# **Measuring Up!**

The COMBI continues to add more important scales to its resource center. As of July 2001 there are currently twenty measures featured and detailed in the COMBI.

Agitated Behavior Scale (ABS)

Awareness Questionnaire (AQ)

Coma/Near Coma Scale (CNC)

Community Integration Questionnaire (CIQ)

The Craig Handicap Assessment and Reporting Technique (CHART)

The CHART Short Form (CHART-SF)

The Craig Hospital Inventory of Environmental Factors (CHIEF)

Disability Rating Scale (DRS)

The Family Needs

Questionnaire (FNQ)

Functional Assessment Measure (FAM)

Functional Independence Measure (FIM)

Glasgow Outcome Scale (GOS)

Level of Cognitive Functioning Scale (LCFS)

Mayo Portland Adaptability Inventory (MPAI)

Neurobehavioral Functioning Inventory (NFI)

The Orientation Log (O-Log)

The Patient Competency Rating Scale (PCRS)

Satisfaction With Life Scale (SWLS)

Service Obstacle Scale (SOS)

Supervision Rating Scale (SRS)

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# Outcome Moriented

The Online Newsletter of the Center for Outcome Measurement in Brain Injury (COMBI)

**Summer 2001** 

# **COMBI Turns 20**

### CHIEF and CHART-SF Make 20 Scales for COMBI

# The Craig Hospital Inventory of Environmental Factors (CHIEF)

The goal of the Craig Hospital Inventory of Environmental Factors (CHIEF) is to provide an instrument that allows the quantification of environmental factors and leads to a better understanding of the degree to which elements of the environment impede or facilitate the lives of people with disabilities. The focus of the CHIEF is on the quantification of barriers experienced within five domains of environmental factors (Policies; Physical and Structural; Work and School; Attitudes and Support; Services and Assistance). Respondents rate the frequency with which they encounter barriers (daily, weekly, monthly, less than monthly, or never) on the 25 items of the CHIEF reflecting elements of the environment. When respondents indicate that they encounter environmental barriers at any frequency other than never, a follow-up question is asked about whether they consider the barrier to be a big or a little problem. Scoring of each CHIEF item is the product of the frequency score (from never=0 to daily=4) and the magnitude of impact score (little problem=1 and big problem=2) to produce an item score that ranges from 0-8. Therefore, higher scores indicate greater frequency and/or magnitude of environmental barriers.

The instrument can be self-administered or administered by interview, either in person or by telephone. If self-administered, it takes approximately 10 minutes to complete the CHIEF or 15 minutes if administered by interview. Participant-proxy agreement across disability groups on the CHIEF indicates that it is NOT recommended to use proxy data for persons with various types of disabilities. The CHIEF was developed and tested with individuals aged 16 to 95, thus it is recommended for use within this age range.

Information regarding the CHIEF was contributed by Cindy Harrison-Felix, MS and Dave Mellick, MA of Craig Hospital.

### The Craig Handicap Assessment and Reporting Technique— Short Form (CHART-SF)

In 2000, the developers of the CHART (Craig Handicap Assessment and Reporting Technique), designed and tested the CHART Short Form (SF). To reduce the number of questions in the CHART a multi-dimensional analysis plan was designed. With two exceptions, the only variables that were selected to be in a subscale were those that entered into a stepwise regression model together explaining over 90% of the variance. The CHART-SF items and scoring were evaluated on 1800 persons that contributed to the Behavioral Risk Factor Surveillance System's survey of Colorado residents. As a result, the CHART-SF has 19 items that yield the same subscales as the original CHART (32 items).

#### **A COMBI Primer**

The Center for Outcome Measurement in Brain Injury (COMBI) is an online resource center cataloguing information on brain injury outcome and assessment scales. The COMBI is funded by the National Institute on Disability and Rehabilitation Research (NIDRR) and is a collaborative project of ten TBI Model System Projects. Information on the COMBI is available free of charge.

Currently, the COMBI contains information on 20 outcome or assessment scales. Materials available include scale syllabi, administration and scoring guidelines, training and testing materials, information on scale properties, references, scale forums, and frequently asked questions (FAQs). Rating forms for most of the measures are also available for downloading. COMBI users have the advantage of instant access to the materials they want.

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www.tbims.org/combi Outcome Oriented

# **Assessing The COMBI**

#### Log Files 101

Did you know that every time you access a web page, a record of what you did is created? These records, called log files, give webmasters a lot of information about you and what you looked at on the site. Programs that interpret log files can tell you what countries your users come from, what pages they looked at, what files they downloaded, what site referred them, even what operating system they use.

#### THE STATS

In the last 7 months (December 00–June 01) the COMBI has logged in 33,827 visitors. That's almost 160 users a day! During this period 129,588 pages of information were reviewed (that's 1,227 megabytes of data). The COMBI has increased its activity in every category (10%-40%) over the last seven months.

The COMBI logs show that 83% of our users are within the United States and 17% are from 66 other countries. The COMBI is especially popular in Canada, the United Kingdom, Japan, Australia, New Zealand, Germany, and the Netherlands. Our biggest referrals come from Google, Yahoo, Alta Vista, and MSN.com.

The COMBI newsletter, *Outcome Oriented*, is primarily disseminated in Portable Document Format (PDF) from the website. Over the last seven months, 2058 newsletters were downloaded by COMBI users.

The COMBI continues to be very successful as a dissemination effort. In the past seven months over 9,875 rating forms were downloaded. Itemized scale activity is summarized in the table below . ☑

## Scale Activity (Number of Visitors & Downloads) December 2000 – June 2001

Scale	Visitors	Downloads		
ABS	1064	441		
AQ	1098	2031		
CHART	664	878		
CHART-SF	41	73		
CHIEF	53	157		
CIQ	883	722		
CNC	643	474		
DRS	1209	219		
FAM	1250	850		
FIM	2690	na		
FNQ	536	na		
GOS	1526	na		
LCFS	799	na		
MPAI	852	1135		
NFI	617	na		
O-LOG	339	360		
PCRS	634	1510		
SOS	469	340		
SRS	501	417		
SWLS	728	na		

### The COMBI Revealed...

#### **OUTCOME ORIENTED'S FIRST CENTERFOLD**

OUTCOME OR	ILINIED STIKST CENTERIOLI	,		
Scale	Contact Int	roduction	Syllabus	Forms
ABS	Jennifer Bogner, Ph.D. bogner.1@osu.edu	<b>√</b>	1	<b>✓</b>
AQ	Mark Sherer, Ph.D., ABPP-Cn marks@mmrcrehab.org.	/	<b>√</b>	<b>√</b> (3)
CNC	Maurice Rappaport, M.D., Ph.D. rappapor@ix.netcom.com	✓	1	/
CIQ	Marcel Dijkers Ph.D. marcel_dijkers@mssm.edu	✓	✓	<b>√</b>
CHART	Dave Mellick, MA dmellick@craig-hospital.org	✓	✓	<b>√</b>
CHART SF	Dave Mellick, MA dmellick@craig-hospital.org	✓	✓	<b>√</b>
CHIEF	Cindy Harrison-Felix charrison-felix@craighospital.or	g 🗸	✓	<b>√</b> (2)
DRS	Jerry Wright tbisci@tbi-sci.org	✓	✓	<b>√</b>
FNQ	Jenny Marwitz,MA jmarwitz@hsc.vcu.edu	✓	Р	Р
FAM	Jerry Wright tbisci@tbi-sci.org	✓	<b>√</b>	<b>✓</b>
FIM	Uniform Data System for Medical Rehabilitation info@udsmr.org	✓	Р	Р
GOS	Jerry Wright tbisci@tbi-sci.org	✓	✓	✓
LCFS	Tamara Bushnik, Ph.D. tamara@tbi-sci.org	✓	✓	<b>✓</b>
MPAI	James F. Malec, Ph.D., L.P. malec.james@mayo.edu	<b>√</b>	1	<b>✓</b>
NFI	The Psychological Corporation hbintl@harcourtbrace.com	✓	Р	Р
O-Log	Tom Novack, Ph.D. novack@uab.edu	✓	<b>√</b>	/
PCRS	Tessa Hart, Ph.D. thart@aehn2.einstein.edu.	✓	✓	<b>√</b> (3)
SWLS	John D. Corrigan, Ph.D. corrigan. 1@osu.edu	/	<b>√</b>	/
SOS	Jeffrey S. Kreutzer, Ph.D., ABPP jskreutz@hsc.vcu.edu	/	✓	<b>✓</b>
SRS	Corwin Boake, Ph.D. Corwin.Boake@uth.tmc.edu	<b>√</b>	1	<b>✓</b>

Training & Testing	Properties	References	Forum	FAQ
✓ (Tr)	✓	<b>✓</b>	1	
<b>✓</b> (Tr)	/	/	/	<b>√</b>
				•
✓ (Tr)	✓	✓	✓	
	✓	✓	✓	✓
	<b>✓</b>	✓	✓	✓
	<b>√</b>	1	1	✓
	✓	✓	✓	
✓ (Tr/Te)	✓	✓	<b>√</b>	✓
Р	1	/	✓	
✓ (Tr/Te)	/	1	<b>√</b>	✓
Р	✓	<b>✓</b>	✓	
✓ (Tr/Te)	✓	✓	✓	
	✓	✓	1	
	✓	✓	✓	
Р	✓	✓	1	
	✓	<b>✓</b>	1	/
	<b>/</b>	<b>✓</b>	<b>√</b>	<b>√</b>
	/	✓	<b>√</b>	<b>√</b>
	✓	<b>✓</b>	<b>√</b>	
	✓	✓	✓	1



# Understanding the Table

**Scale:** Only the acronym for each scale is included. For the complete names see Page 1.

**Contact:** Name and email contact for the individual who contributed information on the scale for the COMBI. This is not necessarily the scale creator.

**Introduction:** Background information on the scale, why it was developed, what it is used for, and what its basic attributes are.

**Syllabus:** Detailed information on how to administer, score, and interpret the scale.

**Forms**: Most scales have rating form(s) available for download. Rating forms are in Portable Document Format (PDF).

**Training & Testing:** Exercises and tests available to check your administration of certain scales.

**Properties:** Information on scale development, reliability, validity, and more.

**References:** Current references pertaining to the scale.

**Forum:** A bulletin board set up to discuss issues pertaining to the scale.

**FAQ:** Frequently asked questions and tips.

#### **TABLE KEY**

- ✓ Available on COMBI
- Tr Online Training Available
- Te Online Testing Available
  - Proprietary (not on COMBI)

## **Future Directions**

The COMBI will continue to add new measures and act as a resource for the rehabilitation community. Planned additional instruments include the Extended Glasgow Outcome Scale (GOS-E), and the Expanded Rancho (LCFS) Scale.

We are also seeking scales that focus on employment, vocational, and family dynamics issues.

We are looking to add more training and testing materials for COMBI measures, and to make the existing materials more interactive (automatic email of results from testing exercises).

Please email us at <combi@tbi-sci.org> with your thoughts and suggestions. Let us know how we measure up! ✓

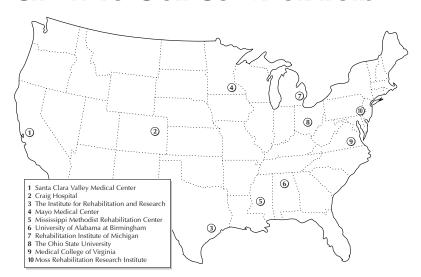
**Outcome Oriented** is a project of the Center for Outcome Measurement in Brain Injury (COMBI) which is funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS), National Institute on Disability and Rehabilitation Research (NIDRR).

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### CREDIT TO OUR COLLABORATORS



The COMBI is a collaborative project of ten brain injury centers located across the US. Without the expertise of these centers this project would not be possible. We would like to offer special recognition to the individuals at these facilities who have taken the time to prepare materials for the COMBI and act as contacts:

Tamara Bushnik, PhD, Jerry Wright, BA, Maurice Rappaport, MD, PhD, & Mary Lou Gustafson, RN, BSN at Santa Clara Valley Medical Center (Lead Center)

 ${\bf Dave\ Mellick, MA\ and\ Cindy\ Harrison-Felix, MS\ at\ Craig\ Hospital}$ 

Corwin Boake, PhD at The Institute for Rehabilitation Research

James F. Malec, PhD, LP at the Mayo Medical Center

Mark Sherer, PhD, ABPP-Cn at the Mississippi Methodist Rehabilitation Center

Tom Novack, PhD at University of Alabama at Birmingham

 ${\it Marcel \, Dijkers, PhD \, at \, Mount \, Sinai \, School \, of \, Medicine}$ 

(Formerly at the Rehabilitation Institute of Michigan)

Jennifer Bogner, PhD & John D. Corrigan, PhD at the Ohio State University Jeffrey Kreutzer, PhD and Jenny Marwitz, MA at Medical College of Virginia

Tessa Hart, PhD at Moss Rehabilitation Research Institute ☑



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#### **UPDATE**

Center for Outcome Measurement in Brain Injury (COMBI) <www.tbims.org/combi>

**Summer 2001** 

