

# Post Stroke Mood Disorders

Stroke Mini-Symposium

Alicia Massarotto

Geriatrician

Fremantle Hospital

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# Intro

- I work with patients who have had an acute disabling event
- they have fears of chronic disability and death
- Adjust to demands of a rehabilitation ward
- Cope with change of roles
  
- They need to find motivation to improve

# Nasir

88 year old retired pharmacist. Drives every day to visit his wife in NH. Now day 16 post (R)MCA Stroke – sitting balance 1 min. Seems cognitively stable.

***“What is the point of going to the gym? I’m not going home. Use your time for someone younger...”***

# Post Stroke Depression

- prevalence at any time after stroke: 29-31%
- frequency is highest in the first year, at nearly 1 in 3 stroke survivors, and declines thereafter

# Risk Factors

- Severity of Impairment
- History of depression
- Cognitive impairment
- Anxiety
- Social Isolation
- Age

Exponential increase if more than one risk factor present

(Depression itself is a risk factor for the occurrence of stroke with)

- Greatest risk left frontal + basal ganglia lesions?

# Major depressive disorder

- 5 or more nearly every day for 2+ weeks:

One symptom must be:

1. Depressed mood or
2. loss of interest

- Depressed mood most of the day
- Markedly diminished interest or anhedonia
- Significant weight loss (unintentional)
- Insomnia (typical) or hypersomnia (atypical)
- Psychomotor agitation or slowing
- Fatigue
- Feelings of worthlessness or excessive / inappropriate guilt
- Diminished ability to think, concentrate, make decisions
- Recurrent thoughts of death or suicidal ideation

# (Adjustment disorder)

- A grief like reaction
- significant coping difficulties dealing with a considerable life change that causes stress
- While adjustment disorder traditionally resolves within six months, major depressive disorder tends to last much longer

Very little specific research in stroke

# Screening for PSD – recommendations:

- All patients with stroke should be screened for depression using a validated tool
- Screening should take place throughout the continuum of care
  - acute care
  - outpatient /community-based setting
  - Rehabilitation
  - community



# Screening Tools

Probably best  
used 3-6  
weeks post  
stroke onset

- Geriatric Depression Scale (GDS)
- Hospital Anxiety and Depression Scale (HADS)
- Patient Health Questionnaire–9 (PHQ-9)

Consider for patients with aphasia:

- Stroke Aphasic Depression Questionnaire – 10 (SADQ-H10)
- Aphasia Depression Rating Scale

## The Stroke Aphasic Depression Questionnaire (SADQ-H10)

Please indicate on how many days of the last seven the person has shown the following behaviour

### Patient Health Questionnaire (PHQ-9)

Patient Name: \_\_\_\_\_

Date: \_\_\_\_\_

	Not at all	Several days	More than half the days	Nearly every day
1. Over the <i>last 2 weeks</i> , how often have you been bothered by any of the following problems?				
a. Little interest or pleasure in doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Feeling down, depressed, or hopeless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Trouble falling/staying asleep, sleeping too much	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Feeling tired or having little energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Poor appetite or overeating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Feeling bad about yourself or that you are a failure or have let yourself or your family down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Trouble concentrating on things, such as reading the newspaper or watching television.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Moving or speaking so slowly that other people could have noticed. Or the opposite; being so fidgety or restless that you have been moving around a lot more than usual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Thoughts that you would be better off dead or of hurting yourself in some way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. If you checked off any problem on this questionnaire so far, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Did he/she have weeping spells this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

2. Did he/she have restless disturbed sleep this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

3. Did he/she avoid eye contact when you spoke to him/her?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

4. Did he/she burst into tears this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

5. Did he/she complain of aches and pains this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

6. Did he/she get angry this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

7. Did he/she refuse to participate in social activities this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

8. Was he/she restless and fidgety this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

9. Did he/she sit without doing anything this week?

Every day    On 4-6 days    On 1-4 days    Not at all  
3                    2                    1                    0

10. Did he/she keep him/herself occupied during the day?

Every day    On 4-6 days    On 1-4 days    Not at all  
0                    1                    2                    3

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Lincoln, N. B., Sutcliffe, L. M., & Unsworth, G. (2000). Validation of the Stroke Aphasic Depression Questionnaire (SADQ) for use with patients in hospital. *Clinical Neuropsychological Assessment, 1*, 88-96.  
<http://www.nottingham.ac.uk/iwho/research/publishedassessments.aspx>

# Outcomes

- Reduced post stroke QOL
- Increased healthcare use
- Longer lengths of stay
- Higher mortality
- Increased carer burden

All worse if <65

# Prevention PSD

- Trials of AD have shown reductions in the proportion of people with depression but these have not been significant, research too varied
- Adverse events not systematically monitored and reported

# Non pharm preventive strategies



# Pharm Treatment PSD

- Beneficial for both Remission and Response
- SSRI (e.g. paroxetine or escitalopram) or SNRI (e.g. duloxetine or venlafaxine)
- Tricyclic Antidepressants (TCA) second line

Patients with executive dysfunction have poor response to treatment with antidepressants and a more chronic and relapsing clinical course

# SSRI side effects

- Postural Hypotension
- Hyponatraemia
- Delirium
- Drowsiness
- Falls
- Increased risk of bleeding
- Increased risk of seizures
- GI symptoms (constipation)

# Non-pharm therapies

- Counseling
- Specific psychotherapy
  - Develop problem solving skills
  - Adjustment strategies re impact of stroke
- Acupuncture
- Exercise
- RTMS/TDCS – lack of evidence at this stage – research tool only



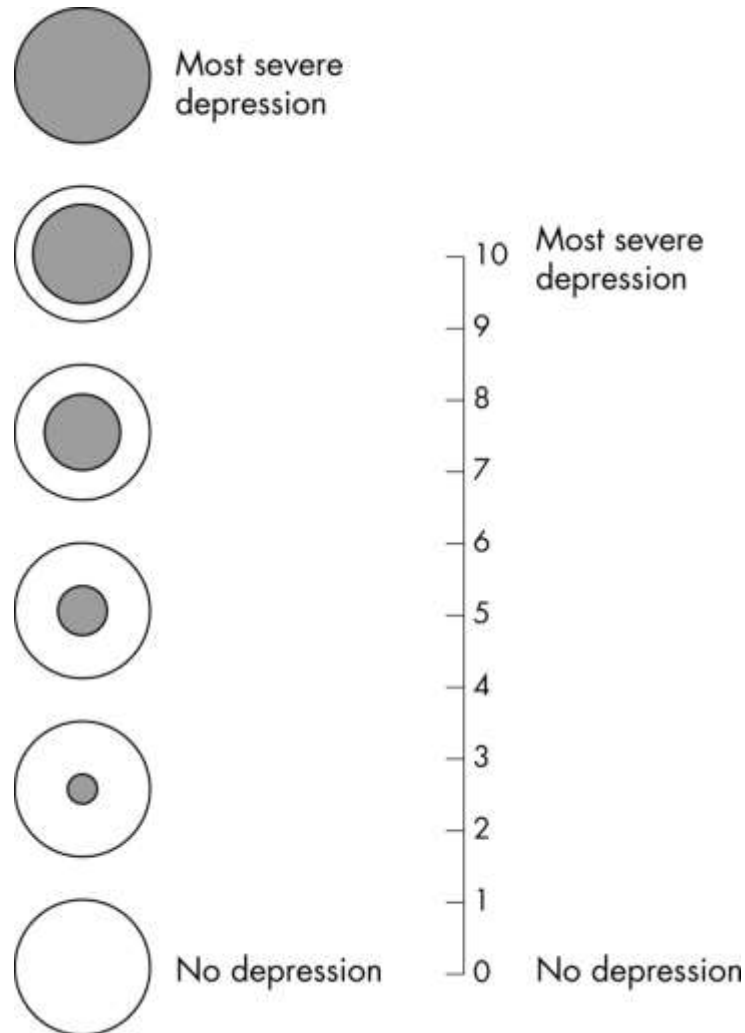
# Education

- Symptomatology and course
- Sense of control
- Develop better self-adjustment abilities
- Accommodate changes resulting from PSD
  
- Education for families-patients with PSD do better when caregivers are empowered to support

# Aphasia and PSD

- 70% of patients with aphasia have depressive symptoms at 3 months
- 62% at 12 months
- SADQ-10
- Feelings thermometers

# The Numbered Graphic Rating Scale (NGRS) and the Depression Intensity Scale Circles (DISCs) are displayed on separate laminated cards.



L Turner-Stokes et al. J Neurol Neurosurg Psychiatry 2005;76:1273-1278

# CALM trial

- Targeted people with aphasia
- Patients allocated to 20 sessions of specific behavioural therapy versus usual care for 3 months
- At 6 months, a 6-point decrease on the SADQ for the intervention group vs 1.9-point decrease for control ( $p=0.01$ )

# Hayhow and Starkstein

***“brief psychosocial therapies focusing on care management, psycho-education, and family support may provide benefits to treat PSD when combined with antidepressant medication. In our opinion, this remains the best therapeutic strategy.”***

# Fluoxetine and Stroke Recovery

- Flame trial 2011
- Effects 2020
- Affinity 2020 5907 patients in total
- Focus 2017

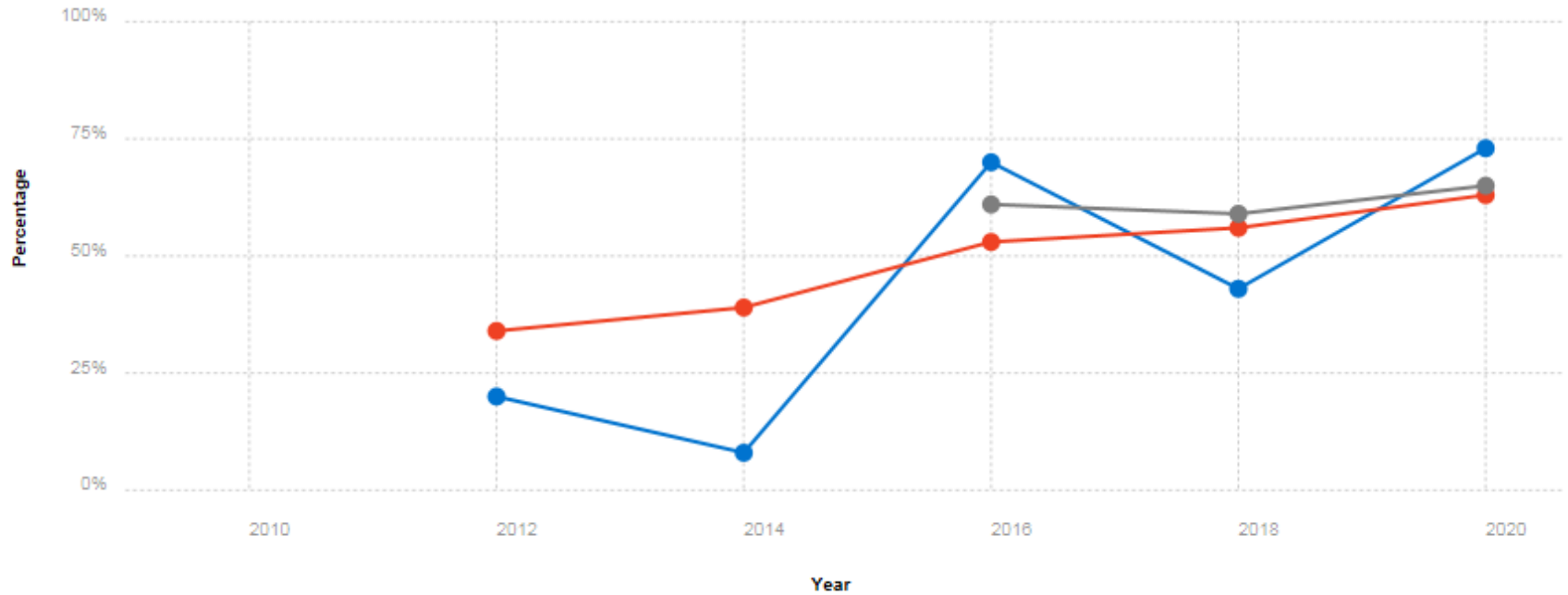
**No effects on mRS compared to placebo**

# V5 experience with PSD

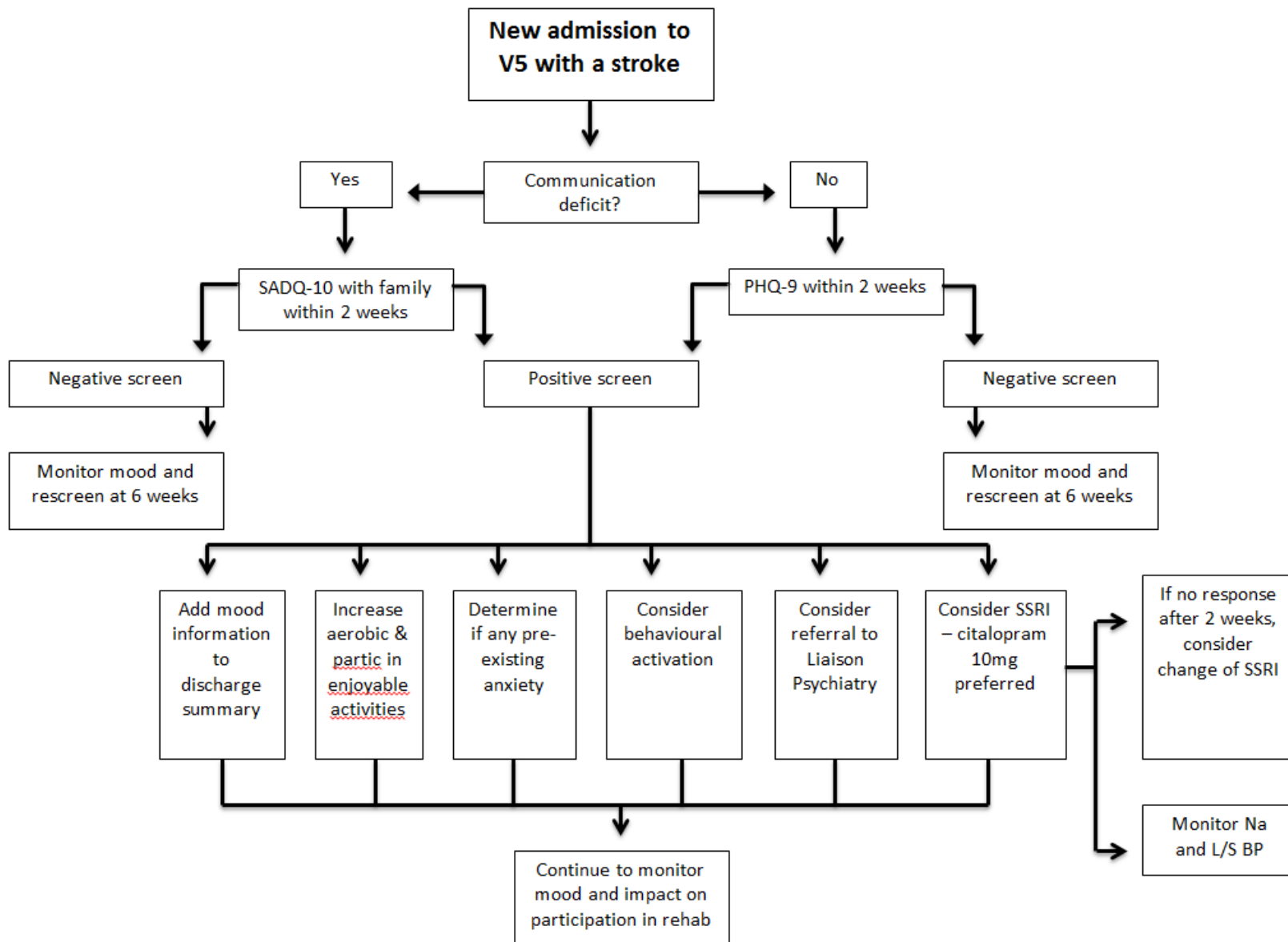
Patient's mood assessed during admission



2020



Source: Stroke Foundation National Audit





# Maria

84yo retired seamstress. Day 18 (R) basal ganglia bleed. Often in bed. Poor engagement in therapy. Daughter is very worried.

***“she only eats if we make her, even if it’s her favourite minestrone.”***

# ***Apathy***

Lack of motivation; failure to initiate goal-directed behaviour

## ***Cognitive***

Loss of interest, curiosity

## ***Emotional***

Reduced emotional reactivity, reward

## ***Behavioural***

Reduced initiative, needs others to structure activities

# Unique & Overlapping Symptoms in Apathy and Depression

A Venn diagram with two overlapping circles. The left circle is light brown and contains symptoms unique to Apathy. The right circle is light blue and contains symptoms unique to Depression. The overlapping area in the center is a darker shade of blue and contains symptoms shared by both conditions.

Sadness  
Worthlessness  
Guilt  
Hopelessness  
Helplessness  
Pessimism  
Suicidal ideation

Anhedonia  
Less enthusiasm  
about usual  
interests  
Increased slowness

Decreased initiative  
Less interest in  
starting  
new activities  
Less interest in world  
Emotional  
indifference  
Decreased emotional  
reactivity

# Apathy

- 34% patients, tend to be older
- Assoc with executive cognitive impairment and neglect
- Increased risk of residential care placement/poor QOL/worse functional outcomes/poor treatment adherence/increased carer distress
- Apathy Evaluation Scales
- Problem solving/strategy training therapy may be of some benefit/evidence poor for pharm strategies

# Anne

68yo teacher. Hx of Global Anxiety Disorder.  
L Frontotemporal stroke. Mod Expressive  
Dysphasia. Often shaking and crying when in  
therapy. Son wants help.

***“She panics whenever she  
needs something and nobody  
understands what she’s  
saying.”***

# Post Stroke Anxiety

- Prevalence 18-24% in first 5 years after stroke
- less in community studies
- Can last longer if assoc with PSD
- If earlier onset, more often assoc with a pre-existing anxiety disorder.
- Assoc with worse social functioning
- Assoc with worse quality of life.
  
- Excessive anxiousness/worry

# Subtypes

- Global Anxiety Disorder
- Agoraphobia 8%
- Simple phobia 2.9%
- Panic Disorder 3.7%

# Screening for PSAD

- Hospital anxiety and depression scale
- General health questionnaire-30
- GAD-7



## Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
<i>Add the score for each column</i>	+	+	+	
Total Score ( <i>add your column scores</i> ) =				

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all \_\_\_\_\_

Somewhat difficult \_\_\_\_\_

Very difficult \_\_\_\_\_

Extremely difficult \_\_\_\_\_

### Scoring

Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety, respectively. When used as a screening tool, further evaluation is recommended when the score is 10 or greater.

Using the threshold score of 10, the GAD-7 has a sensitivity of 89% and a specificity of 82% for GAD. It is moderately good at screening three other common anxiety disorders - panic disorder (sensitivity 74%, specificity 81%), social anxiety disorder (sensitivity 72%, specificity 80%) and post-traumatic stress disorder (sensitivity 66%, specificity 81%).

# Management of PSAD

- Cochrane review could not recommend any treatment (2017)
- Relaxation CD?
- Trial SSRI/SNRI (be aware of side effects)
- ?Mindfulness

# Jim

77yo farmer (still working!). Day 10 post internal capsule infarct. Cried twice during consultant WR yesterday. Also laughed at consultant's jokes!

***“This is ridiculous. I’m a farmer. I don’t cry, and that joke wasn’t funny!!!”***

# Post Stroke Emotionalism

- Emotional lability
- Emotional incontinence
- Pathological crying and laughing
- Pseudobulbar affect
- Involuntary emotional expression disorder

# PSE

- Prevalence 6-34%
- Lessens with time
- Increased risk with subcortical stroke?
- Complex cortico-limbic subcortical-thalamic-pontine-cerebellar system

# PSE treatment

- SSRI
- TCA
- Education +++
- Avoid avoidance coping – may prevent habituation, and lead to a reduction in social support

Tensing facial muscles?!!

# Take home thoughts

- Post stroke mood disorders affect outcomes
- We have evidence for some preventive and treatment strategies
- Some of us have access to clinical/neuropsych support
- How well do we upskill carers and GP's to identify mood disorders post discharge from hospital?
- We need to upskill our rehab teams to tackle some of the non pharm approaches that have evidence
- We need to set up systems to make changes sustainable

# Subacutecare.org.au



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## Motivational Interviewing Resources

### [TRACS WA Motivational Interviewing Videos](#)

This collection of videos depicts motivational interviewing and how it can be used in a subacute context.

### [Motivational Interviewing Network of Trainers \(MINT\)](#)

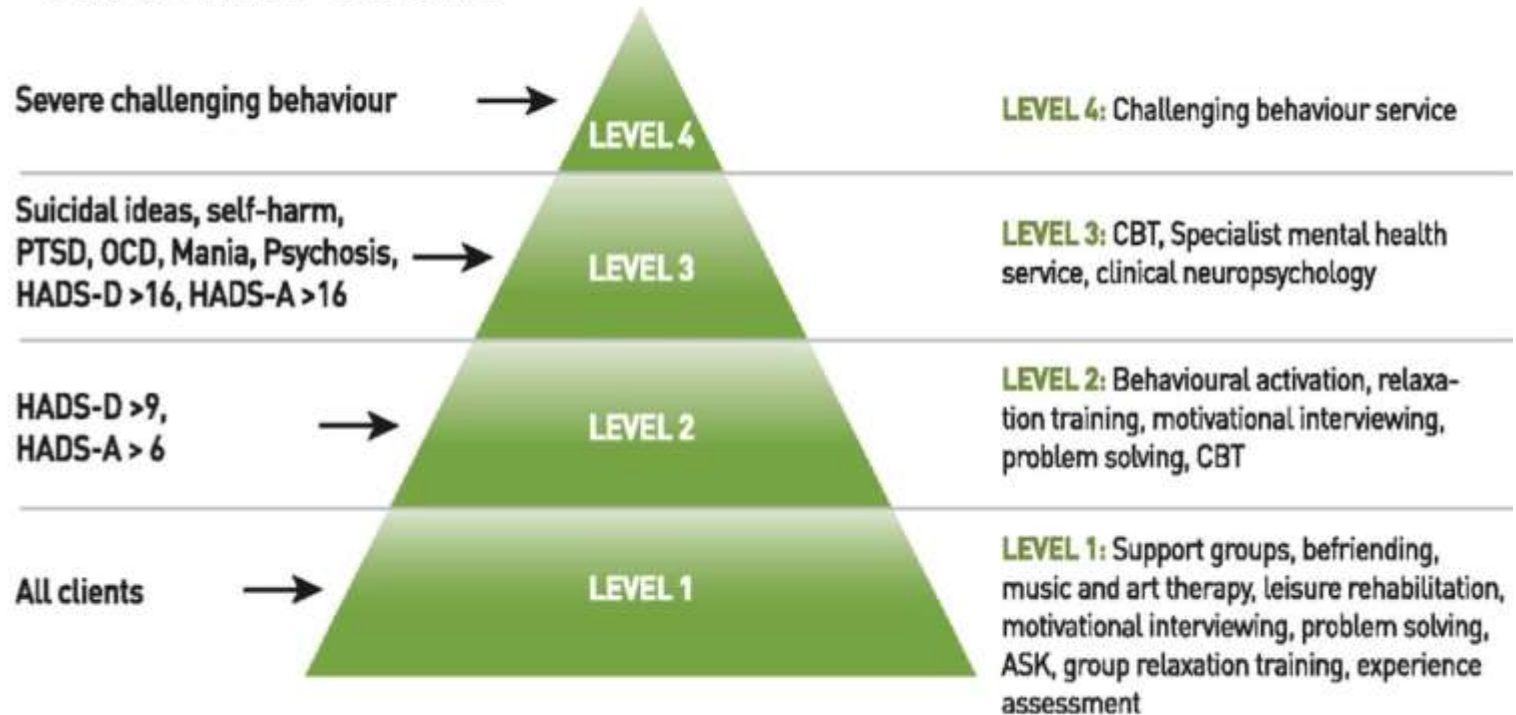
An international organisation committed to promoting high-quality motivational interviewing practice and training



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# Stepped, matched and collaborative psychological care after stroke



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