Life Interests and Values (LIV) cards

- www.liv.org

- Pictoral support for individuals with restricted communication ability to indicate activities and life participation which is most relevant to them
LIV cards: interview

Key Life Activities (Simmons-Mackie, 2001)

<table>
<thead>
<tr>
<th>Pre-Onset</th>
<th>Initial Assessment</th>
<th>Outcome Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching 1st grade</td>
<td>Church on Sunday</td>
<td>Preschool volunteer</td>
</tr>
<tr>
<td>Church on Sunday</td>
<td>Carnival Club attendee</td>
<td>Church on Sunday</td>
</tr>
<tr>
<td>Cook for church (Wed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carnival Club Secretary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walk 2 miles daily</td>
<td>Walk with friend daily</td>
<td></td>
</tr>
<tr>
<td>Prepare family dinner</td>
<td>Host family dinner</td>
<td></td>
</tr>
<tr>
<td>Babysit grandchild</td>
<td>Babysit grandchild</td>
<td>Babysit grandchild</td>
</tr>
<tr>
<td>Garden Club</td>
<td>Gardening (some)</td>
<td>Gardening (some)</td>
</tr>
<tr>
<td>Gardening</td>
<td>Reading (some)</td>
<td>Reading (some)</td>
</tr>
<tr>
<td>Reading</td>
<td>Television</td>
<td>Television</td>
</tr>
</tbody>
</table>
### Key Life Activities – Modified

<table>
<thead>
<tr>
<th>Pre-Onset Activities</th>
<th>Initial Assessment</th>
<th>Outcome Assessment</th>
<th>Future Directions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching 1st grade</td>
<td>Church on Sunday</td>
<td>Preschool volunteer</td>
<td>Church on Sunday</td>
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<td>Carnival Club attendee</td>
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<tr>
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</tbody>
</table>

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### Goal Attainment Scaling

Goal Attainment Scaling is a goal-setting procedure that has the strongest empirical support for its validity and effects (Hurn, Kneebone, & Cropley, 2006)

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Goal Attainment Scaling
(from Malec, 1999)

TABLE 1
Six Steps for the Development and Implementation of GAS

1. Goal selection
2. Weighting goals
3. Designation of follow up time period
4. Articulation of the “expected” level of outcome in objective behavioural terms
5. Articulation of other outcome levels
6. Assessment of GAS level on admission and at follow up

Goal Selection

“Personal goals are projects and concerns that people think about, plan for, carry out, and sometimes (but not always) complete or succeed at. They may be more or less difficult to implement, require only a few or a complex series of steps, represent different areas of a person’s life, and be more or less time consuming, attractive, and urgent. Please list three personal goals that you have for the semester.” (Miquelon & Valleron, 2006)
Goal Attainment Scaling
(from Malec, 1999)

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Goal Attainment Scaling – evaluation

- Most favorable outcome
- More than expected outcome
- Expected outcome
- Less than expected outcome
- Least favorable outcome
  \(+2, +1, 0, -1, -2\)
  OR
  \(0, 1, 2, 3, 4\)
Goal Attainment Scaling Example – Adult Aphasia (Worrall, 2000)

<table>
<thead>
<tr>
<th>Goal 1: Catching the bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most favorable outcome</td>
</tr>
<tr>
<td>More than expected</td>
</tr>
<tr>
<td>Expected outcome</td>
</tr>
<tr>
<td>Less than expected</td>
</tr>
<tr>
<td>Least favorable</td>
</tr>
</tbody>
</table>

- Goal 2: Buying a birthday gift for wife
- Goal 3: Participating in social functions at previous employer
Advantages of Goal Attainment Scaling

- Focused on life participation
- Provides evaluative component
- Provides time limit
- Can be customized to particular social environments
- Structure and process could be internalized by clients to facilitate autonomous goal-seeking

Table 1. Means and Standard Deviations Among Pretest, Posttest, and 2-Month Follow-Up GAS Scores

<table>
<thead>
<tr>
<th>GAS Measure</th>
<th>Pretest M</th>
<th>Pretest SD</th>
<th>Posttest M</th>
<th>Posttest SD</th>
<th>Two Month M</th>
<th>Two Month SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>-1.63</td>
<td>0.52</td>
<td>0.63a</td>
<td>1.06</td>
<td>0.50a</td>
<td>0.55</td>
</tr>
<tr>
<td>LI</td>
<td>-1.63</td>
<td>0.74</td>
<td>-0.25b</td>
<td>1.04</td>
<td>-1.20d</td>
<td>1.30</td>
</tr>
</tbody>
</table>

*a Paired t tests between pretest and posttest means for HI (n = 8) participants, p<.001. b Paired t tests between pretest and posttest means for LI (n = 8) participants, p<.005. c Paired t tests between pretest and 2-month follow-up means for HI (n = 6) participants, p<.001. d Paired t tests between pretest and 2-month follow-up means for LI (n = 5) participants, p = n.s.


**Figure 1.** Effect of Group Membership (High Involvement vs. Low Involvement) and Time of Assessment (Pretest vs. Posttest vs. 2-Month Follow-Up) on Goal Scores as Measured by Goal Attainment Scaling (GAS).

ASHA NOMS

http://www.asha.org/members/research/noms/

**Seven levels (Level 1 – Level 7) based on**

- Frequency of cueing
- Intensity of cueing

**Eight Functional Communication Measures**

1. Attention
2. Memory
3. Motor Speech
4. Reading
5. Spoken Language Comprehension
6. Spoken Language Expression
7. Swallowing
8. Writing

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Frequency of Cueing

Consistent  Required 80–100% of the time.
Usually      50–79% of the time.
Occasionally 20–49% of the time.
Rarely      Less than 20% of the time.

Intensity of Cueing

Maximal      Multiple cues that are obvious to nonclinicians. Any combination of auditory, visual, pictorial, tactile, or written cues.
Moderate     Combination of cueing types, some of which may be intrusive.
Minimal      Subtle and only one type of cueing.
Seven levels (Level 1 – Level 7) based on
- Frequency of cueing
- Intensity of cueing

Eight Functional Communication Measures
1. Attention
2. Memory
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Attention

Note: The following are some examples of living activities as used with this FCM:

**Simple living activities**
- Following simple directions, reading environmental signs,
- Eating a meal, completing personal hygiene, and dressing.

**Complex living activities**
- Watching a news program, reading a book, planning and preparing a meal, and managing one’s own medical, financial, and personal affairs.
ASHA NOMS

LEVEL 1: Attention is nonfunctional. The individual is generally unresponsive to most stimuli.

LEVEL 2: The individual can briefly attend with consistent maximal stimulation, but not long enough to complete even simple living tasks.

LEVEL 3: The individual maintains attention over time to complete simple living tasks of short duration with consistent maximal cueing in the absence of distracting stimuli.

LEVEL 4: The individual maintains attention during simple living tasks of multiple steps and long duration within a minimally distracting environment with consistent minimal cueing.

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ASHA NOMS

LEVEL 5: The individual maintains attention within simple living activities with occasional minimal cues within distracting environments. The individual requires increased cueing to start, continue, and change attention during complex activities.

LEVEL 6: The individual maintains attention within complex activities, and can attend simultaneously to multiple demands with rare minimal cues. The individual usually uses compensatory strategies when encountering difficulty. The individual has mild difficulty or takes more than a reasonable amount of time to attend to multiple tasks/stimuli.

LEVEL 7: The individual’s ability to participate in vocational, avocational, or social activities is not limited by attentional abilities. Independent functioning may occasionally include the use of compensatory strategies.

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Memory

*Note:* The following terms are used with this FCM:

**External Memory Aid** calendars, schedules, communication/memory books, pictures, color coding.

**Memory Strategies** silent rehearsals, word associations, chunking, mnemonic strategies.

Spoken Language Comprehension

**LEVEL 1:** The individual is alert, but unable to follow simple directions or respond to yes/no questions, even with cues.

**LEVEL 2:** With consistent, maximal cues, the individual is able to follow simple directions, respond to simple yes/no questions in context, and respond to simple words or phrases related to personal needs.

**LEVEL 3:** The individual usually responds accurately to simple yes/no questions. The individual is able to follow simple directions out of context, although moderate cueing is consistently needed. Accurate comprehension of more complex directions/messages is infrequent.

**LEVEL 4:** The individual consistently responds accurately to simple yes/no questions and occasionally follows simple directions without cues. Moderate contextual support is usually needed to understand complex sentences/messages. The individual is able to understand limited conversations about routine daily activities with familiar communication partners.
LEVEL 5: The individual is able to understand communication in structured conversations with both familiar and unfamiliar communication partners. The individual occasionally requires minimal cueing to understand more complex sentences/messages. The individual occasionally initiates the use of compensatory strategies when encountering difficulty.

LEVEL 6: The individual is able to understand communication in most activities, but some limitations in comprehension are still apparent in vocational, avocational, and social activities. The individual rarely requires minimal cueing to understand complex sentences. The individual usually uses compensatory strategies when encountering difficulty.

LEVEL 7: The individual’s ability to independently participate in vocational, avocational, and social activities are not limited by spoken language comprehension. When difficulty with comprehension occurs, the individual consistently uses a compensatory strategy.

Spoken Language Expression

Note: This FCM should not be used for individuals using an augmentative/alternative communication system.

LEVEL 1: The individual attempts to speak, but verbalizations are not meaningful to familiar or unfamiliar communication partners at any time.

LEVEL 2: The individual attempts to speak, although few attempts are accurate or appropriate. The communication partner must assume responsibility for structuring the communication exchange, and with consistent and maximal cueing, the individual can only occasionally produce automatic and/or imitative words and phrases that are rarely meaningful in context.

LEVEL 3: The communication partner must assume responsibility for structuring the communication exchange, and with consistent and moderate cueing, the individual can produce words and phrases that are appropriate and meaningful in context.
LEVEL 4: The individual is successfully able to initiate communication using spoken language in simple, structured conversations in routine daily activities with familiar communication partners. The individual usually requires moderate cueing, but is able to demonstrate use of simple sentences (i.e., semantics, syntax, and morphology) and rarely uses complex sentences/messages.

LEVEL 5: The individual is successfully able to initiate communication using spoken language in structured conversations with both familiar and unfamiliar communication partners. The individual occasionally requires minimal cueing to frame more complex sentences in messages. The individual occasionally self-cues when encountering difficulty.

LEVEL 6: The individual is successfully able to communicate in most activities, but some limitations in spoken language are still apparent in vocational, avocational, and social activities. The individual rarely requires minimal cueing to frame complex sentences. The individual usually self-cues when encountering difficulty.

LEVEL 7: The individual’s ability to successfully and independently participate in vocational, avocational, and social activities is not limited by spoken language skills. Independent functioning may occasionally include use of self-cueing.

ASHA NOMS
http://www.asha.org/members/research/noms/

• Purpose is to describe functional abilities over time
• Based on clinical observations; not linked to a particular assessment tool
• FCMs should only be scored if they relate to the individual patient’s goals; so, only a few FCMs will be scored for each patient
Section 2: Assessments that can help select treatment

How to select among the treatments?

• Functional/personal goals? ✔
• Cognitive abilities?
• Specific language processes?
Cognitive abilities in aphasia

Strengths are most likely to be in...
- Social use of language
- Visuo-spatial abilities
- Nonverbal forms of memory (spatial, visual, rhythm)
- Episodic memory, procedural memory

Impairments are most likely to be in...
- Attention, especially executive attention
- Verbal memory
- Declarative memory
- Some executive functions

Three broad systems of attention
(Carr & Hinckley, 2011)

System 1: Alertness and vigilance = self-maintenance of an alert state, or being able to maintain attention on a single task over a period of time

System 2: Orienting and selecting (aka focused or selective attention) = ability to move attention to a particular location or to select to attend to something to the exclusion of other stimuli

System 3: Executive attention = task-switching, divided attention (attention to more than one thing simultaneously)
Three systems of attention

- Alerting = Frontal – parietal – thalamic
- Orienting = Frontal eye field, superior parietal lobule, temporo-occipital junction, thalamus
- Executive = Frontal regions only
Potential areas of overlap:

**Frontal lobe:**
- inferior frontal gyrus
- dorsal premotor cortex

**Temporal and parietal lobes:**
- temporoparietal junction
Attentional abilities and attention allocation vary in aphasia (Murray, 1999)

“Dual-task” performances are impaired

Doing something while talking

Walking

Listening for a tone or signal

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**Impairments are most likely to be in...**
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- Verbal memory
- Declarative memory
- Some executive functions
Short term memory
↓
Working memory
↓
Long term memory
Episodic memory
(memory for events)
Semantic memory
(memory for world knowledge)

Declarative memory
(being able to say what you know)
Procedural memory
(recalling procedures for actions and events)

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Executive function abilities vary in aphasia

- Variable performance on tests of executive function (Berman et al, 1995)
- Not dependent on type or severity of aphasia
“...if strategy generation is impaired, the patient may be less likely to utilise trained methods for circumventing his or her language deficit.”

(Keil & Kaszniak, 2002, pp. 311-12)

Both language and cognition affected in traumatic etiologies

- Stroke
  - Approx 35-40% may have aphasia
  - Approx 50% may have other cognitive impairments
  - Approx 85% may have some cognitive-communicative impairment that affects their ability to participate in health care (O’Halloran, Worrall, & Hickson, 2009)