## Instruction and Template for MPAI-4 Rehabilitation Planning Guide (RPG)

These instructions and template may be downloaded and copied without fee or requesting permission. For greater detail regarding application of this RPG and case examples, please refer to: Malec JF. Research Letter: Rehabilitation Planning using Rasch Analysis of the Mayo-Portland Adaptability Inventory (MPAI-4). Journal of Head Trauma Rehabilitation. ePub on line head of print. February 2025. DOI: 10.1097/HTR.000000000001042

After rating the participant on the MPAI-4 and determining the T-scores using the tables for the 2015 National OutcomeInfo sample from Appendix V in the 3<sup>rd</sup> edition of the MPAI-4 Manual, begin by completing the demographics and filling in the T-scores for the Total MPAI-4 and the indices in the RPG template on the next page. Then draw a line across the table at the level of the Total T-score for the participant. Next, draw another line 10 T-score points lower. As a final step, circle all items with a score of 4; draw a rectangle around those scored 3; and underline those scored 2. Use the original raw scores, not the converted scores. (Different colored markers might also be used to highlight levels of limitations.) These will be the targets for rehabilitation.

## **Basics of Treatment Plan Development with the RPG**

- 1. Examine the T-scores. T-scores that are more than 2 or 3 points higher than the others usually indicate areas where more intensive rehabilitation will be needed.
- 2. Examine the item scores, proceeding from the top down. Marked limitations above the top Total T-score line are also likely to interfere with progress in areas below them.
- 3. Limitations above the top Total T-score that are more than mild are likely to provide major obstacles to rehabilitation; addressing them will be critical.
- 4. Consider also addressing some milder items (scores of 2) initially. These are often areas where more rapid progress can be made, enhancing participant motivation and engagement.
- 5. Items with scores of 3 and 4 are usually areas that will need to be addressed over the longer term.
- 6. Limitations above the lower of the two lines are usually areas for most intensive intervention. This does not mean that limitations below the lower line cannot be addressed in some way, but rehabilitation is often most effective if the limitations above the lowest line are prioritized. It is often necessary to address these limitations in order to pave the way for addressing limitations below the lower line.
- 7. The Participation items that comprise the Autonomy subscale describe 4 critical areas for independent living. Although self-care may be addressed early in the rehabilitation continuum, other Autonomy items are typically addressed in the final phase of rehabilitation and often require focused interventions.
- 8. Always remember: clinical judgement is critical for further developing a treatment plan.

<sup>&</sup>lt;sup>1</sup> Manual for the Mayo-Portland Adaptability Inventory (MPAI-4) for Adults, Children and Adolescents by James F. Malec, Ph.D., ABPP-Cn,Rp can be obtained through Amazon.com.

## MPAI-4 Rehabilitation Planning Guide for TBI

| ID:          | Sex:     | Age: | _ Evaluation date: |  |  |
|--------------|----------|------|--------------------|--|--|
| Iniury date: | Program: |      |                    |  |  |

|     | Ability Index                                      |                                                                                                    | Adjustment Index                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Participation Index                            |                                                                    |                                                                               |
|-----|----------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------|
| I = | T-score =                                          |                                                                                                    | T-score =                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | T-score =                                      |                                                                    |                                                                               |
|     | Physical                                           | Cognitive                                                                                          | Other                                                                                                                        | Emotional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Other                                          | Inter-                                                             | Autonomy                                                                      |
|     |                                                    |                                                                                                    | items                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | items                                          | personal                                                           |                                                                               |
| >70 |                                                    |                                                                                                    | AUD                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
| 68  |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | INSI                                           |                                                                    |                                                                               |
| 66  |                                                    |                                                                                                    | DIZZ                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
| 64  |                                                    |                                                                                                    |                                                                                                                              | IRR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                                                                    |                                                                               |
| 62  |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
| 60  |                                                    | INFO                                                                                               |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SENS                                           |                                                                    |                                                                               |
| 58  |                                                    | NVER                                                                                               |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
| 56  |                                                    |                                                                                                    | VIS SPCH                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
| 54  |                                                    |                                                                                                    | SPAT                                                                                                                         | DEP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                                                                    |                                                                               |
| 52  |                                                    |                                                                                                    | VERB                                                                                                                         | ANX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                |                                                                    |                                                                               |
| 50  | HAND CARE                                          | AWAR                                                                                               |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                | INIT                                                               | CARE                                                                          |
|     |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | REL                                            |                                                                    |                                                                               |
|     |                                                    | MEM                                                                                                |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | PAIN                                           |                                                                    |                                                                               |
|     | MOB                                                |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
|     |                                                    | NOVP                                                                                               |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                | SOC                                                                |                                                                               |
|     | FATG                                               |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    | MONY                                                                          |
|     |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
|     |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    | RES                                                                           |
|     |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    |                                                                               |
|     |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                |                                                                    | TRAN                                                                          |
| <30 |                                                    |                                                                                                    |                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                | EMP                                                                |                                                                               |
|     | 70<br>68<br>66<br>64<br>62<br>60<br>58<br>56<br>54 | Physical  P70 68 68 66 64 62 60 58 56 54 52 50 HAND CARE 48 46 44 MOB 42 40 FATG 38 36 34 32 32 30 | Physical Cognitive  Physical Cognitive  Physical Cognitive  Cognitive  Cognitive  Cognitive  Cognitive  Cognitive  Cognitive | Physical Cognitive Other items  AUD  AUD  BE STATE  BY S | Physical   Cognitive   Other items   Emotional | Physical   Cognitive   Other items   Emotional items   Other items | Physical   Cognitive   Other items   Emotional   Other items   Interpretation |

## Legend

ATTN=Attention; ANX=Anxiety; AUD=Audition; AWAR=Impaired self-awareness; CARE=Self-care;

DEP=Depression; DIZZ=Dizziness; EMP=Paid/unpaid Employment; FATG=Fatigue; HAND=Use of hands;

INFO=Fund of information; INIT=Initiation; INSI=Inappropriate social interaction; IRR=Irritability/aggression;

MEM=Memory; MOB=Mobility; MONY=Managing money and finances; NOVP=Novel problem-solving; NVER=

Nonverbal Communication; PAIN=Pain/headache; REC=Leisure and recreational activities;

REL=Family/significant relationships; RES=Residence; SENS=Sensitivity to mild symptoms; SOC=Social contact; SPAT=Spatial abilities; SPCH=Speech; TRAN=Transportation; VERB=Verbal communication; VIS=Vision

Circles = raw score 4 (severe problem; interferes with activities more than 75% of the time

Rectangles = raw score 3 (moderate problem; interferes with activities 25-75% of the time

Underlined = raw score 2 (mild problem; interferes with activities 5-24% of the time