



Improving Mental Health Care with Digital Innovations: Exploring Barriers and Facilitators for Development and Adoption

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Agenda

- Introduce concept of measurement based care
- Overview of select sections of national and provincial standards for depression and anxiety treatment.
- Discussion of measurement based care.
 - Examples.
 - Framework.
- Common visuals for measurement based care.
 - Integration into electronic medical record (EMR).
- Barriers and facilitators to measurement based care in mental health and to integration in electronic medical record.
- Case study example.
- Leadership lessons learned.
- Q&A, discussion period.

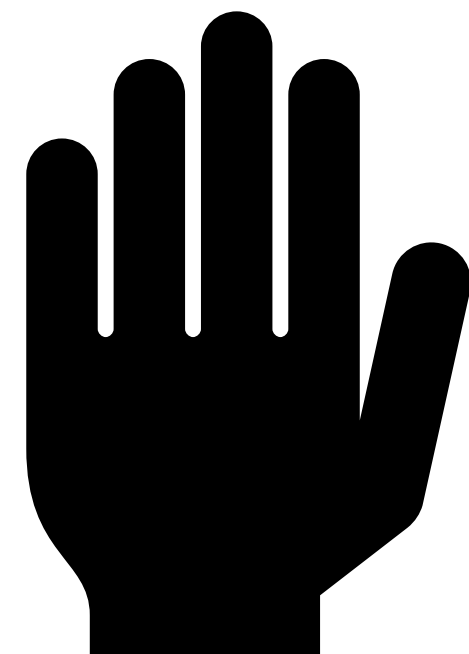
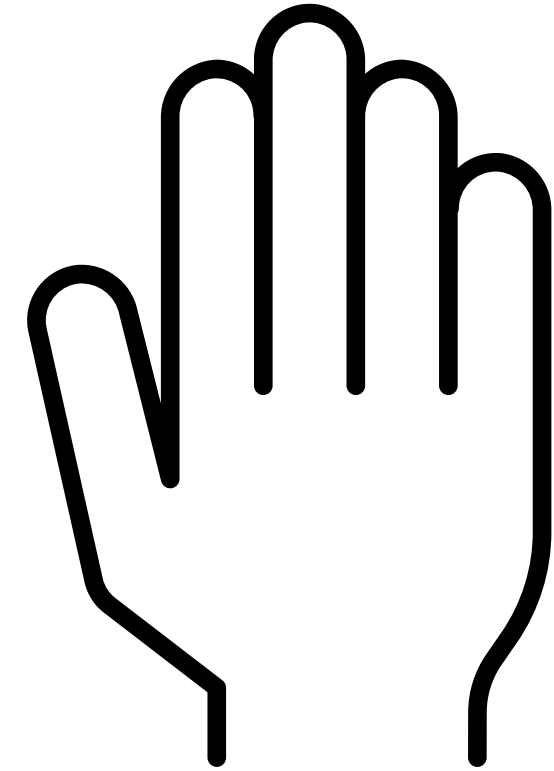
Conflict of Interest Statement

Main Roles:

Clinical Lead, Clinical & Health Psychologist, St. Josephs Healthcare Hamilton Assistant Professor, McMaster University, Department of Psychiatry and Behavioural Neurosciences

Nature of Relationship(s)	Name of FOR-PROFIT or NOT-FOR-PROFIT Organization(s)	Description of Relationship(s)
Any direct financial relationship including receipt of honoraria or in-kind compensation	Oakville Centre for Cognitive Therapy Layla Care	Psychologist at this setting Psychologist at this setting
Membership on advisory board or speakers' bureaus	Layla Care UpBeing Inc	I am a clinical advisory board member for this company
Funded grants, research, or clinical trials	TD Pooler Grant Canadian Institutes of Health Research Grant	Grant received as PI Grants received as PI and co-PI
Patents on a drug, product, or device	N/A	---
All other investments or relationships that could be seen by a reasonable, well-informed participant as having the potential to influence the content of the educational activity	Chair of Hamilton Scleroderma Group	I chair a non-for-profit (not formally registered) organization.

Attendee Roles



Measurement Based Care as the Standard

- Measuring growth during pregnancy both in the mother and the fetus.
- Treating hypertension – measuring blood pressure (+sharing with patient).
- Treating diabetes – measuring blood sugar (+sharing with patient).
- Consider finances.. Would you consider financial investments going well/not - well based on what your perspective is without seeing any data?




National and Provincial Standards


Canadian Network for Mood and Anxiety Treatments (CANMAT) 2023 Update on Clinical Guidelines for Management of Major Depressive Disorder in Adults: Réseau canadien pour Question 5. How is Treatment Monitored?

Q.5.a. What is Measurement-Based Care?

MBC is an evidence-based practice that uses routine outcome measurement and feedback to guide clinical decisions. Practically, MBC in psychiatry comprises 3 components: (a) regularly using validated outcome scales during patient encounters; (b) reviewing the scale scores with patients; and (c) using the scale scores alongside clinical assessment to support collaborative decision-making.

Several high-quality trials and systematic reviews show that MBC improves medication adherence and outcomes, especially in the pharmacological treatment of MDD .

MBC is also useful with psychotherapy, although many of the supporting studies involve mixed-diagnosis outpatient samples and use more general outcome measures, such as the outcome questionnaire. In these studies, MBC was associated with enhanced patient engagement, higher intervention accuracy, and shorter treatment

duration .

Importantly, MBC can identify nonresponders who might need additional therapeutic techniques or sessions, or who would benefit from alternative treatments. Across treatment modalities, MBC can enhance the therapeutic alliance and facilitate SDM. Patients become active participants in monitoring their treatment, which helps them relate collaboratively with their care providers. For these reasons, the use of MBC is recommended in the management of MDD ([Table 5.1](#)).

Measurement Based Care as the Standard

- Measuring mental health symptoms continues to NOT be the norm.
 - 12% of clinicians managing mental health concerns use measurement based care



**“Clinicians overestimate
their clients’ progress by
an average of 65%.”**

Measurement Based Care Description

- Measurement based care for mental health involves:
 - clinicians and clients using patient-reported data to track progress and **inform treatment decisions**** ;
 - empowering clinicians and clients by improving communication and collaboration;
 - identifying harms and lack of symptom improvement / progress toward goals to be identified more rapidly.
 - Self-report data suggesting that **38%** of patients experienced adverse effects from **SSRIs** and 25% of these patients reported that their adverse effects were a significant burden
 - **12%** of patients report harm/adverse events from therapy – this number is cut in half with MBC.

Measurement Based Care—Research

Example of benefits that review have found...

Patients report:	Clinicians report:	Healthcare organizations report:
<ul style="list-style-type: none">• Increased knowledge about diagnosis• Recognize improvement during treatment• Increased feelings of being in tune with symptoms• Validates feelings• Increased empowerment	<ul style="list-style-type: none">• More quickly identifies when treatment should be changed• Facilitates collaborative care• More confidence in patient statements of progress• Can guide decisions for treatment in the session	<ul style="list-style-type: none">• Ability to change programming• Improved sense of impact of care• Shorter treatment duration

“IMPACT trials found that improvement in depression outcomes occurred when the same depression measure was administered weekly and the attending psychiatrist used the data to make treatment recommendations across a team (nurse practitioners, case workers, etc.) (Unutzer et al., 2002)”



Measurement Based Care—Is NOT

- Collecting outcomes at pre - and post - treatment;
- Collecting outcome measures without review with patients;
- Using data for research;
- Used for considering clinician effectiveness.

Measurement Based Care

Collect, Share, Act : A Transtheoretical
Model for Actioning Evidence -Based Care
in Mental Health Treatment

COLLECT



SHARE



ACT



Measurement Based Care- COLLECT



Clients are more likely to follow through on a plan of care they helped create.

MBC allows you to establish a shared language with the client with which to discuss treatment.

Patient-reported outcome measures help clinicians and clients select treatment targets that align with the client's goals.

Frequent use of measure data can signal when treatment isn't working and help the clinician and client set a plan to get back on track.



explain the
R A T I O N A L E
for using measures in your initial session or early on in treatment. Explain how you'll be using the measures together in treatment.

**ENGAGING THE CLIENT
IN THE MBC PROCESS EARLY ON
IS KEY.**



COLLECT



S E L E C T

In addition to measures required by your program (if applicable), consider additional measures you and the client agree are relevant for their treatment, symptom management, and/or functional goals.

**LINKING THE MEASURES TO THE
CLIENT'S GOALS ENHANCES CARE.**



A D M I N I S T E R
the patient-reported outcome measures regularly as a standard part of care.

**REPEAT THE MEASURES
FREQUENTLY SO THAT THE
SCORES CAN GUIDE YOUR PLAN
OF CARE OVER TIME.**

Measurement Based Care- SHARE



Measurement Based Care ACT

APPRAISE

The scores on the patient-reported outcome measures inform your evaluation of how treatment is going.

Do you see improvement, worsening, or lack of change?



**WHAT DO THESE
RESULTS MEAN FOR
THIS CLIENT,
SPECIFICALLY?**

BRAINSTORM

Together with the client, generate possible steps or adjustments in treatment you can make in light of your appraisal.

Utilize all the clinical data—the scores, the client's input, and your own clinical impressions—to generate ideas.



**THE CONVERSATION
IS KEY.**

CHOOSE

Engage the client in a conversation to collaboratively decide on a plan of action from among the possibilities.

Both you and the client get to weigh in on this decision.



**WHAT OPTION BEST
MEETS YOUR SHARED
GOALS OF
TREATMENT?**

“The heart of ACT* in MBC lies in the transparent collaborative conversation you have with the client about what the measures and scores mean and how/if you want to adjust treatment”.



Visuals for MBC

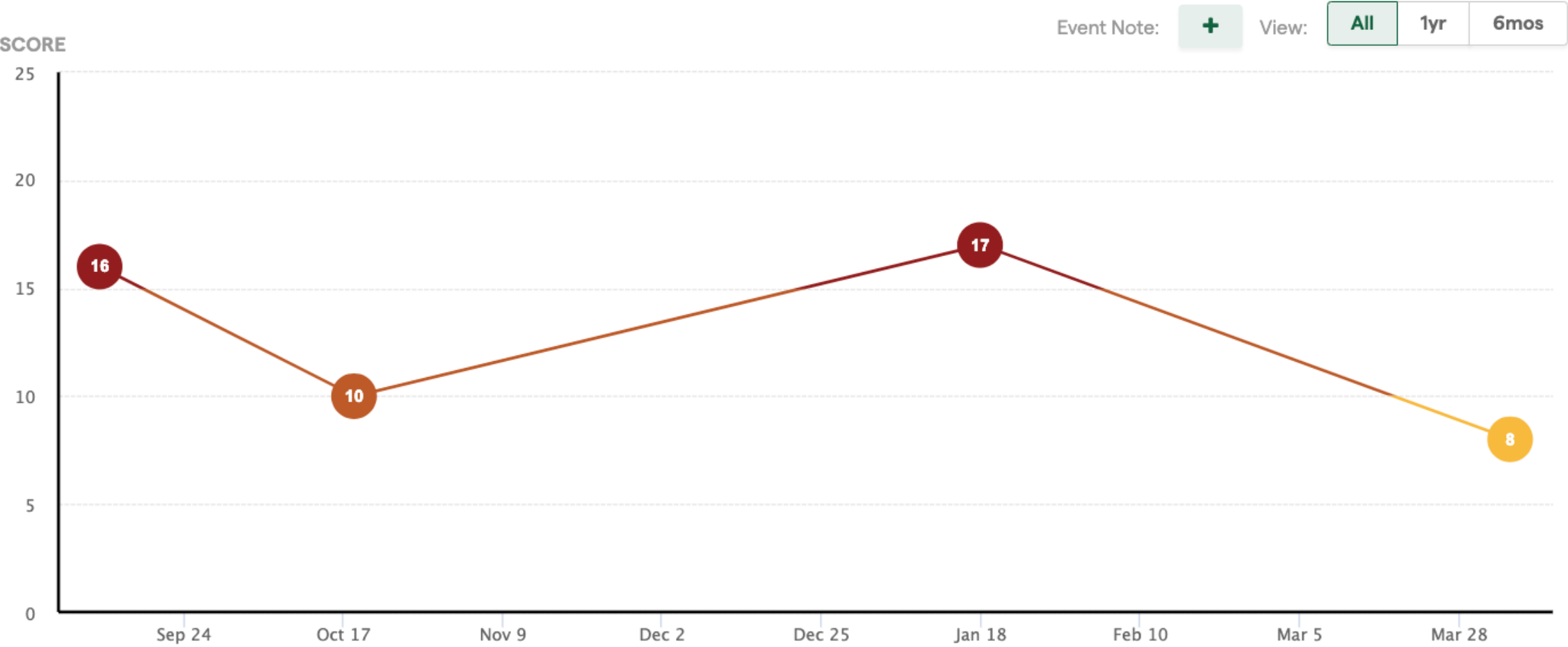
Measurement Based Care- Example

Generalized Anxiety (GAD 7)

Patient Assessments for

April 5, 2023 Score: **8** out of 21 Mild anxiety symptoms

[View all data](#)



APRIL 5 SCORES [?](#)

Intro: Over the last 2 weeks, how often have you been bothered by the following problems.

1	Feeling nervous, anxious or on edge	1
2	Not able to control worrying	1
3	Worrying about different things	2
4	Trouble relaxing	1
5	Being so restless it is hard to sit still	1
6	Becoming easily annoyed or irritable	1
7	Feeling afraid as if something awful might happen	1
Total Score		8

SCORING TRENDS [?](#)

	Sep 12	Oct 19	Jan 18	Apr 5
	2	2	3	1
	2	2	3	1
	3	2	3	2
	3	1	2	1
	2	1	2	1
	2	1	2	1
	2	1	2	1
	16	10	17	8

SCORING GUIDE [?](#)

Individual Responses	
0	- Not at all
1	- Several days
2	- More than half the days
3	- Nearly every day

Range	Symptom Severity
0-4	Minimal or no anxiety symptoms
5-9	Mild anxiety symptoms
10-14	Moderate anxiety symptoms
15-21	Severe anxiety symptoms

[Back](#)

[Forward](#)

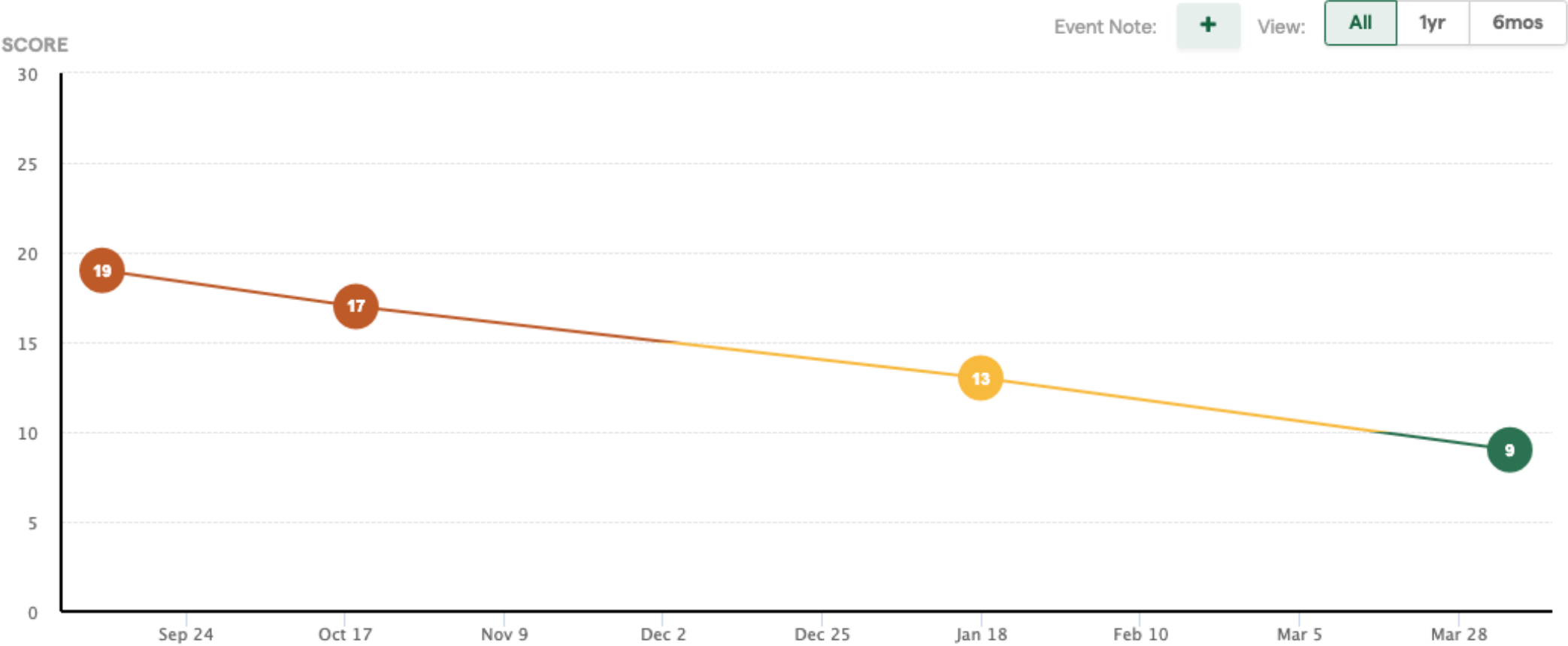
Measurement Based Care- Example

Depression (PHQ 9)

Patient Assessments for

April 5, 2023 Score: **9** out of 27 **Mild depression symptoms**

[View all data](#)



APRIL 5 SCORES [?](#)

Intro: Over the last 2 weeks, how often have you been bothered by the following problems.

1	Little interest or pleasure in doing things	1
2	Feeling down, depressed, or hopeless	1
3	Trouble sleeping, or sleeping too much	1
4	Feeling tired or having little energy	1
5	Poor appetite or overeating	1
6	Feeling bad about yourself or like a failure	2
7	Trouble concentrating	1
8	Moving or speaking slowly / being fidgety or restless	1
9	Suicidal thoughts	0
Total Score		9

SCORING TRENDS [?](#)

	Sep 12	Oct 19	Jan 18	Apr 5
	2	2	2	1
	2	2	2	1
	2	2	1	1
	2	2	2	1
	2	2	2	1
	3	2	2	2
	3	2	1	1
	3	2	1	1
	0	1	0	0
	19	17	13	9

SCORING GUIDE [?](#)

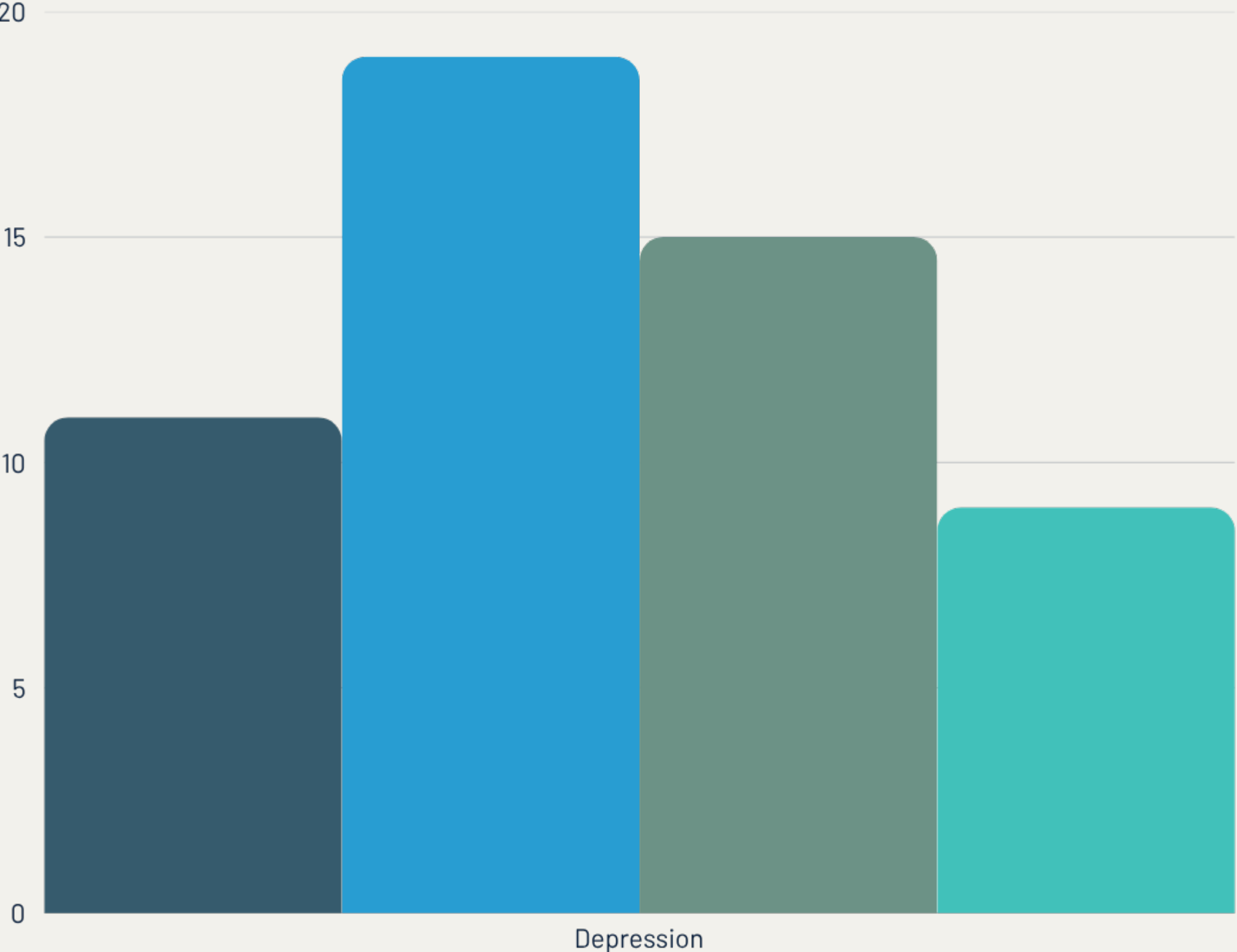
Individual Responses	
0	- Not at all
1	- Several days
2	- More than half the days
3	- Nearly every day

Range	Symptom Severity
0-4	Minimal or no depression symptoms
5-9	Mild depression symptoms
10-14	Moderate depression symptoms
15-19	Moderately severe depression symptoms
20-27	Severe depression symptoms

[Back](#)

[Forward](#)

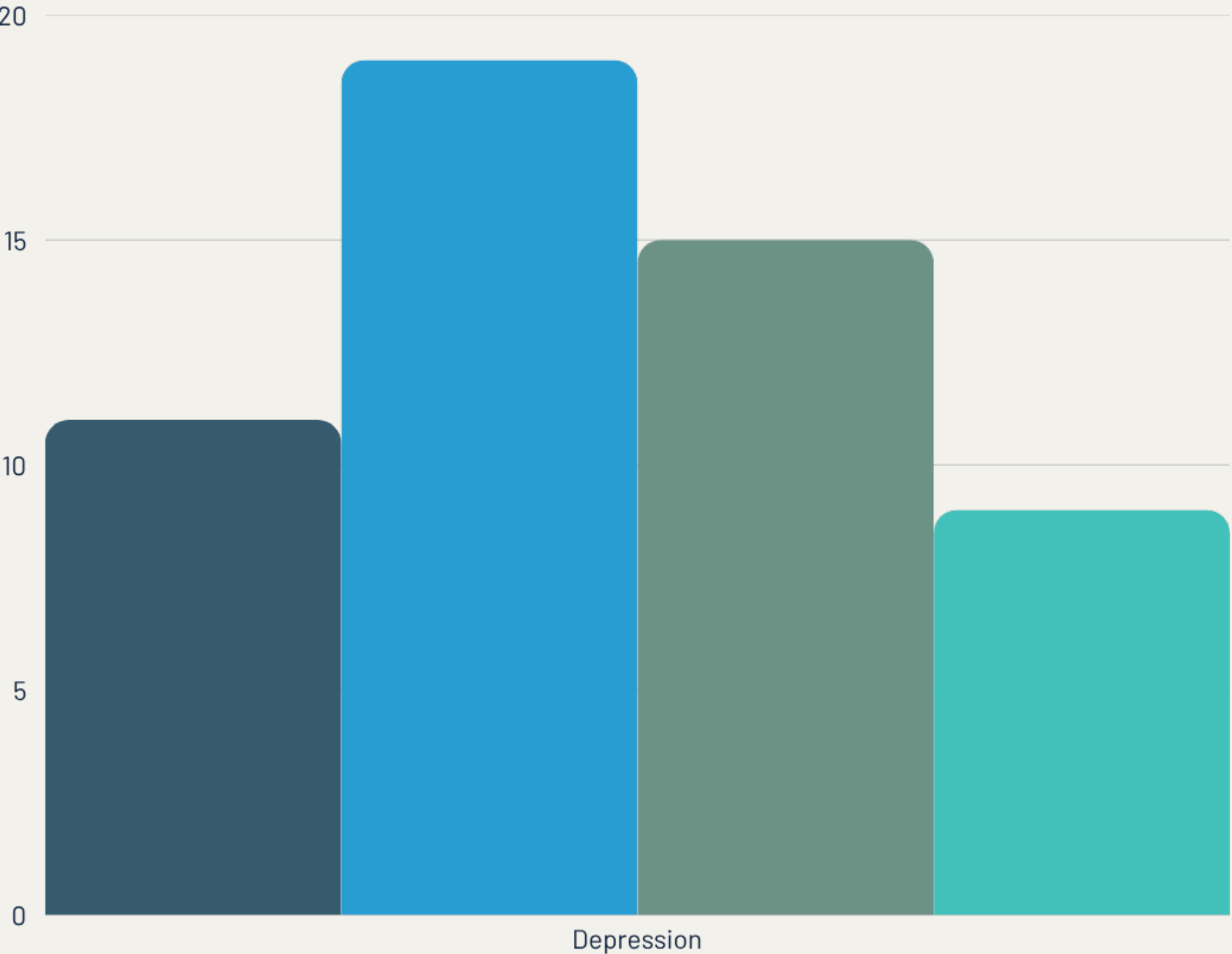
Measurement Based Care- Example



Clinically meaningful changes involve a change of at least 3 points. A lower number means fewer symptoms, a higher number means more symptoms.

	Pre-Treatment	Mid Treatment (1)	Mid Treatment (2)	Post Treatment
Depressive Symptoms	11	19	15	9

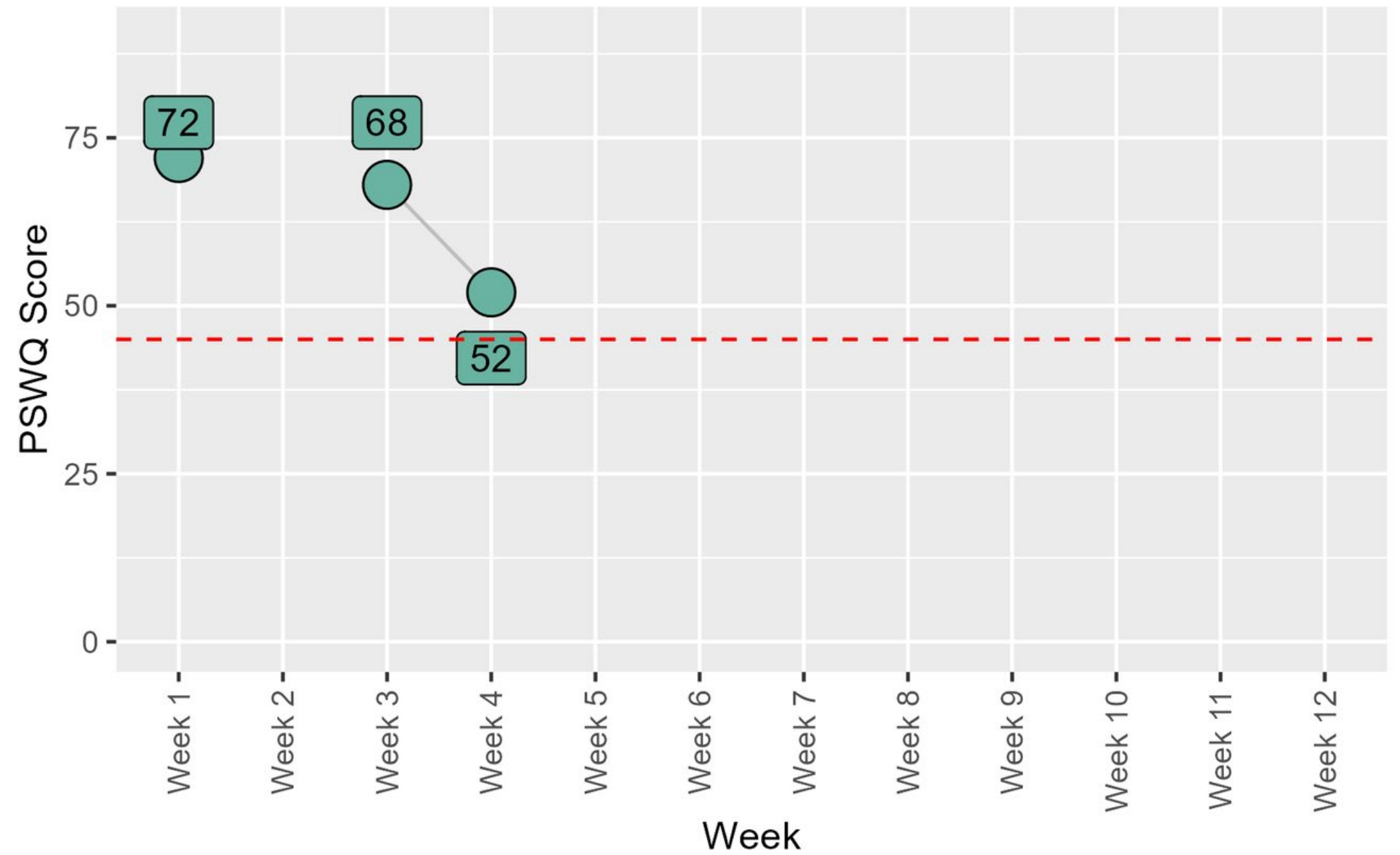
Measurement Based Care- Example



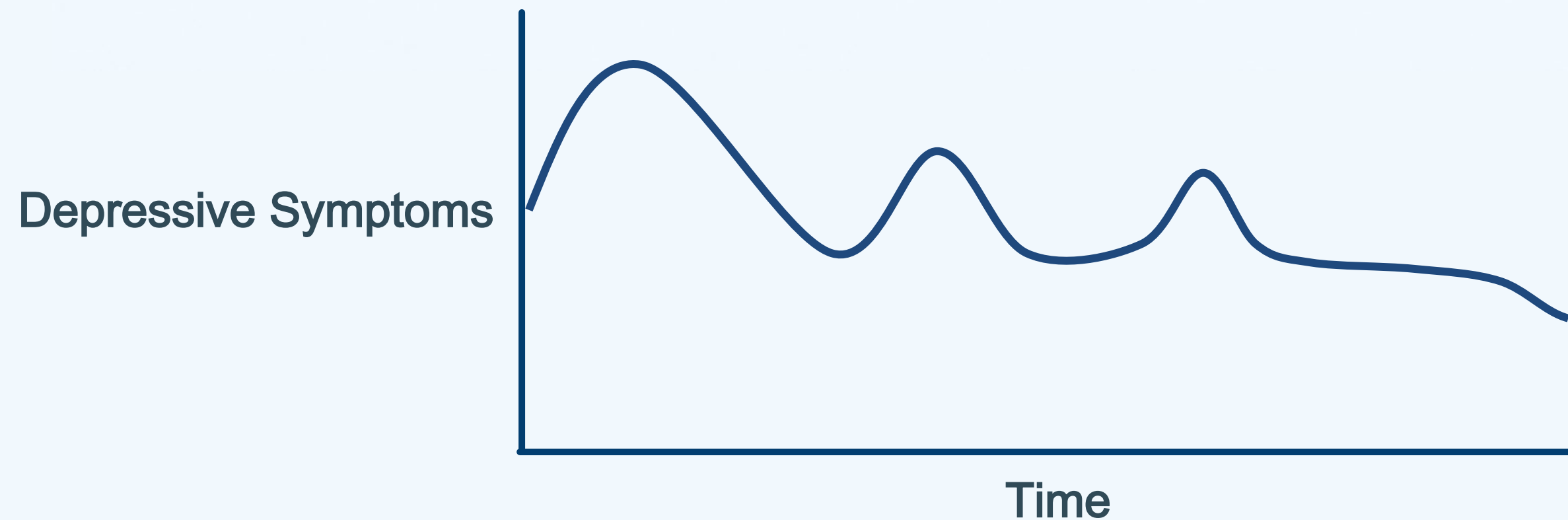
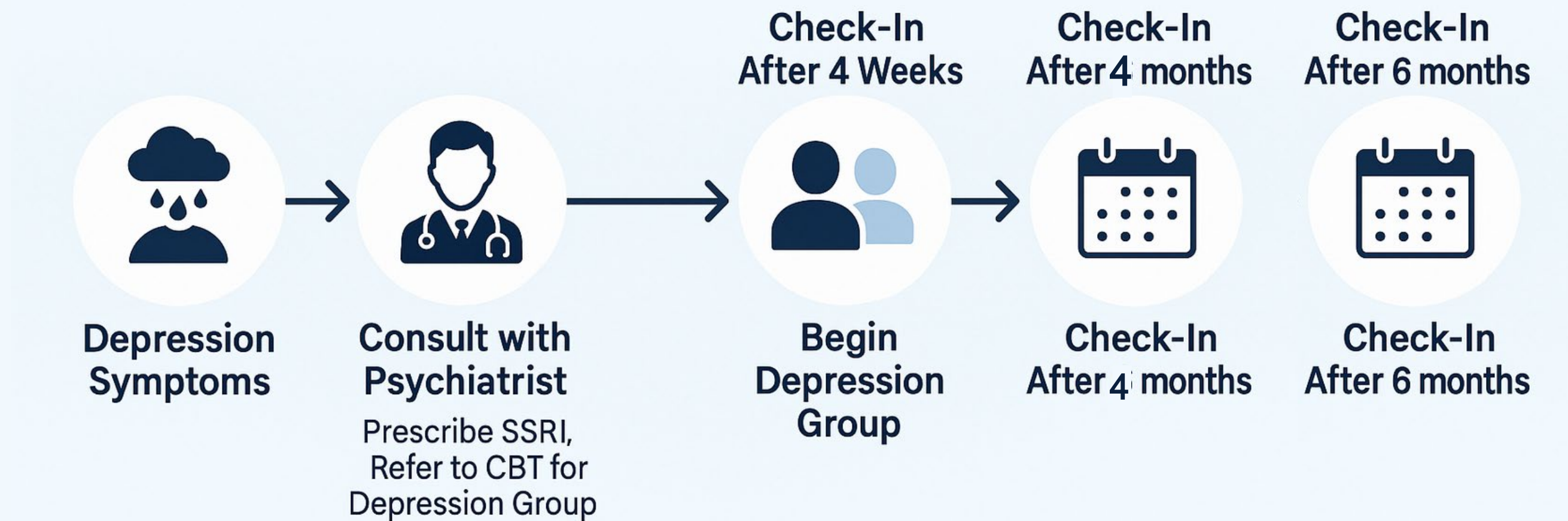
Clinically meaningful changes involve a change of at least 3 points. A lower number means fewer symptoms, a higher number means more symptoms.

	Pre-Treatment	Mid Treatment (1)	Mid Treatment (2)	Post Treatment
Depressive Symptoms	11	19	15	9

Measurement Based Care- Example



DISCUSSION



**What Would Make This
Information More Meaningful
for Your Organization?**

CASE EXAMPLE

Pre-State Measurement Based Care

Inpatient: Measures collected by paper/pen and transferred to flowsheet at admission and discharge. Measures stayed in flowsheet.

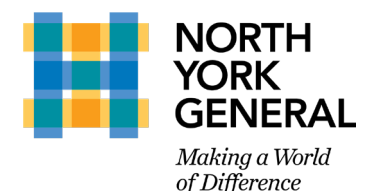
Outpatient: Measures collected in REDCap. Completion rate ~18%. Infrequently reviewed by some clinicians.





Implementing Depression and Anxiety Quality Standards

Program co-leads



Evidence2Practice Ontario is funded as part of the provincial government's Digital First for Health Strategy.

Evidence2Practice Digital Intervention Objectives



Support clinicians with a digitized means to document and trend a patient's PHQ-9 and GAD-7 scores, enabling measurement-based care to guide treatment decisions

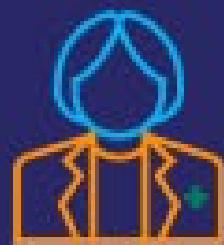


Ensure community care providers and patients receive a discharge summary that includes the necessary content for a seamless transition in care ²⁹

Recap: Evidence2Practice Ontario



Our vision is a future where people get the best evidence-based care by supporting clinicians with easy-to-use tools & supports at the point of care



Ensure clinicians have access to best practice tools & supports

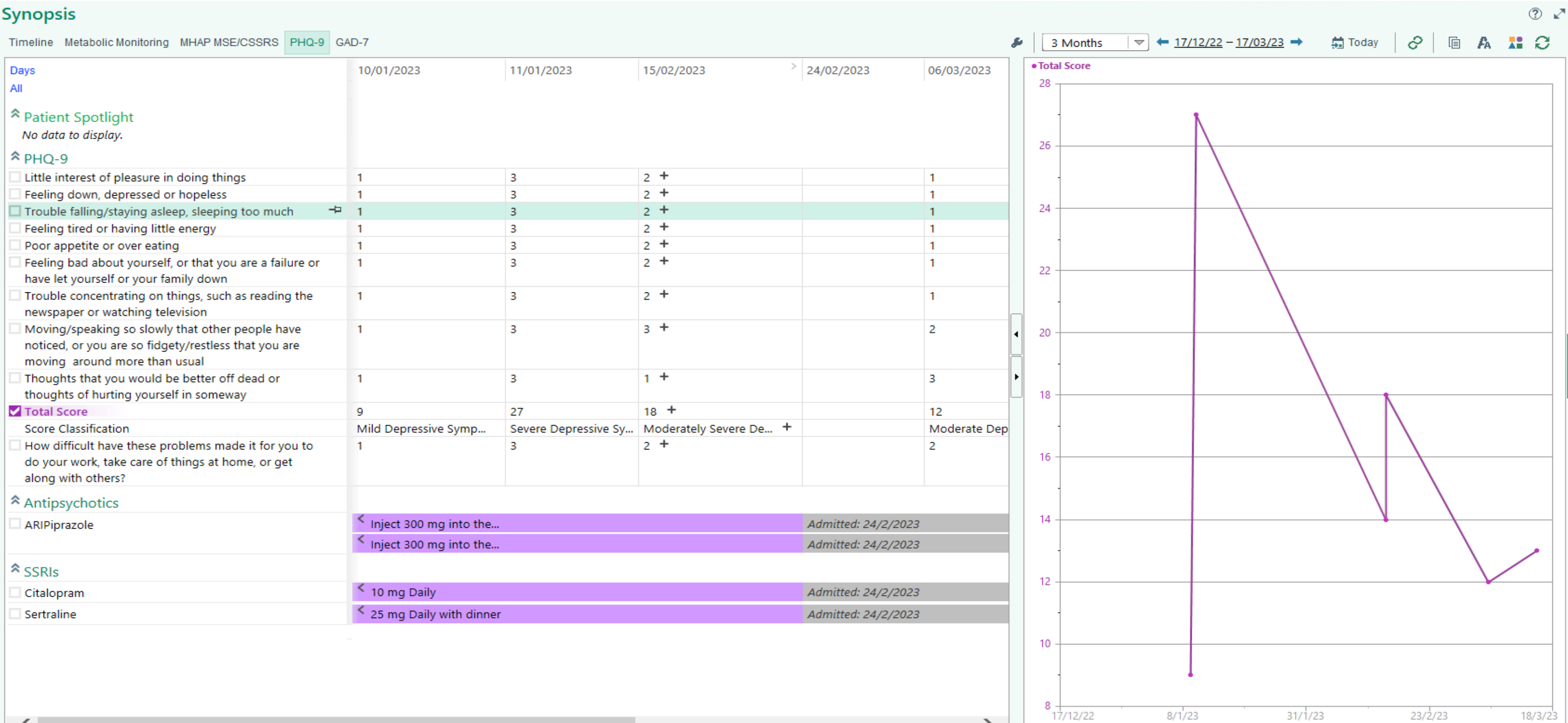


Reduce the effort required by individuals and organizations



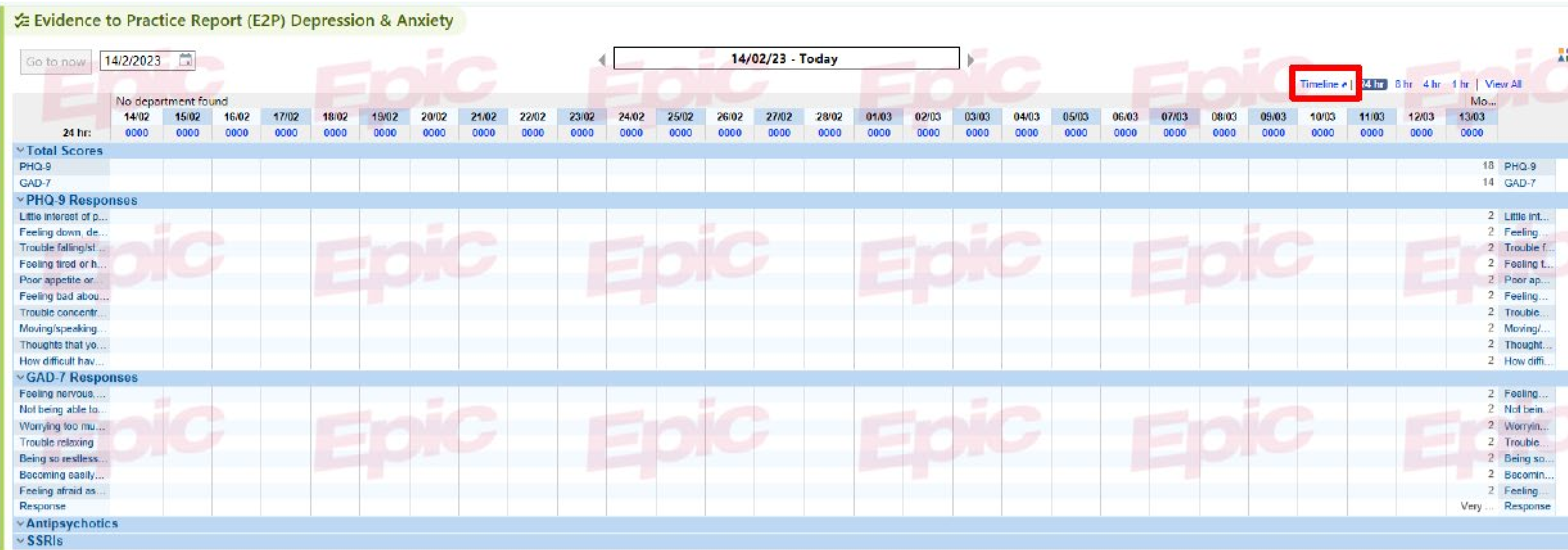
Improve patient and caregiver experience

Synopsis of Scores



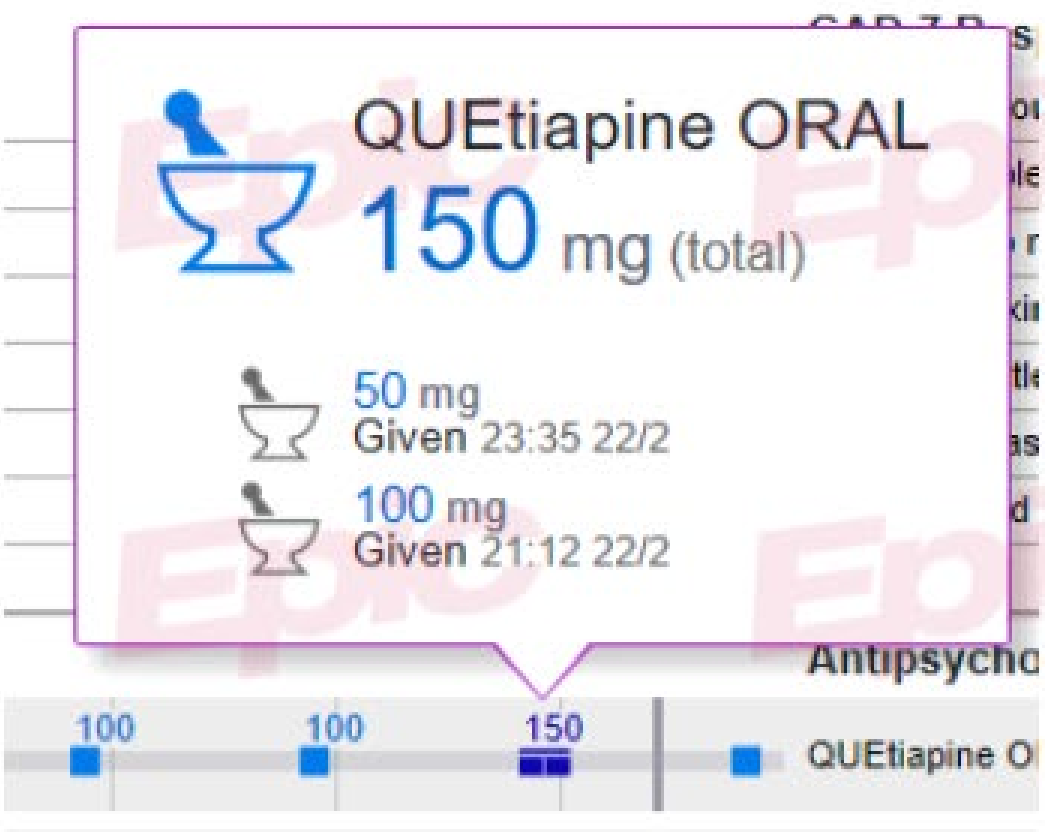
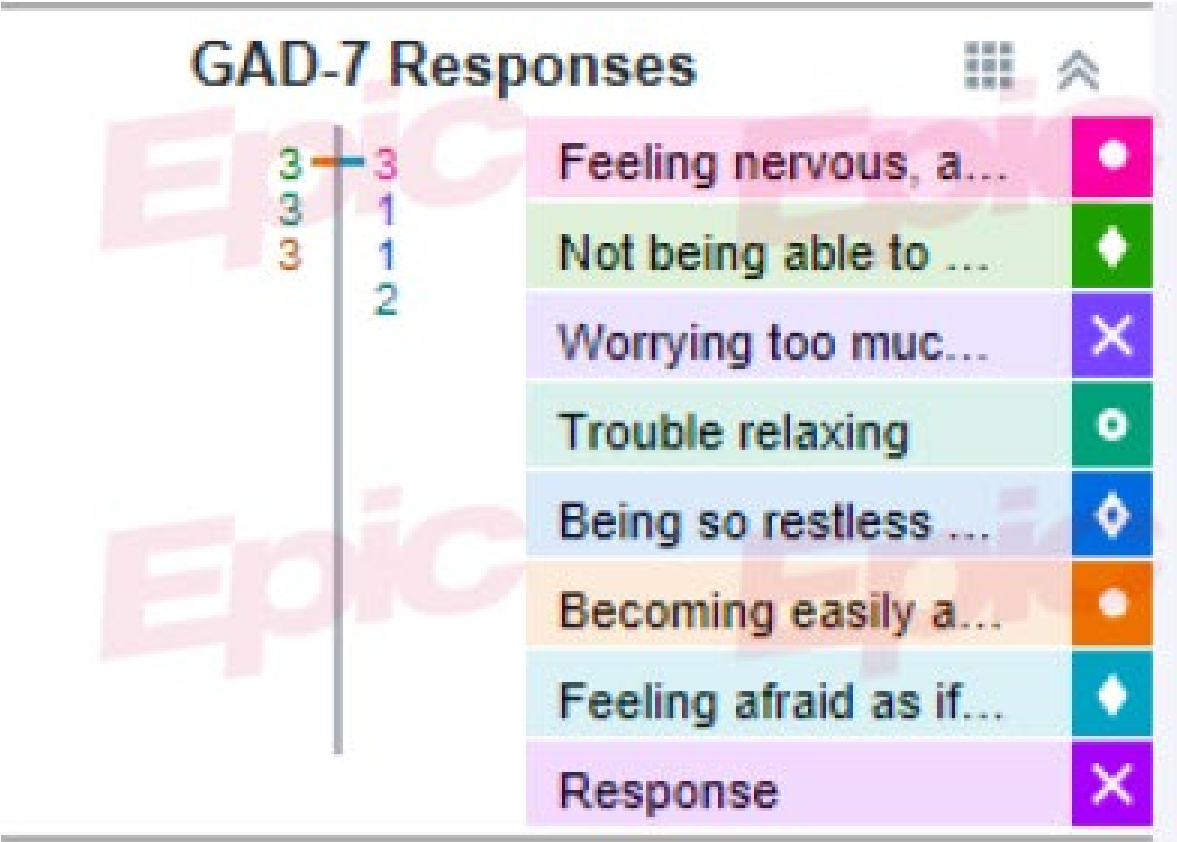


PHQ-9/GAD-7 Trended Scores Dashboard





PHQ-9/GAD-7 Trended Scores Dashboard - Details



The clinician can hover over the timeline to see more details.

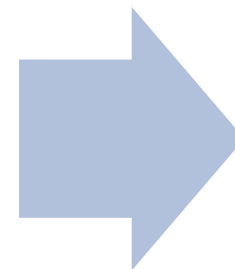


St. Joseph's
Healthcare  Hamilton

Digital Solutions
Project Management Office

Inpatient Pre-State

Complete on
flowsheets at
admission



Complete on
flowsheets at
discharge

Inpatient Post Implementation



Complete on flowsheets at admission



Scores on clinician whiteboards and considered in weekly rounds



Measures collected every 2 weeks – viewed on EMR overlapped with medication



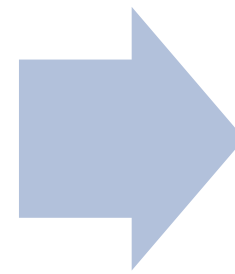
Measures collected at discharge



Scores autopulled and interpreted for patient and family doctor discharge summaries

Outpatient Pre-State

Measures collected
on REDCap at
admission and sent
weekly



Some clinicians
would view scores

Outpatient Post Implementation



Rationale for measures discussed and sent out on REDCap at start of group



Measures collected every 4 weeks – graphs created, discussed, and sent to patients



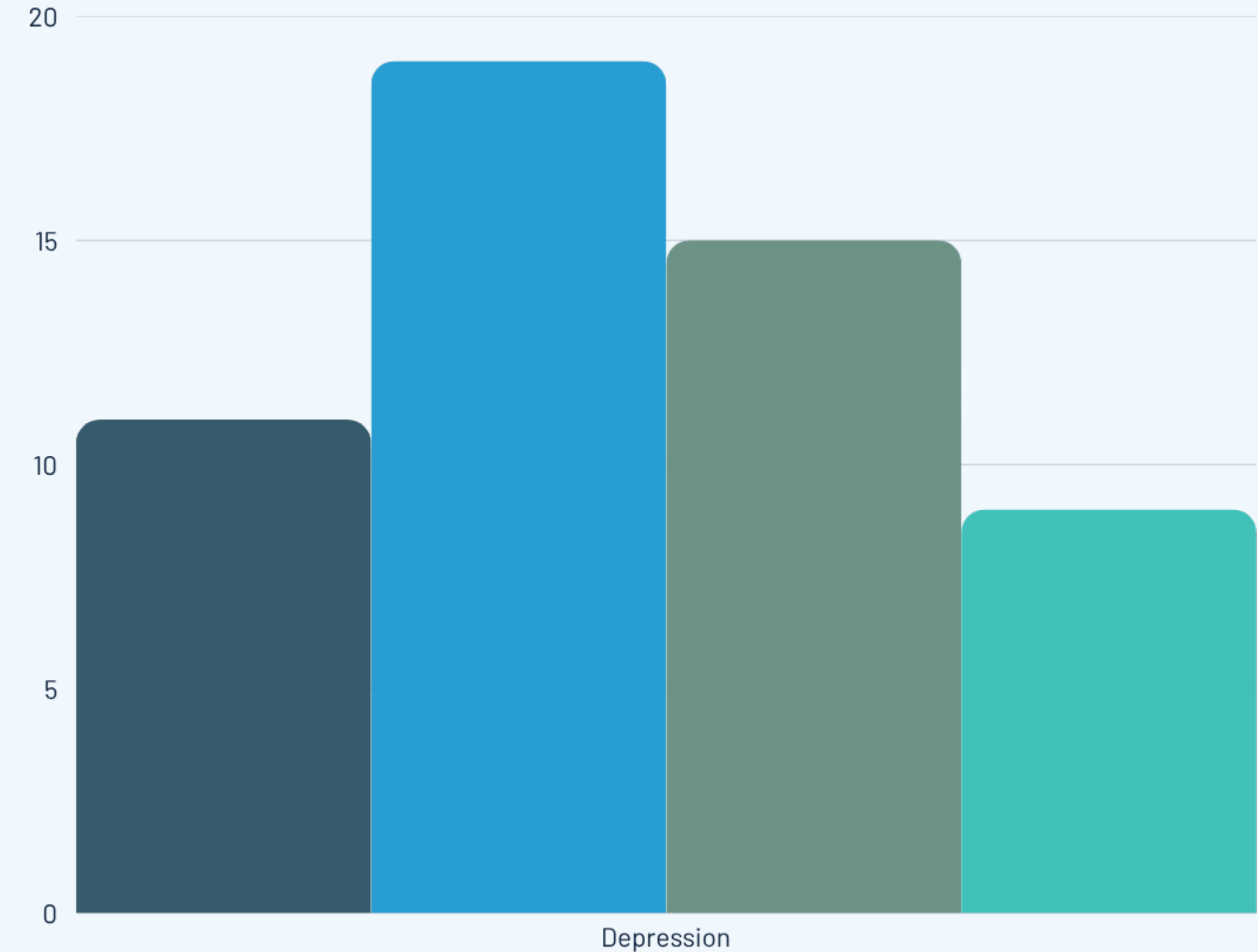
Measures collected at discharge



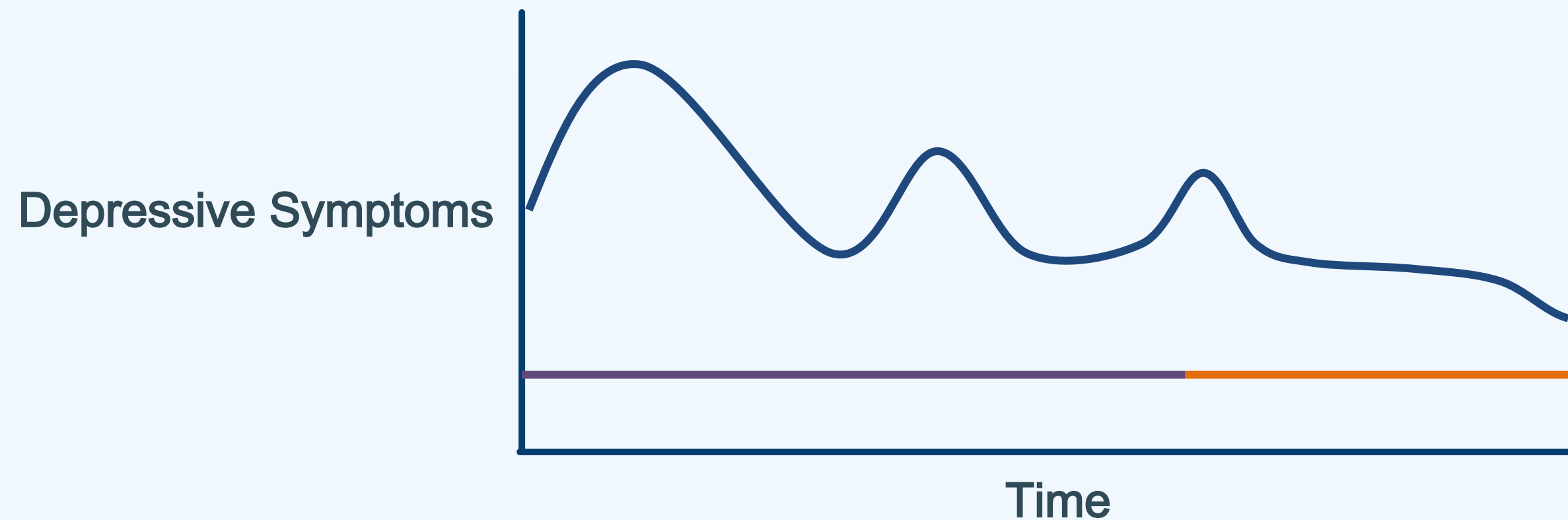
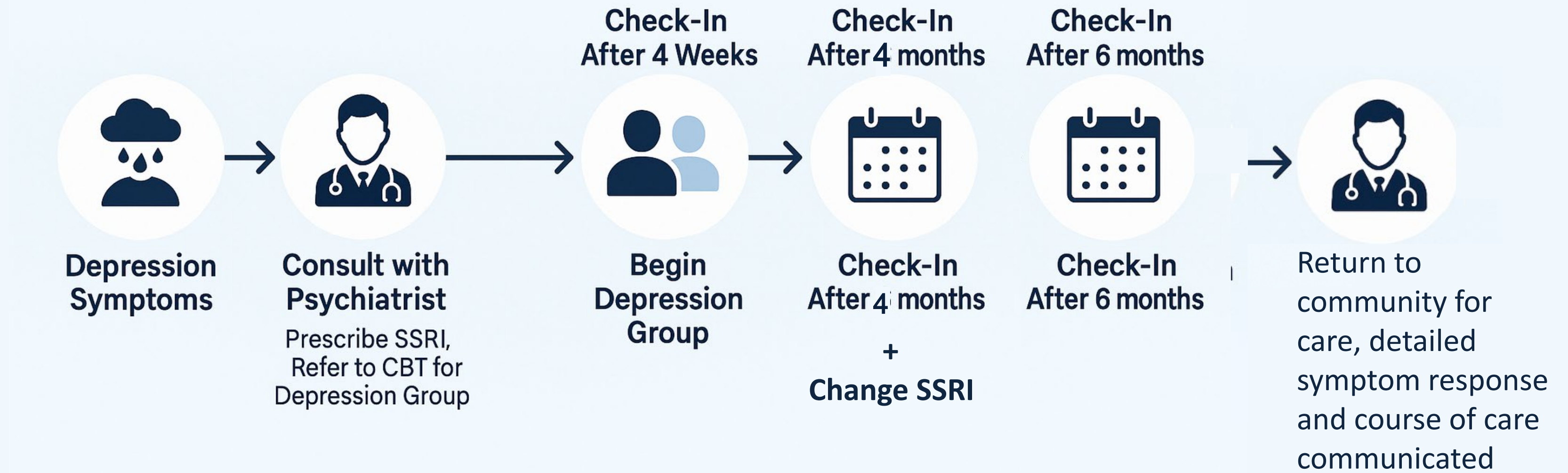
All scores input and provided to family doctor through discharge summary



- Completion remains on REDCap.**
Additions post E2P implementation:
- Rational for measures within group manuals;
 - Individual check in meetings after the collection of all measure;
 - Copy of graphs with interpretation sent to all patients;
 - Scores embedded in discharge summaries that are sent to family doctors

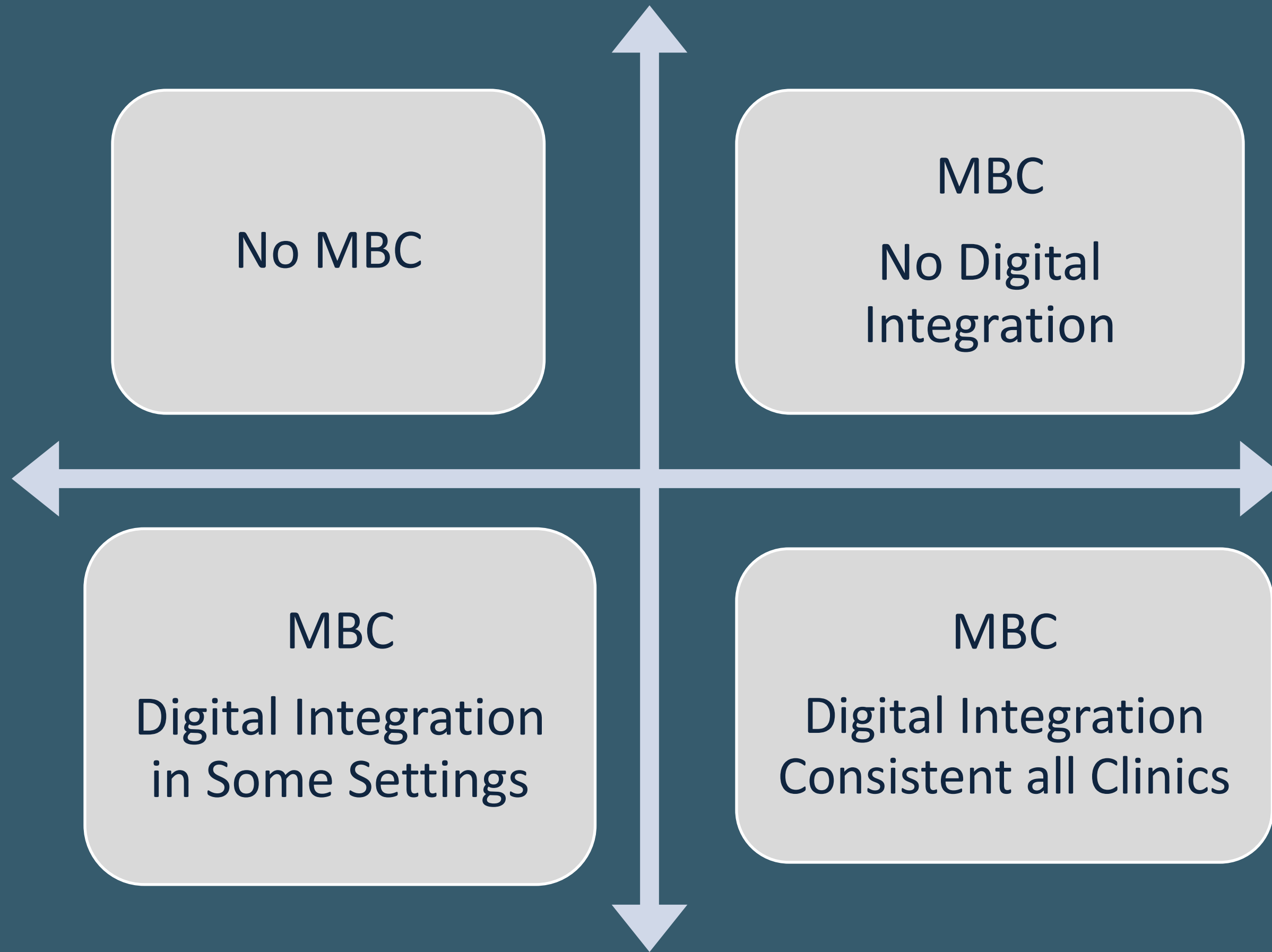


	Pre-Treatment	Mid Treatment (1)	Mid Treatment (2)	Post Treatment
Depressive Symptoms	11	19	15	9



DISCUSSION

Small Group Discussions



Small Group Discussions

At your setting what barriers and facilitators do you perceive or experience for:

- Implementing measurement based care?
- Development and adoption of digital tools for tracking symptoms?
- Addressing data completion and accuracy concerns?

Group Discussion Review

At your setting what barriers and facilitators do you perceive or experience for:

- Implementing measurement based care?
- Development and adoption of digital tools for tracking symptoms?
- Addressing data completion and accuracy concerns?

A close-up, blue-tinted photograph of a pen writing on a document. The document features a line graph with a jagged, upward-trending line. The pen is positioned at the top right, and the line it has just drawn is visible. The background is a light blue gradient.

Implementation

Implementation Planning
Worksheet:

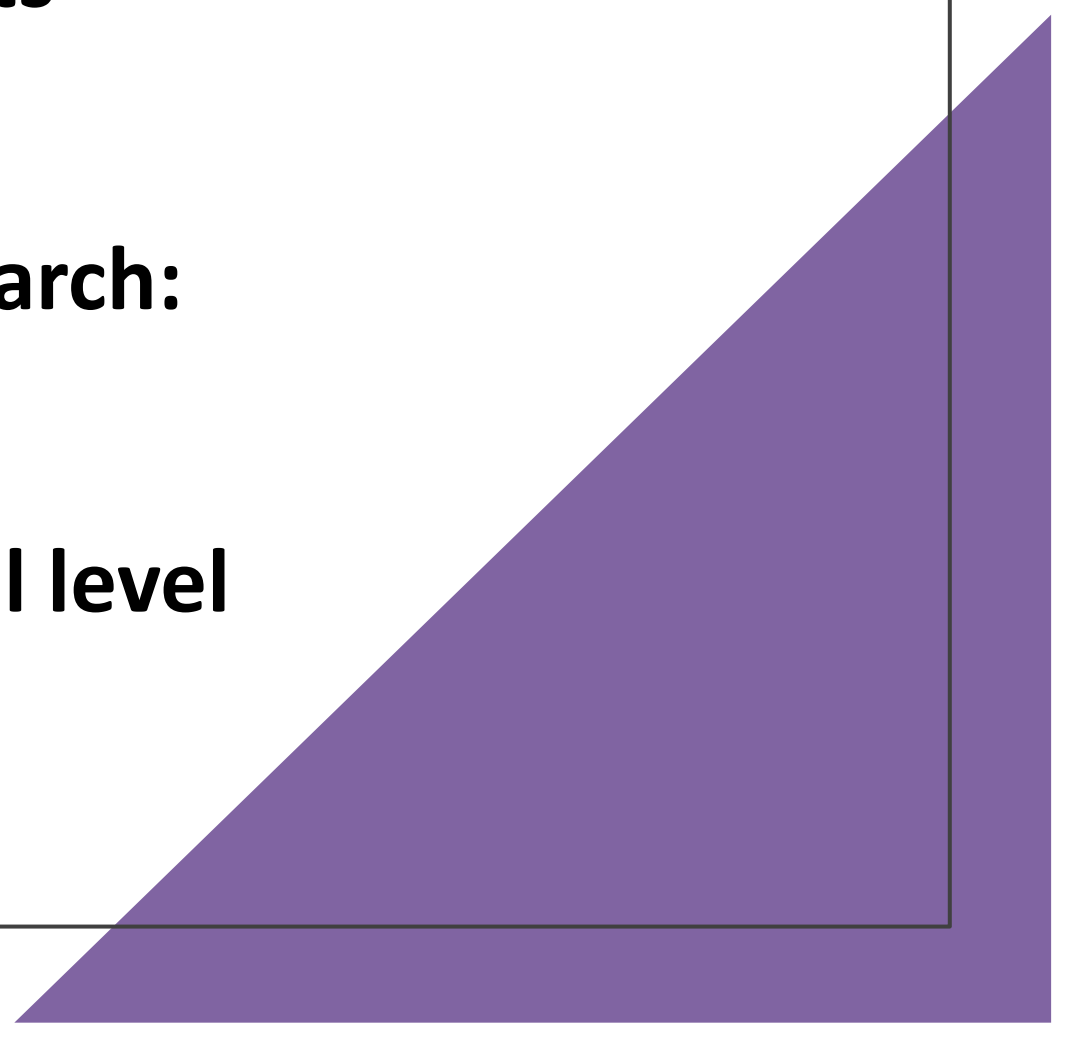
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Self-Paced Toolkit: [https://files -
profile.medicine.yale.edu/docu
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9cb6 -0f0defb4242f](https://files-profile.medicine.yale.edu/documents/6a6cfd40-7fb1-4ee3-9cb6-0f0defb4242f)

Learning and Implementing MBC

- Yale measurement based care collaborative
 - Most practical, includes videos, includes statements you can use for presenting MBC, responses to give for if patient scores or higher or lower etc.
- Greenspace & Yale measurement based care collaborative webinars
- Canadian Psych Association (CPA) Progress Monitoring Task Force Report (2018)
- Beacon Slides
- Ontario Hospitals Association
- Veterans Affairs slides

Lessons Learned

- **Direction and endorsement from leadership necessary;**
 - **Link back to benefits to the program, staff, and patients have to be clear;**
 - **++ Benefits from integrating into the EMR but also ++ costs (e.g., friction between research goals)**
 - **There are parts of MBC that are still in its infancy for research:**
 - **MBC with personality disorders**
 - **Identifying clinically important change on an individual level**
 - **Optimal frequency of measurement administration.**
- 

Take Home Messages

- Measurement based care is recommended by best practice guidelines and is supported by research when treating individuals with mental health conditions.
- To implement measurement-based care, you can use the: Collect. Share. Act. Framework.
- Integrating measurement-based care in the EMR allows for increased standardization, reduced errors, and improved continuity of care.
- Having key collaborative roles is imperative to success (e.g., project lead, digital solutions lead, and clinic lead).

Q&A

Discussion Period

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