

# The GAS-eous Tool

## Goal Attainment Scaling – Evaluation of Outcome for Upper-limb Spasticity

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### Summary description:

A semi-structured tool, designed to provide a framework for goal-setting and outcome assessment in the management of upper limb spasticity.

It comprises eight goal areas across 2 domains and is mapped onto the WHO International Classification of Functioning Disability and Health (ICF).

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Development based on goals analysis from four published studies incorporating 696 goals from a total of 18 centres in the UK (n=12) and Australia (n=6).

### Instructions for use:

At baseline:

1. Choose 2-3 goal areas – designate one primary goal, and others as secondary goals
2. Select principal subcategory for each goal area
3. Record goal parameter – how goal will be assessed (e.g. rating out of 10, Visual analogue scale (VAS), timed task etc).  
Record baseline and target ratings – e.g. pain score baseline 8/10 – target 4-5/10
4. Write SMART goal statement and record baseline GAS

At evaluation point:

5. Record achieved rating / measurement for goal parameter
6. Record Goal attainment rating
7. Use GAS formula to derive T-scores  
(Goal weighting: Primary goal w=2, Secondary goals w=1)

### Further information and advice may be obtained from:

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## GAS-eous Tool: Goal Attainment Scaling – Evaluation of Outcome for Upper-limb Spasticity

Select only those goal areas that are relevant

Domain 1: Impairment / symptoms				Measurement / goal rating		
Goal Area	Set Goal?	Sub-categories	Goal parameter (suggestions provided)	Baseline	Goal	Achieved
<b>Pain /discomfort</b> (b280, b780, b134) Including stiffness	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input checked="" type="checkbox"/> Pain (b280) <input type="checkbox"/> Stiffness (b780) <input type="checkbox"/> Sleep disturbance (b134)	Level of pain / /stiffness / sleep disturbance Eg rated /10 or on graphic rating scale* Score 0-10 in whole numbers (see Appendix 1)	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Involuntary movements</b> (b755, b760, b765) Eg spasms or flexed posturing of arm when walking)	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Associated reactions <input type="checkbox"/> Spasms <input type="checkbox"/> Posturing / dystonia	Carry angle of elbow/height of hand up torso Spasm frequency (no. per day or night) Resting angle – degrees or % joint range	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Range of movement / prevention of contractures</b> (b710, b735)	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Contracture prevention <input type="checkbox"/> Passive ROM <input type="checkbox"/> Active ROM <input type="checkbox"/> Splint tolerance <input type="checkbox"/> Splint application	Joint angles or anatomical distances eg - % normal joint range (25, 50, 75%) - finger-tips to palm Splint tolerance – time per day Ease of splint application (rating/10)	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Cosmesis</b> Perception of body image	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Aesthetic appearance <input type="checkbox"/> Body image	Satisfaction with appearance / body image eg rated /10 or on graphic rating scale	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more

\* We recommend using a visual analogue scale with numbers (technically called a Numeric graphic rating Scale (NGRS)) to optimize patient report – see appendix 1

Domain 2: Activities / Function				Measurement / goal rating		
Goal Area	Set Goal?	Sub-categories	Goal parameter (suggestions provided)	Baseline	Goal	Achieved
<b>Passive function</b> (d510, d520) <b>Caring for the affected limb</b> whether care is done by someone else or by the person him/herself.	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Hygiene – hand <input type="checkbox"/> Hygiene – axilla / elbow <input type="checkbox"/> Nails <input type="checkbox"/> Dressing the limb <input type="checkbox"/> Positioning the limb <input type="checkbox"/> Splint application/removal	Ease of care - eg rated /10 or on NGRS Time taken to achieve functional task	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some function <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Active function</b> (d430, d440, d445) <b>Using the affected limb</b> in some active task involving motor movement /dexterity	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Reaching (d445) <input type="checkbox"/> Grasp/release/grip (d445) <input type="checkbox"/> Holding/bimanual function (d445) <input type="checkbox"/> Manipulating objects (d445) <input type="checkbox"/> Dexterity / fine motor (d440) <input type="checkbox"/> Lifting / carrying (d430)	Able to manage motor task eg - holding and using the object - lifting cup to mouth etc Improved control / dexterity eg - rating/10, or NGRS etc - improved timing	Measurement	Measurement	Measurement
Ideally, goals should also have a clear functional purpose	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Eating /drinking (d550, d560) <input type="checkbox"/> Personal ADL (d500, d510, d540) <input type="checkbox"/> Extended ADL (d630, d640) <input type="checkbox"/> Typing / writing (d345, d360) <input type="checkbox"/> Hobbies /recreation (d920) <input type="checkbox"/> Work (d850)	Achievement of functional task	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some function <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Mobility</b> (d415, d420, d450) Improved mobility – transfers / standing / walking due to better balance, gait quality, speed, efficiency	<input type="checkbox"/> 1° <input type="checkbox"/> 2°	<input type="checkbox"/> Ease of transfers (d420) <input type="checkbox"/> Balance (d415) <input type="checkbox"/> Gait quality (b770) <input type="checkbox"/> Speed / efficiency <input type="checkbox"/> Type of walking aid used	Gait parameters – speed, distance Ability to climb stairs Falling / tripping frequency Safety / confidence /fatigue (NGRS) Video rating of gait quality	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some function <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more
<b>Facilitating therapy</b> interference with therapy	<input type="checkbox"/> 1° <input type="checkbox"/> 2°		Team/pt's perception of interference - Rated out of 10, or NGRS etc.	Measurement	Measurement	Measurement
<b>Goal statement</b>	<i>Write SMART goal statement here</i>			Baseline <input type="checkbox"/> Some <input type="checkbox"/> Bad as could be	<input type="checkbox"/> Partially <input type="checkbox"/> Same <input type="checkbox"/> Worse	<input type="checkbox"/> As expected <input type="checkbox"/> A little more <input type="checkbox"/> A lot more

### Example of a GAS-eous Record:

**Patient: Ivor Payne.** Age 46. Post stroke spasticity in his right upper limb causing severe pain and restriction of his right shoulder – **3 goals**

Domain 1: Impairment / symptoms				Measurement / goal rating		
Goal Area	Set Goal?	Sub-categories	Goal parameter (suggestions provided)	Baseline	Goal	Achieved
<b>Pain /discomfort</b> (b280) Including stiffness	<input type="checkbox"/> 1°	<input type="checkbox"/> Pain <input type="checkbox"/> Stiffness <input type="checkbox"/> Sleep disturbance	Pain rating – numbered graphic VAS	8	4-5	3
<b>Goal statement</b>	<i>To reduce resting pain in right shoulder from 8/10 to 4-5/10 at 3 months post injection</i>			Baseline GAS <b>-1</b>	<b>A little more</b>	
<b>Range of movement / prevention of contractures</b> (b710, b735)	<input type="checkbox"/> 2°	<input type="checkbox"/> Contracture prevention <input type="checkbox"/> <b>Passive ROM</b> <input type="checkbox"/> Active ROM	Angle of passive shoulder abduction with scapula stabilised	30°	75°	60°
<b>Goal statement</b>	<i>To be able to abduct arm passively to 75° in order to facilitate cleaning under the axilla at 3 months post injection</i>			Baseline GAS <b>-1</b>	<b>Partially</b>	

Domain 2: Activities / Function				Measurement / goal rating		
Goal Area	Set Goal?	Sub-categories	Goal parameter (suggestions provided)	Baseline	Goal	Achieved
<b>Passive function</b> (d520) <u>Ease of caring for the affected limb</u> whether care is done by someone else or by the person him/herself.	<input type="checkbox"/> 2°	<input type="checkbox"/> Hygiene – hand <input type="checkbox"/> <b>Hygiene – axilla / elbow</b> <input type="checkbox"/> Nails <input type="checkbox"/> Dressing the limb <input type="checkbox"/> Positioning the limb <input type="checkbox"/> Splint application	Ease of cleaning right armpit - rated out of 10 by carer.	3	6	6
<b>Goal statement</b>	<i>To make it easier to clean under axilla – carer rating of ease of care to improve from 3/10 to 6/10 at 3 months post injection</i>			Baseline GAS <b>-1</b>	<b>As expected</b>	

Baseline GAS T score: <b>36.7</b>	Achieved GAS T score: <b>53.3</b>
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## Appendix 1

Following stroke, some patients may have difficulty understanding words or numbers, and others may have visuo-spatial problems. The Numeric graphic rating scale has been designed to give patients the 'best of both worlds' by providing the numbers in a graphic form. (In other words – this is a visual analogue scale with numeric anchors written in)

### The Numeric Graphic Rating Scale (NGRS)

Patient Name.....
Date.....
Time.....

**The scale below is a generic measure of self-reported symptoms**

In this context it can be used to rate a variety of unwanted symptoms  
eg Pain, discomfort, stiffness, sleep disturbance

It can also be used to denote positive aspects of experience  
eg Ease of care.

The 10 cm line is marked off in 1 cm increments

Scores are recorded in whole numbers

The top LEVEL (Marked 10) indicates the symptom as bad (or good) as it could be

The bottom LEVEL (0) indicates no symptom at all

As the patient to

**Circle the number that best describes the level of symptom that they feel**

### The Numeric Graphic Rating Scale (NGRS)

