

Patient-Reported Physical Functioning

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MCID for Orthopaedic Devices

Silver Springs, MD (The Great Room)

MID Essentials

- Need external anchor(s) that indicate(s) change that is small, but important
 - Distribution-based “estimates” are not estimates
- MID best interpreted as part of responsiveness to change

Patient-Reported Outcomes Measurement Information System (PROMIS®)

Does your health now limit you in walking more than a mile?

*Not at all/Very little/Somewhat/
Quite a lot/Cannot do*

Are you able to dress yourself, including tying shoelaces and doing buttons?

*Without any difficulty/With a little
difficulty/With some difficulty/
With much difficulty/Unable to do*

Observational Study of Self-Reported Physical Functioning

- One-year study of 451 persons who met American College of Rheumatology criteria for RA
 - Baseline (w1)
 - 6 months (w2)
 - 12 months (w3)
- PROMIS “20”-item physical functioning short-form
- SF-36 Physical functioning scale
- Health Assessment Questionnaire

Sample Characteristics

% female	= 81%
% white	= 87%
Mean Age (range)	= 65 (20-70+)
Mean education (range)	= 14 years (1-18)

Retrospective Rating of Change (Anchor Item)

We would like know about any changes in how you are feeling now compared to how you were feeling 6 months ago.

How has your ability to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair changed

- Got a lot better
- Got a little better
- Stayed the same
- Got a little worse
- Got a lot worse

Better Group

How has your ability to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair changed

- Got a lot better (n = 21)
- Got a little better (n = 35)

Worse Group

How has your ability to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair changed

- Got a lot worse (n = 30)
- Got a little worse (n = 113)

Effect Sizes for Physical Functioning by Change on Anchor

Wave 3 – Wave 1

Wave 3 – Wave 2

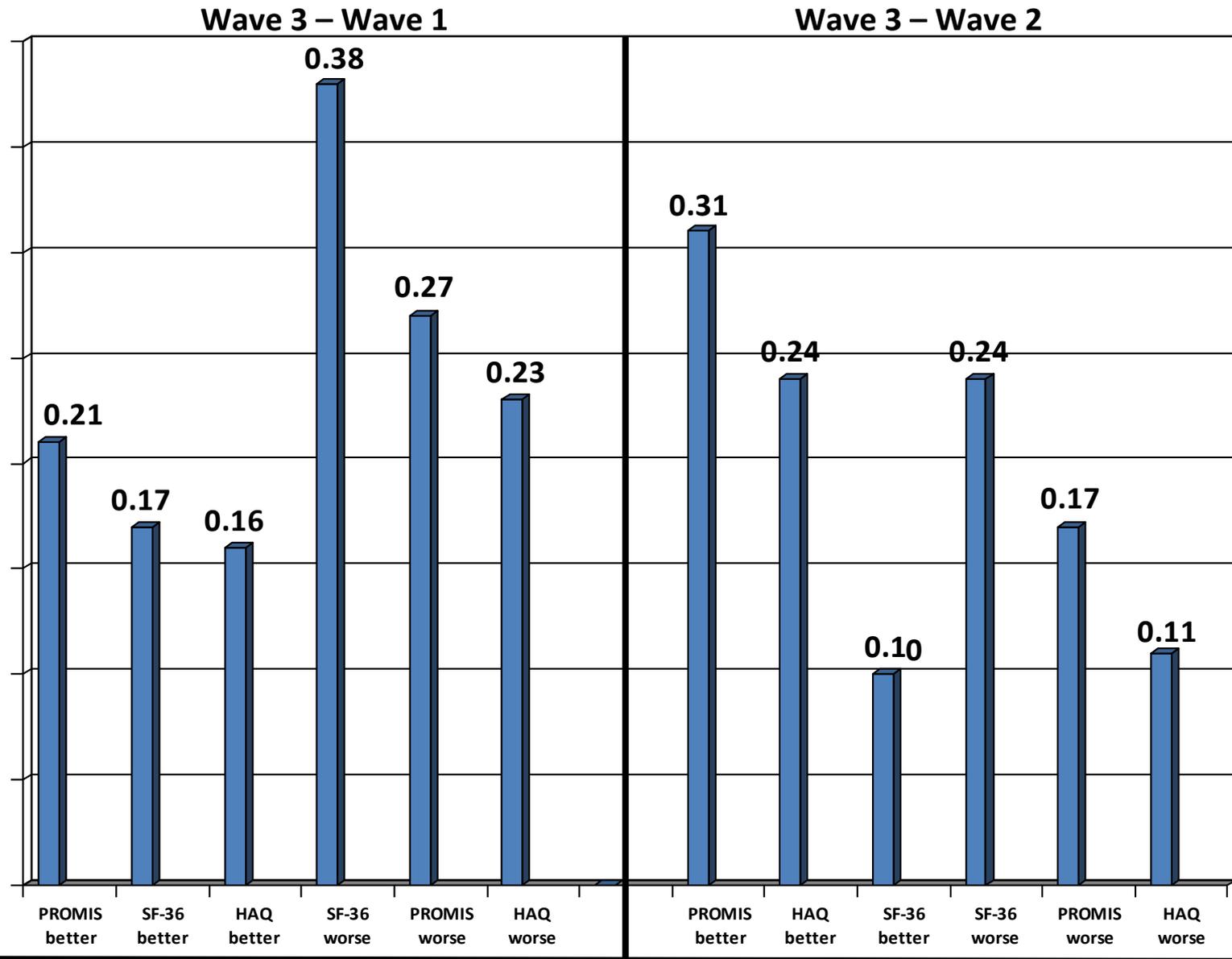
	Better	Same	Worse	Better	Same	Worse
	(n = 56)	(n = 252)	(n = 143)	(n = 55)	(n = 245)	(n = 143)
PROMIS	0.21	0.03	-0.27	0.31	0.05	-0.17
SF-36	0.17	0.04	-0.38	0.10	0.07	-0.24
HAQ	0.16	0.02	-0.23	0.24	0.01	-0.11

Wave 3 is 12 months after wave 1. Wave 2 is 6 months after wave 1.

Better = got a lot better or a little better on anchor.

Worse = got a lot worse or a little worse on anchor.

Effect Size By Measure



Reported getting a lot or a little better (better) or a lot or a little worse (worse) on retrospective change anchor.

Raw Score Change on PROMIS Physical Functioning (T-score) by Change on Anchor

	Lot Better	Little Better	Same	Little Worse	Lot Worse
	(n = 21)	(n = 35)	(n = 252)	(n = 113)	(n = 30)
Wave 3 – Wave 1	1.94 ^a	<u>1.63</u> ^{a,b}	0.27 ^b	<u>-1.68</u> ^c	-3.20 ^d
Wave 3 – Wave 2	3.26 ^a	<u>1.96</u> ^{a,b}	0.43 ^{b,c}	<u>-0.82</u> ^c	-3.16 ^d

Summary

- Anchor(s) indicating change in physical functioning essential to estimate
 - Responsiveness in prospectively collected patient-reported physical functioning.
- Responsiveness of PROMIS physical functioning measure similar or better than “legacy” measures
 - SF-36 and HAQ
- Minimally important differences based on change on anchor that is small but important (non-trivial)

Thank you

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<http://gim.med.ucla.edu/FacultyPages/Hays/present.htm>

Hays, R. D., Farivar, S. S., & Liu, H. (2005). Approaches and recommendations for estimating minimally important differences for health-related quality of life measures. COPD: Journal of Chronic Obstructive Pulmonary Disease, 2, 63-67.