

**Title of Presentation:** Consumer Outcome Instruments Toolkit  
**Principal Presenter:** James E. Sorensen, Ph.D.  
**Title:** Professor of Accountancy\_Organization School of Accountancy, University of Denver

**Address** 2101 S. University Blvd  
 Denver CO, 80208

**E-mail:** [jsorensen@du.edu](mailto:jsorensen@du.edu)

**Additional Presenter:** Jim Elzey, BS  
**Title:** Information Knowledge Specialist  
 Organization Office of Behavioral Health Services, West Virginia Department of Health and Human Services

**Address:** 350 Capitol Street #350  
 Charleston, WV 25301-3702

**E-mail:** [jelzey@wvdhhr.org](mailto:jelzey@wvdhhr.org)

Consumer Outcome Instruments Toolkit  
 Office of Behavioral Health Services, Department of Health and Human Resources  
 State of West Virginia

Dynamic Assessment of Consumer Progression or Regression

Accountability for consumer outcomes is now another responsibility faced by the providers of behavioral health care services. Assessment of consumer outcomes must be comprehensive, dynamic, user friendly, and relatively inexpensive. Simple gain scores (viz., time 1 - time 2) are subject to extensive criticism. The results have to be interpreted with caution since those with higher initial scores can be expected to improve at a higher rate than those with lower scores.

By relating the actual gain to a potential gain is somewhat more defensible. The analysis uses the form  $[(\text{Older Score} - \text{Newer Score}) / (\text{Ideal} - \text{Older Score})] \times 100 = \%$ . If the ideal is not specified, then the form of  $[(\text{Older Score} - \text{New Score}) / (\text{Maximum score} + 1) - (\text{Older Score})] \times 100$  relates the change to the initial base.<sup>1</sup> The major drawback to this approach is the arbitrary weighting of the change. For example, if a five (5) point scale was used and 5 = highly dysfunctional and 1 = highly functional and a consumer *progressed* from a three (3) to a one (1), the change of two (2) would be

$$\frac{[\text{Older Score}] - [\text{Newer Score}]}{(5 + 1) - [\text{Older Score}]} * 100 = \frac{[3] - [1]}{[6] - [3]} * 100 = \frac{2}{3} * 100 = .67 * 100 = 67\%$$

to show a 67% progression (or improvement).

Likewise, if a five (5) point scale was used and 5 = highly dysfunctional and 1 = highly functional and a consumer *regressed* from a one (1) to a (3), the change of two (2) would be:

$$\frac{[\text{Older Score}] - [\text{Newer Score}]}{[1] - [3]} * 100 = \frac{[1] - [3]}{[1] - [3]} * 100 = \frac{-2}{-2} * 100 = -.67 * 100 = -67\%$$

---

<sup>1</sup> The denominator includes the (maximum scale score + 1) and shifts from the older score (for progression) to the newer score (for regression) to keep the progression and regression percentages parallel, to weight more dramatic changes with higher percentages and to avoid a potential division by zero.

(5 + 1) - [Newer Score]

[6] - [3]

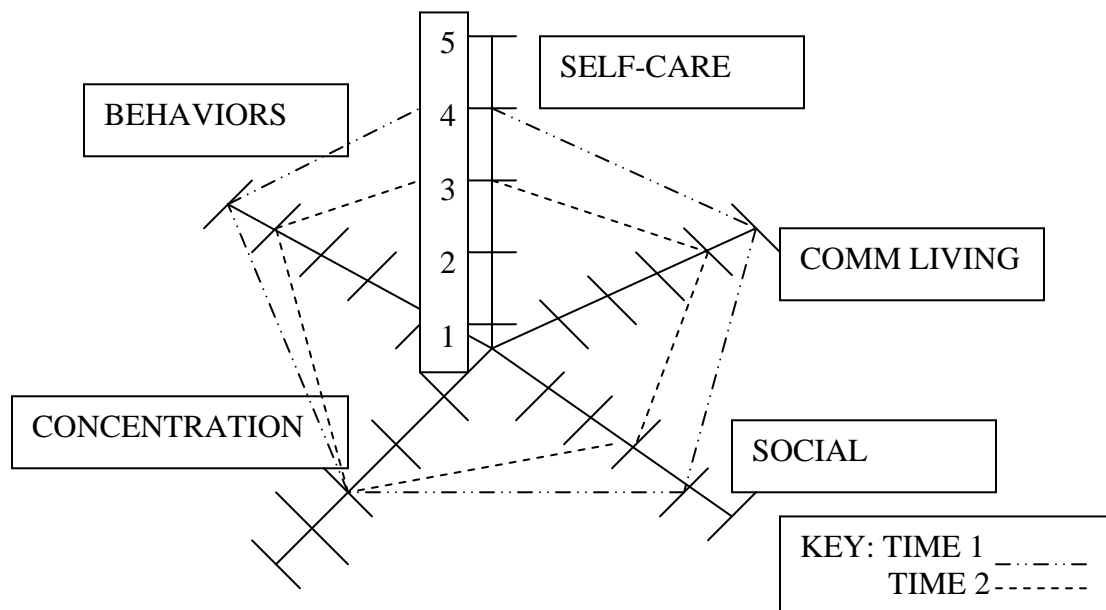
3

to show a 67% regression. If the consumer regressed from a 1 to a 4, the computations would be

$$\frac{[1] - [4]}{[6] - 4} * 100 = \frac{-3}{2} * 100 = -1.50 * 100 = -150\% \text{ or } 150\% \text{ regression}$$

to reveal a 150% regression. Note a shift of three points (150%) is weighted more heavily than a shift of two points (67%). The percentage changes for these examples, namely a shift of two points at 67% versus three points at 150% (while mathematically correct) are arbitrary from a clinical viewpoint.

A more direct approach to the presentation of a scale score can be achieved with the use of a *radar (or spider) graph*. Actual scale scores for multiple domains are presented in a spider web display for multiple points in time. The clinician can now visually review all of the domains for multiple time periods in a single graph. The clinician can overlay his/her professional judgment as to the significance of the changes in the domains over time. A sample radar (or spider) graph using a functional assessment scale with five domains (namely, self-care, community living, social relationships, concentration and behaviors) is graphed for up to three (or four) time periods.



The same principles and descriptions of the outcomes apply to all levels of reporting (e.g., individual consumer outcome, clinician's consumers' outcomes, reporting unit outcomes or total program outcomes).

The West Virginia Consumer Outcome Instruments Toolkit covers multiple instruments:

Adult MH/SA Functional Assessment Instrument—Consumer/Staff

Child and Adolescent Functional Assessment Scale (Subscales) ages 7-18 (CAFAS)

Preschool and Early Childhood Functional Assessment Scales (Subscales) ages 4-7 (PECFAS)

Brief Psychiatric Rating Scale-Anchored (BPRS-A)

WV Brief Psychiatric Rating Scale for Children (BPRS-C)

Addiction Severity Index (ASI)

Adaptive Behavior Scale—Residential and Community (ABS-RC:2)

ACCESS databases exist for all of the forgoing instruments and a copy of the databases and user's manual are available upon request at no charge. Please contact Jim Elzey at [jelzey@wvdhhr.org](mailto:jelzey@wvdhhr.org).

Funding for this project was provided by the Substance Abuse and Mental Health Services Administration (SAMSHA) through a grant to the West Virginia Department of Health and Human Resources (DHHR).