

Appendix. Example of actual patient responses where IRT classified patients as not reliably changing but CTT as reliably changing.

A. Anxiety

Baseline score of 37	Follow-up score of 47
1. I felt fearful. Never	1. I felt fearful. Never
2. I found it hard to focus on anything other than my anxiety. Never	2. I found it hard to focus on anything other than my anxiety. Rarely
3. My worries overwhelmed me. Never	3. My worries overwhelmed me. Rarely
4. I felt uneasy. Never	4. I felt uneasy. Never
5. I felt nervous. Never	5. I felt nervous. Never
6. I felt like I needed help for my anxiety. Never	6. I felt like I needed help for my anxiety. Never
7. I felt anxiety. Never	7. I felt anxiety. Never
8. I felt tense. Never	8. I felt tense. Never

B. Depression

Baseline score of 38	Follow-up score of 48
1. I felt worthless. Never	1. I felt worthless. Never
2. I felt helpless. Never	2. I felt helpless. Never
3. I felt depressed. Never	3. I felt depressed. Never
4. I felt hopeless. Never	4. I felt hopeless. Rarely
5. I felt like a failure. Never	5. I felt like a failure. Never
6. I felt unhappy. Never	6. I felt unhappy. Never
7. I felt that I had nothing to look forward to. Never	7. I felt that I had nothing to look forward to. Rarely
8. I felt that nothing could cheer me up. Never	8. I felt that nothing could cheer me up. Never

C. Fatigue

Baseline score of 29	Follow-up score of 40
<ol style="list-style-type: none"> 1. How often did you feel tired? Never 2. How often did you experience Extreme exhaustion? Never 3. How often did you run out of energy? Never 4. How often did your fatigue limit You at work (include work at home)? Never 5. How often were you too tired to think clearly? Never 6. How often were you too tired to take a bath or shower? Never 7. How often did you have enough energy to get things done due to fatigue? Always 8. How often did you have to push yourself to get things done due to fatigue? Never 9. How often did you have trouble Finishing things due to fatigue? Never 	<ol style="list-style-type: none"> 1. How often did you feel tired? Sometimes 2. How often did you experience Extreme exhaustion? Never 3. How often did you run out of energy? Never 4. How often did your fatigue limit You at work (include work at home)? Never 5. How often were you too tired to think clearly? Never 6. How often were you too tired to take a bath or shower? Never 7. How often did you have enough energy to get things done due to fatigue? Never 8. How often did you have to push yourself to get things done due to fatigue? Never 9. How often did you have trouble Finishing things due to fatigue? Never

Note. The item, “How often did you have enough energy to get things done due to fatigue” had low correlations (Spearman’s correlation: 0.05 to 0.16) with the other items due to the scoring scale that runs in the opposite direction.

D. Sleep disturbance

Baseline score of 31	Follow-up score of 40
<ol style="list-style-type: none"> 1. My sleep quality was Very good 2. My sleep was refreshing. Very much 3. I had a problem with my Sleep. Not at all 4. I had difficulty falling asleep. Not at all 5. My sleep was restless. Not at all 6. I tried hard to get to sleep Not at all 7. I worried about not being able to fall asleep Not at all 8. I was satisfied with my sleep Very much 	<ol style="list-style-type: none"> 1. My sleep quality was Good 2. My sleep was refreshing. Very much 3. I had a problem with my Sleep. A little bit 4. I had difficulty falling asleep. Not at all 5. My sleep was restless. A little bit 6. I tried hard to get to sleep Not at all 7. I worried about not being able to fall asleep Not at all 8. I was satisfied with my sleep Quite a bit

E. Pain interference

Baseline score of 41	Follow-up score of 50
<ol style="list-style-type: none"> 1. How much did pain interfere with Your day to day activities? Not at all 2. How much did pain interfere with Work around the home? Not at all 3. How much did pain interfere with your ability to participate in social activities? Not at all 4. How much did pain interfere with your household chores? Not at all 5. How much did pain interfere with the things you usually do for fun? Not at all 6. How much did pain interfere with your enjoyment of social activities? Not at all 7. How much did pain interfere with your enjoyment of life? Not at all 8. How much did pain interfere with your family life? Not at all 	<ol style="list-style-type: none"> 1. How much did pain interfere with Your day to day activities? A little bit 2. How much did pain interfere with Work around the home? A little bit 3. How much did pain interfere with your ability to participate in social activities? Not at all 4. How much did pain interfere with your household chores? Not at all 5. How much did pain interfere with the things you usually do for fun? Not at all 6. How much did pain interfere with your enjoyment of social activities? Not at all 7. How much did pain interfere with your enjoyment of life? Not at all 8. How much did pain interfere with your family life? Not at all

F. Pain interference

Baseline score of 40.5	Follow-up score of 50.3
<ol style="list-style-type: none">1. How much did pain interfere with Your day to day activities? Not at all2. How much did pain interfere with Work around the home? Not at all3. How much did pain interfere with your ability to participate in social activities? Not at all4. How much did pain interfere with your household chores? Not at all5. How much did pain interfere with the things you usually do for fun? Not at all6. How much did pain interfere with your enjoyment of social activities? Not at all7. How much did pain interfere with your enjoyment of life? Not at all8. How much did pain interfere with your family life? Not at all	<ol style="list-style-type: none">1. How much did pain interfere with Your day to day activities? A little bit2. How much did pain interfere with Work around the home? A little bit3. How much did pain interfere with your ability to participate in social activities? Not at all4. How much did pain interfere with your household chores? Not at all5. How much did pain interfere with the things you usually do for fun? Not at all6. How much did pain interfere with your enjoyment of social activities? Not at all7. How much did pain interfere with your enjoyment of life? Not at all8. How much did pain interfere with your family life? Not at all