

Introduction

- ▶ Prof Lynne Turner-Stokes
 - ❖ Northwick Park Professor of Rehabilitation Medicine
 - King's College London
- ▶ Day job:
 - ❖ Consultant in Rehabilitation Medicine
 - Regional Hyper-acute Rehabilitation Unit
 - Northwick Park Hospital
- ▶ Director of the UK Rehabilitation Outcomes Collaborative (UK ROC)





GAS without tears: Finding the right balance for goal setting in rehabilitation

Prof Lynne Turner-Stokes

Department of Palliative Care, Policy and Rehabilitation
King's College London and Northwick Park Hospital

Declarations of Interest

- ▶ I am a consultant in rehabilitation medicine, employed full time in the NHS.
 - ❖ I am also a clinical academic Professor of Rehabilitation Medicine at KCL
- ▶ Some of the material I will present
 - ▶ Is derived from the research of my department and/or that of my colleagues
 - ❖ It may be declared in my Trust's on Research and Development activity
 - ❖ Or by the University in their submission to the Research Excellence Framework.
- ▶ Neither I or my family
 - ▶ Have any personal or financial interest in the content of this presentation

Measuring outcomes from rehabilitation

▶ Challenges of wide diversity

- ❖ Conditions
- ❖ Level of ability
- ❖ Goals for treatment



▶ Examples:

- ❖ Return to long distance running
- ❖ Being able to feed oneself
- ❖ Slow progression
 - of contractures and deformity



▶ How do we capture all of this?

Individualised goals for treatment

▶ Individualised goal-setting

- ❖ Forms the cornerstone of management in rehabilitation programmes,
 - But can be challenging to implement in busy settings.
 - Teams sometimes struggle to develop multidisciplinary goals
 - Get bogged down by procedure and rules

▶ Most teams now report that they set goals for rehabilitation,

- ❖ But not all actually review them to determine how well they were met.

▶ Challenges include:

- ❖ **Time** - Goal-setting be excessively time-consuming
- ❖ **Engagement** – How to set goals when patients / their families cannot engage
- ❖ **Coverage** - May miss key target areas that may need to be addressed
 - Some disciplines feel excluded from the process
 - as patients rarely chose goals in their particular area of practice.

Aims of this workshop

- ▶ To explore the practical implementation of goal-setting in rehabilitation
 - ❖ present a number of solutions to get the best out of it with the minimum of fuss.
- ▶ Techniques will include:
 - ❖ Person-centred goal setting
 - ❖ Simplified goal attainment scaling
 - using the GAS-Lite model as a measure of goal achievement
 - ❖ Measuring engagement and goal-satisfaction
 - for patients and their families
 - ❖ Goal setting for patients who cannot engage with the process
 - finding the balance between 'process' and 'outcome' goals
 - ❖ An inclusive approach to goal-setting
 - using structured goal sets and goal menus
 - ❖ Using evaluation of goal attainment for team reflection and learning



Programme

Time	Programme
13.00-13.05	Introduction and Welcome
Part 1	Introduction to goal setting and GAS – Prof Lynne Turner-Stokes
13.05 -14.00	Presentation 1: <ul style="list-style-type: none">• Goal attainment scaling<ul style="list-style-type: none">○ A set by step approach to GAS, using the GAS-lite• Using GAS to reflect on the achievement of intention• Engaging patients in goal setting• Demonstration of the software to support GAS
14.00-14.15	Questions and answers
14.15-14.30	Break
Part 2	Practical application of goal setting and GAS
14.30-14.55	Presentation 2: Structured goal setting <ul style="list-style-type: none">• Using structured goal sets<ul style="list-style-type: none">○ Some examples – general rehabilitation, spasticity and prolonged disorders of consciousness• Demonstration of the software in these contexts
14.55-15.05	Questions and answers
15.05-15.55	Interactive case study with panelists
15.55-16.00	Sum-up and close

Part 1

Goal Attainment Scaling (GAS)

The 'GAS-Lite' Method

For practical application in routine clinical settings



What is goal attainment scaling?

▶ Method of scoring

- ❖ Extent to which goals are achieved
 - In a standardised way
 - To allow statistical analysis

▶ Generic measures

- ❖ Standardised tasks / standardised levels

▶ GAS –

- ❖ Tasks are individually chosen
- ❖ Levels set around current and expected performance
 - for that individual

▶ Why use it?

❖ **Person-centred perspective**

- It measures what matters to the patient
- Provides two types of information
 - **Quantitative**
 - Assessment of success
 - **Qualitative** – descriptive
 - What the patient wanted to achieve

❖ **More sensitive measure**

- Does not include irrelevant items

Goal Attainment Scaling (GAS)

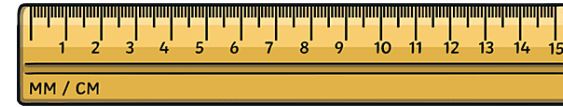
▶ Goal attainment scaling provides

- ❖ A person-centred, individualised approach
- ❖ To measuring achievement of intention
 - Did we achieve what we set out to achieve?
- ❖ Achievement:
 - Some goals will be achieved
 - Others will not
 - Some may exceed expectation
- ❖ Weighting:
 - Some goals are more important than others
 - Some are more difficult than others

▶ GAS captures all of this

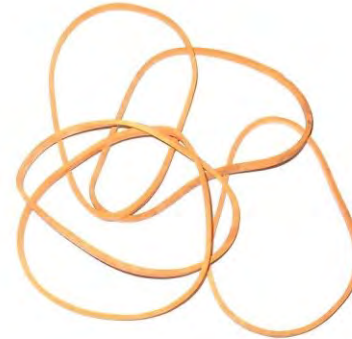
- ❖ In a single overall measure

▶ Types of measure



Interval

Ordinal



Bunch of elastic bands

▶ GAS is not a measure of outcome *per se*

- ❖ Does not stand alone
- ❖ Need standardised measures alongside it
 - To provide a yardstick for comparison

Goal setting – a critical step

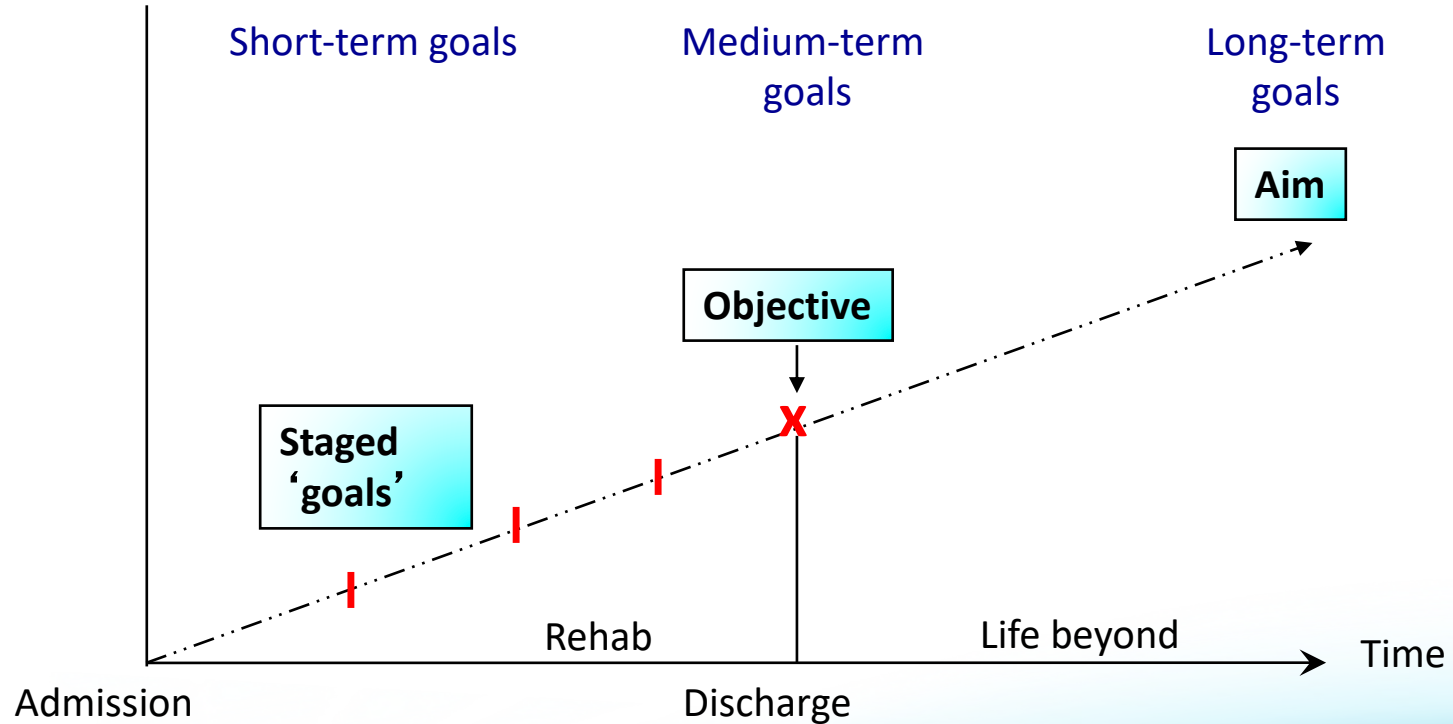
- ▶ Discuss and agree priorities and objectives for programme
 - ❖ With patient / family
 - ❖ With multidisciplinary team
- ▶ Consider the expected outcomes from treatment
 - ❖ If expectations unrealistic
 - Negotiate what can reasonably be achieved
 - ❖ Is the expected outcome worthwhile?
- ▶ Describe and document expected outcome
 - ❖ Ensure that this is understood and agreed
 - Define SMART goals

Defining goals:

Goals must be **SMART**:

- Specific
- Measurable
- Achievable
- Realistic
- Timed

Goal Setting Terminology



- ❖ In patients with moderate severe brain injury
 - Goal-setting is usually an iterative process

Prediction of outcome

▶ Some clinicians feel threatened by the prospect

❖ Of predicting outcome

- Lots of unknowns..
- How can we tell what will happen
 - From an early stage in the process
 - Without a crystal ball?



▶ Relax

❖ Don't have to get it right all the time

- Some goals will be met, and others not
 - So long as goals are set in an unbiased manner, it will work out in the end
- There is always the opportunity to revisit and reset goals
 - Along the patient journey
- Goal review provides an opportunity to reflect and learn

Types of goal and terminology

▶ Goals or objectives may be:

❖ Outcome orientated

- Specific target to be reached

❖ Process orientated

- Tasks to be done

▶ Generally aim for outcome goals

❖ But process goals are valid

- if the outcome is genuinely uncertain

Some examples	
Process goals	Outcome goals
To explore a wheelchair seating package to extend sitting tolerance	To be able to tolerate sitting out in wheelchair for 4 hours/day
To explore potential for trachy weaning	To de-cannulate the tracheostomy
To explore suitability for home discharge	To discharge to a suitable nursing home placement
To explore possibility of being able to manage tastes for pleasure	To be able to join family at lunch-time and eat half a pot of yoghurt without choking

Brief Overview of GAS

▶ Kiresuk and Sherman 1968 – developed GAS in context of mental health

❖ Goal achievement for each goal

- Rated on 5-point scale (-2 to +2)
 - '0' score = goal achieved as expected

❖ Recommend an 'a priori' follow-up guide

- Sets out descriptors for each score level

❖ Goals may also be weighted

- For importance and/or difficulty

❖ Goal scores assimilated in a T-score

$$\text{Overall GAS} = 50 + \frac{10 \sum(w_i \underline{x}_i)}{\sqrt{(0.7 \sum w_i^2 + 0.3(\sum w_i)^2)}}$$

Where:

w_i = the weight assigned to the i th goal (if equal weights, $w_i = 1$)

\underline{x}_i = the numerical value achieved (between -2 and + 2)

ρ = the expected correlation of the goal scales



Exemplar follow-up guide

	-2	-1	0	+1	+2
Goal	A lot less	A little less	Achieved as expected	A little more	A lot more
Walking	Wheelchair bound	Walks indoors with assistance of 1 person	Walks indoors independently but uses chair outdoors	Walks outdoors with assistance of 1 person	Walks outdoors independently
Eating	Entirely Tube fed	Takes small tastes orally	Takes half of their nutrition orally with tube supplements	Takes all nutrition orally, with tube only for medications and flushes	All nutrition and fluid taken orally - tube has been removed

Step by step approach to GAS-Lite

▶ GAS 5-point scale

❖ Score 0 – the most probable level achieved

- If the patient received the expected treatment

	-2	-1	0	+1	+2
Goal	A lot less	A little less	Achieved as expected	A little more	A lot more
Walking	Wheelchair bound	Walks indoors with assistance of 1 person	Walks indoors independently but uses chair outdoors	Walks outdoors with assistance of 1 person	Walks outdoors independently

❖ No need to define each level

- Simply define the SMART goal for the zero score

Exception – goal negotiation

▶ Mrs Smith

- ❖ Previously left-handed
- ❖ Severe spastic left hemiparesis with neglect

▶ Goal

- ❖ *“I want to be able to use my left hand normally”*

	-2	-1	0	+1	+2
Goal	A lot less	A little less	Achieved as expected	A little more	A lot more
Use of dominant hand	No function	Crude grasp, but unable to release	To be able to use hand as a functional prop to stabilise objects	Uses left hand to lift cup and bring it to her mouth	Uses left hand normally

- ❖ *“No... , I said normally...!”*
- ❖ Goal negotiation

Goal weighting

▶ Some goals

- ❖ Matter more to the patient than others
- ❖ Present more of a challenge than others

▶ To take these factors into account

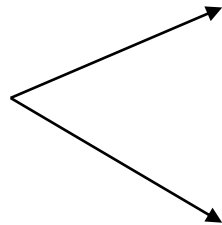
- ❖ Goals can be weighted for
 - Importance
 - to the patient/family
 - Difficulty
 - rated by the team

Importance (for Patient / family)		Difficulty (rated by Team)	
Not at all	0	Not at all	0
A little	1	A little	1
Moderately	2	Moderately	2
Very	3	Very	3

In reality, 3-point scales..

Baseline level

Baseline level
With respect
to that goal



Some function

Baseline rating

-1

Unable to do task

-2

Usually -1

To allow for deterioration

Unless no clinically plausible

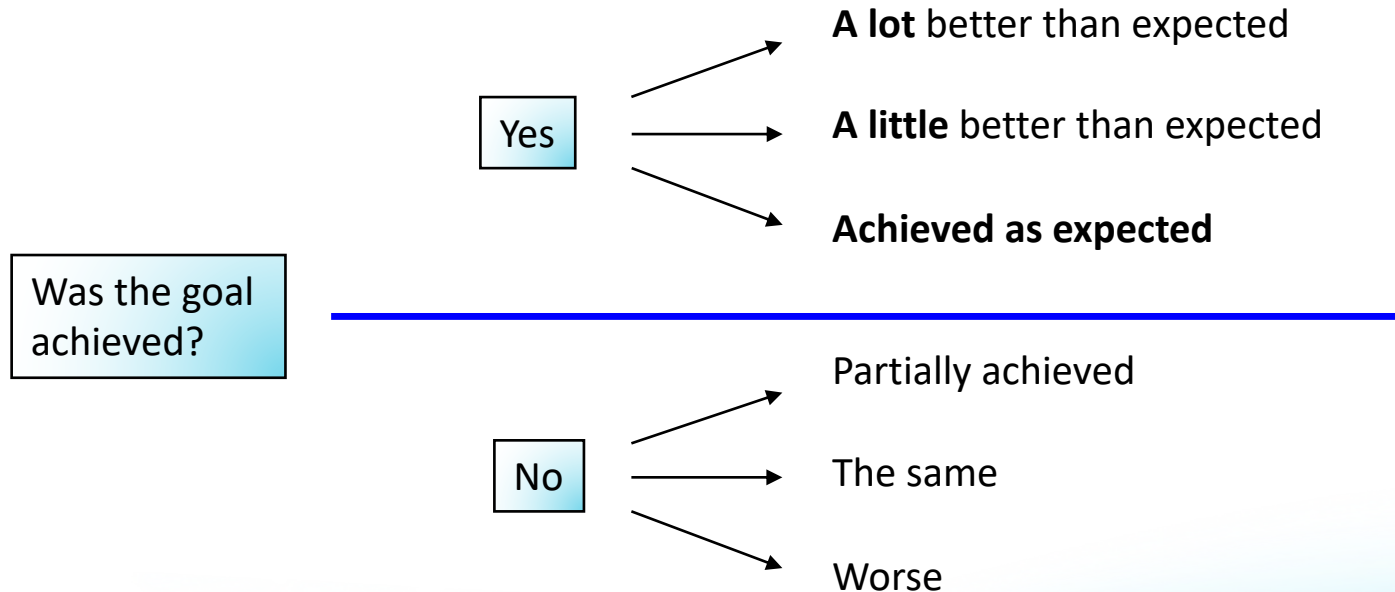
Worse condition exists

Or as bad as they could be:

Eg pain score 10/10

Verbal rating of goal attainment

Many clinicians prefer to think in words and not numbers



▶ 6-point scale..

- ❖ Some authors have suggested a '-3' score to denote a worse condition
 - Skews the normal data distribution - And no need..

Numerical scoring can be applied retrospectively

- ▶ How to convert to a numerical score
 - ❖ Outcome score allocated according to baseline score

Depends on baseline score:

Baseline	
-1	-2

Was the goal achieved?	Yes	A lot more	+2	+2
		A little more	+1	+1
		As expected	0	0
	No	Partially achieved	(-1)	-1
		Same as baseline	-1	-2
		Worse	-2	

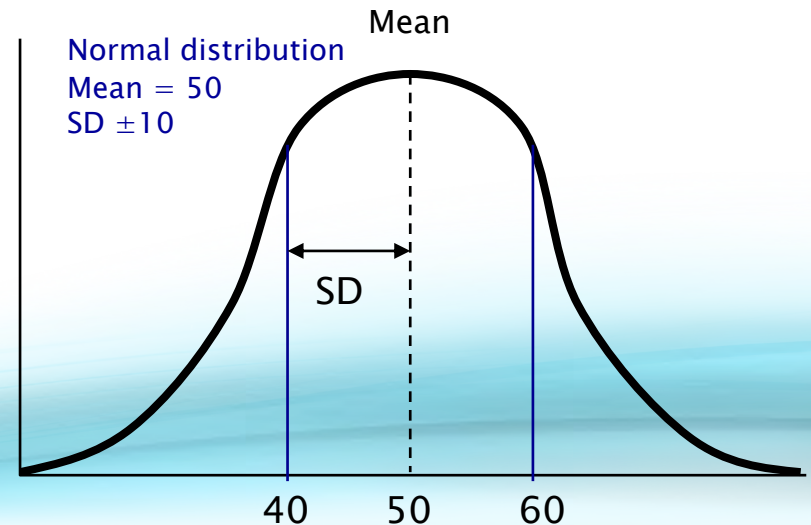
What does the formula do?

- ▶ Calculates a GAS T-Score:
 - ❖ The composite GAS score
 - (ie the sum of attainment levels x relative weights for each goal)
 - ❖ Is transformed to a standardised measure
 - Mean 50 and Std Dev ± 10
- ▶ If goal setting is unbiased
 - ❖ Results exceed and fall short of expectations equally
 - GAS T-scores form a normal distribution
 - Allows statistical analysis using parametric techniques
- ▶ Expected range of T scores

Much better than expected	>60
Better than expected	50-60
As expected	50
Less well than expected	40-50
Much less than expected	<40

GAS Formula

$$T = 50 + \frac{10 \sum(w_i x_i)}{(0.7 \sum w_i^2 + 0.3(\sum w_i)^2)}$$



Goal weighting – optional

▶ Takes time and makes little difference to the scores

❖ Can have perverse effect

- “Importance” works as expected
 - More important goals score more highly on GAS T-score
- “Difficulty” does not
 - If a difficult goal is not achieved
 - Penalises the GAS T-score more than an easy goal
 - Counter intuitive..

❖ Weighting can be useful for team reflection

- If a goal was not achieved:
 - Was it known to be difficult?
 - How important was it?

❖ If weighting is used in formula

- Recommend using importance weight only.

GAS-Lite – summary

▶ Key differences..

❖ Set baseline score

- -1: clinically plausible worse condition
- -2: no plausible worse condition

❖ No need to define all 5 levels

- Concentrate on defining '0' level
 - 'SMART' goal description
 - Agreed between team and family

❖ At evaluation point

- Level of achievement jointly agreed
 - Using **verbal rating** score
 - 6-point score
 - Reflects how clinicians think

▶ Comparison with traditional method

❖ High level of agreement

- GAS-Lite is quicker and more acceptable to clinicians – widely taken up in clinical practice

Outcome score depends on baseline score			-1	-2
Was the goal achieved?	Yes	A lot more	+2	+2
		A little more	+1	+1
		As expected	0	0
	No	Partially achieved	(-1)	-1
		No change	-1	-2
		Worse	-2	

▶ GAS calculator software

- ❖ Deals with all the numbers/ formulae..
- ❖ Conversion to numeric score
 - Programmed into software
 - Keep clinicians away from numbers!

Frequently asked questions

Question	Answer
How many personal goals should we set?	Not too many (3-5 is plenty)
All our patients want to set goals related to physical function - SLT and psychology get left out!	Consider using some structured goal-sets Or some team-led goals alongside personal ones
Is the GAS-Lite a valid measure	Yes – of the achievement of intention (But does not replace the need for standardised measures)
Should goal achievement be assessed by an independent observer?	No – that defeats the purpose of GAS as part of goal management training – Achievement should be rated by the patient and the treating team together
Are process goals valid?	Yes – we try to set outcome goals, but process goals are sometimes more clinically relevant
What if the patient's goals are unrealistic?	The goals have to be agreed – use the 5 levels to negotiate. Consider weighting for difficulty (NB caution re interpretation)
What if the patient cannot engage?	Can the family be engaged on their behalf? Consider using some structured goal-sets Or some team-led goals alongside

Recording and Reflection:

**Using GAS to reflect on
achievement of intention**

Goal engagement and GMT

▶ Goal management training (GMT)

❖ An important part of rehabilitation

- Rebuilding autonomy
 - (We all have a 'to-do' list!)

▶ GAS supports GMT

❖ Active engagement of patient

- Setting and monitoring their own goals

❖ Goal setting can be challenging for patients with ABI

- Prescott S, Fleming J, Doig E
Australian Journal of Occupational Therapy 2019; 66:313-25
- Helpful framework for engaging them in goal setting
 - Sets out some key strategies with practical advice



▶ Key strategies

❖ Establishing Trust

- Collaboration
- Education

❖ Identifying needs

❖ Allowing time

- Supportive contact

❖ Goal mapping

- Prioritisation

❖ Active engagement

- Goal clarity
- Progress and feedback
- Monitoring
- Generalisation
- Family support

Can we measure engagement?

▶ Patient level of engagement scale

- Can be used to monitor this



Turner-Stokes L, Rose H, Ashford S, Singer B. [2015 International Journal of Therapy and Rehabilitation](#) 22(5):210-216

Patient level of engagement in goal setting (as judged by team)



Excellent engagement

Fully independent in goal monitoring and setting their own goals



Very good engagement,

Patient takes most of responsibility for monitoring and re-setting goals



Good engagement,

But requires active support
Patient and team take 50/50 responsibility



Moderate engagement,

Patient engages to some degree, but team takes most of responsibility (>50%) for monitoring and re-setting goals



Minimal engagement,

Patient indicates general goal area, but cannot engage in goal setting to any meaningful level



Unable

Cannot engage in goal setting at any level

Goal Satisfaction

- ▶ Important corollary to engagement
 - ❖ How satisfied the patient is
 - With their own goals
- ▶ Patient goal satisfaction scale
 - ❖ Rated by the patient
- ▶ Together these two scales
 - ❖ Provide evidence
 - For GAS as a patient reported outcome (PROM)



Patient satisfaction with the goal setting process (as judged by patient / family)



Excellent

My goals matched all my key priorities for rehab
And were entirely my own choice



Very good

My goals matched my main priorities for rehab
And I was pretty happy with my agreed goal-set



Good

My goals met most of my priorities for rehab
And I agreed with most of them



Moderate

My goals met some of my priorities for rehab
And I agreed with some of them



Poor

My goals were largely irrelevant to me
And I disagreed with most of them



None

My goals were completely irrelevant
And I did not agree with any of them

Or
What goals???

Goal Attainment Scaling (GAS) Record Sheet

Patient Name:..... **Age**.....

Hospital No:..... **Discharge date:**.....

Keyworker:.....

Importance to patient: score Important , Very Important, Extremely important.
Difficulty of achieving (professionals): score Not difficult, Minor difficulty, Moderate difficulty, Extreme difficulty
 Goal attainment **baseline:** usually set at some function, or No function, (as bad as it can be)
Goal attainment score: As expected = achieves goal as expected. partially achieved = some improvement but goal not achieved, same as baseline = no change, a little better = achieved more than the goal, Much better – over achieved goal

	Patient stated goal	SMART goal	Importance	Difficulty of achieving	Baseline	Achieved	Variance (Describe achievement if differs from expected)
1			<input type="checkbox"/> Imp <input type="checkbox"/> v.imp <input type="checkbox"/> Ex.imp	<input type="checkbox"/> Minor difficulty <input type="checkbox"/> Mod difficulty <input type="checkbox"/> Extreme difficulty	<input type="checkbox"/> Some function <input type="checkbox"/> No function (as bad as can be)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Much better <input type="checkbox"/> A little better <input type="checkbox"/> As expected <input type="checkbox"/> Part achieved <input type="checkbox"/> Same as baseline <input type="checkbox"/> Worse
		Date Set.....	<i>Baseline function</i>				Date
2			<input type="checkbox"/> Imp <input type="checkbox"/> v.imp <input type="checkbox"/> Ex.imp	<input type="checkbox"/> Minor difficulty <input type="checkbox"/> Mod difficulty <input type="checkbox"/> Extreme difficulty	<input type="checkbox"/> Some function <input type="checkbox"/> No function (as bad as can be)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Much better <input type="checkbox"/> A little better <input type="checkbox"/> As expected <input type="checkbox"/> Part achieved <input type="checkbox"/> Same as baseline <input type="checkbox"/> Worse
		Date Set.....	<i>Baseline function</i>				Date
3			<input type="checkbox"/> Imp <input type="checkbox"/> v.imp <input type="checkbox"/> Ex.imp	<input type="checkbox"/> Not difficult <input type="checkbox"/> Minor difficulty <input type="checkbox"/> Mod difficulty <input type="checkbox"/> Extreme difficulty	<input type="checkbox"/> Some function <input type="checkbox"/> No function (as bad as can be)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Much better <input type="checkbox"/> A little better <input type="checkbox"/> As expected <input type="checkbox"/> Part achieved <input type="checkbox"/> Same as baseline <input type="checkbox"/> Worse
		Date Set.....	<i>Baseline function</i>				Date

Baseline GAS T-score:	Achieved GAS T-score	Change in GAS T Score	Date
------------------------------	-----------------------------	------------------------------	-------------------

Example John Bloggs – age 43

▶ Brain-stem stroke

❖ Tetraparetic

- Some useful function in upper limbs
 - Slowly improving
- Currently bedbound
 - Has not yet been given a wheelchair

❖ PEG fed

- Starting to take oral tasters
 - Choking risk

❖ Lives with wife (Jane) and 1 daughter (Jennie) – now 15

- Jane is finance director for a large firm in Sydney
- John is house-husband and home maker
- He is a keen amateur chef
 - Was on BBC's Masterchef TV programme

▶ Key goals for rehabilitation

❖ Wants to get back to normal

- To walk again
- To be able to eat and drink
- To resume role as home-maker
 - Especially cooking for his family

Example

Goal Attainment Scaling (GAS) Record Sheet

Patient Name:.....John Bloggs Age...43...

Hospital No:.....123456.....

Discharge date:.....

Keyworker:.....

	Patient stated goal	SMART goal (Objective for discharge)	Imp	Diff	Baseline	Achieved		Variance * (If differs from expected and give reasons)
1.	To be able to walk again	To be able to get around independently indoors at home in a self-propelling wheelchair	2	2	<input type="checkbox"/> None (as bad as can be)	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> As expected	
2.	To eat normal food	To be able to eat a soft diet with thickened fluids, with PEG supplements (for half of dietary needs)	3	1	<input type="checkbox"/> Some function	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> A little better	Eats soft diet and meets ¾ dietary needs orally
3.	To cook for my family	To be able to prepare a meal of Tuna Mornay with incidental help only (lifting heavy pans and hot dishes)	3	3	<input type="checkbox"/> None (as bad as can be)	<input type="checkbox"/> No	<input type="checkbox"/> Partially achieved	Assists in preparation of meal but daughter still does more than half

Demo of software – 1

Example

Goal Attainment Scaling (GAS) Record Sheet

Patient Name:.....John Bloggs Age...43... Hospital No:.....123456.....

Discharge date:..... Keyworker:.....

	Patient stated goal	SMART goal (Objective for discharge)	Imp	Diff	Baseline	Achieved		Variance * (If differs from expected and give reasons)
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GAS T scores			
Weighting	Baseline	Achieved	Change
Unweighted	34.9	50	15.1
Importance only	27.9	50	22.1
Importance and difficulty	26.4	45.1	18.7

	Engagement		Satisfaction	
	John	Family	John	Family
Admission	2	3	1	3
Discharge	4	5	4	4
Engagement and satisfaction with goals improved for John and his family				

Questions and discussion



Break 15 minutes



Part II

Structured goal setting



Problems with GAS

▶ Even with the GAS-Lite

- ❖ Goal setting can still be time-consuming

▶ Data are not comparable

- ❖ No yardstick for comparing with other patients , programmes etc
 - We need to collect standardised measures alongside
 - For comparable data

▶ Challenge

- ❖ Individual Goals can be very diverse
 - Hard to find measures to reflect all of this diversity
 - Which is the very reason for using GAS in the first place

Our own work with GAS – last 2 decades

▶ Context

- ❖ General rehabilitation
- ❖ Complex neuro-disability
 - Spasticity management
 - Prolonged disorders of consciousness
- ❖ Palliative care

▶ Purposes

- ❖ Research
 - Randomised controlled trials (RCTs)
 - Large international cohort studies
- ❖ Clinical practice

Some examples



❖ Australian RCT of Botulinum Toxin for Spasticity (2006-9)

- GAS more sensitive than other tools
 - Demonstrated changes in active function
 - Not picked up by generic standard measures

McCorry et al. J Rehabil Med 2009; 41: 536-44

Turner-Stokes et al. J Rehabil Med 2010; 42: 81–89

❖ Upper Limb International Spasticity (ULIS)

- Series of large international observational cohorts
 - Examining real life clinical practice
 - Recruited 2434 patients over 10 years
 - From >100 centres across >20 countries
- GAS was feasible to use in routine clinical practice
 - Supported a structured approach to GAS (more later)

Turner-Stokes et al. BMJ Open.2013; 3: e002771

Turner-Stokes et al. J Rehabil Med. 2021 Feb 24; 53(2): jrm00157

❖ Prolonged Disorders of Consciousness (PDOC)

- Patients unable to participate in goal setting
- Standardised goal menus for GAS

Turner-Stokes et al. Brain injury. 2020; 34 (1): 78-88

General rehabilitation

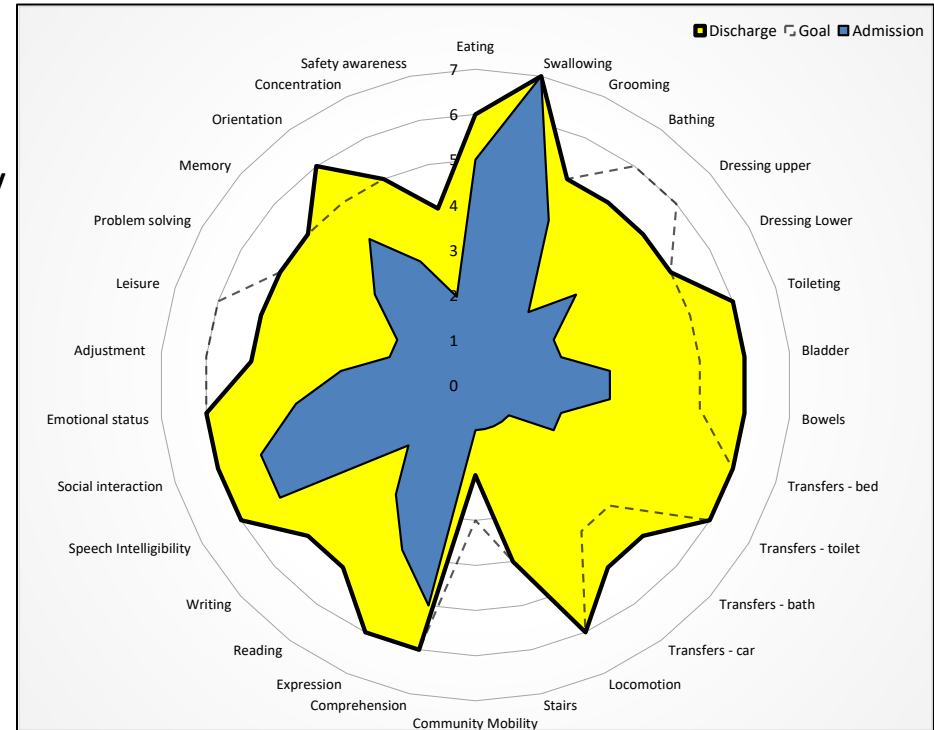
▶ The UK Rehabilitation Outcome Collaborative (UKROC)

❖ Provides the UK Specialist Rehab Registry

- Data on needs, input and outcomes
 - From all specialist Level 1 and 2 rehab units

❖ UK FIM+FAM

- Primary outcome measure
 - 30 item scale
 - FIM 18 items
 - + FAM 12 psychosocial items
- UKROC recommends collecting
 - Scores on admission and discharge
 - Goal scores - FAM-splat – pictorial representation
- Reported alongside individual personal goals



FAM GAS:

Baseline	30.1
Achieved	54
Change	24.0

Upper limb spasticity

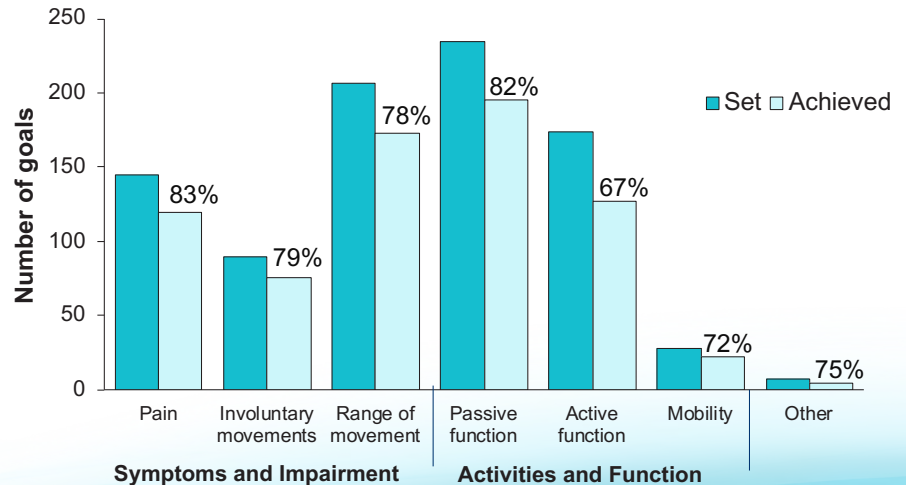
▶ Upper limb International Spasticity (ULIS) study

❖ A series of international cohort studies (2005 -21)

- Of botulinum toxin for Upper limb spasticity
 - >130 sites over 31 countries
 - GAS – primary outcome measure

❖ Analysis of goals

- >2500 goals from >1500 patients
- 6 key goal areas
 - Consistent across multiple studies and sites
- Supported a structured approach to GAS
 - **GAS-Evaluation of Upper limb Spasticity tool**
 - Improved the quality and ease of goal-setting



Structured goal setting

▶ The GAS-eous tool

❖ 6 key goal domains

- Suggested parameters
 - for person-centered goal setting

❖ Limited set of standardised measures

- Recorded alongside
 - Selected according to the chosen goals



Goal area	Standardised measure
Pain	Verbal rating 0-10 / visual analogue scale
Invol movement	Associated Reaction Rating Scale
Range of movement	Neurological Impairment scale – upper limb
Passive function	Arm Activity (ArmA) Scale – passive subscale
Active function	Arm Activity (ArmA) Scale – active subscale
Mobility	Functional Ambulation categories

❖ Timely to use in a busy clinic setting

- Improved the quality of goal setting
 - Validity of measurement
- Provides standardised outcomes
 - As relevant to the intentions of treatment
 - In ULIS-III
 - Used for systematic data collection in longitudinal study of >1000 patients

Example: Goals set for pain and passive function:

Goal area	Standardised measure
Pain	Verbal rating 0-10 / visual analogue scale
Invol movement	Associated Reaction Rating Scale
Range of movement	Neurological Impairment scale – upper limb
Passive function	Arm Activity (ArmA) Scale – passive subscale
Active function	Arm Activity (ArmA) Scale – active subscale
Mobility	Functional Ambulation categories

Prolonged disorders of consciousness

▶ Similar approach to goals analysis for ULIS

❖ 162 patients

- 661 goals mapped to 18 domains

❖ Set of standardised objectives

- Or process goals

❖ Use on a 'pick'n'mix' basis

- Select the goals that apply to each patient
 - Goal scoring sheet and Excel database for GAS calculation available free on our website
 - <https://www.kcl.ac.uk/cicelysaunders/resources/tool/s/gas#:~:text=GAS%20is%20a%20method%20of,as%20to%20allow%20statistical%20analysis.>



▶ On top of that

❖ 3-5 person-centred goals eg

- To sit out in wheelchair in order to have visits from his dog
- To be able to access her local church for a blessing

▶ Domains include

- ❖ Establish medical stability
- ❖ Nutrition and weight management
- ❖ Airway /Tracheostomy management
- ❖ Maintaining skin integrity
- ❖ Continence management
- ❖ Postural management / seating
- ❖ Sleep hygiene
- ❖ Pain and Mood
- ❖ Communication
- ❖ Establish level of consciousness
- ❖ Behavioural management
- ❖ Social interaction and QoL
- ❖ Family support
- ❖ Best interests decision-making
- ❖ Finance
- ❖ Discharge /long-term care planning

Demo of software – 2



Structured goal sets

- ▶ Can help to take some of the stress out of goal-setting
 - ❖ For hard pressed clinical teams
 - Especially in areas where there are commonly applied goals
- ▶ But they do not replace personalised goal-setting and GAS
 - ❖ The next part of the workshop
 - Will explore goal-setting as part of integrated MDT management
 - In an exemplar case of acquired brain injury

Resources

- ▶ Many of the tools and resources referred to in this workshop
 - ❖ Are freely available on our website, along with other useful information
 - ▶ <https://www.kcl.ac.uk/cicelysaunders/resources/tools/gas#:~:text=GAS%20is%20a%20method%20of,as%20to%20allo w%20statistical%20analysis.>
- ▶ Other information may be obtained
 - ❖ By visiting the UKROC website
 - <https://www.kcl.ac.uk/cicelysaunders/research/studies/uk-roc/index>
 - ❖ Or by contacting the UKROC team
 - LNWH-tr.ukroc@nhs.net

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