

# Outcome Oriented

Summer 2005  
Issue 11

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

## Measuring Up!

The COMBI continues to add more important scales to its resource center. As of July 2005 there are currently 26 measures featured and detailed in the COMBI.

Agitated Behavior Scale (ABS)  
Alcohol and Substance use items  
Apathy Evaluation Scale (AES)  
Awareness Questionnaire (AQ)  
The Cognitive Log (Cog-Log)  
Coma/Near Coma Scale (CNC)  
Community Integration Questionnaire (CIQ)  
Confusion Assessment Protocol (CAP)  
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)  
Employment variables after TBI  
The Family Needs Questionnaire (FNQ)  
Functional Assessment Measure (FAM)  
Functional Independence Measure (FIM)  
Glasgow Outcome Scale (GOS)  
Extended Glasgow Outcome Scale (GOS-E)  
Levels of Cognitive Functioning Scale (LCFS)  
Mayo Portland Adaptability Inventory (MPAI)  
Mississippi Aphasia Screening Test (MAST)  
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)

## Out and About: The COMBI in Print and on the Web

**Jerry Wright**  
Rehabilitation Research Center  
Santa Clara Valley Medical Center

Since 1998, the Center for Outcome Measurement in Brain Injury (COMBI) has acted as an online resource for information on brain injury-related outcome and assessment scales. It was hoped that the COMBI would provide quality information and increase the consistency of scale usage in research. As its role is becoming more well known, the COMBI is now appearing in more peer-reviewed journal articles. The following are some of the more recent articles/projects to make use of and cite the COMBI:

Brandys C, Vander Laan R, Lemsky C, Waechter R (2002). Development of a comprehensive best practice brain injury model: Phase 2. Toronto Acquired Brain Injury Network. Toronto, Canada.

Lezak M (2004). Chapter 18: Observational methods, rating scales and inventories. In M Lezak, *Neuropsychological Assessment* (pp.736-767). New York: Oxford University Press.

Malec JF (2004). Comparability of Mayo-Portland Adaptability Inventory ratings by staff, significant others and people with acquired brain injury. *Brain Injury*, 18,563-575.

Mateo M (2003). Evaluation of patients with mild traumatic brain injury. *Lippincott's Case Management*, 8,203-207.

Tate R (2004). Assessing support needs for people with traumatic brain injury: the care and needs scale (CANS). *Brain Injury*, 18,445-460.

### HOW TO CITE THE COMBI

If you find the information in the COMBI useful, please mention it when citing sources of information. The COMBI website may be cited as:

Santa Clara Valley Medical Center (2005). *The Center for Outcome Measurement in Brain Injury*. <http://www.tbims.org/combi> (access date).

The COMBI is a collaborative project funded by the National Institute on Disability and Rehabilitation Research. Citing the COMBI is a way of demonstrating the usefulness of this project. Please recognize the work of your colleagues in bringing this information to you.

### COMBI ESTABLISHED INTERNATIONALLY

The COMBI is increasingly being cited and linked to by prominent international websites. Here are a few of the latest found:

*Australian Society of Occupational Therapists*  
<[www.ausot.com.au](http://www.ausot.com.au)>

*Brain Injury News and Information Blog* (US)  
<[braininjury.blogs.com](http://braininjury.blogs.com)>

*Canadian Institute for Health Information*  
<[secure.cihi.ca](http://secure.cihi.ca)>

*eMedicine*  
<[www.emedicine.com/pmr/topic213.htm](http://www.emedicine.com/pmr/topic213.htm)>  
Article: Management and Staging of Traumatic Brain Injury. Smith DE, Greenwald BD.

*Health & Disability Research Institute*  
(Boston University) <[www.bu.edu/hdr](http://www.bu.edu/hdr)>

*International Congress of Neuropsychology in the Internet* <[www.serviciodc.com/congreso](http://www.serviciodc.com/congreso)>

*Measurement Excellence and Training Resource Information Center* (VA). The VA resource for measurement issues. <[www.measurementexperts.org](http://www.measurementexperts.org)>

*The Norwegian Occupational Therapist Association*  
<[www.netf.no](http://www.netf.no)>

*Organising Medical Networked Information* (UK)  
A gateway to evaluated, quality Internet resources in health and medicine. <[omni.ac.uk](http://omni.ac.uk)>

*Performance of Emergency Medical Services in Patients with Brain Injury from Traumatic Accidents* (PEBITA-Switzerland). Swiss national database to study brain injury. <[www.pebita.ch](http://www.pebita.ch)>

*Videnscenter for Hjerneskade* (The Brain Injury Resource Centre-Denmark). Development, gathering and distribution of information regarding brain injury. <[www.vfhj.dk](http://www.vfhj.dk)>

*ZPID Institute for Psychology Information* (Germany)  
<[www.zpid.de](http://www.zpid.de)>



# THE 2005 COMBI SCALES REVEALED

Scale	Purpose	Admin in Min	Items	Inpt/Community	Rater	Admin Method	Norms	Public Domain	Other populations
ABS	serial assessment of agitation	10	14	inpt/comm	clinician	observation	Yes	Yes	Dementia, psychiatric
AES	evaluation of apathy	15	18	community	self, SO, clinician	in-person, phone, qstnr	No	Yes	Alz, CVA, dep
AQ	measure of self-awareness	10	17-18	inpt/comm	self, SO, clinician	in-person, phone, qstnr	No	Yes	CVA, tumor, anoxia
CAP	measure of confusion	30	58	inpatient	clinician	in-person, observation	No	Yes	CVA
CHART	measure of participation	15	32	community	self, proxy (SO)	in-person, phone, qstnr	Yes	Yes	SCI
CHART-SF	measure of participation	7-8	19	community	self, proxy (SO)	in-person, phone, qstnr	No	Yes	SCI
CHIEF	measure of environmental factors	10-15	25	community	self	in-person, phone, qstnr	Yes	Yes	Many disabilities
CIQ	community integration	10	15	community	self, proxy (SO)	in-person, phone, qstnr	No	Yes	
C/NC	assess low-level patients	15	11	inpatient	clinician	in-person	No	Yes	
Cog-Log	serial cognition measure	5-15	10	inpt/comm	clinician	in-person	Yes	Yes	Acquired brain injury
DRS	measure of disability	5-15	8	inpt/comm	clinician	in-person, phone, med rec	No	Yes	CVA
FAM	brain injury adjunct to the FIM	10-15	12	inpt/comm	clinician	in-person, phone, med rec	No	Yes	CVA
FIM(tm)	measure of disability	20-30	18	inpt/comm	clinician	in-person, phone, med rec	?	No	Many disabilities
FNQ	measure of family needs	10-15	40	inpt/outpt	SO	in-person, phone, qstnr	No	No	
GOS	measure of disability	3-5	1	inpt/comm	clinician	in-person, phone, med rec	?	Yes	Many disabilities
GOS-E	measure of disability	10	1	inpt/comm	clinician	in-person, phone, qstnr	No	Yes	
LCFS	assess cognitive functioning	3	1	inpt/comm	clinician	in-person	?	Yes	
MAST	communication & language skills	15	46	inpt/comm	clinician	in-person	No	Yes	CVA, epilepsy, tumor,
MPAI	assess ability, activity & participation	30	29 (35)	inpt/comm	self, SO, clinician	in-person	Yes	Yes	
NFI	measure of symptoms/behaviors	15	76	community	self, SO	questionnaire	No	No	
O-Log	measure of orientation	5	10	inpt/comm	clinician	in-person, phone	Yes	Yes	Acquired brain injury
PCRS	measure of self-awareness	10-15	30	community	self, SO, clinician	in-person, qstnr	No	Yes	
SOS	perceptions of BI services	5	6	community	self, SO	in-person, phone, qstnr	No	Yes	
SRS	measure of supervision received	3-5	up to 6	inpt/comm	clinician, trained rater	in-person, phone	No	Yes	
SWLS	measure of life satisfaction	5	5	community	self	in-person, phone, qstnr	Yes	Yes	SCI, students, mult

# UNDERSTANDING THE TABLE

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

**Purpose:** Only a very brief purpose is given. For more, see the COMBI.

**Admin in Min:** Administration time in minutes.

**Items:** The number of questions or items in this measure.

**Inpt/Community:** Would this measure only be appropriate in an inpatient setting? Would this measure be appropriate to use in a community setting?

**Rater:** Who would the appropriate rater be for this measure? Can the individual complete the measure (self report)? Can a significant other or other proxy complete the measure? Does the rater have to be a clinician or specially trained?

**Admin Method:** What are the acceptable methods for completing this measure? Is the measure completed through observation only, in-person interview, telephone interview, mailed questionnaire, or can it be completed through medical record abstraction?

**Norms:** Are there norms available for this measure?

**Public Domain:** Can the instrument be used without charge or permission?

**Other Populations:** What other populations has this measure been used with?

## TABLE KEY

Alz .....Alzheimer's  
 BI .....brain injury  
 comm .....community  
 CVA .....cerebrovascular accident  
 dementia ....Older adults with dementia  
 dep .....depression  
 inpt .....inpatient  
 med rec .....medical record abstracted  
 mult .....multiple groups with no disabilities  
 psychiatric ..psychiatric patients  
 qstnr .....questionnaire  
 SCI .....spinal cord injury  
 SO .....significant other  
 students .....students with disabilities

# Assessing The COMBI

## LOG FILES 101

When you access a web page, a record is created (a log file). Log files give webmasters information about you and what you looked at on the site. We use log files to assess how the COMBI is being used.

## THE STATS

In the last 12 months (July 04 – June 05) the COMBI has logged in 267,000 visitors. That's over 700 users a day! During this period 593,000 pages of information were reviewed (that's 8,568 megabytes of data).

The COMBI logs show that 65% of our users are within the United States and 35% are from 110 other countries. The COMBI is especially popular in India, the United Kingdom, Australia, and Canada. Our biggest referrals come from Google, Yahoo, MSN, stroke-site.org, and the Brain Injury Association of America .

The COMBI newsletter, *Outcome Oriented*, is primarily disseminated in Portable Document Format (PDF) from the website. Over the last 12 months, 13,744 newsletters were downloaded by COMBI users.

Itemized scale activity is summarized in the table below. *Please, no wagering.*

### Scale Activity (Number of Downloads or Visits)

July 2004 through June 2005

Scale	Activity
ABS	1263 downloads
Alcohol	1645 downloads
AQ	4680 downloads
CAP	1972 downloads
CHART	2464 downloads
CHART-SF	1547 downloads
CHIEF	1998 downloads
CIQ	2245 downloads
CNC	2672 downloads
Cog-Log	1820 downloads
DRS	1318 downloads
EMPLOY	2017 downloads
FAM	6075 downloads
FIM	21518 visitors
FNQ	1868 visitors
GOS	11351 visitors
GOS-E	3579 visitors
LCFS	1514 downloads
MAST	1937 downloads
MPAI	10116 downloads
NFI	2284 visitors
O-LOG	1351 downloads
PCRS	4429 downloads
SOS	707 downloads
SRS	1402 downloads
SWLS	10120 visitors

Visitors are reported when scales are not available on the COMBI.

# Future Directions

This is the fourth *Outcome Oriented* newsletter for this funding cycle (2002-2007). We are updating materials for all of our current measures. 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! Thank you for allowing us to be your brain injury outcome measure resource! ☑

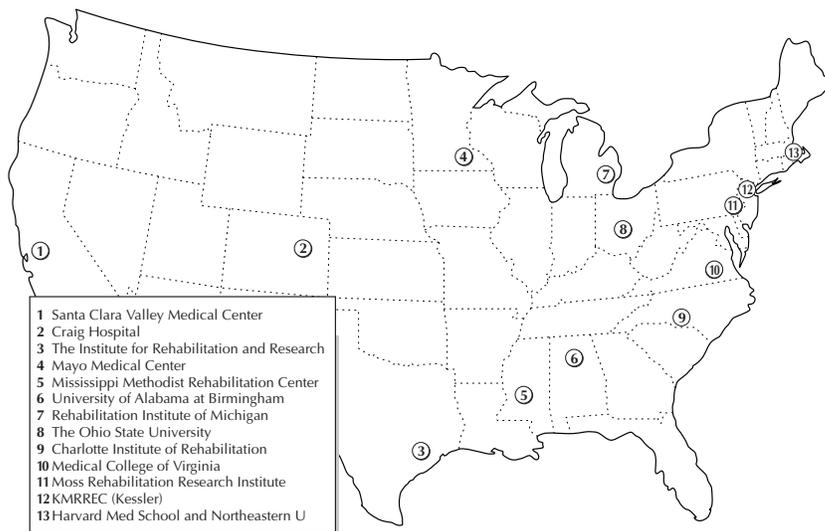
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Address inquiries to

**Jerry Wright**, Editor. Phone (408) 793-6430;  
Email [jerry.wright@hhs.sccgov.org](mailto:jerry.wright@hhs.sccgov.org)

This document is available online at:  
<[www.tbims.org/combi/combinews.html](http://www.tbims.org/combi/combinews.html)>

# CREDIT TO OUR COLLABORATORS



The COMBI is a collaborative project of thirteen 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:

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Tessa Hart, PhD at Moss Rehabilitation Research Institute

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**SANTA CLARA  
VALLEY  
MEDICAL CENTER**

**Rehabilitation Research Center for TBI & SCI**  
**Santa Clara Valley Medical Center**  
751 South Bascom Avenue  
San Jose, CA 95128

## UPDATE

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

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