Measurement-Based Care Training
2. Clinical Scales and Tools

Raymond W Lam, MD, FRCPC, FCAHS

Professor and BC Leadership Chair in Depression Research,
Associate Head, Department of Psychiatry, University of BC.

Director, Mood Disorders Centre, Djavad Mowafaghian Centre for Brain Health.

Executive Director, APEC Digital Hub for Mental Health.

Past Executive Chair, Canadian Network for Mood and Anxiety Treatments (CANMAT).

Vancouver, BC, Canada

r.lam@ubc.ca

@DrRaymondLam

Djavad Mowafaghian CENTRE FOR BRAIN HEALTH

MDC reach

Vancouver CoastalHealth
Promoting wellness. Ensuring care.

CANMAT

APEC

Disclosure Statement 2019-2021

Raymond W. Lam, MD, FRCPC, FCAHS

Ad hoc Consulting/Advisory	Allergan, Asia-Pacific Economic Cooperation, Canadian Network for Mood and Anxiety Treatments (CANMAT), Janssen, Lundbeck, Myriad Neuroscience, Otsuka.
Ad hoc Speaking honoraria	CANMAT, Lundbeck, Lundbeck Institute, Pfizer.
Clinical trials/research (through UBC)	BC Leading Edge Endowment Fund, Canadian Institutes of Health Research, CANMAT, Janssen, Michael Smith Foundation for Health Research, MITACS, Ontario Brain Institute, Unity Health, VGH-UBCH Foundation
Stocks/Options	None
Patents/Copyrights	Lam Employment Absence and Productivity Scale (LEAPS)
Book Royalties	American Psychiatric Press, Cambridge University Press, Informa Press, Oxford University Press.

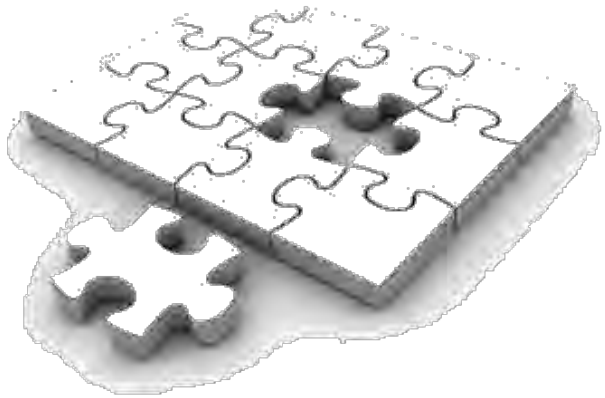
www.DrRaymondLam.ca

Objectives

At the end of this presentation, participants will be able to:

- Describe important factors to consider for using scales in measurement-based care (MBC).
- Use 2 symptom scales for use in MBC for depression.
- Use 2 scales to assess functioning and side effects.

www.WorkingWithDepression.psychiatry.ubc.ca



Features of EMBED MBC Implementation

For Doctors

Scales package

Monitoring form for chart

Medication algorithm

MBC training

For Patients

Patient information

WeChat mood tracking

WeChat "Feeling Better"

For Hospital

Workflow training

Champions

Expert consultation

Icons by DinosoftLabs

Rating Scales for Measurement-Based Care

Rating scales can be used for:

- Screening
- Diagnosis
- Treatment selection
- Treatment adjustments
- Relapse prevention

Lam RW, et al. Ann Clin Psychiatry 2015;27:2-9.

Rating Scales for Measurement-Based Care

Scales must be psychometrically sound

- Reliable
  - Is the scale internally consistent?
  - Are scores stable on test-retest?
- Valid
  - Does the scale measure what it is supposed to measure?
  - If a digital/online version is used, does the scale still perform like the paper-pencil version?
- Sensitive to change
  - Do change in scores reflect clinical improvement or worsening?
  - What is the minimal clinically important change?
- Appropriate to setting and purpose
  - Is the scale feasible to use?
  - Research scales – more items, clinical scales – fewer items.

Lam RW, et al. Ann Clin Psychiatry 2015;27:2-9.

Rating Scales for Measurement-Based Care

Scores must be interpreted within the patient's:

- Context
  - Are there external life events?
  - Where will the scale be administered?
- Language, culture, IQ
  - Has the scale been appropriately translated and validated?
  - Are there cultural differences in responding?
  - Are there cognitive or literacy problems that interfere with responding?
- Individual differences
  - Does the patient tend to over-report or under-report?
  - Are there sensitive questions?

Never treat a number!

Lam RW, et al. Ann Clin Psychiatry 2015;27:2-9.

Examples of Validated Outcome Scales

Outcome	Clinician-Rated	Patient-Rated
Symptoms	• Hamilton Depression Rating Scale (HAM-D, HAM-7) • Montgomery-Asberg Depression Rating Scale (MADRS) • Inventory for Depressive Symptomatology (IDS)	• Patient Health Questionnaire (PHQ-9) • Quick Inventory for Depressive Symptomatology, Self-Rated (QIDS-SR) • Clinically Useful Depression Outcome Scale (CUDOS)
Functioning	• Multidimensional Scale of Independent Functioning (MSIF) • WHO Disability Assessment Scale (WHO-DAS) • Social and Occupational Functioning Assessment Scale (SOFAS)	• Sheehan Disability Scale (SDS) • WHO-DAS, self-rated • Lam Employment Absence and Productivity Scale (LEAPS)
Side effects	• UKU Side Effect Rating Scale	• Frequency, Intensity and Burden of Side Effects Rating (FIBSER)
Quality of life	• Quality of Life Interview (QOLI)	• Quality of Life, Enjoyment and Satisfaction Questionnaire (QLESQ) • EuroQoL-5D (EQ-5D)

Lam RW et al. Can J Psychiatry 2016;61:510-23.

EMBED: 4 Rating Scales for MBC

Symptoms

Depression (PHQ-9)

Anxiety (GAD-7)

Functional disability

Functioning (SDS)

Side Effects

Side Effects (FIBSER)

Selected because:

- Validated and widely used
- Completed by patient
- Short (5-7 minutes)
- Free to use
- Available in Chinese

Icons by Flat Icons

Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
1. Little interest or pleasure in doing things.	☐	☐	☐	☐
2. Feeling down, depressed, or hopeless.	☐	☐	☐	☐
3. Trouble falling/staying asleep, sleeping too much.	☐	☐	☐	☐
4. Feeling tired or having little energy.	☐	☐	☐	☐
5. Poor appetite or overeating.	☐	☐	☐	☐
6. Feeling bad about yourself, or that you are a failure, or have let yourself or your family down.	☐	☐	☐	☐
7. Trouble concentrating on things, such as reading the newspaper or watching TV.	☐	☐	☐	☐
8. 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 more than usual.	☐	☐	☐	☐
9. Thoughts that you would be better off dead or of hurting yourself in some way.	☐	☐	☐	☐

A score of 10 or higher indicates significant depression.

TOTAL SCORE	Scoring Criteria
0-4	None or minimal
5-9	Mild
10-14	Moderate
15-19	Moderately severe
≥20	Severe

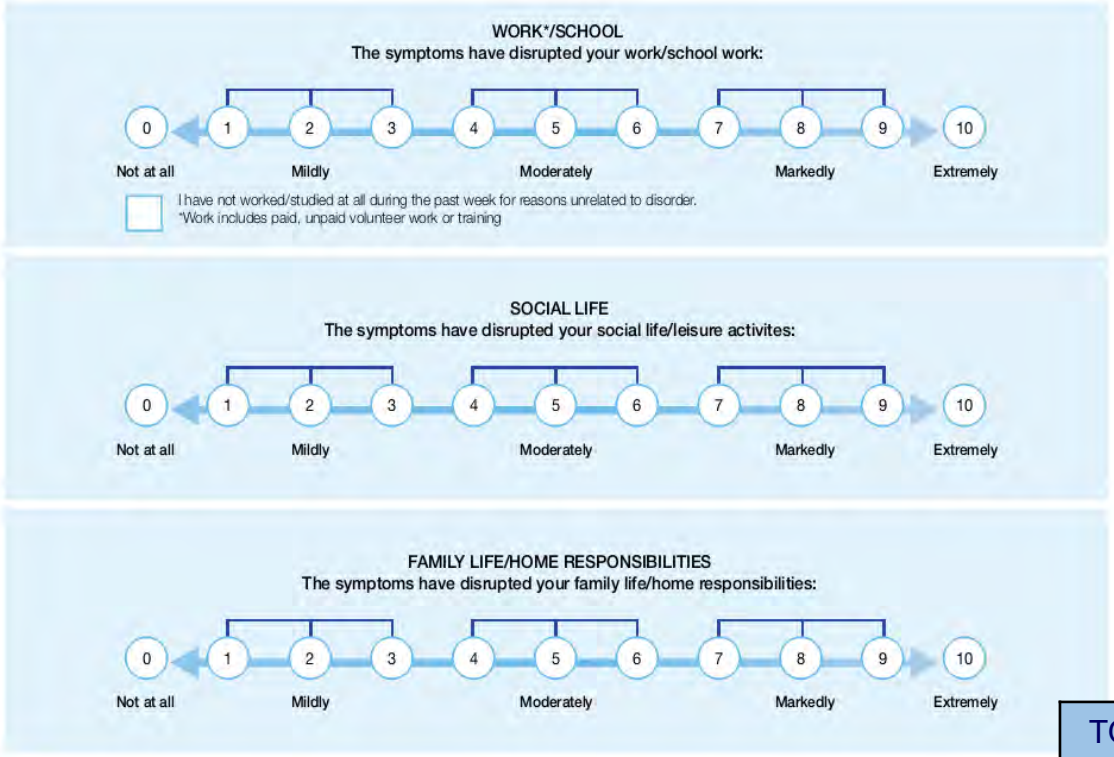
Generalized Anxiety Disorder scale (GAD-7)

Over the last 2 weeks, how often have you been bothered by any of the following problems?	Not at all (0)	Several days (1)	More than half the days (2)	Nearly every day (3)
1. Feeling nervous, anxious or on edge.	☐	☐	☐	☐
2. Not being able to stop or control worrying.	☐	☐	☐	☐
3. Worrying too much about different things.	☐	☐	☐	☐
4. Trouble relaxing.	☐	☐	☐	☐
5. Being so restless it is hard to sit still.	☐	☐	☐	☐
6. Becoming easily annoyed or irritable.	☐	☐	☐	☐
7. Feeling afraid as if something awful might happen.	☐	☐	☐	☐

TOTAL SCORE	Scoring Criteria
0-4	Normal
5-9	Mild
10-14	Moderate
15-21	Severe

A score of 10 or higher indicates significant anxiety.

Sheehan Disability Scale (SDS)



- Assesses impairment in 3 domains:
  - Work/School
  - Social Life
  - Family/Home Responsibilities
- Higher scores indicate greater impairment
- For total score, a change of 3 or more is clinically important

TOTAL SCORE	Scoring Criteria
0-9	None/mild
10-18	Moderate
19-27	Marked
28-30	Extreme

Frequency, Intensity and Burden Side Effect Rating (FIBSER))

1. IN THE PAST WEEK, how much of the time did you experience side effects caused by medications for depression?

0	1	2	3	4	5	6
None of the time (no side effects)	10% of the time	25% of the time	50% of the time	75% of the time	90% of the time	All the time

2. IN THE PAST WEEK, how severe were the side effects to your medications for depression?

0	1	2	3	4	5	6
None (no side effects)	Minimal severity	Mild severity	Moderate severity	Marked severity	Severe severity	Intolerable severity

3. IN THE PAST WEEK, how much have the side effects to your medications for depression interfered with your day-to-day activities?

0	1	2	3	4	5	6
No interference with activities	Minimal interference with activities	Mild interference with activities	Moderate interference with activities	Marked interference with activities	Severe interference with activities	Unable to function

Clinical Relevance: Question 3	
0 – 2	No changes needed
3 – 4	Side effect should be addressed
5 – 6	**Change treatment**

Adapted by Lam RW, with permission from Wisniewski SR et al, J Psychiatr Prac 2006;12:71-9.

Scales Monitoring Form

	Date ⇒						
PHQ-9	Severe; Very severe (16-20; ≥21)						
	Moderate (11-15)						
	Mild (6-10)						
	None/Minimal (0-5)						
GAD-7	Severe (15-21)						
	Moderate (10-14)						
	Mild (5-9)						
	None/Minimal (0-4)						
SDS	Extreme (28-30)						
	Marked (14-27)						
	Moderate (12-16)						
	None/Mild (0-9)						
FIBSER	Marked/Severe (4-6)						
	Mild/Moderate (2-3)						
	None/Minimal (1-2)						

Patient scenarios with MBC versus usual care

1

David is a 45 year old man with depressive symptoms for the past 6 months. He had a previous episode 5 years ago but did not seek help. Now, he is clearly depressed with many symptoms and had to stop working. He has no other medical or psychiatric problems.

Usual Care:

- You diagnose major depressive disorder.
- You start escitalopram 10 mg/d.

PHQ-9	18
GAD-7	12
SDS	26
FIBSER	--

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate he is severely depressed and moderately anxious with marked impairment in functioning.
- You diagnose major depressive disorder.
- You both decide he will start escitalopram 10 mg/d.
- You tell him that the scales can help monitor his response to treatment.

Patient scenarios with MBC versus usual care

2

David returns for follow up at 3 weeks. He has been taking escitalopram 10 mg/d. He says, “I am still not feeling good, doctor. My mood has not improved.”

Usual Care:

- You increase escitalopram to 20 mg/d.

	0	3
PHQ-9	18	13
GAD-7	12	8
SDS	26	23
FIBSER		2

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate early improvement in depression, anxiety and functioning.
- He has mild interference from side effects.
- **You both decide he will stay on escitalopram 10 mg/d.**

Patient scenarios with MBC versus usual care

2

David returns for follow up at 3 weeks. He has been taking escitalopram 10 mg/d. He says, “I am still not feeling good, doctor. My mood has not improved.”

Usual Care:

- You increase escitalopram to 20 mg/d.

	0	3
PHQ-9	18	13
GAD-7	12	8
SDS	26	23
FIBSER		2

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate early improvement in depression, anxiety and functioning.
- He has mild interference from side effects.
- **You both decide he will stay on escitalopram 10 mg/d.**

	0	3
PHQ-9	18	13
GAD-7	12	8
SDS	26	23
FIBSER		6

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate early improvement in depression, anxiety and functioning.
- However, he has severe interference from side effects (agitation, sleep disturbance).
- **You both decide he will switch to mirtazapine.**

Patient scenarios with MBC versus usual care

3

David returns for follow up at 8 weeks. He has been taking escitalopram 10 mg/d. He says, “Thank you, doctor, I am feeling much better.”

Usual Care:

- You keep escitalopram at 10 mg/d.

	0	3	8
PHQ-9	18	13	8
GAD-7	12	8	6
SDS	26	23	17
FIBSER		2	2

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate clear response in depression, anxiety and functioning.
- He still has residual symptoms (energy, concentration) that are interfering with his functional improvement.
- He has mild interference from side effects.
- **You both decide he will increase escitalopram to 20 mg/d.**

Patient scenarios with MBC versus usual care

3

David returns for follow up at 8 weeks. He has been taking escitalopram 10 mg/d. He says, “Thank you, doctor, I am feeling much better.”

Usual Care:

- You keep escitalopram at 10 mg/d.

	0	3	8
PHQ-9	18	13	8
GAD-7	12	8	6
SDS	26	23	17
FIBSER		2	2

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate clear response in depression, anxiety and functioning.
- He still has residual symptoms (energy, concentration) that are interfering with his functional improvement.
- He has mild interference from side effects.
- **You both decide he will increase escitalopram to 20 mg/d.**

	0	3	8
PHQ-9	18	13	8
GAD-7	12	8	6
SDS	26	23	17
FIBSER		2	4

- David completed the scales before being seen.
- You discuss the scores with him: scores indicate clear response in depression, anxiety and functioning.
- He still has residual symptoms (energy, concentration) that are interfering with his functional improvement.
- However, he has moderate interference from side effects.
- **You both decide he will add aripiprazole 2 mg/d.**

Patient scenarios with MBC versus usual care

4

David returns for follow at 8 weeks. He says, “I am feeling better, but I am having some pretty bad side effects from the medication.”

Usual Care:
- You switch the antidepressant to mirtazapine 30 mg/d.

	0	3	8
PHQ-9	18	13	8
GAD-7	12	8	6
SDS	26	23	17
FIBSER		2	3

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate clear response in depression, anxiety and functioning.
- He still has residual symptoms that are interfering with his functional improvement.
- He has **moderate interference from side effects**.
- **You both decide he will take escitalopram at bedtime.**

	Frequency	Intensity	Interference
FIBSER	2 (25%)	4 (Marked)	3 (Moderate)

Patient scenarios with MBC versus usual care

5

David returns for follow up at 12 weeks. He has been taking escitalopram 20 mg. He says, “I am feeling well and almost back to my normal self!”

Usual Care:
- You maintain the medication.

	0	3	8	12
PHQ-9	18	13	8	4
GAD-7	12	8	6	2
SDS	26	23	17	12
FIBSER		2	3	1

- David completes the scales before being seen.
- You discuss the scores with him: scores indicate clear remission in depression and anxiety.
- He still has **residual impairment in work functioning**.
- He has only mild interference from side effects.
- **You both decide he will add cognitive-behavioural therapy.**

	Work	Social	Home
SDS	6 (Moderate)	3 (Mild)	3 (Mild)

Scales Monitoring Form - David

	Date ⟹	0	3	8	12		
PHQ-9	Severe; Very severe (16-20; ≥21)	18					
	Moderate (11-15)		13				
	Mild (6-10)			8			
	None/Minimal (0-5)				4		
GAD-7	Severe (15-21)	12					
	Moderate (10-14)						
	Mild (5-9)		8	6			
	None/Minimal (0-4)				2		
SDS	Extreme (28-30)	26	23				
	Marked (14-27)			16			
	Moderate (12-16)				12		
	None/Mild (0-9)						
FIBSER	Marked/Severe (4-6)						
	Mild/Moderate (2-3)		2	3			
	None/Minimal (1-2)				1		

Summary

- These brief case examples illustrate how measurement-based care can aid treatment decisions.
- Symptom remission is an important goal for acute treatment, but functional recovery is also important.
- Scale scores should be used like laboratory tests – they must be interpreted with all other clinical information when making treatment decisions.
- Monitoring of scale scores can help with continuity of care in busy clinics.