

Glasgow Outcome Scale- Extended (GOS-E)

ASSESSMENT FOR CATASTROPHIC DETERMINATION

Introduction

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Pursuit Health Management

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- Occupational Therapy
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Locations serviced:

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- Oxford County
- Cambridge*
- Owen Sound*
- Simcoe & Norfolk County

* Indicates staff location



Areas Assessed by GOS-E

1. Consciousness
2. Independence in the Home
3. Independence Outside of the Home
4. Travel Locally Without Assistance (bus, car, taxi)
5. Work
6. Social and Leisure Activities
7. Family and Friendships
8. Return to Normal Life
9. What is the Most Important Factor in Outcome?

Purpose of the GOS-E

Used in part for Catastrophic Determination for individuals diagnosed with a traumatic brain injury (TBI) as outlined in Section 3.1.4 of the SABS

- Clients >18 years of age
- With positive findings on a brain imaging scan (CT, MRI, etc.)

Assessed using GOS-E as outlined in Wilson, Pettigrew & Teasdale (1998)

- Vegetative State 1 month post-MVA
- Upper Severe Disability, or Lower Severe Disability 6+ months post-MVA
- Lower Moderate Disability 12+ months post-MVA

Score obtained is based on the lowest outcome category indicated



	1 = Dead	
1 Month	2 = Vegetative State	<ul style="list-style-type: none"> Unawareness, only reflex responses, unable to follow commands
6 Months	3 = Lower Severe Disability	<ul style="list-style-type: none"> Dependent on frequent daily support for mental or physical disability. Unable to be left alone for 8h at home.
	4 = Upper Severe Disability	<ul style="list-style-type: none"> Dependent on others for regular daily support. Able to be left alone >8h but <24h. Dependent on support for shopping and travel.
12 Months	5 = Lower Moderate Disability	<ul style="list-style-type: none"> Dependent for shopping & travel. Only sheltered/volunteer work. Restricted or rare leisure/social activities. Daily/intolerable relationship strain.
	6 = Upper Moderate Disability	<ul style="list-style-type: none"> Able to return to work, or school with accommodation, but not to prior level. <50% leisure/social activities. Weekly/tolerable relationship strain.
	7 = Lower Good Recovery	<ul style="list-style-type: none"> >50% leisure/social activities. Occasional/tolerable relationship strain. Resumption of normal life, work (even if reduced level). Symptoms continue to affect daily life.
	8 = Upper Good Recovery	<ul style="list-style-type: none"> Resumption of normal life (leisure, social), Able to return to work to full capacity. No relationship strain/psychological problems. May have non-disabling ABI-symptoms.

Assessment Timing (SABS)

1 Month:

- To achieve CAT designation: Vegetative State (or VS*)

6 – 12 Months:

- To achieve CAT designation: Upper or Lower Severe Disability - SD (or SD*)

12 + Months:

- To achieve CAT designation: Lower Moderate Disability - MD (or MD*)

Strengths of GOS-E

- Very good inter-rater reliability has been established
- On the surface, a straightforward questionnaire
- Common article from which to draw information
- Minor changes from GOS used in the past, which some practitioners may have experience with

Limitations of GOS-E

- Reliance on verbal report of client and/or caregiver
 - Levels of client and/or caregiver insight and awareness vary
 - Client may not have a reliable caregiver to participate
 - *“use the best source of information available”* opens up options, if needed
 - Report of current performance, not prior (e.g., 4 months post-MVA reported at 6 months)
- Responses to individual questions require interpretation and judgement
 - Questions may be susceptible to misinterpretation
 - Change from pre-injury status (in medically complex clients)
 - Disability resulting from mental or physical impairment related to TBI
- Reliance on broad social roles for outcome categories

Pre-Existing Difficulties

- When a GOS-E score is reported with a *, this denotes the client experienced a pre-existing limitation in function and that the client continues to function at the same level
- Only used for “very significant pre-injury problems and severe pre-injury disability” (Wilson et. al., 1998, p. 576)
- If a client had “prior problems” that have become “markedly worse due to the brain injury, this change can be used in the rating” (p. 576)
 - i.e. client would receive a rating without an *
- If the client was not working prior to injury (e.g. retired or due to pre-injury disability), then a client’s rating on the GOS-E would be a result of limitations in other areas that are assessed

Need for In-Depth Assessment

Wilson et al., 1997 article states, on p. 574:

“There are many contexts in which a more detailed assessment of specific limitations and their effects than that provided by either the GOS or GOS-E is appropriate and desirable.

The precise neurological, neuropsychological, emotional, and behavioural indices used will depend on the purpose of the assessment and the resources available to carry it out.

An issue not fully resolved is the best choice of tests to supplement the GOS when it is adopted as a primary end point: sensible decisions require an understanding of the relationship between the GOS and other measures of impairment and disability”

Supporting Assessment Tools

- Adaptive Behavior Assessment System
- Anger Inventory
- Assessment of Motor and Process Skills
- Caregiver Burden Scale
- Clinical Assessment of Depression
- Cognitive Competency Test
- Cognistat
- Form 1
- Functional Independence Measure
- Independent Living Scales
- Instrumental Activities of Daily Living Profile
- Kohlman Evaluation of Living Skills
- Kenny Self-Care Evaluation
- Multiple Errands Test
- Patient Health Questionnaire-9
- Psychological Well Being Post Traumatic Changes Questionnaire
- Vineland Adaptive Behavior Scale

Proposed Comprehensive Assessment for GOS-E

Session 1:

- Structured Interview with client and caregiver(s) using GOS-E interview guide
- Supplementary information from client using standardized measures (KELS)
- Supplementary information from caregiver using standardized and non-standardized measures (ABAS, Vineland)
- Caregiver journal

Session 2:

Functional assessment of skills including:

- Dressing
- Meal preparation
- Shopping
- Transportation
- Community living skills

Assessment report forwarded to physician for review and sign-off and completion of OCF-19

Assessment Information: Adaptive Behavior Assessment System (ABAS)

- Was originally designed to assess how well an individual responds to demands in their daily environment; recent research shows usefulness in determining an adult's ability to live independently
- Normed for clients birth through 89 years
- Normed on a wide range of ethnicities, educational levels, and diagnoses, including traumatic brain injury

Assessment Information: Kohlman Evaluation of Living Skills (KELS)

- Established to assess a client's ability to live safely and independently within the community
- More sensitive than the Functional Independence Measure (FIM) in distinguishing those living independently from those who require support
- Strong concurrent validity with a number of cognitive and independent living assessments (Vineland, ABAS, etc.)

Assessment Information: Vineland

- Designed to measure adaptive behaviour across a range of diagnoses including traumatic brain injury
- Includes a Maladaptive Behavior Index to assess challenging or difficult behaviours, such as impulsive behavior, physical aggression, inappropriate social behaviour, social withdrawal, etc.
- Good concurrent validity with the ABAS, but provides information about maladaptive behaviour that is not captured in the ABAS

Question 1: Consciousness

- Will not be assessed by community occupational therapists
- Best assessed by hospital medical team at one month mark
- For CAT designation: need a score of VS on GOS-E at one month post-injury

Question 2: Independence at Home

GOS-E includes:

- Getting washed
- Putting on clean clothes
- Preparing food for self
- Dealing with callers
- Handling minor domestic crises

*Client should be able to carry out above activities without prompting

For CAT designation (Severe Disability at 6 months):

- If client cannot be left independently for 8 hours, would meet criteria for LSD
- If client can be left alone for 8 hours, but not 24, would meet criteria for USD

Question 2: Independence at Home

KELS

- Client appearance and client self report of frequency of self-care activities
- Telephone management explores a client's ability to locate a phone number and obtain information using the telephone
- Health and safety section includes awareness of dangerous situations, identification of appropriate action for illness/accidents, knowledge of emergency numbers, and awareness of how to access medical and dental services

ABAS

- Self-care section provides caregiver report of dressing, toileting, bathing, and health and safety behaviours

Functional assessment could include observation of food preparation, handling of telephone call, management of competing demands (e.g. Multiple Errands Test, AMPS)

Question 3 & 4: Independence Outside the Home

Question 3 relates to client's ability to shop including

- Planning
- Management of money
- Behaving appropriately in public

Question 4 relates to client's ability to travel locally without assistance

- Client's own vehicle – or
- Public transportation – or
- Taxi

For CAT designation (Severe Disability at 6 months):

- If client is unable to shop or travel locally, rating would be USD

Question 3 & 4: Independence Outside the Home

KELS:

- Transportation and Telephone Section includes
 - Community mobility
 - Knowledge of transit system
 - Use of telephone and/or computer to obtain transit information

ABAS:

- Communication Section includes skills such as speaking clearly, engaging in appropriate conversations with various audiences
- Community Use Section includes such skills as making purchases, locating public washrooms, making appointments

Functional Assessment: grocery shopping with client, observe transportation arrangements to and from store, ability to follow plan, manage money, communicate effectively

Question 5: Work

GOS-E:

- Is the client able to return to work at their previous capacity?
- If restricted, what is the level of restriction (e.g reduced work capacity vs. unable to work or only in non-competitive roles)

Question 5: Work

KELS: Work section explores skills such as identification of appropriate roles, fit of skills to work role

ABAS: Self-Direction, Work, Functional Academics (caregiver report)

- Includes: working independently, remaining on task, has good safety awareness, organizes tasks, manages appointments and deadlines

Employer/supervisor report will be essential in situations where client has resumed work

Students: Progress reports, marks can serve as objective measure of function

For CAT designation (Lower Moderate Disability at 12 months):

- If client is unable to work, or is only able to work in sheltered, non-competitive roles

Question 6: Social and Leisure Activities

GOS-E:

- Is the client able to resume regular social and leisure activities outside the home?
- What is the level of restriction? >50% = a bit less, <50% = much less, or unable

Question 6: Social and Leisure Activities

KELS: Leisure section

- Includes skills such as identifying appropriate leisure, participating in preferred activities

ABAS: Social and Leisure sections

- Includes such skills as scheduling activities, rule following, organizing a group activity

Consultation with team members

For CAT designation (Lower Moderate Disability at 12 months):

- If client is unable to participate in social or leisure activities (e.g. rarely, if ever, take part)

Question 7: Family and Friendships

GOS-E:

- Are there psychological problems which have resulted in ongoing family disruption or disruption to friendships?
- Includes changes such as quick temper, irritability, anxiety, insensitivity to others, mood swings, depression, unreasonable behavior
- Changes to intimacy
- Extent of disruption determines level of function

Question 7: Family and Friendships

ABAS: Social section includes socially appropriate behaviours, engaging in conversation

Vineland Maladaptive Behavior Index includes behaviors such as anger, irritability, impulsivity

Consultation with team members

For CAT designation (Lower Moderate Disability at 12 months)

- Is the disruption constant (e.g. daily) and intolerable?

Question 8: Return to Normal Life

- Captures other ongoing difficulties such as:
 - headaches
 - dizziness
 - fatigue
 - sensitivity to light and noise
 - memory difficulties
 - concentration difficulties
- Corroboration of client report of symptoms with records of TBI sequelae will be key in providing objective response to this question

Question 9: Factors in Outcome

- GOS-E:
 - Is the head injury the most important factor in determining the outcome?
 - Are symptoms from other injuries affecting the client's participation in daily life?
- Separating effects of one injury from another can be challenging
- A medical opinion may be required to support the assessment

Help Us Help You

- Medical evidence confirming TBI with positive imaging
- Progress reports from treating team at 5 ½ or 11 ½ month mark
- Include an updated Form 1 at that time, if indicated

Paediatrics

- Clients <18 years use different processes, and assessments
- Under the SABS, the GOS-E does not apply for Catastrophic determination for paediatrics
- The Kings Outcome Scale for Childhood Head Injury (KOSCHI) is used instead

Please contact us for additional details if you have paediatric clients in need of assessment

Questions ?
