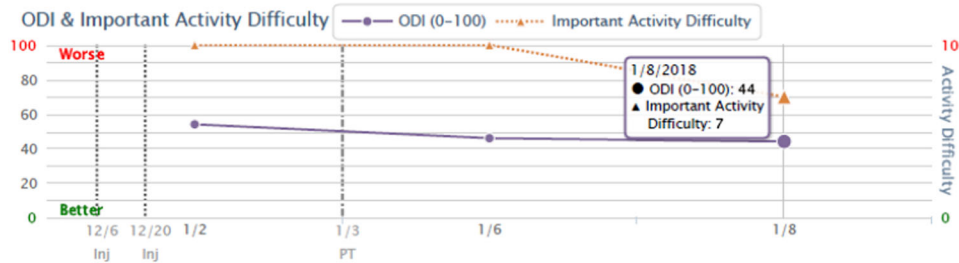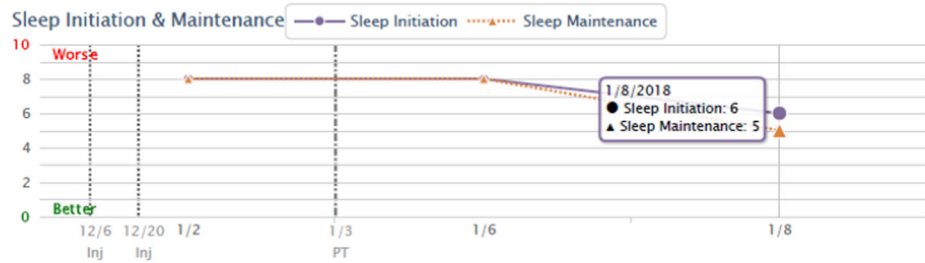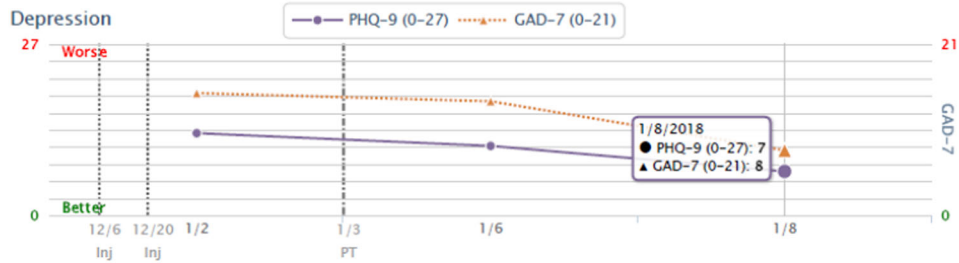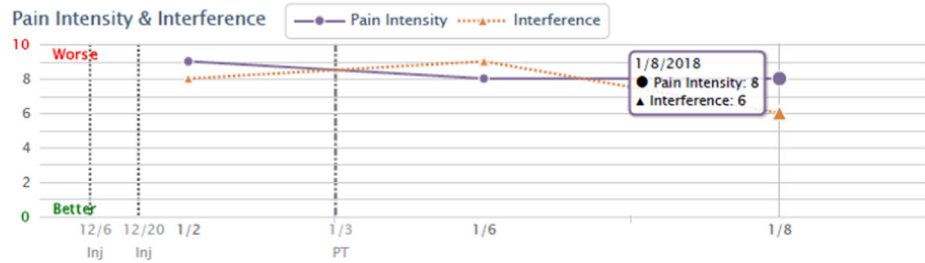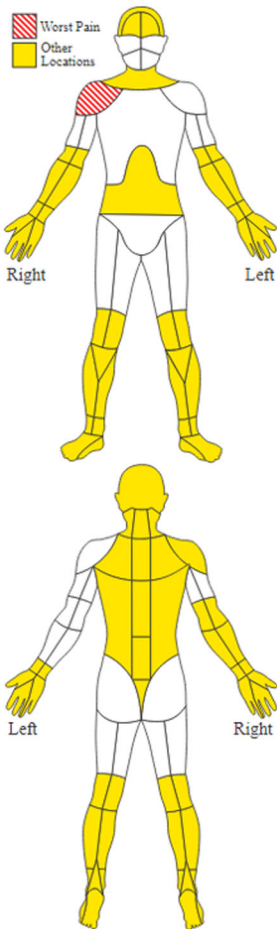
The systematic evaluation of patient-reported outcomes spanning pain and non-pain domains is necessary for capturing the multidimensionality of the pain experience, useful for guiding treatment decisions, and enhances patient engagement in their own pain care.

ORT Score	9 (0–26)	⚠
AUDIT-C	3 (0–12)	⚠
PHQ-9	7 (0–27)	
SI	0 (0–3)	
GAD-7	8 (0–21)	
PTSD	2 (0–4)	
STOP	1 (0–4)	
FM	10 (0–31)	⚑
Opioids		
Problems	High	⚠
Concerns	Low	
Helpfulness	No	
Taper	No	

Worst Pain
Other Locations

Right   Left

Left   Right

Most Bothersome Side Effect
(From most recent assessment)

Trouble concentrating

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PainTracker™

	Patient-reported Recent Treatments				Patient-reported Treatment Goals and Expectations	
Type	Last 3 Dates	Total	Rank	Goals (1/8/18)	Expectations (1/2/18)
······ Injection	12/20/17, 12/6/17	2	1st	Help w/ important activities	Medications for pain
--·-- Started Phys. Therapy	1/3/18	1	2nd	Help coping w/ pain	Physical Therapy
—— Started Psych. Therapy	Not reported	0	3rd	A reduction in pain	Counseling

Pain Intensity & Interference   ●—— Pain Intensity   ····▲···· Interference

1/8/2018
● Pain Intensity: 8
▲ Interference: 6

12/6 12/20 1/2   1/3   1/6   1/8
Inj   Inj   PT

Depression   ●—— PHQ-9 (0–27)   ····▲···· GAD-7 (0–21)

1/8/2018
● PHQ-9 (0–27): 7
▲ GAD-7 (0–21): 8

12/6 12/20 1/2   1/3   1/6   1/8
Inj   Inj   PT

Sleep Initiation & Maintenance   ●—— Sleep Initiation   ····▲···· Sleep Maintenance

1/8/2018
● Sleep Initiation: 6
▲ Sleep Maintenance: 5

12/6 12/20 1/2   1/3   1/6   1/8
Inj   Inj   PT

ODI & Important Activity Difficulty   ●—— ODI (0–100)   ····▲···· Important Activity Difficulty

1/8/2018
● ODI (0–100): 44
▲ Important Activity Difficulty: 7

12/6 12/20 1/2   1/3   1/6   1/8
Inj   Inj   PT

QOL & Satisfaction   ●—— Quality of Life   ····▲···· Satisfaction

1/8/2018
● Quality of Life: 6
▲ Satisfaction: 6

12/6 12/20 1/2   1/3   1/6   1/8
Inj   Inj   PT

	1/2	1/6	1/8
Days w/ Excess Meds (past month)	1 - 2	1 - 2	None
Important Activity	walking with friends	walking with friends	walking with friends

Fig. 1 Primary section of the PainTracker™ report from fictitious patient with chronic pain. Copyrighted by the University of Washington.

Corresponding Author: *Dale J. Langford, PhD; Department of Anesthesiology and Pain Medicine University of Washington, 1959 NE Pacific Street, Seattle, WA, USA (e-mail: dalejwl@uw.edu).*

Compliance with Ethical Standards:

Conflict of Interest: *None of the authors have any conflicts of interest to disclose.*

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