



PROMIS ADULT PROFILE INSTRUMENTS

SCORING MANUAL

A brief guide to scoring the PROMIS® Profile instruments for Adult respondents:

PROMIS-29 Profile v2.1
PROMIS-43 Profile v2.1
PROMIS-57 Profile v2.1
PROMIS-16 Profile v2.1 (PROPr)
PROMIS-29+2 Profile v2.1 (PROPr)
PROMIS Profile CAT v1.0 – 29
PROMIS-29 Profile v2.0*
PROMIS-43 Profile v2.0*
PROMIS-57 Profile v2.0*
PROMIS-29 Profile v1.0*
PROMIS-43 Profile v1.0*
PROMIS-57 Profile v1.0*

*Retired measure

PROMIS Profile Measure Scores

- PROMIS Profiles are comprised of multiple short forms or computer adaptive tests. Each short form or CAT produces its own **domain-level T-score** (e.g., Fatigue, Anxiety).
- Some Profile measures also include a **Pain Intensity numeric rating scale**. This is a single item scored 0-10.
- Some Profile measures can produce a **preference score** (PROMIS Preference or PROPr). PROPr is a generic, society preference-based score. Preference-based scores provide an overall summary of health-related quality of life on a common metric. They summarize multiple domains on a metric ranging from 0 (as bad as dead) to 1 (perfect or ideal health). They can be used in comparisons across groups and for cost-utility analyses.
- Profiles can produce Physical and Mental Health Summary Scores on the z-score metric.
- See the PROMIS Adult Profile Measure Differences document to learn more about the differences between Profiles.

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Scores Produced by Profile Measures

Measure Name	Physical Function T-score	Anxiety T-score	Depression T-score	Fatigue T-score	Sleep Disturbance T-score	Ability to Participate in Social Roles and Activities T-score	Cognitive Function T-score	Pain Intensity 0-10	PROPr 0-1	Physical and Mental Health Summary Z-Scores
PROMIS-29 Profile v2.1	X	X	X	X	X	X		X		X
PROMIS-43 Profile v2.1	X	X	X	X	X	X		X		X
PROMIS-57 Profile v2.1	X	X	X	X	X	X		X		X
PROMIS-16 Profile v2.1 (PROPr)	X	X	X	X	X	X	X		X	X
PROMIS-29+2 Profile v2.1 (PROPr)	X	X	X	X	X	X	X	X	X	X
PROMIS Profile CAT v1.0 – 29	X	X	X	X	X	X		X		X

COMPARING SCORES ACROSS INSTRUMENTS

Some PROMIS domains have multiple versions of instruments (i.e., v1.0, v2.0, v2.1). Generally, **it is recommended that you use the most recent version available which can be identified as the instrument with the highest version number.** In most cases, an instrument that has a decimal increase (v2.0 to v2.1) retains the same item-level parameters as well as instrument reliability and validity. In cases where a version number increases by a whole number (e.g., v1.0 to v2.0), the changes to the instrument are more substantial.

The PROMIS-29, PROMIS-43, and PROMIS-57 v2.0 Profiles replaced the v1.0 Satisfaction with Participation in Social Roles short form with a v2.0 Ability to Participate in Social Roles and Activities short form. Because the social domain differs between v1.0 and v2.0, the Social scores between these measures should not be compared to each other.

In the PROMIS-43 and PROMIS-57, the Physical Function short form was also updated. However, the final Physical Function T-scores from v1.0 and v2.0 can be directly compared to each other. The PROMIS-29, PROMIS-43, and PROMIS-57 v2.1 Profiles have identical items to v2.0. The Physical Function item calibrations were updated to match those used in the PROMIS v2.0 Physical Function item bank. T-scores from the Physical Function short forms in v2.1 Profiles can be directly compared to T-scores from both Physical Function short forms in Profiles v2.0 and v1.0. Also, v2.1 profiles use the same pain intensity item as earlier versions.

Scores from the PROMIS Profile CAT v1.0 – 29 can be compared to scores from short-form based v2.0/v2.1 Profiles (i.e., PROMIS-29 v2.0 and v2.1, PROMIS-43 v2.0 and v2.1, PROMIS-57 v2.0 and v2.1).

Scores from the PROMIS-16 Profile v2.1 (PROPr) and PROMIS-29+2 Profile v2.1 (PROPr) can be compared to other v2.0 and v2.1 PROMIS Profiles.

CONTENT OF PROMIS ADULT PROFILES

The following tables list the specific short forms or CATs that comprise the PROMIS Adult Profile instruments. Use this information to locate the correct scoring table in this manual.

Short Forms in PROMIS-29 Profiles		
PROMIS-29 v1.0	PROMIS-29 v2.0	PROMIS-29 v2.1
PROMIS SF v1.0 – Physical Function 4a	PROMIS SF v1.0 – Physical Function 4a	PROMIS SF v2.0 – Physical Function 4a
PROMIS SF v1.0 – Anxiety 4a	PROMIS SF v1.0 – Anxiety 4a	PROMIS SF v1.0 – Anxiety 4a
PROMIS SF v1.0 – Depression 4a	PROMIS SF v1.0 – Depression 4a	PROMIS SF v1.0 – Depression 4a
PROMIS SF v1.0 – Fatigue 4a	PROMIS SF v1.0 – Fatigue 4a	PROMIS SF v1.0 – Fatigue 4a
PROMIS SF v1.0 – Sleep Disturbance 4a	PROMIS SF v1.0 – Sleep Disturbance 4a	PROMIS SF v1.0 – Sleep Disturbance 4a
PROMIS SF v1.0 – Satisfaction with Participation in Social Roles 4a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 4a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 4a
PROMIS SF v1.0 – Pain Interference 4a	PROMIS SF v1.0 – Pain Interference 4a	PROMIS SF v1.0 – Pain Interference 4a
PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)

Short Forms in PROMIS-43 Profiles		
PROMIS-43 v1.0	PROMIS-43 v2.0	PROMIS-43 v2.1
PROMIS SF v1.0 – Physical Function 6a	PROMIS SF v1.2 – Physical Function 6b	PROMIS SF v2.0 – Physical Function 6b
PROMIS SF v1.0 – Anxiety 6a	PROMIS SF v1.0 – Anxiety 6a	PROMIS SF v1.0 – Anxiety 6a
PROMIS SF v1.0 – Depression 6a	PROMIS SF v1.0 – Depression 6a	PROMIS SF v1.0 – Depression 6a
PROMIS SF v1.0 – Fatigue 6a	PROMIS SF v1.0 – Fatigue 6a	PROMIS SF v1.0 – Fatigue 6a
PROMIS SF v1.0 – Sleep Disturbance 6a	PROMIS SF v1.0 – Sleep Disturbance 6a	PROMIS SF v1.0 – Sleep Disturbance 6a
PROMIS SF v1.0 – Satisfaction with Participation in Social Roles 6a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 6a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 6a
PROMIS SF v1.0 – Pain Interference 6a	PROMIS SF v1.0 – Pain Interference 6a	PROMIS SF v1.0 – Pain Interference 6a
PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)

Short Forms in PROMIS-57 Profiles		
PROMIS-57 v1.0	PROMIS-57 v2.0	PROMIS-57 v2.1
PROMIS SF v1.0 – Physical Function 8a	PROMIS SF v1.2 – Physical Function 8b	PROMIS SF v2.0 – Physical Function 8b
PROMIS SF v1.0 – Anxiety 8a	PROMIS SF v1.0 – Anxiety 8a	PROMIS SF v1.0 – Anxiety 8a
PROMIS SF v1.0 – Depression 8a	PROMIS SF v1.0 – Depression 8a	PROMIS SF v1.0 – Depression 8a
PROMIS SF v1.0 – Fatigue 8a	PROMIS SF v1.0 – Fatigue 8a	PROMIS SF v1.0 – Fatigue 8a
PROMIS SF v1.0 – Sleep Disturbance 8a	PROMIS SF v1.0 – Sleep Disturbance 8a	PROMIS SF v1.0 – Sleep Disturbance 8a
PROMIS SF v1.0 – Satisfaction with Participation in Social Roles 8a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 8a	PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 8a
PROMIS SF v1.0 – Pain Interference 8a	PROMIS SF v1.0 – Pain Interference 8a	PROMIS SF v1.0 – Pain Interference 8a
PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)	PROMIS Pain Intensity item (Global07)

Short Forms in PROMIS-16 Profile v2.1 (PROPr)
PROMIS Short Form v2.0 – Physical Function 2a
PROMIS Short Form v1.0 – Anxiety 2a
PROMIS Short Form v1.0 – Depression 2a
PROMIS Short Form v1.0 – Fatigue 2a
PROMIS Short Form v1.0 – Sleep Disturbance 2a
PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities 2a
PROMIS Short Form v1.1 – Pain Interference 2a
PROMIS Short Form v2.0 – Cognitive Function-Abilities 2a

Short Forms in PROMIS-29+2 Profile v2.1 (PROPr)
PROMIS SF v2.0 – Physical Function 4a
PROMIS SF v1.0 – Anxiety 4a
PROMIS SF v1.0 – Depression 4a
PROMIS SF v1.0 – Fatigue 4a
PROMIS SF v1.0 – Sleep Disturbance 4a
PROMIS SF v2.0 – Ability to Participate in Social Roles and Activities 4a
PROMIS SF v1.0 – Pain Interference 4a
PROMIS SF v2.0 – Cognitive Function-Abilities 2a
PROMIS Pain Intensity item (Global07)

4-Item CATs in PROMIS Profile CAT v1.0 – 29
PROMIS Bank/CAT v2.0 – Physical Function
PROMIS Bank/CAT v1.0 – Anxiety
PROMIS Bank/CAT v1.0 – Depression
PROMIS Bank/CAT v1.0 – Fatigue
PROMIS Bank/CAT v1.0 – Sleep Disturbance
PROMIS Bank/CAT v2.0 – Ability to Participate in Social Roles and Activities
PROMIS Bank/CAT v1.1 – Pain Interference
PROMIS Pain Intensity item (Global07)

SCORING THE INSTRUMENT

PROMIS instruments are scored using item-level calibrations. This means that the most accurate way to score a PROMIS instrument is to use the HealthMeasures Scoring Service (https://www.assessmentcenter.net/ac_scoringervice) or a data collection tool that automatically calculates scores (e.g., Assessment Center API, Epic PROMIS CAT application, REDCap auto-score). This method of scoring uses responses to each item for each participant. We refer to this as “response pattern scoring.” Response pattern scoring is preferred because it is more accurate than the use of raw score/scale score look up tables included in this manual. Response pattern scoring is especially useful when there is missing data (i.e., a respondent skipped an item), different groups of participants responded to different items, or you have created a new questionnaire using a subset of questions from a PROMIS item bank.

Step 1: Identify the short forms.

Identify the specific short forms that are included in the profile measure to be scored. The tables above include each short form name. Calculate a total raw score for each short form. Each PROMIS question usually has five response options ranging in value from one to five. To calculate the total raw score for a short form with all

questions answered, sum the values of the response to each question. For example, for an adult 8-item short form, the lowest possible raw score is 8; the highest possible raw score is 40. **All questions must be answered in order to produce a valid total raw score.** If a participant has skipped a question, use the HealthMeasures Scoring Service (https://www.assessmentcenter.net/ac_scoring-service) NOT this manual to generate a final score.

Step 2: Use the appropriate score conversion tables.

Then, locate the applicable score conversion tables in Appendices 1 and 2. Use each table to translate the total raw score into a T-score for each participant for each short form. For example, in the PROMIS-29 Profile 2.1 instrument, an Anxiety raw score of 10 converts to a T-score of 59.5 with a standard error (SE) of 2.6 (see scoring table for the 4a short form v2.1 in Appendix 1).

The T-score rescales a raw score into a standardized score with a mean of 50 and a standard deviation (SD) of 10. Therefore, a person with a T-score of 40 is one SD below the mean.

Scoring PROMIS Profile CAT v1.0 - 29

The PROMIS Profile CAT is automatically scored within its administration platform. Hand scoring using this manual is not possible.

Calculate a PROPr Score

The PROMIS-Preference (PROPr) score is a generic, societal, preference-based summary score. It is based on PROMIS scores for Cognitive Function or Cognitive Function-Abilities, Depression, Fatigue, Pain Interference, Physical Function, Sleep Disturbance, and Ability to Participate in Social Roles and Activities. You can calculate a PROPr score with the **PROMIS-16 Profile v2.1 (PROPr)** and **PROMIS-29+2 Profile v2.1 (PROPr)** measures or T-scores from PROMIS short forms or CATs for the same domains.

Option 1: Automatic Scoring

If you administer measures via a [digital platform](#) supported by the [Assessment Center API](#), a PROPr score can be calculated. Contact api@assessmentcenter.net for support.

Option 2: Manual Scoring

Step 1: Access or calculate theta values for all PROMIS domains.

- Identify if your scoring process produces theta values. The HealthMeasures Scoring Service, for example, includes theta values in the scored files it produces. [See Scoring Instructions for more information>>](#)
- If your scoring process only produces T-scores, manually calculate theta values. Theta values can be calculated from T-scores using the formula: **$\text{theta} = (T - 50) / 10$**
- If you used a PROMIS Profile that is missing Cognitive Function, estimate a Cognitive Function theta. This involves multiplying constants with theta values and summing them together. Note that you will use the 0-10 response score for PROMIS Pain Intensity (see [Dewitt, Jalal, & Hanmer, 2020, Value in Health, 23](#)).
 - Cognitive Function – Abilities theta = $0.00943 + (-0.037 * \text{Depression theta}) + (0.118 * \text{Physical Function theta}) + (-0.223 * \text{Sleep Disturbance theta}) + (0.0505 * \text{Ability to Participate in Social Roles and Activities theta}) + (-0.168 * \text{Anxiety theta}) + (-0.00599 * \text{Pain Intensity score})$

Step 2: Access PROPr scoring software in SAS, Stata, or R.

- Navigate to <https://github.com/janelhanmer/PROPr>.

- Download the code named “MAUT” (Multi-Attribute Utility Theory).
- Apply the code to your theta values to produce PROPr scores.

Dewitt, B., Feeny, D., Fischhoff, B., Cella, D., Hays, R.D., Hess, R., . . . Hanmer, J. (2018). Estimation of a preference-based summary score for the Patient-Reported Outcomes Measurement Information System: The PROMIS-preference (PROPr) scoring system. *Medical Decision Making*, 38, 683-698. <https://www.ncbi.nlm.nih.gov/pubmed/29944456>

Calculate an HUI-3 Score

Hays and colleagues (2016) published an equation for estimating a Health Utility Index Mark 3 from the PROMIS-29 v2.0 Profile measure.

Hays RD, Revicki DA, Feeny D et al. (2016) Using linear equating to map PROMIS global health items and the PROMIS-29 v2.0 profile measure to the Health Utilities Index Mark 3. *Pharmacoeconomics* 34: 1015. <https://doi.org/10.1007/s40273-016-0408-x>

Calculate Physical and Mental Health Summary Scores

Physical Health and Mental Health summary scores can be calculated from many of the PROMIS profile measures (e.g., PROMIS-29 Profile v2.0 and v2.1, PROMIS-43 Profile v2.0 and 2.1, PROMIS-29+2 Profile v2.1 (PROPr), PROMIS Profile CAT v1.0 – 29). Both scores combine eight domain scores from PROMIS Profiles and apply different weighting coefficients to calculate the Physical Health and Mental Health Summary Scores. The eight domains are Physical Function, Pain Interference, Pain Intensity, Fatigue, Sleep Disturbance, Depression, Anxiety, and Ability to Participate in Social Roles and Activities.

Option 1: SAS Scoring

SAS code to is provided in Appendix 3. If you are not familiar with SAS, work with a statistician or data manager with this expertise.

Option 2: Manual Scoring

1. Calculate T-scores for all domains except for the 0-10 Pain Intensity item. We encourage using the HealthMeasures Scoring Service, the Assessment Center API, or an API-powered platform to calculate T-scores and standard errors for each short form. If you are unable to use these tools, follow the manual scoring instructions above.
2. Transform all T-scores to z-scores. A z-score = $(T\text{-score} - 50) / 10$. For example, a T-score = 60 is a z-score = 1. This is because $(60 - 50)/10 = 1$. A T-score of 40 is a z-score = -1.
3. Calculate a z-score for the Pain Intensity item using the formula:

$$z = (\text{Pain Intensity Item Response Score} - 2.31) / 2.34$$

For example, if a person's pain intensity = 4, the z-score is $(4 - 2.31)/2.34 = 0.72$. The values in this formula are from the PROMIS Wave 1 general population mean of 2.31 and standard deviation of 2.34. In the SAS code in Appendix 3, the Pain Intensity z-score variable is named PAIN1_Z.
4. Create a pain composite score. Calculate the average of the new Pain Intensity z-score (PAIN1_Z) and the Pain Interference z-score. In the SAS code in Appendix 3, this variable is named PAINAV_Z.
5. Create an emotional distress composite score. Calculate the average of the Anxiety z-score and Depression z-score. In the SAS code in Appendix 3, this variable is named EMOT_Z.
6. Calculate the Physical Health and Mental Health summary z-scores. Multiply your z-scores with the values in the factor scoring coefficient column in the table below.
7. Sum the products of the z-scores * factor scoring coefficients as shown in the tables below to produce a Physical Health summary z-score and Mental Health summary z-score.

z-score		Factor Scoring Coefficient		
Physical Function z-score	*	0.872	=	_____ +
PAINAV_Z	*	-0.094	=	_____ +
Ability to Participate z-score	*	0.113	=	_____ +
Fatigue z-score	*	-0.009	=	_____ +
EMOT_Z	*	0.003	=	_____ +
Sleep Disturbance z-score	*	0.002	=	_____ +

				= Physical Health summary z-score

z-score		Factor Scoring Coefficient		
Fatigue z-score	*	-0.351	=	_____ +
EMOT_Z	*	-0.257	=	_____ +
Ability to Participate z-score	*	0.252	=	_____ +
PAINAV_Z	*	-0.154	=	_____ +
Sleep Disturbance z-score	*	-0.139	=	_____ +
Physical Function z-score	*	-0.015	=	_____ +

				= Mental Health summary z-score

8. Convert the Physical Health summary z-score and Mental Health summary z-score to the T-score metric.
 Physical Health summary T-score = (Physical Health summary z-score * 10) + 50.
 Mental Health summary T-score = (Mental Health summary z-score * 10) + 50.

Hays, R. D., Spritzer, K. L., Schalet, B. D., & Cella, D. (2018). PROMIS-29 v2.0 profile physical and mental health summary scores. *Quality of Life Research*, 27, 1885-1891.

SCORES

For most PROMIS instruments, a score of 50 is the average for the United States general population with a standard deviation of 10 because calibration testing was performed on a large sample of the general population. You can read more about the calibration and centering samples on HealthMeasures.net (<http://www.healthmeasures.net/score-and-interpret/interpret-scores/promis>). The T-score is provided with an error term (Standard Error or SE). The Standard Error is a statistical measure of variance and represents the “margin of error” for the T-score.

Important: *A higher PROMIS T-score represents more of the concept being measured.* For negatively-worded concepts like Anxiety, a T-score of 60 is one SD worse than average. By comparison, an Anxiety T-score of 40 is one SD better than average. Higher scores for Depression, Fatigue, Sleep Disturbance, and Pain Interference indicate worse health than average. However, for positively-worded concepts like Physical Function and Ability to Participate in Social Roles and Activities, a T-score of 60 is one SD better than average while a T-score of 40 is one SD worse than average.

Standard Error (SE): A PROMIS score includes a T-score and a standard error (SE). The standard error is a measure of the variability for a given T-score across hypothetical repeated measurements. The standard error can be used to construct confidence intervals around a T-score. A 95% confidence interval is common. A 95% confidence interval means there is a 95% probability that the true T-score is within this range. The formula for a 95% confidence interval is $(T\text{-score} \pm (1.96 * SE))$. For example, if $T=52$ and $SE=2$, the lower boundary of the confidence interval is $(52 - (1.96 * 2)) = 48$ and the upper boundary is $(52 + (1.96 * 2)) = 56$.

FREQUENTLY ASKED QUESTIONS (FAQs)

Q: I am interested in learning more. Where can I do that?

Review the HealthMeasures website at www.healthmeasures.net.

Q: How do I handle multiple responses when administering a short form on paper?

Guidelines on how to deal with multiple responses have been established. Resolution depends on the responses noted by the research participant.

- If two or more responses are marked by the respondent, and they are next to one another, then a data entry specialist will be responsible for randomly selecting one of them to be entered and will write down on the form which answer was selected. Note: To randomly select one of two responses, the data entry specialist will flip a coin (heads - higher number will be entered; tails – lower number will be entered). To randomly select one of three (or more) responses, a table of random numbers should be used with a statistician’s assistance.
- If two or more responses are marked, and they are NOT all next to one another, the response will be considered missing.

Q: What is the minimum change on a PROMIS instrument that represents a clinically meaningful difference?

To learn more about research on the meaning of a change in scores, we suggest conducting a literature review to identify the most current information. The HealthMeasures website (<http://www.healthmeasures.net/score-and-interpret/interpret-scores/promis>) has additional information on interpreting scores.

APPENDIX 1 — SCORING TABLES

PROMIS-29 Profile v2.1 scoring tables and PROMIS-29+2 Profile v2.1 (PROPr) scoring tables

Adult v2.0 - Physical Function 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	22.5	4.0
5	26.6	2.8
6	28.9	2.5
7	30.5	2.4
8	31.9	2.3
9	33.2	2.3
10	34.4	2.3
11	35.6	2.3
12	36.7	2.3
13	37.9	2.3
14	39.2	2.4
15	40.5	2.4
16	41.9	2.5
17	43.5	2.6
18	45.5	2.8
19	48.3	3.3
20	57.0	6.6
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	40.3	6.1
5	48.0	3.6
6	51.2	3.1
7	53.7	2.8
8	55.8	2.7
9	57.7	2.6
10	59.5	2.6
11	61.4	2.6
12	63.4	2.6
13	65.3	2.7
14	67.3	2.7
15	69.3	2.7
16	71.2	2.7
17	73.3	2.7
18	75.4	2.7
19	77.9	2.9
20	81.6	3.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	41.0	6.2
5	49.0	3.2
6	51.8	2.7
7	53.9	2.4
8	55.7	2.3
9	57.3	2.3
10	58.9	2.3
11	60.5	2.3
12	62.2	2.3
13	63.9	2.3
14	65.7	2.3
15	67.5	2.3
16	69.4	2.3
17	71.2	2.4
18	73.3	2.4
19	75.7	2.6
20	79.4	3.6
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	33.7	4.9
5	39.7	3.1
6	43.1	2.7
7	46.0	2.6
8	48.6	2.5
9	51.0	2.5
10	53.1	2.4
11	55.1	2.4
12	57.0	2.3
13	58.8	2.3
14	60.7	2.3
15	62.7	2.4
16	64.6	2.4
17	66.7	2.4
18	69.0	2.5
19	71.6	2.7
20	75.8	3.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	32.0	5.2
5	37.5	4.0
6	41.1	3.7
7	43.8	3.5
8	46.2	3.5
9	48.4	3.4
10	50.5	3.4
11	52.4	3.4
12	54.3	3.4
13	56.1	3.4
14	57.9	3.3
15	59.8	3.3
16	61.7	3.3
17	63.8	3.4
18	66.0	3.4
19	68.8	3.7
20	73.3	4.6
*SE = Standard Error on T-score metric		

Adult v2.0 – Ability to Participate in Social Roles and Activities 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	27.5	4.1
5	31.8	2.5
6	34.0	2.3
7	35.7	2.2
8	37.3	2.1
9	38.8	2.2
10	40.5	2.3
11	42.3	2.3
12	44.2	2.3
13	46.2	2.3
14	48.1	2.2
15	50.0	2.2
16	51.9	2.2
17	53.7	2.3
18	55.8	2.3
19	58.3	2.7
20	64.2	5.1
*SE = Standard Error on T-score metric		

Cognitive Function Short Form v2.0 - Abilities 2a (part of PROMIS-29+2 Profile)		
Raw Summed Score	T-score	SE*
2	29.5	6.4
3	34.4	5.9
4	38.0	5.7
5	41.2	5.7
6	44.3	5.8
7	47.3	5.8
8	50.5	5.7
9	54.7	5.9
10	61.2	6.9
*Standard Error on T-score metric		

Adult v1.0 - Pain Interference 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	41.6	6.1
5	49.6	2.5
6	52.0	2.0
7	53.9	1.9
8	55.6	1.9
9	57.1	1.9
10	58.5	1.8
11	59.9	1.8
12	61.2	1.8
13	62.5	1.8
14	63.8	1.8
15	65.2	1.8
16	66.6	1.8
17	68.0	1.8
18	69.7	1.9
19	71.6	2.1
20	75.6	3.7
*SE = Standard Error on T-score metric		

PROMIS-43 Profile v2.1 scoring tables

Adult v2.0 - Physical Function 6b			Adult v1.0 - Anxiety 6a			Adult v1.0 - Depression 6a		
Short Form Conversion Table			Short Form Conversion Table			Short Form Conversion Table		
Raw Summed Score	T-score	SE*	Raw Summed Score	T-score	SE*	Raw Summed Score	T-score	SE*
6	21.0	3.8	6	39.1	5.9	6	38.4	5.8
7	25.0	2.7	7	45.9	3.4	7	45.2	3.4
8	27.1	2.4	8	48.8	2.9	8	48.3	2.8
9	28.8	2.2	9	50.9	2.6	9	50.4	2.4
10	30.1	2.1	10	52.7	2.4	10	52.0	2.2
11	31.3	2.0	11	54.2	2.3	11	53.4	2.1
12	32.3	2.0	12	55.6	2.2	12	54.7	2.0
13	33.2	1.9	13	56.9	2.2	13	55.9	2.0
14	34.2	1.9	14	58.2	2.2	14	57.0	1.9
15	35.0	1.9	15	59.4	2.2	15	58.2	1.9
16	35.9	1.9	16	60.7	2.2	16	59.3	2.0
17	36.8	1.9	17	62.0	2.2	17	60.5	2.0
18	37.6	1.9	18	63.3	2.2	18	61.7	2.0
19	38.5	1.9	19	64.6	2.2	19	62.9	2.0
20	39.3	1.9	20	66.0	2.2	20	64.2	2.0
21	40.2	1.9	21	67.3	2.2	21	65.5	2.0
22	41.2	1.9	22	68.6	2.2	22	66.7	2.0
23	42.1	1.9	23	70.0	2.2	23	68.0	2.0
24	43.2	2.0	24	71.3	2.2	24	69.3	2.0
25	44.3	2.0	25	72.7	2.2	25	70.6	2.0
26	45.6	2.2	26	74.1	2.2	26	72.0	2.0
27	47.1	2.3	27	75.6	2.3	27	73.4	2.0
28	48.9	2.7	28	77.4	2.4	28	75.0	2.1
29	51.3	3.0	29	79.4	2.7	29	76.9	2.4
30	59.0	6.2	30	82.7	3.5	30	80.3	3.5
*SE = Standard Error on T-score metric			*SE = Standard Error on T-score metric			*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	33.4	4.9
7	39.1	2.9
8	42.0	2.4
9	44.2	2.2
10	46.1	2.1
11	47.8	2.1
12	49.4	2.1
13	50.9	2.0
14	52.4	2.0
15	53.7	2.0
16	55.1	2.0
17	56.3	1.9
18	57.5	1.9
19	58.8	1.9
20	60.0	1.9
21	61.2	1.9
22	62.4	1.9
23	63.7	2.0
24	65.0	2.0
25	66.4	2.0
26	67.8	2.0
27	69.3	2.0
28	71.0	2.1
29	73.0	2.5
30	76.8	3.8
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	31.7	5.1
7	36.9	3.9
8	40.1	3.5
9	42.5	3.3
10	44.6	3.2
11	46.4	3.1
12	48.0	3.0
13	49.5	3.0
14	50.9	3.0
15	52.3	2.9
16	53.6	2.9
17	54.8	2.9
18	56.1	2.9
19	57.3	2.9
20	58.5	2.9
21	59.7	2.9
22	61.0	2.9
23	62.3	2.9
24	63.6	2.9
25	65.0	2.9
26	66.5	3.0
27	68.1	3.1
28	70.0	3.3
29	72.4	3.6
30	76.1	4.4
*SE = Standard Error on T-score metric		

Adult v2.0 – Ability to Participate in Social Roles and Activities 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	26.7	4.0
7	30.7	2.4
8	32.5	2.0
9	33.9	1.9
10	35.1	1.8
11	36.2	1.8
12	37.2	1.8
13	38.2	1.8
14	39.3	1.8
15	40.4	1.8
16	41.6	1.9
17	42.9	1.9
18	44.2	1.9
19	45.6	1.9
20	46.9	1.9
21	48.2	1.8
22	49.5	1.8
23	50.7	1.8
24	51.9	1.8
25	53.2	1.8
26	54.5	1.9
27	55.9	1.9
28	57.5	2.1
29	59.6	2.6
30	65.0	4.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	41.1	6.0
7	48.6	2.4
8	50.7	1.8
9	52.2	1.6
10	53.4	1.6
11	54.5	1.6
12	55.6	1.5
13	56.6	1.5
14	57.6	1.5
15	58.6	1.5
16	59.5	1.5
17	60.4	1.4
18	61.2	1.4
19	62.1	1.4
20	63.0	1.5
21	63.8	1.5
22	64.8	1.5
23	65.7	1.5
24	66.7	1.5
25	67.6	1.5
26	68.7	1.5
27	69.8	1.5
28	71.0	1.6
29	72.6	2.0
30	76.3	3.6
*SE = Standard Error on T-score metric		

PROMIS-57 Profile v2.1 scoring tables

Adult v2.0 – Physical Function 8b		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	20.3	3.7
9	23.9	2.5
10	26.0	2.2
11	27.5	2.1
12	28.8	2.0
13	29.8	1.9
14	30.8	1.8
15	31.7	1.8
16	32.5	1.7
17	33.2	1.7
18	34.0	1.7
19	34.7	1.7
20	35.4	1.6
21	36.1	1.6
22	36.7	1.6
23	37.4	1.6
24	38.1	1.6
25	38.8	1.6
26	39.5	1.6
27	40.1	1.6
28	40.8	1.6
29	41.6	1.7
30	42.3	1.7
31	43.1	1.7
32	43.9	1.7
33	44.7	1.8
34	45.7	1.8
35	46.7	1.9
36	47.8	2.1
37	49.2	2.3
38	50.8	2.6
39	53.0	3.0
40	60.1	5.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	37.1	5.5
9	42.2	3.3
10	45.9	2.8
11	47.8	2.5
12	49.4	2.3
13	50.8	2.2
14	52.1	2.1
15	53.2	2.0
16	54.3	2.0
17	55.4	2.0
18	56.4	2.0
19	57.4	2.0
20	58.4	2.0
21	59.4	2.0
22	60.4	2.0
23	61.4	2.0
24	62.5	2.0
25	63.5	2.0
26	64.5	2.0
27	65.6	2.0
28	66.6	2.0
29	67.7	2.0
30	68.7	2.0
31	69.8	2.0
32	70.8	2.0
33	71.9	2.0
34	73.0	2.0
35	74.1	2.0
36	75.4	2.0
37	76.7	2.1
38	76.2	2.3
39	80.0	2.6
40	83.1	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	38.2	5.7
9	44.7	3.3
10	47.5	2.7
11	49.4	2.3
12	50.9	2.0
13	52.1	1.9
14	53.2	1.8
15	54.1	1.8
16	55.1	1.7
17	55.9	1.7
18	56.8	1.7
19	57.7	1.7
20	58.5	1.7
21	59.4	1.7
22	60.3	1.7
23	61.2	1.7
24	62.1	1.8
25	63.0	1.8
26	63.9	1.8
27	64.9	1.8
28	65.8	1.8
29	66.8	1.8
30	67.7	1.8
31	68.7	1.8
32	69.7	1.8
33	70.7	1.8
34	71.7	1.8
35	72.8	1.8
36	73.9	1.8
37	75.0	1.9
38	76.4	2.0
39	78.2	2.4
40	81.3	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	33.1	4.8
9	38.5	2.7
10	41.0	2.2
11	42.8	2.0
12	44.3	1.9
13	45.6	1.8
14	46.9	1.8
15	48.1	1.8
16	49.2	1.8
17	50.4	1.8
18	51.5	1.7
19	52.5	1.7
20	53.6	1.7
21	54.6	1.7
22	55.6	1.7
23	56.6	1.7
24	57.5	1.7
25	58.5	1.7
26	59.4	1.7
27	60.4	1.7
28	61.3	1.7
29	62.3	1.7
30	63.3	1.7
31	64.3	1.7
32	65.3	1.7
33	66.4	1.7
34	67.5	1.7
35	68.6	1.7
36	69.8	1.8
37	71.0	1.8
38	72.4	2.0
39	74.2	2.4
40	77.8	3.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	30.5	4.9
9	35.3	3.7
10	38.1	3.3
11	40.4	3.1
12	42.2	3.0
13	43.9	2.9
14	45.3	2.8
15	46.7	2.7
16	47.9	2.7
17	49.1	2.6
18	50.2	2.6
19	51.3	2.6
20	52.4	2.6
21	53.4	2.6
22	54.3	2.5
23	55.3	2.5
24	56.2	2.5
25	57.2	2.5
26	58.1	2.5
27	59.1	2.5
28	60.0	2.5
29	61.0	2.5
30	62.0	2.6
31	63.0	2.6
32	64.0	2.6
33	65.1	2.6
34	66.2	2.7
35	67.4	2.8
36	68.7	2.9
37	70.2	3.0
38	72.0	3.2
39	74.1	3.5
40	77.6	4.3
*SE = Standard Error on T-score metric		

Adult v2.0 – Ability to Participate in Social Roles and Activities 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	25.9	3.9
9	29.7	2.3
10	31.3	1.9
11	32.6	1.7
12	33.6	1.6
13	34.5	1.6
14	35.3	1.5
15	36.2	1.5
16	36.9	1.5
17	37.7	1.5
18	38.5	1.5
19	39.3	1.6
20	40.2	1.6
21	41.1	1.6
22	42.0	1.7
23	43.0	1.7
24	44.0	1.7
25	45.0	1.7
26	46.0	1.6
27	47.0	1.6
28	48.0	1.6
29	48.9	1.6
30	49.9	1.6
31	50.8	1.6
32	51.7	1.6
33	52.7	1.6
34	53.6	1.6
35	54.6	1.6
36	55.7	1.6
37	56.8	1.7
38	58.2	2.0
39	60.2	2.5
40	65.4	4.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	40.7	5.9
9	47.9	2.4
10	49.9	1.8
11	51.2	1.5
12	52.3	1.4
13	53.2	1.4
14	54.1	1.4
15	55.0	1.4
16	55.8	1.4
17	56.6	1.4
18	57.4	1.3
19	58.1	1.3
20	58.8	1.3
21	59.5	1.3
22	60.2	1.3
23	60.8	1.3
24	61.5	1.3
25	62.1	1.3
26	62.8	1.3
27	63.5	1.3
28	64.1	1.3
29	64.8	1.3
30	65.5	1.3
31	66.2	1.3
32	66.9	1.3
33	67.7	1.3
34	68.4	1.3
35	69.2	1.3
36	70.1	1.4
37	71.0	1.4
38	72.1	1.6
39	73.5	2.0
40	77.0	3.5
*SE = Standard Error on T-score metric		

PROMIS-16 Profile v2.1 (PROPr) scoring tables

PROMIS Adult SF v2.0 – Physical Function 2a			PROMIS Adult SF v1.0 – Anxiety 2a			PROMIS Adult SF v1.0 – Depression 2a		
Short Form Conversion Table			Short Form Conversion Table			Short Form Conversion Table		
Raw Summed Score	T-Score	SE*	Raw Summed Score	T-Score	SE*	Raw Summed Score	T-Score	SE*
2	27.5	4.6	2	43.5	6.9	2	41.7	6.4
3	32.0	3.4	3	52.9	3.9	3	50.8	3.6
4	34.3	3.4	4	56.7	3.6	4	54.8	3.4
5	36.4	3.5	5	60.1	3.6	5	58.1	3.1
6	38.3	3.5	6	63.5	3.6	6	61.2	3.1
7	40.4	3.5	7	67.0	3.6	7	64.6	3.2
8	42.9	3.5	8	70.6	3.7	8	68.1	3.2
9	46.3	3.8	9	74.4	3.8	9	71.8	3.3
10	56.1	7.0	10	79.5	4.3	10	77.0	4.1
*SE = Standard Error on T-Score metric			*SE = Standard Error on T-Score metric			*SE = Standard Error on T-Score metric		

PROMIS Adult SF v1.0 – Fatigue 2a			PROMIS Adult SF v1.0 – Sleep Disturbance 2a			PROMIS Adult SF v2.0 – Ability to Participate in Social Roles and Activities 2a		
Short Form Conversion Table			Short Form Conversion Table			Short Form Conversion Table		
Raw Summed Score	T-Score	SE*	Raw Summed Score	T-Score	SE*	Raw Summed Score	T-Score	SE*
2	35.1	5.4	2	37.6	6.0	2	28.3	4.7
3	43.3	3.9	3	44.8	4.6	3	33.3	3.6
4	48.6	3.4	4	48.8	4.5	4	36.3	3.6
5	52.7	3.2	5	52.3	4.4	5	39.4	3.4
6	56.3	3.2	6	55.5	4.5	6	42.9	3.4
7	59.7	3.2	7	58.6	4.5	7	46.5	3.4
8	63.2	3.2	8	61.7	4.6	8	50.4	3.4
9	66.9	3.4	9	65.3	4.6	9	54.4	3.6
10	72.6	4.4	10	70.5	5.3	10	62.1	5.7
*SE = Standard Error on T-Score metric			*SE = Standard Error on T-Score metric			*SE = Standard Error on T-Score metric		

PROMIS Adult SF v1.1 – Pain Interference 2a			PROMIS Adult SF v2.0 – Cognitive Function—Abilities 2a		
Short Form Conversion Table			Short Form Conversion Table		
Raw Summed Score	T-Score	SE*	Raw Summed Score	T-Score	SE*
2	42.9	6.5	2	28.6	5.4
3	52.7	2.7	3	33.7	4.7
4	56.1	2.4	4	37.0	4.7
5	58.9	2.4	5	40.1	4.6
6	61.5	2.3	6	43.1	4.6
7	64.0	2.3	7	46.2	4.5
8	66.7	2.3	8	49.6	4.6
9	69.5	2.5	9	53.6	4.8
10	74.4	3.9	10	61.0	6.3
*SE = Standard Error on T-Score metric			*SE = Standard Error on T-Score metric		

APPENDIX 2 – SCORING TABLES FOR RETIRED MEASURES

PROMIS-29 Profile v2.0 scoring tables

Adult v1.0 - Physical Function 4a <i>Short Form Conversion Table</i> <table> <tr> <th>Raw Summed Score</th><th>T-score</th><th>SE*</th></tr> <tr><td>4</td><td>22.9</td><td>3.9</td></tr> <tr><td>5</td><td>26.9</td><td>2.7</td></tr> <tr><td>6</td><td>29.1</td><td>2.4</td></tr> <tr><td>7</td><td>30.7</td><td>2.2</td></tr> <tr><td>8</td><td>32.1</td><td>2.2</td></tr> <tr><td>9</td><td>33.3</td><td>2.1</td></tr> <tr><td>10</td><td>34.4</td><td>2.1</td></tr> <tr><td>11</td><td>35.6</td><td>2.1</td></tr> <tr><td>12</td><td>36.7</td><td>2.1</td></tr> <tr><td>13</td><td>37.9</td><td>2.2</td></tr> <tr><td>14</td><td>39.1</td><td>2.2</td></tr> <tr><td>15</td><td>40.4</td><td>2.2</td></tr> <tr><td>16</td><td>41.8</td><td>2.3</td></tr> <tr><td>17</td><td>43.4</td><td>2.4</td></tr> <tr><td>18</td><td>45.3</td><td>2.6</td></tr> <tr><td>19</td><td>48.0</td><td>3.1</td></tr> <tr><td>20</td><td>56.9</td><td>6.7</td></tr> </table> *SE = Standard Error on T-score metric	Raw Summed Score	T-score	SE*	4	22.9	3.9	5	26.9	2.7	6	29.1	2.4	7	30.7	2.2	8	32.1	2.2	9	33.3	2.1	10	34.4	2.1	11	35.6	2.1	12	36.7	2.1	13	37.9	2.2	14	39.1	2.2	15	40.4	2.2	16	41.8	2.3	17	43.4	2.4	18	45.3	2.6	19	48.0	3.1	20	56.9	6.7	Adult v1.0 - Anxiety 4a <i>Short Form Conversion Table</i> <table> <tr> <th>Raw Summed Score</th><th>T-score</th><th>SE*</th></tr> <tr><td>4</td><td>40.3</td><td>6.1</td></tr> <tr><td>5</td><td>48.0</td><td>3.6</td></tr> <tr><td>6</td><td>51.2</td><td>3.1</td></tr> <tr><td>7</td><td>53.7</td><td>2.8</td></tr> <tr><td>8</td><td>55.8</td><td>2.7</td></tr> <tr><td>9</td><td>57.7</td><td>2.6</td></tr> <tr><td>10</td><td>59.5</td><td>2.6</td></tr> <tr><td>11</td><td>61.4</td><td>2.6</td></tr> <tr><td>12</td><td>63.4</td><td>2.6</td></tr> <tr><td>13</td><td>65.3</td><td>2.7</td></tr> <tr><td>14</td><td>67.3</td><td>2.7</td></tr> <tr><td>15</td><td>69.3</td><td>2.7</td></tr> <tr><td>16</td><td>71.2</td><td>2.7</td></tr> <tr><td>17</td><td>73.3</td><td>2.7</td></tr> <tr><td>18</td><td>75.4</td><td>2.7</td></tr> <tr><td>19</td><td>77.9</td><td>2.9</td></tr> <tr><td>20</td><td>81.6</td><td>3.7</td></tr> </table> *SE = Standard Error on T-score metric	Raw Summed Score	T-score	SE*	4	40.3	6.1	5	48.0	3.6	6	51.2	3.1	7	53.7	2.8	8	55.8	2.7	9	57.7	2.6	10	59.5	2.6	11	61.4	2.6	12	63.4	2.6	13	65.3	2.7	14	67.3	2.7	15	69.3	2.7	16	71.2	2.7	17	73.3	2.7	18	75.4	2.7	19	77.9	2.9	20	81.6	3.7	Adult v1.0 - Depression 4a <i>Short Form Conversion Table</i> <table> <tr> <th>Raw Summed Score</th><th>T-score</th><th>SE*</th></tr> <tr><td>4</td><td>41.0</td><td>6.2</td></tr> <tr><td>5</td><td>49.0</td><td>3.2</td></tr> <tr><td>6</td><td>51.8</td><td>2.7</td></tr> <tr><td>7</td><td>53.9</td><td>2.4</td></tr> <tr><td>8</td><td>55.7</td><td>2.3</td></tr> <tr><td>9</td><td>57.3</td><td>2.3</td></tr> <tr><td>10</td><td>58.9</td><td>2.3</td></tr> <tr><td>11</td><td>60.5</td><td>2.3</td></tr> <tr><td>12</td><td>62.2</td><td>2.3</td></tr> <tr><td>13</td><td>63.9</td><td>2.3</td></tr> <tr><td>14</td><td>65.7</td><td>2.3</td></tr> <tr><td>15</td><td>67.5</td><td>2.3</td></tr> <tr><td>16</td><td>69.4</td><td>2.3</td></tr> <tr><td>17</td><td>71.2</td><td>2.4</td></tr> <tr><td>18</td><td>73.3</td><td>2.4</td></tr> <tr><td>19</td><td>75.7</td><td>2.6</td></tr> <tr><td>20</td><td>79.4</td><td>3.6</td></tr> </table> *SE = Standard Error on T-score metric	Raw Summed Score	T-score	SE*	4	41.0	6.2	5	49.0	3.2	6	51.8	2.7	7	53.9	2.4	8	55.7	2.3	9	57.3	2.3	10	58.9	2.3	11	60.5	2.3	12	62.2	2.3	13	63.9	2.3	14	65.7	2.3	15	67.5	2.3	16	69.4	2.3	17	71.2	2.4	18	73.3	2.4	19	75.7	2.6	20	79.4	3.6
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Adult v1.0 - Pain Interference 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	41.6	6.1
5	49.6	2.5
6	52.0	2.0
7	53.9	1.9
8	55.6	1.9
9	57.1	1.9
10	58.5	1.8
11	59.9	1.8
12	61.2	1.8
13	62.5	1.8
14	63.8	1.8
15	65.2	1.8
16	66.6	1.8
17	68.0	1.8
18	69.7	1.9
19	71.6	2.1
20	75.6	3.7
*SE = Standard Error on T-score metric		

PROMIS-43 Profile v2.0 scoring tables

Adult v1.2 - Physical Function 6b		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	21.6	3.6
7	25.4	2.6
8	27.5	2.3
9	29.1	2.1
10	30.4	2.0
11	31.5	1.9
12	32.5	1.9
13	33.4	1.8
14	34.3	1.8
15	35.1	1.8
16	36.0	1.8
17	36.8	1.8
18	37.6	1.8
19	38.5	1.8
20	39.3	1.8
21	40.2	1.8
22	41.1	1.8
23	42.1	1.8
24	43.1	1.9
25	44.2	1.9
26	45.4	2.0
27	46.8	2.2
28	48.7	2.6
29	50.9	2.9
30	58.7	6.2
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	39.1	5.9
7	45.9	3.4
8	48.8	2.9
9	50.9	2.6
10	52.7	2.4
11	54.2	2.3
12	55.6	2.2
13	56.9	2.2
14	58.2	2.2
15	59.4	2.2
16	60.7	2.2
17	62.0	2.2
18	63.3	2.2
19	64.6	2.2
20	66.0	2.2
21	67.3	2.2
22	68.6	2.2
23	70.0	2.2
24	71.3	2.2
25	72.7	2.2
26	74.1	2.2
27	75.6	2.3
28	77.4	2.4
29	79.4	2.7
30	82.7	3.5
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	38.4	5.8
7	45.2	3.4
8	48.3	2.8
9	50.4	2.4
10	52.0	2.2
11	53.4	2.1
12	54.7	2.0
13	55.9	2.0
14	57.0	1.9
15	58.2	1.9
16	59.3	2.0
17	60.5	2.0
18	61.7	2.0
19	62.9	2.0
20	64.2	2.0
21	65.5	2.0
22	66.7	2.0
23	68.0	2.0
24	69.3	2.0
25	70.6	2.0
26	72.0	2.0
27	73.4	2.0
28	75.0	2.1
29	76.9	2.4
30	80.3	3.5
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	33.4	4.9
7	39.1	2.9
8	42.0	2.4
9	44.2	2.2
10	46.1	2.1
11	47.8	2.1
12	49.4	2.1
13	50.9	2.0
14	52.4	2.0
15	53.7	2.0
16	55.1	2.0
17	56.3	1.9
18	57.5	1.9
19	58.8	1.9
20	60.0	1.9
21	61.2	1.9
22	62.4	1.9
23	63.7	2.0
24	65.0	2.0
25	66.4	2.0
26	67.8	2.0
27	69.3	2.0
28	71.0	2.1
29	73.0	2.5
30	76.8	3.8
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	31.7	5.1
7	36.9	3.9
8	40.1	3.5
9	42.5	3.3
10	44.6	3.2
11	46.4	3.1
12	48.0	3.0
13	49.5	3.0
14	50.9	3.0
15	52.3	2.9
16	53.6	2.9
17	54.8	2.9
18	56.1	2.9
19	57.3	2.9
20	58.5	2.9
21	59.7	2.9
22	61.0	2.9
23	62.3	2.9
24	63.6	2.9
25	65.0	2.9
26	66.5	3.0
27	68.1	3.1
28	70.0	3.3
29	72.4	3.6
30	76.1	4.4
*SE = Standard Error on T-score metric		

Adult v2.0 – Ability to Participate in Social Roles and Activities 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	26.7	4.0
7	30.7	2.4
8	32.5	2.0
9	33.9	1.9
10	35.1	1.8
11	36.2	1.8
12	37.2	1.8
13	38.2	1.8
14	39.3	1.8
15	40.4	1.8
16	41.6	1.9
17	42.9	1.9
18	44.2	1.9
19	45.6	1.9
20	46.9	1.9
21	48.2	1.8
22	49.5	1.8
23	50.7	1.8
24	51.9	1.8
25	53.2	1.8
26	54.5	1.9
27	55.9	1.9
28	57.5	2.1
29	59.6	2.6
30	65.0	4.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	41.1	6.0
7	48.6	2.4
8	50.7	1.8
9	52.2	1.6
10	53.4	1.6
11	54.5	1.6
12	55.6	1.5
13	56.6	1.5
14	57.6	1.5
15	58.6	1.5
16	59.5	1.5
17	60.4	1.4
18	61.2	1.4
19	62.1	1.4
20	63.0	1.5
21	63.8	1.5
22	64.8	1.5
23	65.7	1.5
24	66.7	1.5
25	67.6	1.5
26	68.7	1.5
27	69.8	1.5
28	71.0	1.6
29	72.6	2.0
30	76.3	3.6
*SE = Standard Error on T-score metric		

PROMIS-57 Profile v2.0 scoring tables

Adult v1.2 - Physical Function 8b		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	20.9	3.5
9	24.4	2.5
10	26.4	2.2
11	27.9	2.0
12	29.1	1.9
13	30.1	1.8
14	31.1	1.7
15	31.9	1.7
16	32.7	1.6
17	33.4	1.6
18	34.1	1.6
19	34.8	1.6
20	35.5	1.6
21	36.2	1.5
22	36.8	1.5
23	37.5	1.5
24	38.1	1.5
25	38.8	1.5
26	39.4	1.5
27	40.1	1.5
28	40.8	1.6
29	41.5	1.6
30	42.2	1.6
31	43.0	1.6
32	44.6	1.6
33	45.5	1.6
34	46.4	1.7
35	47.5	1.8
36	48.8	1.9
37	50.4	2.1
38	50.4	2.5
39	52.5	2.9
40	59.7	6.1
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	37.1	5.5
9	42.2	3.3
10	45.9	2.8
11	47.8	2.5
12	49.4	2.3
13	50.8	2.2
14	52.1	2.1
15	53.2	2.0
16	54.3	2.0
17	55.4	2.0
18	56.4	2.0
19	57.4	2.0
20	58.4	2.0
21	59.4	2.0
22	60.4	2.0
23	61.4	2.0
24	62.5	2.0
25	63.5	2.0
26	64.5	2.0
27	65.6	2.0
28	66.6	2.0
29	67.7	2.0
30	68.7	2.0
31	69.8	2.0
32	70.8	2.0
33	71.9	2.0
34	73.0	2.0
35	74.1	2.0
36	75.4	2.0
37	76.7	2.1
38	76.2	2.3
39	80.0	2.6
40	83.1	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	38.2	5.7
9	44.7	3.3
10	47.5	2.7
11	49.4	2.3
12	50.9	2.0
13	52.1	1.9
14	53.2	1.8
15	54.1	1.8
16	55.1	1.7
17	55.9	1.7
18	56.8	1.7
19	57.7	1.7
20	58.5	1.7
21	59.4	1.7
22	60.3	1.7
23	61.2	1.7
24	62.1	1.8
25	63.0	1.8
26	63.9	1.8
27	64.9	1.8
28	65.8	1.8
29	66.8	1.8
30	67.7	1.8
31	68.7	1.8
32	69.7	1.8
33	70.7	1.8
34	71.7	1.8
35	72.8	1.8
36	73.9	1.8
37	75.0	1.9
38	76.4	2.0
39	78.2	2.4
40	81.3	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	33.1	4.8
9	38.5	2.7
10	41.0	2.2
11	42.8	2.0
12	44.3	1.9
13	45.6	1.8
14	46.9	1.8
15	48.1	1.8
16	49.2	1.8
17	50.4	1.8
18	51.5	1.7
19	52.5	1.7
20	53.6	1.7
21	54.6	1.7
22	55.6	1.7
23	56.6	1.7
24	57.5	1.7
25	58.5	1.7
26	59.4	1.7
27	60.4	1.7
28	61.3	1.7
29	62.3	1.7
30	63.3	1.7
31	64.3	1.7
32	65.3	1.7
33	66.4	1.7
34	67.5	1.7
35	68.6	1.7
36	69.8	1.8
37	71.0	1.8
38	72.4	2.0
39	74.2	2.4
40	77.8	3.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	30.5	4.9
9	35.3	3.7
10	38.1	3.3
11	40.4	3.1
12	42.2	3.0
13	43.9	2.9
14	45.3	2.8
15	46.7	2.7
16	47.9	2.7
17	49.1	2.6
18	50.2	2.6
19	51.3	2.6
20	52.4	2.6
21	53.4	2.6
22	54.3	2.5
23	55.3	2.5
24	56.2	2.5
25	57.2	2.5
26	58.1	2.5
27	59.1	2.5
28	60.0	2.5
29	61.0	2.5
30	62.0	2.6
31	63.0	2.6
32	64.0	2.6
33	65.1	2.6
34	66.2	2.7
35	67.4	2.8
36	68.7	2.9
37	70.2	3.0
38	72.0	3.2
39	74.1	3.5
40	77.6	4.3
*SE = Standard Error on T-score metric		

Adult v2.0 – Ability to Participate in Social Roles and Activities 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	25.9	3.9
9	29.7	2.3
10	31.3	1.9
11	32.6	1.7
12	33.6	1.6
13	34.5	1.6
14	35.3	1.5
15	36.2	1.5
16	36.9	1.5
17	37.7	1.5
18	38.5	1.5
19	39.3	1.6
20	40.2	1.6
21	41.1	1.6
22	42.0	1.7
23	43.0	1.7
24	44.0	1.7
25	45.0	1.7
26	46.0	1.6
27	47.0	1.6
28	48.0	1.6
29	48.9	1.6
30	49.9	1.6
31	50.8	1.6
32	51.7	1.6
33	52.7	1.6
34	53.6	1.6
35	54.6	1.6
36	55.7	1.6
37	56.8	1.7
38	58.2	2.0
39	60.2	2.5
40	65.4	4.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	40.7	5.9
9	47.9	2.4
10	49.9	1.8
11	51.2	1.5
12	52.3	1.4
13	53.2	1.4
14	54.1	1.4
15	55.0	1.4
16	55.8	1.4
17	56.6	1.4
18	57.4	1.3
19	58.1	1.3
20	58.8	1.3
21	59.5	1.3
22	60.2	1.3
23	60.8	1.3
24	61.5	1.3
25	62.1	1.3
26	62.8	1.3
27	63.5	1.3
28	64.1	1.3
29	64.8	1.3
30	65.5	1.3
31	66.2	1.3
32	66.9	1.3
33	67.7	1.3
34	68.4	1.3
35	69.2	1.3
36	70.1	1.4
37	71.0	1.4
38	72.1	1.6
39	73.5	2.0
40	77.0	3.5
*SE = Standard Error on T-score metric		

PROMIS-29 Profile v1.0 scoring tables

Adult v1.0 - Physical Function 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	22.9	3.9
5	26.9	2.7
6	29.1	2.4
7	30.7	2.2
8	32.1	2.2
9	33.3	2.1
10	34.4	2.1
11	35.6	2.1
12	36.7	2.1
13	37.9	2.2
14	39.1	2.2
15	40.4	2.2
16	41.8	2.3
17	43.4	2.4
18	45.3	2.6
19	48.0	3.1
20	56.9	6.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	40.3	6.1
5	48.0	3.6
6	51.2	3.1
7	53.7	2.8
8	55.8	2.7
9	57.7	2.6
10	59.5	2.6
11	61.4	2.6
12	63.4	2.6
13	65.3	2.7
14	67.3	2.7
15	69.3	2.7
16	71.2	2.7
17	73.3	2.7
18	75.4	2.7
19	77.9	2.9
20	81.6	3.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	41.0	6.2
5	49.0	3.2
6	51.8	2.7
7	53.9	2.4
8	55.7	2.3
9	57.3	2.3
10	58.9	2.3
11	60.5	2.3
12	62.2	2.3
13	63.9	2.3
14	65.7	2.3
15	67.5	2.3
16	69.4	2.3
17	71.2	2.4
18	73.3	2.4
19	75.7	2.6
20	79.4	3.6
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	33.7	4.9
5	39.7	3.1
6	43.1	2.7
7	46.0	2.6
8	48.6	2.5
9	51.0	2.5
10	53.1	2.4
11	55.1	2.4
12	57.0	2.3
13	58.8	2.3
14	60.7	2.3
15	62.7	2.4
16	64.6	2.4
17	66.7	2.4
18	69.0	2.5
19	71.6	2.7
20	75.8	3.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	32.0	5.2
5	37.5	4.0
6	41.1	3.7
7	43.8	3.5
8	46.2	3.5
9	48.4	3.4
10	50.5	3.4
11	52.4	3.4
12	54.3	3.4
13	56.1	3.4
14	57.9	3.3
15	59.8	3.3
16	61.7	3.3
17	63.8	3.4
18	66.0	3.4
19	68.8	3.7
20	73.3	4.6
*SE = Standard Error on T-score metric		

Adult v1.0 - Satisfaction with Participation in Social Roles 4a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
4	29.0	4.2
5	33.6	2.5
6	35.7	2.2
7	37.3	2.1
8	38.8	2.1
9	40.3	2.1
10	41.7	2.1
11	43.2	2.1
12	44.8	2.1
13	46.4	2.1
14	48.1	2.1
15	49.8	2.2
16	51.6	2.2
17	53.5	2.2
18	55.6	2.3
19	58.1	2.7
20	64.1	5.1
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 4a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
4	41.6	6.1
5	49.6	2.5
6	52.0	2.0
7	53.9	1.9
8	55.6	1.9
9	57.1	1.9
10	58.5	1.8
11	59.9	1.8
12	61.2	1.8
13	62.5	1.8
14	63.8	1.8
15	65.2	1.8
16	66.6	1.8
17	68.0	1.8
18	69.7	1.9
19	71.6	2.1
20	75.6	3.7
*SE = Standard Error on T-score metric		

PROMIS-43 Profile v1.0 scoring tables

Adult v1.0 - Physical Function 6a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
6	20.8	3.6
7	24.4	2.4
8	26.5	2.2
9	28.0	2.0
10	29.4	1.9
11	30.5	1.9
12	31.6	1.8
13	32.5	1.8
14	33.5	1.8
15	34.3	1.8
16	35.2	1.8
17	36.0	1.8
18	36.9	1.8
19	37.7	1.8
20	38.6	1.8
21	39.4	1.8
22	40.3	1.8
23	41.3	1.8
24	42.2	1.8
25	43.3	1.9
26	44.4	2.0
27	45.7	2.1
28	47.4	2.4
29	49.7	2.9
30	57.8	6.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 6a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
6	39.1	5.9
7	45.9	3.4
8	48.8	2.9
9	50.9	2.6
10	52.7	2.4
11	54.2	2.3
12	55.6	2.2
13	56.9	2.2
14	58.2	2.2
15	59.4	2.2
16	60.7	2.2
17	62.0	2.2
18	63.3	2.2
19	64.6	2.2
20	66.0	2.2
21	67.3	2.2
22	68.6	2.2
23	70.0	2.2
24	71.3	2.2
25	72.7	2.2
26	74.1	2.2
27	75.6	2.3
28	77.4	2.4
29	79.4	2.7
30	82.7	3.5
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 6a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
6	38.4	5.8
7	45.2	3.4
8	48.3	2.8
9	50.4	2.4
10	52.0	2.2
11	53.4	2.1
12	54.7	2.0
13	55.9	2.0
14	57.0	1.9
15	58.2	1.9
16	59.3	2.0
17	60.5	2.0
18	61.7	2.0
19	62.9	2.0
20	64.2	2.0
21	65.5	2.0
22	66.7	2.0
23	68.0	2.0
24	69.3	2.0
25	70.6	2.0
26	72.0	2.0
27	73.4	2.0
28	75.0	2.1
29	76.9	2.4
30	80.3	3.5
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	33.4	4.9
7	39.1	2.9
8	42.0	2.4
9	44.2	2.2
10	46.1	2.1
11	47.8	2.1
12	49.4	2.1
13	50.9	2.0
14	52.4	2.0
15	53.7	2.0
16	55.1	2.0
17	56.3	1.9
18	57.5	1.9
19	58.8	1.9
20	60.0	1.9
21	61.2	1.9
22	62.4	1.9
23	63.7	2.0
24	65.0	2.0
25	66.4	2.0
26	67.8	2.0
27	69.3	2.0
28	71.0	2.1
29	73.0	2.5
30	76.8	3.8
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	31.7	5.1
7	36.9	3.9
8	40.1	3.5
9	42.5	3.3
10	44.6	3.2
11	46.4	3.1
12	48.0	3.0
13	49.5	3.0
14	50.9	3.0
15	52.3	2.9
16	53.6	2.9
17	54.8	2.9
18	56.1	2.9
19	57.3	2.9
20	58.5	2.9
21	59.7	2.9
22	61.0	2.9
23	62.3	2.9
24	63.6	2.9
25	65.0	2.9
26	66.5	3.0
27	68.1	3.1
28	70.0	3.3
29	72.4	3.6
30	76.1	4.4
*SE = Standard Error on T-score metric		

Adult v1.0 – Satisfaction with Participation in Social Roles 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	26.9	4.1
7	31.0	2.6
8	32.9	2.3
9	34.4	2.1
10	35.7	2.0
11	36.8	1.9
12	37.9	1.9
13	39.0	1.9
14	40.1	1.9
15	41.2	1.9
16	42.3	1.9
17	43.4	2.0
18	44.6	2.0
19	45.8	1.9
20	47.0	1.9
21	48.2	1.9
22	49.4	1.9
23	50.5	1.9
24	51.7	1.9
25	53.0	1.9
26	54.3	2.0
27	55.7	2.1
28	57.4	2.3
29	59.6	2.8
30	65.1	5.0
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 6a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
6	41.1	6.0
7	48.6	2.4
8	50.7	1.8
9	52.2	1.6
10	53.4	1.6
11	54.5	1.6
12	55.6	1.5
13	56.6	1.5
14	57.6	1.5
15	58.6	1.5
16	59.5	1.5
17	60.4	1.4
18	61.2	1.4
19	62.1	1.4
20	63.0	1.5
21	63.8	1.5
22	64.8	1.5
23	65.7	1.5
24	66.7	1.5
25	67.6	1.5
26	68.7	1.5
27	69.8	1.5
28	71.0	1.6
29	72.6	2.0
30	76.3	3.6
*SE = Standard Error on T-score metric		

PROMIS-57 Profile v1.0 scoring tables

Adult v1.0 - Physical Function 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	20.2	3.5
9	23.7	2.4
10	25.6	2.1
11	27.0	1.9
12	28.2	1.8
13	29.3	1.8
14	30.3	1.7
15	31.2	1.7
16	32.0	1.6
17	32.7	1.6
18	33.5	1.6
19	34.2	1.6
20	34.9	1.6
21	35.5	1.5
22	36.2	1.5
23	36.9	1.5
24	37.5	1.5
25	38.2	1.5
26	38.9	1.5
27	39.5	1.5
28	40.2	1.6
29	40.9	1.6
30	41.6	1.6
31	42.4	1.6
32	43.1	1.6
33	43.9	1.6
34	44.8	1.7
35	45.7	1.8
36	46.8	1.9
37	48.0	2.1
38	49.6	2.5
39	51.8	2.9
40	59.2	6.1
*SE = Standard Error on T-score metric		

Adult v1.0 - Anxiety 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	37.1	5.5
9	42.2	3.3
10	45.9	2.8
11	47.8	2.5
12	49.4	2.3
13	50.8	2.2
14	52.1	2.1
15	53.2	2.0
16	54.3	2.0
17	55.4	2.0
18	56.4	2.0
19	57.4	2.0
20	58.4	2.0
21	59.4	2.0
22	60.4	2.0
23	61.4	2.0
24	62.5	2.0
25	63.5	2.0
26	64.5	2.0
27	65.6	2.0
28	66.6	2.0
29	67.7	2.0
30	68.7	2.0
31	69.8	2.0
32	70.8	2.0
33	71.9	2.0
34	73.0	2.0
35	74.1	2.0
36	75.4	2.0
37	76.7	2.1
38	76.2	2.3
39	80.0	2.6
40	83.1	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Depression 8a		
Short Form Conversion Table		
Raw Summed Score	T-score	SE*
8	38.2	5.7
9	44.7	3.3
10	47.5	2.7
11	49.4	2.3
12	50.9	2.0
13	52.1	1.9
14	53.2	1.8
15	54.1	1.8
16	55.1	1.7
17	55.9	1.7
18	56.8	1.7
19	57.7	1.7
20	58.5	1.7
21	59.4	1.7
22	60.3	1.7
23	61.2	1.7
24	62.1	1.8
25	63.0	1.8
26	63.9	1.8
27	64.9	1.8
28	65.8	1.8
29	66.8	1.8
30	67.7	1.8
31	68.7	1.8
32	69.7	1.8
33	70.7	1.8
34	71.7	1.8
35	72.8	1.8
36	73.9	1.8
37	75.0	1.9
38	76.4	2.0
39	78.2	2.4
40	81.3	3.4
*SE = Standard Error on T-score metric		

Adult v1.0 - Fatigue 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	33.1	4.8
9	38.5	2.7
10	41.0	2.2
11	42.8	2.0
12	44.3	1.9
13	45.6	1.8
14	46.9	1.8
15	48.1	1.8
16	49.2	1.8
17	50.4	1.8
18	51.5	1.7
19	52.5	1.7
20	53.6	1.7
21	54.6	1.7
22	55.6	1.7
23	56.6	1.7
24	57.5	1.7
25	58.5	1.7
26	59.4	1.7
27	60.4	1.7
28	61.3	1.7
29	62.3	1.7
30	63.3	1.7
31	64.3	1.7
32	65.3	1.7
33	66.4	1.7
34	67.5	1.7
35	68.6	1.7
36	69.8	1.8
37	71.0	1.8
38	72.4	2.0
39	74.2	2.4
40	77.8	3.7
*SE = Standard Error on T-score metric		

Adult v1.0 - Sleep Disturbance 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	30.5	4.9
9	35.3	3.7
10	38.1	3.3
11	40.4	3.1
12	42.2	3.0
13	43.9	2.9
14	45.3	2.8
15	46.7	2.7
16	47.9	2.7
17	49.1	2.6
18	50.2	2.6
19	51.3	2.6
20	52.4	2.6
21	53.4	2.6
22	54.3	2.5
23	55.3	2.5
24	56.2	2.5
25	57.2	2.5
26	58.1	2.5
27	59.1	2.5
28	60.0	2.5
29	61.0	2.5
30	62.0	2.6
31	63.0	2.6
32	64.0	2.6
33	65.1	2.6
34	66.2	2.7
35	67.4	2.8
36	68.7	2.9
37	70.2	3.0
38	72.0	3.2
39	74.1	3.5
40	77.6	4.3
*SE = Standard Error on T-score metric		

Adult v1.0 – Satisfaction with Participation in Social Roles 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	26.2	4.0
9	30.0	2.6
10	31.7	2.3
11	33.1	2.0
12	34.2	1.9
13	35.2	1.8
14	36.1	1.7
15	36.9	1.7
16	37.7	1.7
17	38.5	1.7
18	39.4	1.7
19	40.2	1.7
20	41.0	1.7
21	41.8	1.7
22	42.7	1.7
23	43.5	1.8
24	44.4	1.8
25	45.3	1.7
26	46.2	1.7
27	47.1	1.7
28	47.9	1.7
29	48.8	1.7
30	49.7	1.7
31	50.6	1.7
32	51.6	1.7
33	52.5	1.7
34	53.4	1.7
35	54.4	1.8
36	55.5	1.8
37	56.8	2.0
38	58.3	2.2
39	60.4	2.8
40	65.6	4.9
*SE = Standard Error on T-score metric		

Adult v1.0 - Pain Interference 8a		
<i>Short Form Conversion Table</i>		
Raw Summed Score	T-score	SE*
8	40.7	5.9
9	47.9	2.4
10	49.9	1.8
11	51.2	1.5
12	52.3	1.4
13	53.2	1.4
14	54.1	1.4
15	55.0	1.4
16	55.8	1.4
17	56.6	1.4
18	57.4	1.3
19	58.1	1.3
20	58.8	1.3
21	59.5	1.3
22	60.2	1.3
23	60.8	1.3
24	61.5	1.3
25	62.1	1.3
26	62.8	1.3
27	63.5	1.3
28	64.1	1.3
29	64.8	1.3
30	65.5	1.3
31	66.2	1.3
32	66.9	1.3
33	67.7	1.3
34	68.4	1.3
35	69.2	1.3
36	70.1	1.4
37	71.0	1.4
38	72.1	1.6
39	73.5	2.0
40	77.0	3.5
*SE = Standard Error on T-score metric		

APPENDIX 3 – SAS CODE TO CALCULATE PHYSICAL AND MENTAL HEALTH SUMMARY Z-SCORES

The following uses SAS software version 9.4 (SAS Institute, Inc., Cary, NC, USA). This example uses a scored file named “prom29_1.csv” produced by the HealthMeasures Scoring Service. It contains scores from the PROMIS-29 short forms. It begins by restructuring prom29_1.csv to create one record for each PIN/Assessment with 7 domain scores.

score29.lst:

Assmnt	N	Obs	Variable	Label	N	Mean	Std Dev	Minimum	Maximum
1	1000		ph29_t	PROMIS29 v2.0 PH summary (T)	999	49.40	8.94	22.19	58.63
			mh29_t	PROMIS29 v2.0 MH summary (T)	999	49.71	8.86	20.33	65.51
			phy4a_t	Physical Function (T)	1000	49.18	8.61	22.90	56.90
			painav_t	pain composite (T)	1000	52.20	9.48	40.86	79.23
			social4a_t	Ability to Part in Soc Roles/Activ (T)	1000	52.58	9.21	27.50	64.20
			fatig4a_t	Fatigue (T)	999	49.91	9.62	33.70	75.80
			slpd4a_t	Sleep Disturbance (T)	1000	50.98	8.55	32.00	73.30
			emot_t	anxiety/dep composite (T)	1000	52.00	9.13	40.65	80.35
			anx4a_t	Anxiety/Fear (T)	1000	52.91	9.54	40.30	81.40
			dep4a_t	Depression/Sadness (T)	1000	51.10	9.66	41.00	79.30
			pain4a_t	Pain Interference (T)	999	51.23	9.25	41.60	75.60
			pain1_t	Pain intensity (T)	1000	53.18	11.11	40.13	82.86

score29.sas:

```
options ls=132 ps=54 nocenter;
*-----;
libname AC "C:\Projects\PROMIS\AC\scoring_example\";
/*****
* AC\prom29_1.csv: first 1000 records scored in AC from prom29.csv (uniform # of cases); *
AC\testing\prom29_1.csv: modified prom29.csv first 1000 records illustrate variable number of
rows/pin; * AC\testing\prom29_2.csv: modified prom29.csv first 1000 records illustrate 2
assessments; *****/
PROC IMPORT OUT= WORK.AC
DATAFILE= "AC\testing\prom29_1.csv" DBMS=CSV REPLACE;
    GETNAMES=NO;
    DATAROW=6;
RUN;
/*****
data ac; set ac;
rename
var1=pin
var2=assmnt
var3=inst
var6=Tscore;

*rename
var1=pin
var2=assmnt
var3=inst
var4=RawScore
var5=Theta
var6=Tscore
var7=SE
var8=ScrdCnt
var9=ItmCnt;
keep var1 var2 var3 var6;
run;
```

```

/*
TITLE "Initial read from AC CSV file"; run;
proc freq; tables inst; run;
*/
/*****

/*****/
* restructure data: one record per PIN/Assmnt;
proc sort data=ac; by pin assmnt; run;
data ac(keep=pin assmnt pain4a_t dep4a_t phy4a_t social4a_t fatig4a_t anx4a_t
slpd4a_t); set ac; by pin assmnt;
if first.assmnt then do;
pain4a_t =.;
dep4a_t =.;
phy4a_t =.;
social4a_t =.;
fatig4a_t =.;
anx4a_t =.;
slpd4a_t =.;
end;

retain pin assmnt pain4a_t dep4a_t phy4a_t social4a_t fatig4a_t anx4a_t slpd4a_t;

if index(inst,"Pain Interference") > 0 then pain4a_t =Tscore; if
index(inst,"Depression/Sadness") > 0 then dep4a_t =Tscore; if index(inst,"Physical
Function") > 0 then phy4a_t =Tscore; if index(inst,"Ability to Participate in Social
Roles/Activities") > 0 then social4a_t=Tscore; if index(inst,"Fatigue") > 0 then
fatig4a_t =Tscore; if index(inst,"Anxiety/Fear") > 0 then anx4a_t =Tscore; if
index(inst,"Sleep Disturbance") > 0 then slpd4a_t =Tscore;

if last.assmnt then output;
run;
/*****/

/*****/
* pick up single-item 0-10 pain intensity item from original dataset;
libname library "C:\projects\PROMIS\AC\scoring_example";
DATA prom;
set library.ReCenter_14_08_2013V1Comp(keep=rid qglobal07);
Assmnt=1;
rename
rid = pin
qglobal07=pain_average;
run;
proc sort data=prom; by pin assmnt; run;
/*****/

/*****/
data all;
merge prom(keep=pin assmnt pain_average)
ac(keep=pin assmnt pain4a_t dep4a_t phy4a_t social4a_t fatig4a_t anx4a_t
slpd4a_t); by pin assmnt;

* create Z-scores from T;
pain4a_z = (pain4a_t - 50)/10;
dep4a_z = (dep4a_t - 50)/10;
phy4a_z = (phy4a_t - 50)/10;
social4a_z = (social4a_t - 50)/10;
fatig4a_z = (fatig4a_t - 50)/10;
anx4a_z = (anx4a_t - 50)/10;
slpd4a_z = (slpd4a_t - 50)/10;

* create Z-score for pain_average using PROMIS Wave 1 general population
mean=2.31, sd=2.34; pain1_z = (pain_average - 2.31)/2.34;

```

```

*compute composite for pain interference and pain intensity
using Z-scores; painav_z = mean(of pain4a_z pain1_z);

* compute composite for emotion using anxiety and depression Z-scores;
emot_z = mean(of anx4a_z dep4a_z);

* create T-score versions;
pain1_t = 50 + (pain1_z * 10);
painav_t = 50 + (painav_z *
10); emot_t = 50 + (emot_z *
10);

label
painav_z ="pain composite (Z)"
emot_z ="anxiety/dep composite
(Z)" painav_t ="pain composite (T)"
emot_t ="anxiety/dep composite (T)"

social4a_z ="Ability to Part in Soc Roles/Activ
(Z)" anx4a_z ="Anxiety/Fear (Z)"
dep4a_z ="Depression/Sadness
(Z)" fatig4a_z ="Fatigue (Z)"
pain4a_z ="Pain Interference (Z)"
phy4a_z ="Physical Function (Z)"
slpd4a_z ="Sleep Disturbance (Z)"
pain1_z ="Pain intensity (Z)"

social4a_t ="Ability to Part in Soc Roles/Activ
(T)" anx4a_t ="Anxiety/Fear (T)"
dep4a_t ="Depression/Sadness
(T)" fatig4a_t ="Fatigue (T)"
pain4a_t ="Pain Interference (T)"
phy4a_t ="Physical Function (T)"
slpd4a_t ="Sleep Disturbance (T)"
pain1_t ="Pain intensity (T)"
;

/* factor scoring coefficients from "PROMIS-29 V2.0
Physical and Mental Health Summary Scores" -
Hays/Spritzer/Schalet/Cella

ph_phyfun= 0.872 ; mh_phyfun= -0.015 ;
ph_painav= -0.094 ; mh_painav= -0.154 ;
ph_social= 0.113 ; mh_social= 0.252 ;
ph_fatig = -0.009 ; mh_fatig = -0.351 ;
ph_sleep = 0.002 ; mh_sleep = -0.139 ;
ph_emot = 0.003 ; mh_emot = -0.257 ;
*/

/* multiply z-scores with corresponding factor scoring
coefficient */ ph29_z=(phy4a_z * 0.872) +
(painav_z * -0.094) +
(social4a_z * 0.113) +
(fatig4a_z * -0.009) +
(slpd4a_z * 0.002) +
(emot_z * 0.003);

mh29_z=(phy4a_z * -0.015) +
(painav_z * -0.154) +
(social4a_z * 0.252) +
(fatig4a_z * -0.351) +
(slpd4a_z * -0.139) +
(emot_z * -0.257);

* create T-score versions: ;
ph29_t= 50 + (ph29_z * 10);
mh29_t= 50 + (mh29_z * 10);
label
ph29_z ="PROMIS29 v2.0 PH summary (Z)"
mh29_z ="PROMIS29 v2.0 MH summary (Z)"
ph29_t ="PROMIS29 v2.0 PH summary (T)"

```

```
mh29_t="PROMIS29 v2.0 MH summary  
(T)"; run;  
  
TITLE "Score29 means"; run;  
proc means data=all maxdec=2;  
var ph29_t mh29_t phy4a_t painav_t social4a_t fatig4a_t slpd4a_t  
    emot_t anx4a_t dep4a_t pain4a_t pain1_t ;  
class assmnt;
```

From Hays, R. D., Spritzer, K. L., Schalet, B. D., & Cella, D. (2018). PROMIS-29 v2.0 profile physical and mental health summary scores. *Quality of Life Research*, 27, 1885-1891.