

**Memo:** Scoring the QIDS-SR in instances with missing data

**Purpose:** The IMPAACT 2002 QIDS-SR form (QLW0277) allows for missing data (i.e., “Prefer not to answer”) for each item. The purpose of this memo is to outline how to score the QIDS-SR in the presence of missing data and how to enter these data into e-Data.

**General scoring algorithm:** The snapshot below shows the basic scoring algorithm for the QIDS-SR. However, it does not account for missing data. In this algorithm, there are nine “component” scores, which are summed to get the Total Score.

For Clinic Use Only	
<b>SCORING</b>	
Enter the highest score on any one of the four sleep items (1-4): ...	<input type="checkbox"/>
Enter the highest score on either the mood sad or mood irritable item (5 or 6): .....	<input type="checkbox"/>
Enter the highest score on any one appetite/weight item (8-9-11-12): NOTE: If question 7 and question 10 are BOTH 0, enter 0	<input type="checkbox"/>
Item 13: .....	<input type="checkbox"/>
Item 14: .....	<input type="checkbox"/>
Item 15: .....	<input type="checkbox"/>
Item 16: .....	<input type="checkbox"/>
Item 17: .....	<input type="checkbox"/>
Enter the highest score on either of the two psychomotor items (18-19):	<input type="checkbox"/>
<b>TOTAL SCORE (RANGE 0-27):</b> .....	<input type="checkbox"/>

INTERPRETATION
Not Depressed: 0-5
Mild: 6-10
Moderate: 11-15
Severe: 16-20
Very Severe: 21+

**Missing values:** On the QLW0277 form, missing values (i.e., “Prefer not to answer”) are coded as “8”s. These numerical values should not be incorporated into the scoring algorithm. We next describe how to integrate missing values when scoring the QIDS-SR.

**Multi-item component scores:** For components that are based on selecting the highest score of two or more “item” scores, if one of the items is missing (i.e., Prefer not to answer=8), select the highest score of the non-missing items. If all items are missing, consider the component score to be missing.

**Example 1 – Sleep component score.** The first component score is the highest of the four sleep items (Q1-Q4). If one of these four items, say Q2, is missing (i.e., Prefer not to answer=8), select the highest of the three remaining items (Q1, Q3 and Q4). If all four contributing items are missing (i.e., Prefer not to answer=8), then the sleep component score is assigned a missing value.

The appetite and weight component score is a little different because the pattern of responses to Q8, Q9, Q11 and Q12 depends on the answers to lead questions, Q7 and Q10. If Q7 and Q10 are both scored as “0”, the appetite and weight component score is “0”. Otherwise, this component is scored as the highest of items Q8, Q9, Q11 and Q12. What if some of these items are missing (i.e., Prefer not to answer=8)?

**Example 2 – Weight and appetite, only one set of items is completed.** Let us say that the response to item Q10 is missing (i.e., Prefer not to answer=8) and, as a result, Q11 and Q12 are not completed. As above, we can rely on the non-missing scores to determine the component score for this group of items. If Q7 is “0”, then the component score is “0”. If Q7 is “1=appetite decreased” and Q8 is non-missing, the component score will be the score on Q8. If Q7 is “2=appetite increase” and Q9 is non-missing, the component score will be the score on Q9.

**Example 3 – Weight and appetite, all items are missing.** If lead questions Q7 and Q10 are both missing (i.e., Prefer not to answer=8) and as a result, there are no responses to Q8, Q9, Q11, Q12, then this scoring component is assigned a missing value.

**\*\*Computing the Total QIDS-SR Score\*\*:** *If one or two of the nine component scores are missing, the QIDS-SR can still be scored as follows.*

1. *First, assign the missing components values equal to the average of the non-missing component scores.*
2. *The Total QIDS Score is the sum of the nine components, after missing values have been replaced by the average of the non-missing component scores.*

***However, if more than two component scores are missing, the QIDS cannot be scored and the Total Score should be coded as missing. In this case, please see below for how to enter missing values into e-Data for the relevant component and Total scores.***

**Example 4 – One missing component, multi item.** If all four sleep items (Q1-Q4) are missing (i.e., Prefer not to answer=8), the first QIDS scoring component will be missing. If all the other components are non-missing, take the average of the non-missing items. In other words sum the scores of the eight other components and divide by eight. Round this average up or down to the nearest integer value. If the average is 2.5, for example, round up and enter a “3”. If the average of the eight other component scores is 2.3, round it down to “2”. Enter the appropriate value into the box for the missing component score.

**Example 5 – One missing component, single item.** If Q14 (View of myself) is missing (i.e., Prefer not to answer=8), that component score is missing. Replace it with the rounded average of the eight other non-missing component scores as noted in Example 4.

**Example 6 – Two missing components.** In the case where two component scores are missing, take the average of the seven non-missing items and enter that value (rounded up or down as appropriate) into the box for that component.

**Example 7 – Three missing components.** Sleep (Q1-Q4), Mood (Q5-Q6), and Concentration (Q13) component scores are all missing (i.e., all relevant items are “Prefer not to answer=8”). In this case, the QIDS-SR cannot be scored and the Total Score is set to missing.

The three missing component scores should not be imputed and the Protocol Data Manager will instruct sites on how to enter the missing values into e-Data.

**Entering data into e-Data:** As noted above, when three or more QIDS-SR component scores are completely missing, the Total score cannot be calculated. Please leave the missing component scores and Total score blank when entering data. These values will default to -2 in the database. Please submit a proposal in the “Resolve” program in order to confirm the missing values. The protocol data managers will approve the missing values.