




Recovery Alberta

MENTAL HEALTH AND ADDICTION SERVICES



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Knowledge Bites Lunch 'n' Learn

March 5, 2025



Measuring Recovery in Recovery Alberta



Graham Gaine, Ph.D. & Kewir Dufe, Ph.D., PMP | March 5, 2024

Agenda



1. Importance of measurement-based care (MBC)
2. Implementation of MBC in Recovery Alberta
3. The CORE Recovery Outcome Measure (CORE-ROM)
4. The Monitor for Substance and Behavioural Addiction (MSBA)
5. Implementation of CORE-ROM and MSBA in Recovery Alberta

Acknowledgements

Co-investigators

Drs. Adam Abba-Aji, Mohit Singh, David Hodgins, & Cam Wild

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Recovery Alberta

Edmonton zone programs

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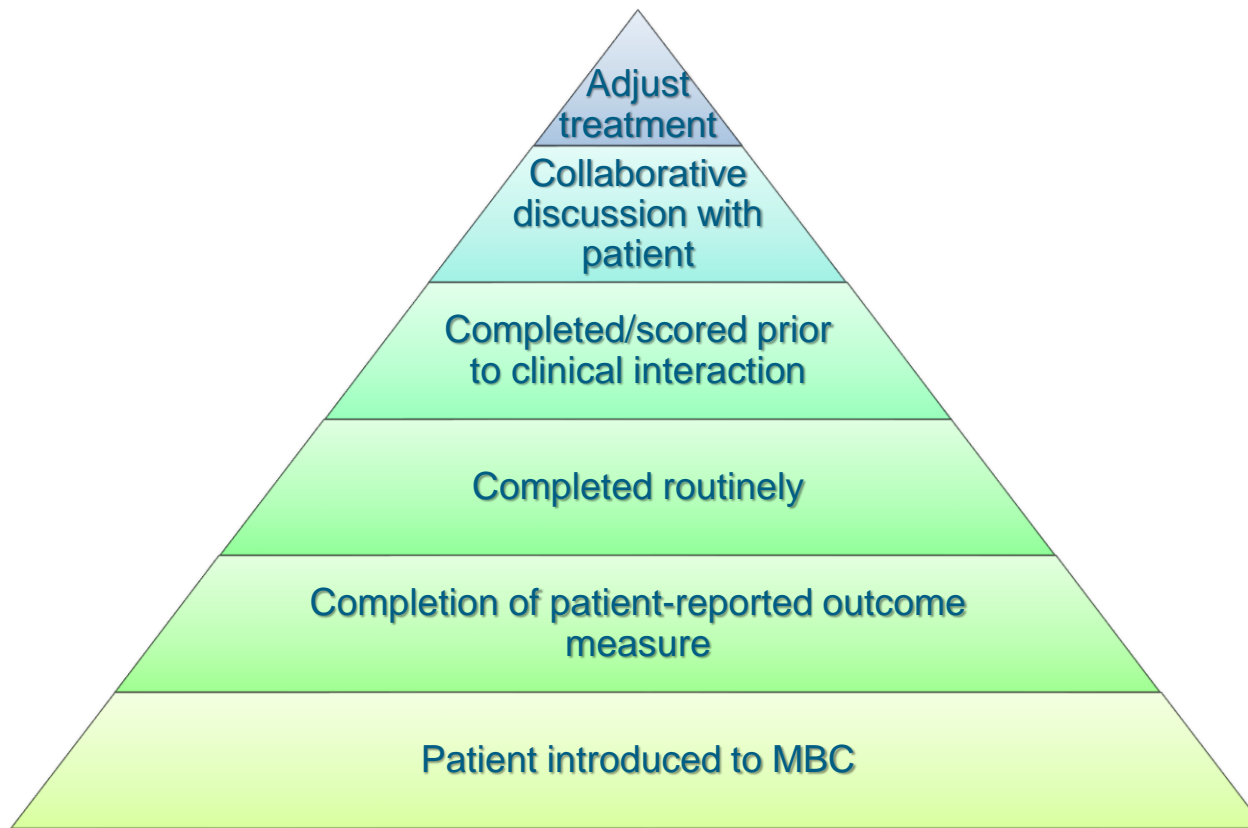




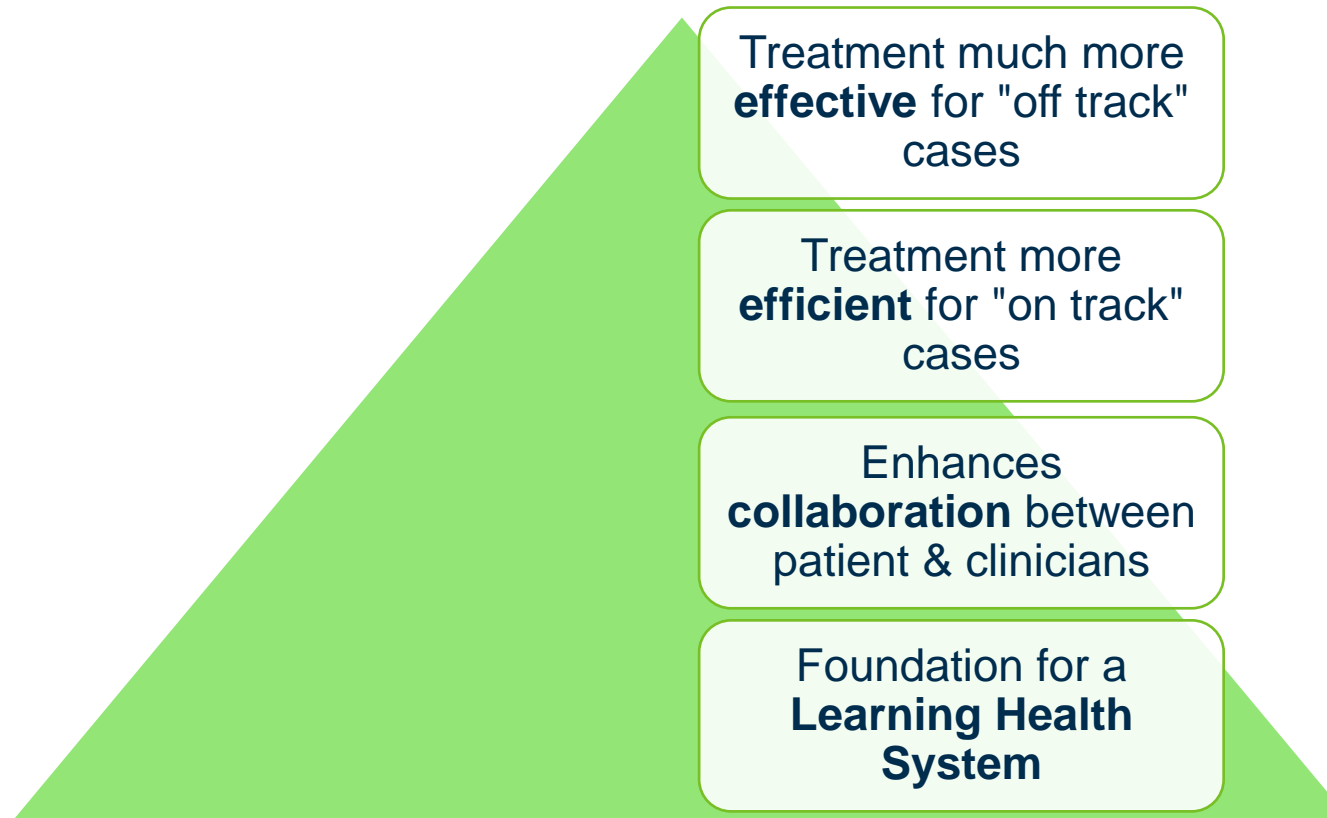
Importance of Measurement-based Care (MBC)

What is Measurement-based Care (MBC)?

“It’s not just a questionnaire”



Why is MBC Important?



Relevant references: Lambert et al., 2003, Lambert et al., 2018, Gondek et al, 2016, Fortney et al., 2017, Krageloh et al., 2015; Lambert & Shimokawa, 2011; Lambert, 2007; Shimokawa et al., 2010; Goldberg et al., 2016



Implementation of MBC in Recovery Alberta

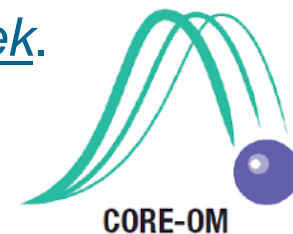
Identifying Outcome Measures for Connect Care

- In 2019, there was an opportunity to identify appropriate outcome measures for build into Connect Care
 - Outcome measures needed to be non-proprietary and have permission for use in an electronic medical record
- The Clinical Outcomes in Routine Evaluation (CORE) Outcome Measures
 - Very well-validated
 - Free for use
 - Can be built into Connect Care
 - Benchmarks for clinical cutoff and reliable change
 - Brief version available
 - Adolescent and adult measures



What are the CORE Outcome Measures?

- Patient-reported outcome measure (PROM) assessing the patient's past week.
- 3 versions built into Connect Care & MyAHS Connect:



www.coresystemtrust.org.uk

	CORE Outcome Measure (CORE-OM)	CORE-10	Young Person's CORE (YP-CORE)
# of items	34	10	10
Constructs measured	Problems Functioning Well-being Risk	Distress	Distress
Age range	17+	17+	11-16*

**Child, Youth & Family program using Young Person's CORE (YP-CORE) for 17-year-olds*

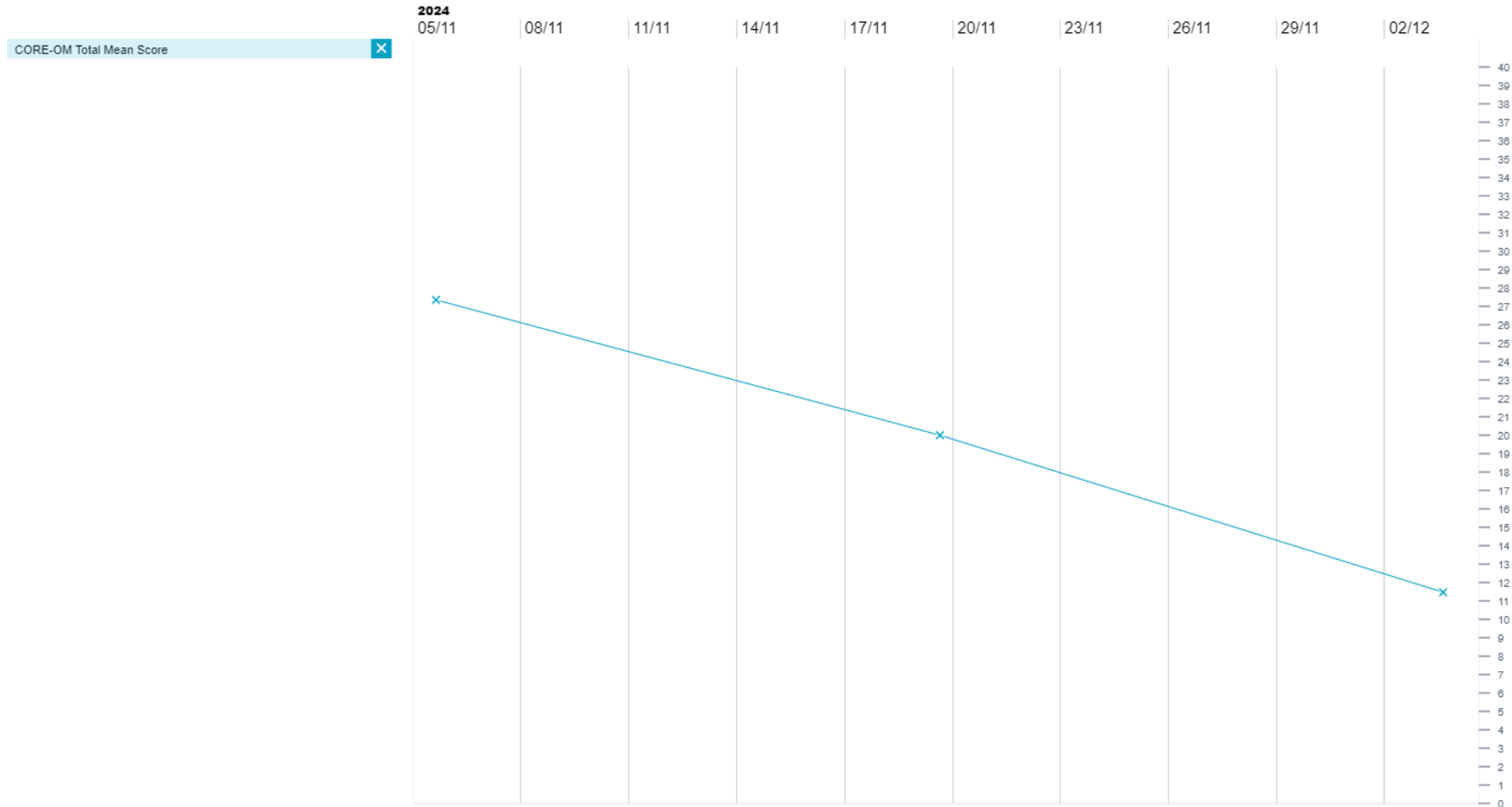
Digital Measurement-based Care



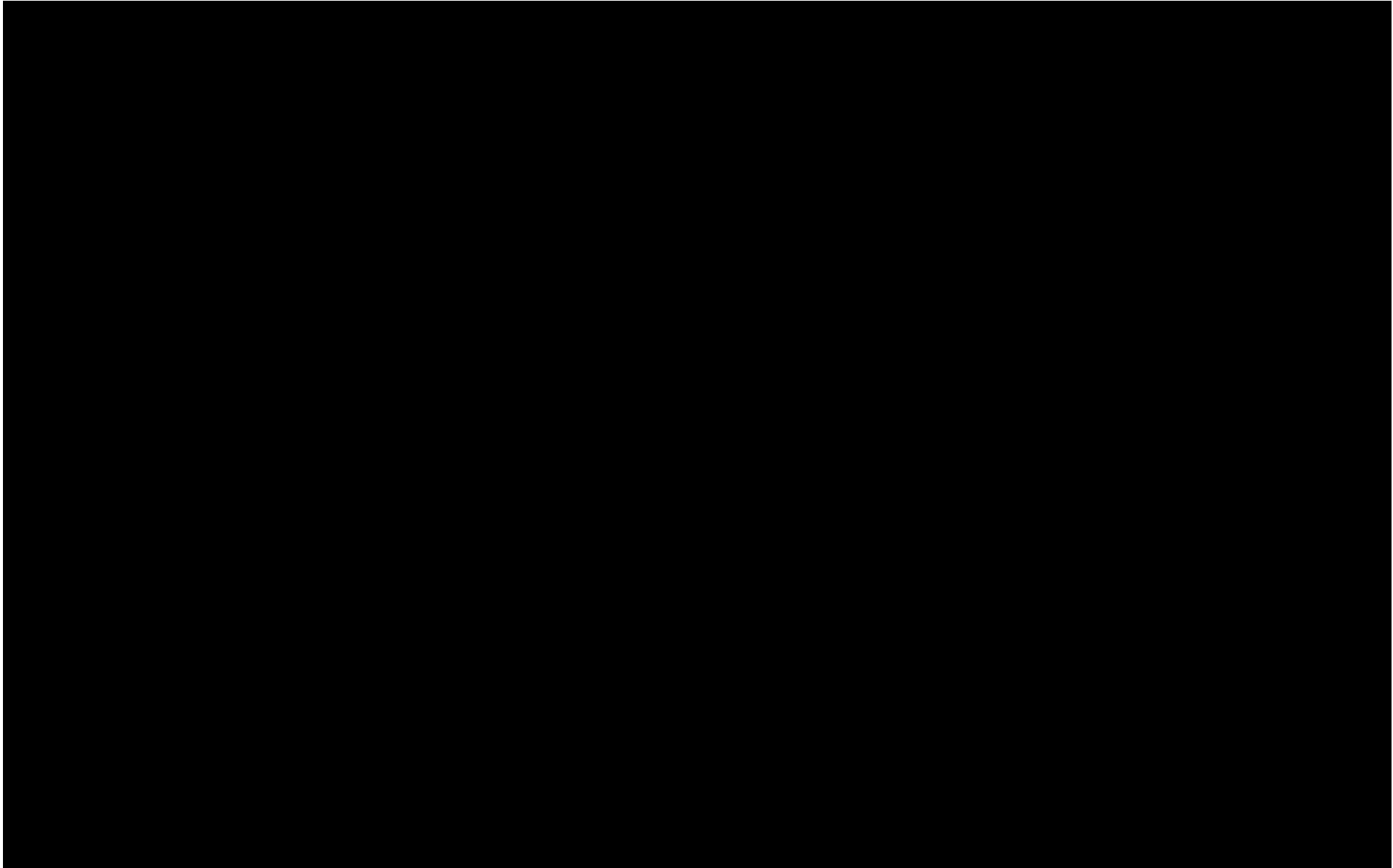
Features of digital MBC in electronic medical record

- Online administration with MyAHS Connect
- Automatic scoring & graphing
- Enhanced continuity of care across programs

Tracking CORE in Connect Care



CORE Clinician Data Input and Graphing in Connect Care



Administering CORE in MyAHS Connect

This is a non-production environment. If you are a patient, contact the system administrator immediately. [X]

MyChart by Epic Alberta

Log out

Menu Visits Messages Test Results Medications

B Bonnie

Welcome!

please fill out core 10

Physician Psychiatry, MD 17 Sep

Please fill out

View Message

View All (3)

Consultation

Fri 17 Sep Starts at 10:45 AM MDT

DiverseCity Housing Program, Addiction and Mental Health

With Delday, Amy C, CTRS

View Details

Screening - Virtual Visit

Fri 17 Sep Starts at 10:15 AM MDT

DiverseCity Housing Program, Addiction and Mental Health

With Delday, Amy C, CTRS

View Details

Share Everywhere

Give one-time access to your health information to any clinician with internet access.

Learn More

Dismiss

Save time while you save paper! Sign up for paperless billing.

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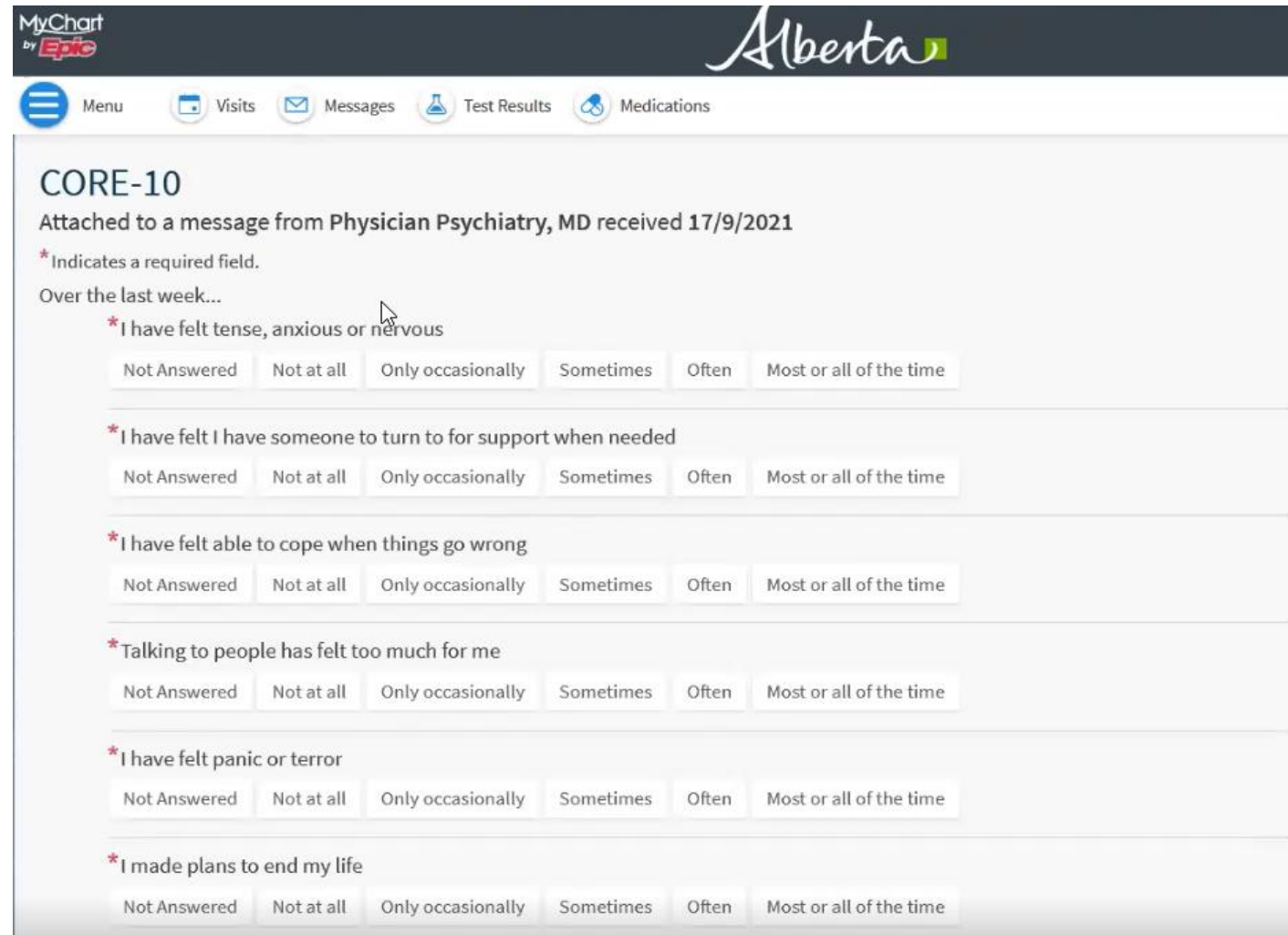
Care Team and Recent Providers

Allen E. Ausford, MD
Primary Care Provider
General Practice

Nurse Aline N
Internal Medicine

See provider details and manage

Administering CORE in MyAHS Connect



The screenshot displays the MyChart by Epic interface for a patient in Alberta. The top navigation bar includes icons for Menu, Visits, Messages, Test Results, and Medications. The main content area is titled "CORE-10" and indicates it is attached to a message from Physician Psychiatry, MD received on 17/9/2021. A note states that an asterisk (*) indicates a required field. The assessment consists of six items, each with a set of response buttons: "Not Answered", "Not at all", "Only occasionally", "Sometimes", "Often", and "Most or all of the time".

CORE-10
Attached to a message from Physician Psychiatry, MD received 17/9/2021

* Indicates a required field.

Over the last week...

* I have felt tense, anxious or nervous

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

* I have felt I have someone to turn to for support when needed

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

* I have felt able to cope when things go wrong

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

* Talking to people has felt too much for me

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

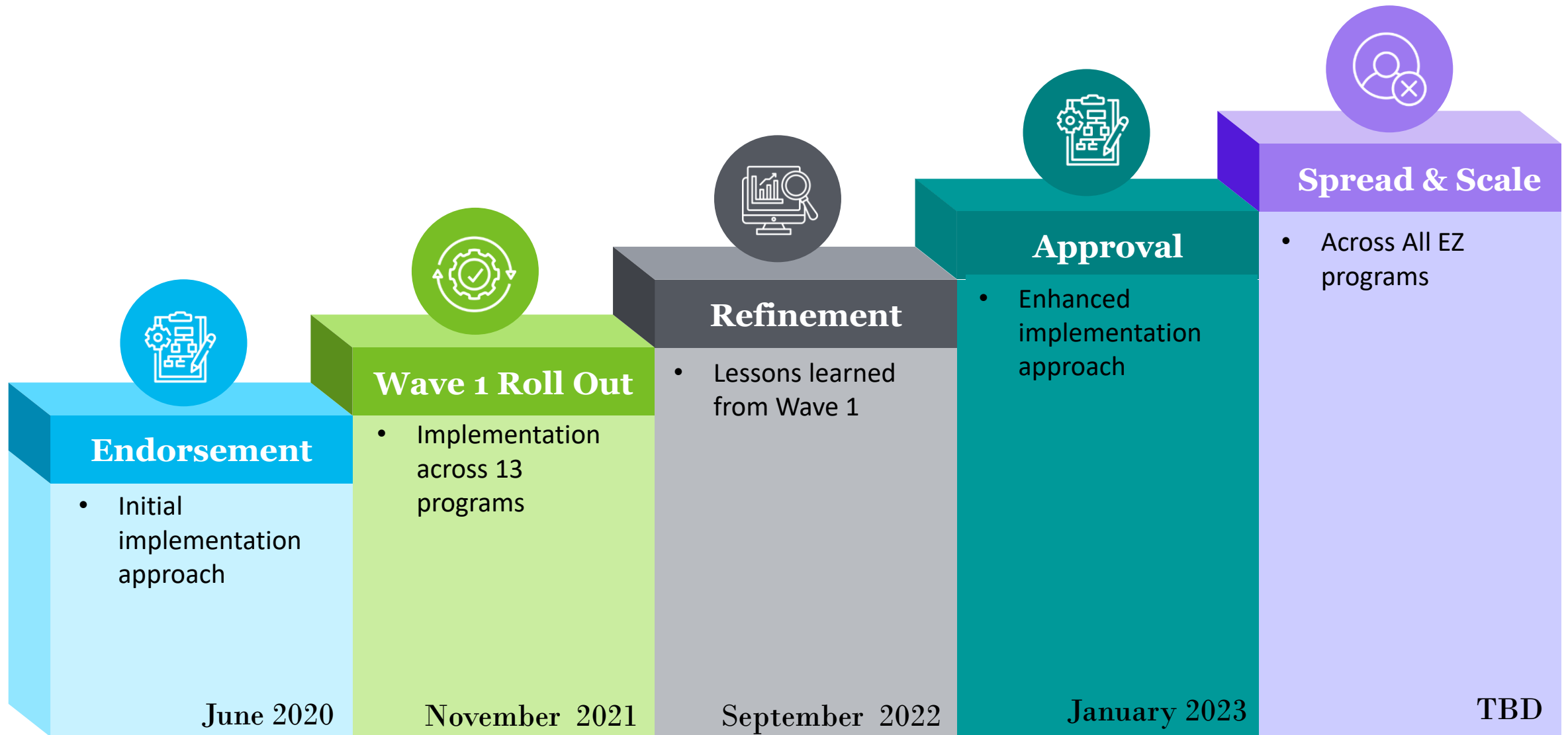
* I have felt panic or terror

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

* I made plans to end my life

Not Answered Not at all Only occasionally Sometimes Often Most or all of the time

The CORE Implementation Journey

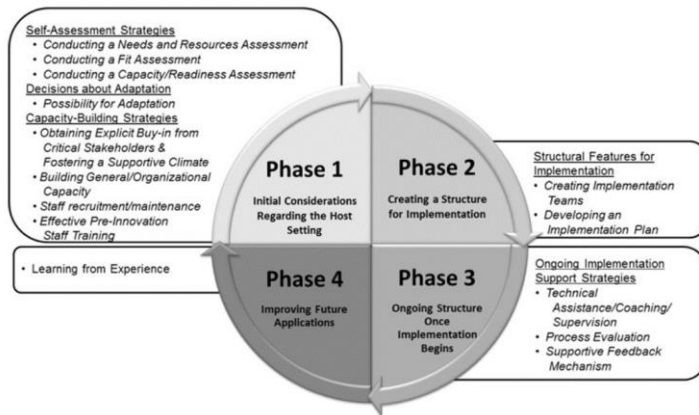


[Measuring Recovery in Recovery Alberta]

ZCDEC= Zone clinical Director's Executive Committee

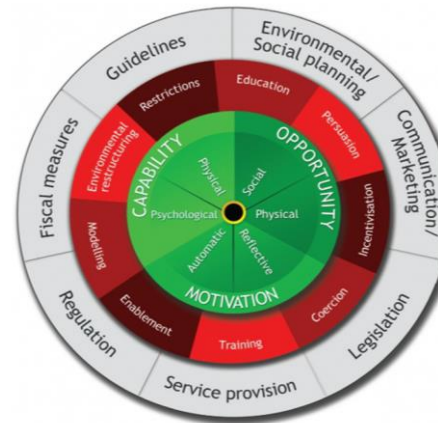
Wave 1 CORE Implementation Approach

- CORE implementation in the UK was initially a failure (only 40% of clients had at least 1 CORE).
- Use of Implementation science i.e., Quality Implementation Framework gained tremendous success (>90% sessions with a completed CORE) (Mellor-Clark et al., 2016)
- 3 comprehensive implementation science frameworks to guide our approach



1. Quality Implementation Framework

(Meyers DC, et al (2012), Am J Community Psychol.)



2. Behaviour Change Wheel

(Michie, S., (2011) *Implementation Sci* 6, 42)



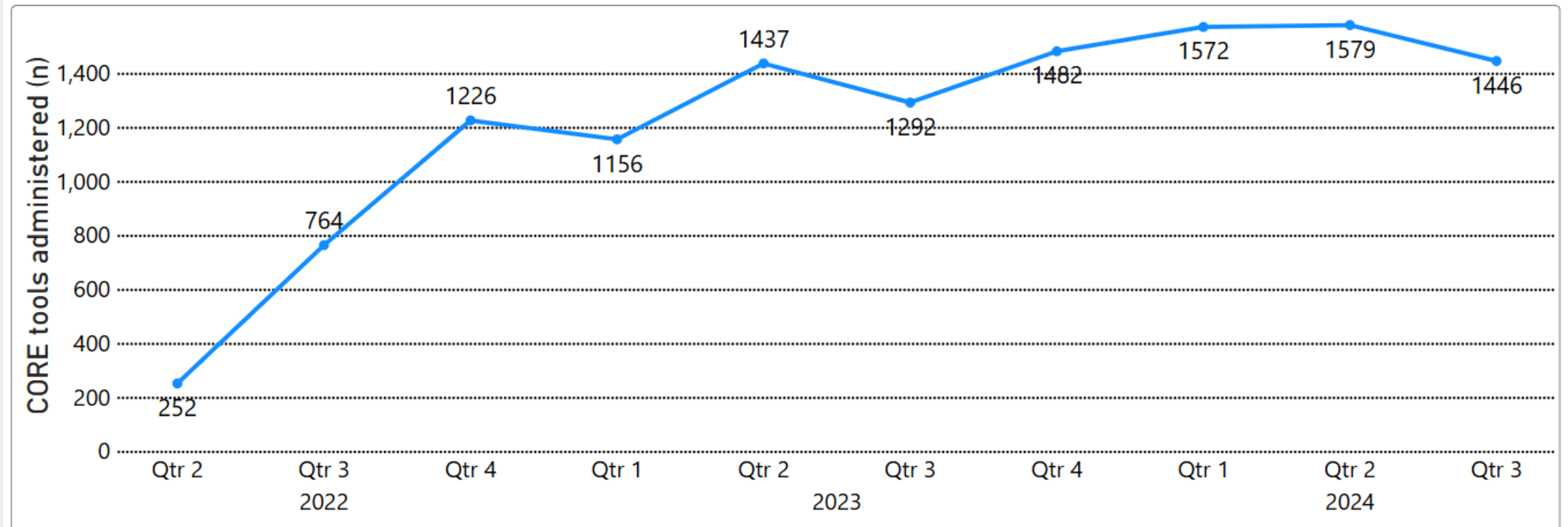
3. EQUIP Tool

(ABSPORU)

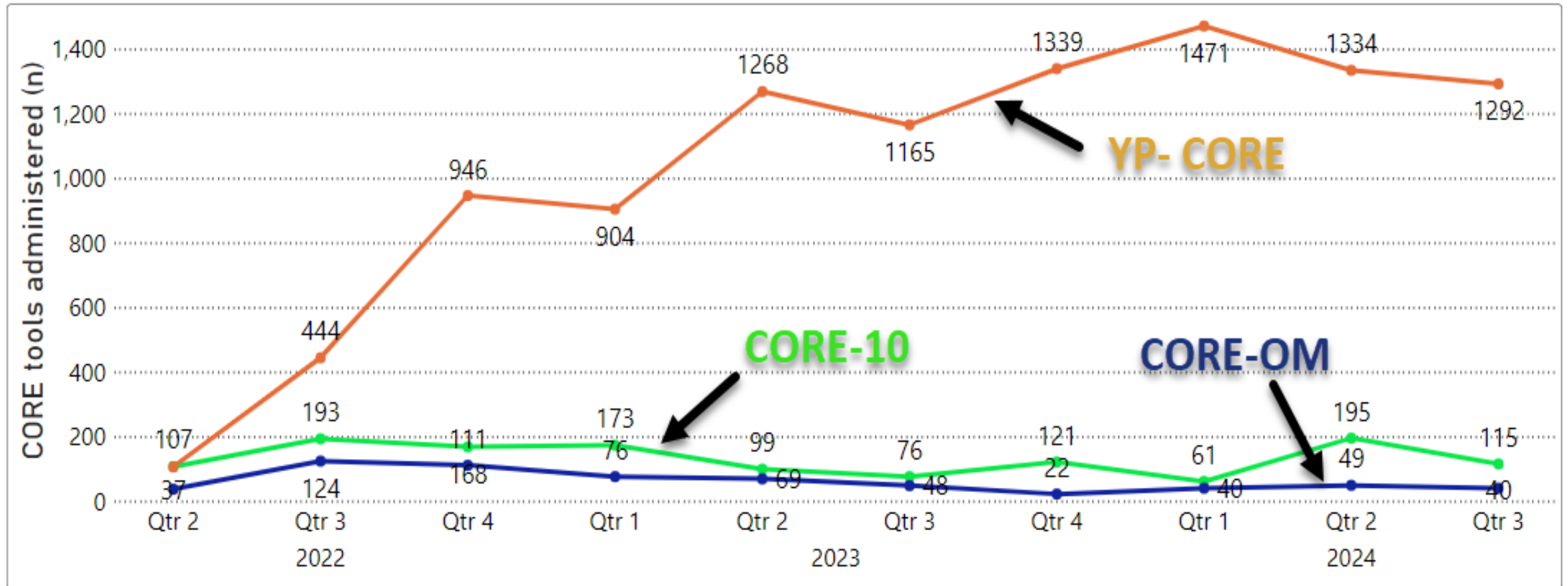
CORE Implemented in 13 Recovery Alberta Programs



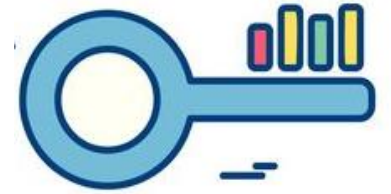
Sustainability of CORE Implementation



Sustainability of CORE Implementation



Three Key Learnings to Sustainable CORE Implementation



Feasibility


- Greater adoption of brief measures

Recovery

- Need to measure personal recovery

Addiction

- Need to measure addiction recovery



The CORE Recovery Outcome Measure (CORE-ROM)

What is “Recovery?”



“Recovery” is a widely used term with multiple definitions (Boardman, 2013)

- **Recovery:** Healing response and restoration of well-being
- **Clinical recovery:** Recovery from symptoms, distress, and dysfunction
- **Personal recovery:** Recovery of a valued pattern of life and living (with or without symptoms)
 - **CHIME** personal recovery framework: Connection, Hope, Identity, Meaning, and Empowerment (Leamy et al., 2011)

Measures of Personal & Clinical Recovery

	Personal recovery	Clinical recovery
<i>Measures</i>	<ul style="list-style-type: none">• Questionnaire about the Process of Recovery (QPR)• Recovery Assessment Scale (RAS)	<ul style="list-style-type: none">• Patient Health Questionnaire (PHQ-9)• General Anxiety Disorder (GAD-7)• Outcome Questionnaire (OQ-45)• Behavior and Symptom Identification Scale (BASIS-24)
<i>Item content</i>	<ul style="list-style-type: none">• Positively framed• Focus on CHIME (connection, hope, identity, meaning, & empowerment)	<ul style="list-style-type: none">• Primarily negatively framed• Focus on distress, dysfunction, & risk

Measuring Total Recovery

- Well-being is defined as BOTH the presence of *well*-being and the absence of *ill*-being
- Absence of ill-being is most important for quality of life (Connell et al., 2014)
- Measures that focus exclusively on well-being (personal recovery) or ill-being (clinical recovery) provide an incomplete picture

Measuring total recovery requires a **balanced** assessment of personal and clinical recovery



Do the CORE Tools Measure Personal Recovery?



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- The CORE-OM contains 8 positively worded items
- Several factors analyses of the CORE-OM items indicate the presence of a factor comprised of the positively framed items (Evans et al., 2002; Lorentzen et al., 2020; Lyne et al., 2006; Skre et al., 2013).

Alignment of CORE Positive Items with CHIME Personal Recovery Framework



1. I have felt I have someone to turn to for support when needed
2. I have felt warmth and affection for someone
3. I have felt optimistic about my future
4. I felt O.K. about myself
5. I have been happy with the things I have done
6. I have achieved the things I wanted to
7. I have felt able to cope when things go wrong
8. I have been able to do most things I needed to

CORE-OM Personal Recovery Subscale in Connect Care

CORE-OM MEAN SCORES 	
CORE-OM Total Mean Score	04/12/2024 20.88
Well-Being Mean Score	04/12/2024 30
Problem Mean Score	04/12/2024 26.67
Function Mean Score	04/12/2024 21.67
Risk Mean Score	04/12/2024 1.67
Risk To Self Mean Score	04/12/2024 2.5
Risk To Others Mean Score	04/12/2024 0
Non-Risk Mean Score	04/12/2024 25
Personal Recovery Mean Scor... 	04/12/2024 15

The CORE Recovery Outcome Measure (CORE-ROM)

- Clinicians prefer brief measures (i.e., CORE-10 over CORE-OM)
- CORE-10 contains only 2 of 8 personal recovery items



**Remaining 6
personal
recovery items
from CORE-OM**



The CORE Recovery Outcome Measure (CORE-ROM)

Personal Recovery	Clinical Recovery	Total Recovery
8 positively framed items	8 negatively framed items	Total of 16 items
<ul style="list-style-type: none"><i>Measures connection, hope, identity, meaning, & empowerment</i>	<ul style="list-style-type: none"><i>Measures anxiety, depression, trauma, sleep difficulties, & suicide risk</i>	<ul style="list-style-type: none"><i>Balanced assessment of recovery</i>
<ol style="list-style-type: none">1. I have felt I have someone to turn to for support when needed2. I have felt able to cope when things go wrong3. I felt O.K. about myself4. I have been happy with the things I have done5. I have felt warmth and affection for someone6. I have been able to do most things I needed to7. I have felt optimistic about my future8. I have achieved the things I wanted to	<ol style="list-style-type: none">1. I have felt tense, anxious or nervous2. Talking to people has felt too much for me3. I have felt panic or terror4. I made plans to end my life5. I have had difficulty getting to sleep or staying asleep6. I have felt despairing or hopeless7. I have felt unhappy8. Unwanted images or memories have been distressing me	

CORE-ROM Validation

1. Demonstrate two-factor structure of CORE-ROM: Personal & clinical recovery
2. Demonstrate the reliability & validity of CORE-ROM
3. Demonstrate sensitivity to change

Sample 1

Ambulatory patients
(N=1835)

Sample 2

General Canadian
population (N=401)

CORE-ROM Factor Structure

- Principal Components factor analysis with Promax oblique rotation (i.e., correlated factors)
- Strong support for two correlated factors of Clinical Recovery (CR) & Personal Recovery (PR)

Sample	Ambulatory @ admission	Ambulatory @ discharge	General population
<i>Males</i>	CR/PR	CR/PR	CR/PR
<i>Females</i>	CR/PR/ Connection	CR/PR	CR/PR

CORE-ROM Reliability

- Internal consistencies across samples:

Sample	Ambulatory @ admission	Ambulatory @ discharge	General population
<i>Personal Recovery</i>	.83	.90	.90
<i>Clinical Recovery</i>	.86	.88	.91
<i>Total Recovery</i>	.90	.93	.94

Validity of CORE-ROM Personal Recovery

- The Questionnaire about the Process of Recovery (QPR-15) is the most supported measure of personal recovery, with best coverage of the CHIME domains (Shanks et al., 2013; Felix et al., 2024)
- Correlations between CORE-ROM subscales & QPR-15 in general Canadian population:

<i>CORE-ROM subscales</i>	(CHIME personal recovery) QPR-15
<i>Personal Recovery</i>	.83
<i>Clinical Recovery</i>	-.72

Correlations significant at $p < .001$

Validity of CORE-ROM Clinical Recovery

- Correlations between CORE-ROM subscales & measures of symptoms/risk in ambulatory patients at admission

<i>CORE-ROM subscales</i>	Depression (PHQ-9)	Anxiety (GAD-7)	Suicidality (C-SSRS)
<i>Personal Recovery</i>	-.63	-.47	-.33
<i>Clinical Recovery</i>	.78	.75	.45

Correlations significant at $p < .001$

Validity of CORE-ROM Clinical Recovery

- Correlations between CORE-ROM subscales & symptom measures in general Canadian population

<i>CORE-ROM subscales</i>	Depression (PHQ-4)	Anxiety (PHQ-4)	Panic (PADIS)	PTSD (PCL-5 brief)
<i>Personal Recovery</i>	-.72	-.64	-.50	-.68
<i>Clinical Recovery</i>	.83	.84	.71	.85

Correlations significant at $p < .001$

CORE-ROM Sensitivity to Change


- Admission to discharge effect sizes in ambulatory sample:

Measure	Effect size estimate	Effect size description
<i>Personal Recovery</i>	.85	Large
<i>Clinical Recovery</i>	.96	Large
<i>Total Recovery</i>	.99	Large
<i>CORE-10</i>	.99	Large
<i>CORE-OM</i>	1.00	Large
<i>PHQ-9</i>	1.08	Large
<i>GAD-7</i>	.93	Large
<i>Columbia (C-SSRS)</i>	1.03	Large



Advantages of CORE-ROM

- ✓ Takes only a few minutes to complete!
- ✓ Balanced measure of personal AND clinical recovery
- ✓ Reliable, valid, and sensitive to change
- ✓ CORE-10 embedded in CORE-ROM



The Monitor for Substance and Behavioural Addiction (MSBA)

Need for a Transdiagnostic Addiction Measure

Need

- Substance and behavioural addictions are highly comorbid (Kim & Hodgins, 2018)
- Need for brief progress measure of both substance and behavioural addictions

Gap

- Many addiction measures focus on broad periods of time (e.g., past month, past year), which is unsuitable for progress monitoring
- Most addiction measures focus on specific substances (e.g., alcohol) or behavioural addictions (e.g., gambling)

Solution

- We developed the **Monitor for Substance and Behavioural Addiction (MSBA)** to provide a transdiagnostic progress measure of substance and behavioural addictions
 - 10 items measuring substance addiction in general
 - 10 items measuring behavioural addiction in general



Developing the Monitor for Substance and Behavioural Addiction (MSBA)

- Screener for Substance and Behavioural Addiction (SSBA; Schluter et al., 2018)
 - SSBA is a transdiagnostic addiction measure assessing past year
 - SSBA items were developed in collaboration with people with lived experience
 - Items written in lay language
 - Original 15 item pool
- MSBA adapted 10 SSBA items for monitoring addiction recovery on a weekly basis

Monitor for Substance Addiction (MSA)

This survey has 10 statements that apply to **substance use** (*including alcohol, cannabis, street drugs, tobacco, caffeine, and overuse or misuse of prescribed medications*). Check the box which is closest to how often each item applied to your substance use in the past week

1. I did it too much
2. Once I started, I couldn't stop
3. Doing it got in the way of my responsibilities
4. I continued to do it, even though it caused problems
5. Doing it hurt my family or friends

**Problematic Use
subscale**

0	1	2	3	4
Not at all	Only occasionally	Sometimes	Often	Most or all of the time

Monitor for Substance Addiction (MSA)

The following statements may apply even if you did not use substances in the past week

- 6. I was thinking about doing it
- 7. I felt I needed it to function
- 8. I craved doing it
- 9. I was triggered to do it or think about doing it
- 10. I felt I needed it to cope

**Risks for Use
subscale**

0	1	2	3	4
Not at all	Only occasionally	Sometimes	Often	Most or all of the time

Monitor for Substance Addiction (MSA)

11. Which substances were you rating above? (check all substances that apply)

- ☐ None (I selected 'Not at all' for all items)
- ☐ Alcohol (including beer, wine, or hard liquor)
- ☐ Cannabis (including marijuana, hashish, hash oil, weed, grass, or pot)
- ☐ Opioids (including heroine, fentanyl, Codeine, morphine, or Oxycodone)
- ☐ Stimulants (including cocaine, crack, methamphetamine, Ritalin, Adderall, or Vyvanse)
- ☐ Tobacco (including cigarettes, cigars, chew, cigarillos, or any other tobacco products)
- ☐ Caffeine (including coffee, tea, energy drinks, caffeinated sodas, or caffeine pills)
- ☐ Others (please specify) _____

Monitor for Behavioural Addiction (MBA)

This survey has 10 statements that apply to **excessive behaviours** (*including excessive gambling, shopping, technology use, overeating, excessive sexual activity, overworking, and overexercising*). Check the box which is closest to how often each item applied to your behaviours in the past week

1. I did it too much
2. Once I started, I couldn't stop
3. Doing it got in the way of my responsibilities
4. I continued to do it, even though it caused problems
5. Doing it hurt my family or friends

**Problematic
Behaviour subscale**

0	1	2	3	4
Not at all	Only occasionally	Sometimes	Often	Most or all of the time

Monitor for Behavioural Addiction (MBA)

The following statements may apply even if you did not engage in these excessive behaviours in the past week

- 6. I was thinking about doing it
- 7. I felt I needed it to function
- 8. I craved doing it
- 9. I was triggered to do it or think about doing it
- 10. I felt I needed it to cope

**Risks for
Behaviour
subscale**

0	1	2	3	4
Not at all	Only occasionally	Sometimes	Often	Most or all of the time

Monitor for Behavioural Addiction (MBA)

11. Which excessive behaviours were you rating above? (check all behaviours that apply)

- ☐ None (I selected 'Not at all' for all items)
- ☐ Gambling (including playing slot machines, online gambling, casino games, lotteries, scratch tickets, and/or any other betting for money)
- ☐ Shopping (including in store and/or online shopping)
- ☐ Technology use (videogames, internet, smartphones, television/movies, texting, and/or social media)
- ☐ Overeating (more than is needed for day-to-day living)
- ☐ Sexual activity (excessive sexual activity and/or inappropriate use of pornography, whether online or offline)
- ☐ Overworking (in paid and/or volunteer work)
- ☐ Overexercising (Includes any form of physical exercise that is beyond what is needed for the maintenance of good health and physical fitness)
- ☐ Others (please specify) _____

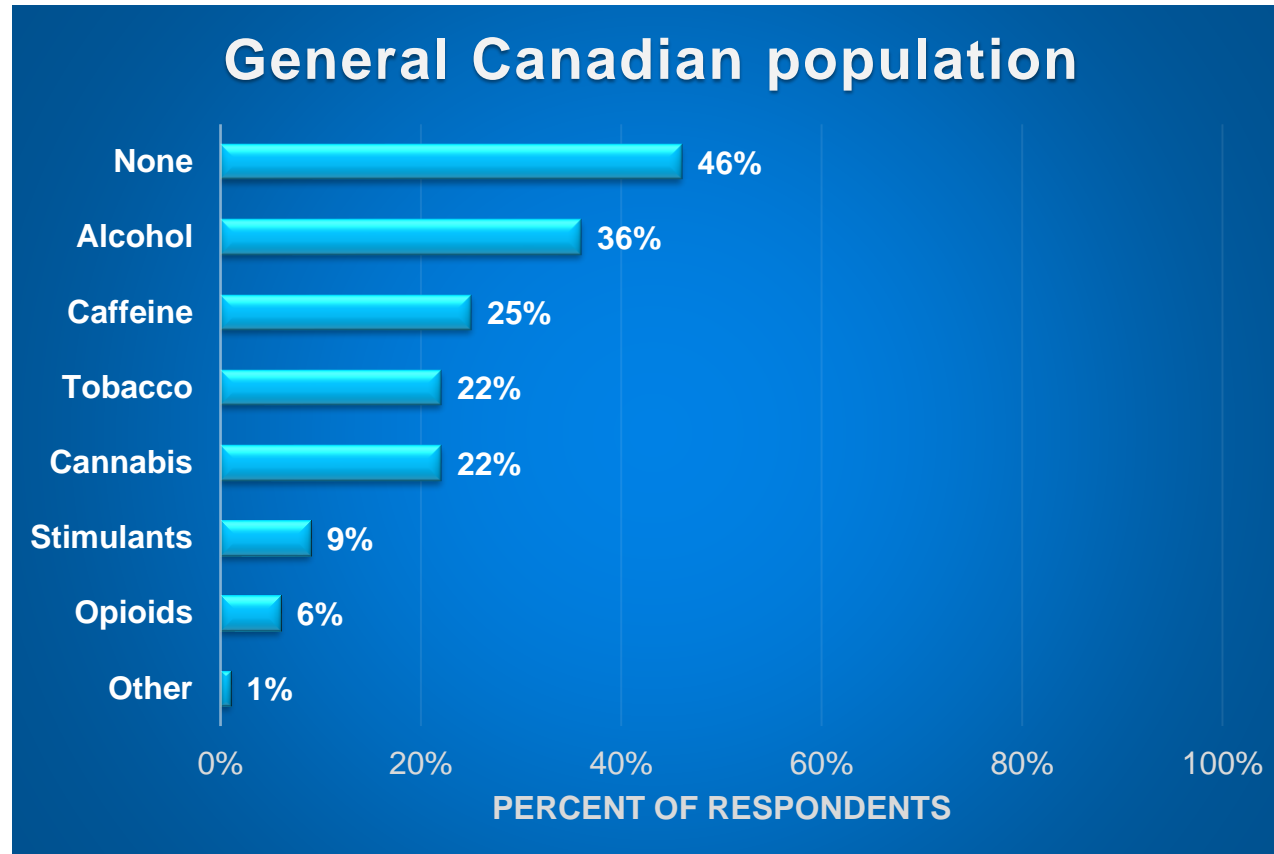
Initial Validation of the MSBA

1. Examine prevalence of different substance & behavioural addiction problems on MSBA
2. Explore the factor structure of the MSBA
3. Demonstrate initial validity of MSBA

Sample 2

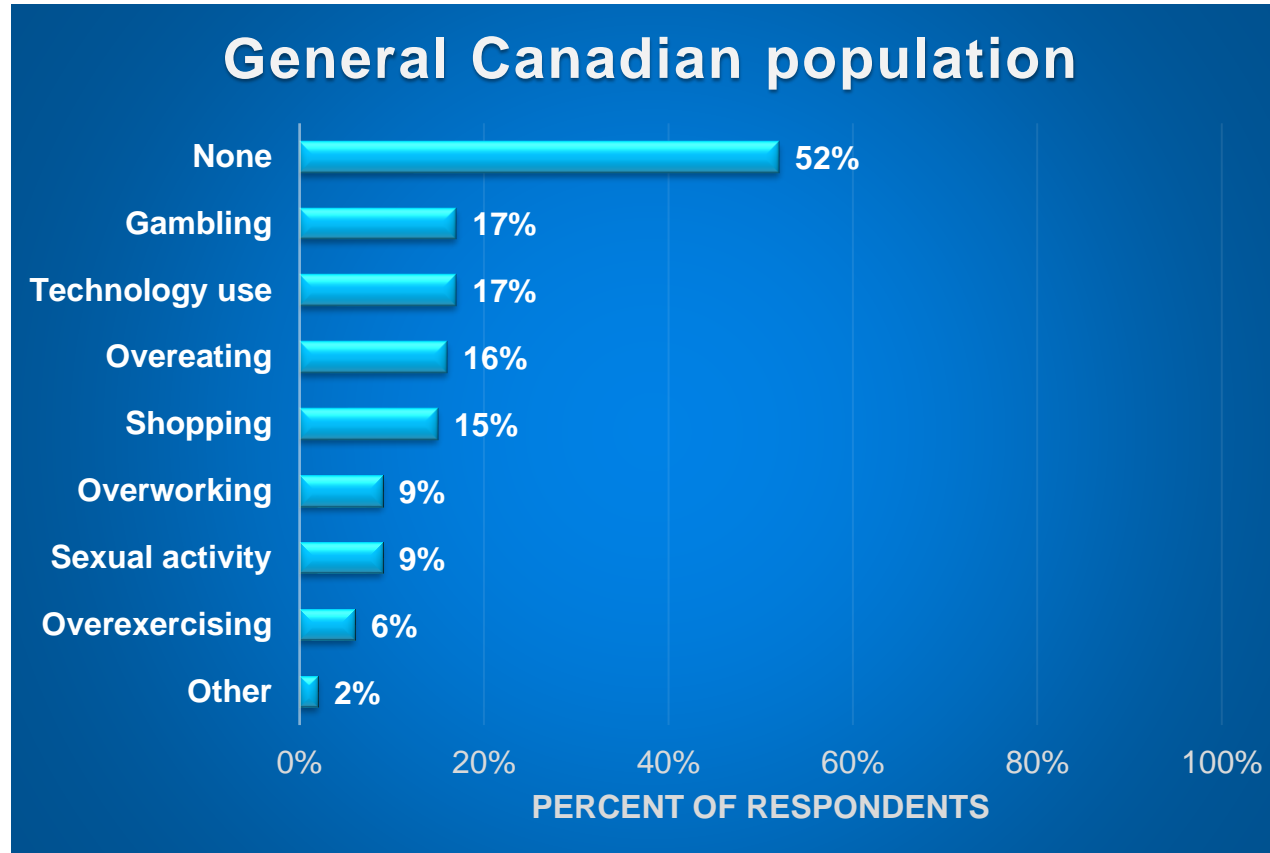
General Canadian
population (N=401)

Prevalence of Specific Substance Problems



- 22% endorsed one substance
- 34% endorsed multiple substances
- **Highlights need to assess different substances!**

Prevalence of Specific Behaviour Problems



- 24% endorsed one behaviour
- 25% endorsed multiple behaviours
- **Highlights need to assess different behaviours!**



Co-occurrence of Substance and Behavioural Addiction Problems

- 38% of sample endorsed both substance AND behavioural addiction problems!
- **Shows need to measure both substance and behavioural addiction!**



MSBA Factor Structure

- Principal Components factor analysis with Promax rotation (i.e., correlated factors)
 - MSA and MBA were one-factored in males and females
 - For people who had *not* used substances in past week, the MSA had two factors corresponding to Problematic Use and Risks for Use
- Future research to clarify impact of time since last use on factor structure
 - Expect Risks for Use to emerge as separate factor when abstinence has begun recently (e.g., when patient is in a controlled environment without access to substances)

MSBA reliability

- Internal consistencies:

	Monitor for <u>Substance</u> Addiction (MSA)	Monitor for <u>Behavioural</u> Addiction (MBA)
<i>Total score</i>	.96	.97
<i>Problematic Use/Behaviour</i>	.93	.94
<i>Risks for Use/Behaviour</i>	.96	.96

Validity of Monitor for Substance Addiction (MSA)

- Correlations between MSA subscales & patterns of use and risk/protective factors

<i>MSA subscales</i>	Dependence (LDQ)	Compulsivity (BATCAP)	Risk factors (BAM)	Protective factors (BAM)
<i>Problematic Use</i>	.83**	.76**	.58**	-.12*
<i>Risks for Use</i>	.88**	.82**	.63**	-.19**

*p<.01

**p<.001

Validity of Monitor for Substance Addiction (MSA)

- Correlations between MSA subscales & substance use

<i>MSA subscales</i>	Drug & alcohol use (BAM)	Alcohol use (AUDIT-C)	Drug use (DUDIT-C)	Past week problematic use
<i>Problematic Use</i>	.58	.44	.64	.60
<i>Risks for Use</i>	.58	.48	.69	.58

Correlations significant at $p < .001$

Validity of Monitor for Behavioural Addiction (MBA)

- Correlations between MBA subscales & measures of compulsivity and past week excessive behaviour


<i>MBA subscales</i>	Compulsivity (BATCAP)	Past week excessive behaviour
<i>Problematic Behaviour</i>	.74	.60
<i>Risks for Behaviour</i>	.79	.57

Correlations significant at $p < .001$



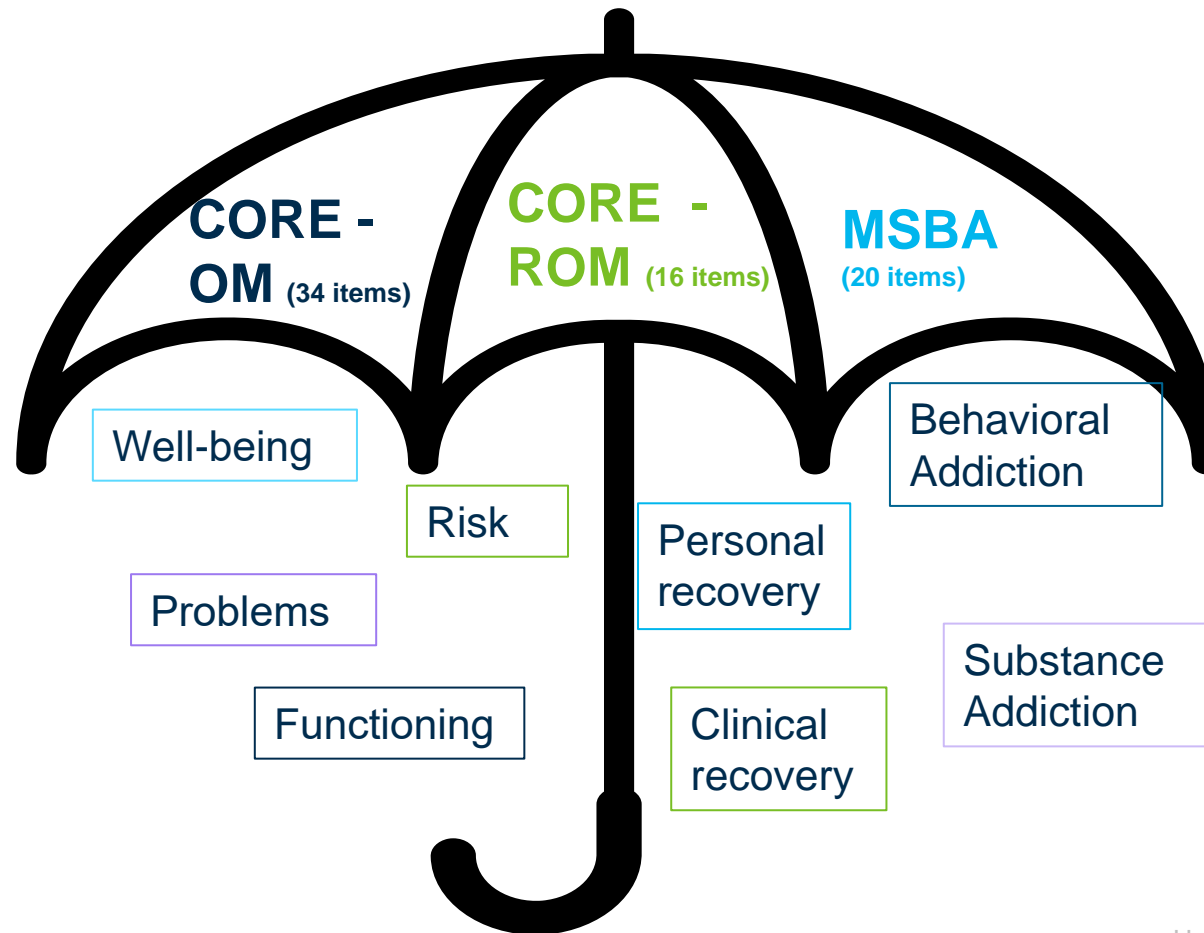
Advantages of MSBA

- ✓ Only takes a few minutes to complete!
- ✓ MSA (10 items) and MBA (10 items) can be used together or individually
- ✓ MSBA assesses multiple substances and excessive behaviours in one brief measure
- ✓ Problematic Use/Behaviour subscales especially suitable for **harm reduction**
- ✓ Risks for Use/Behaviour subscales especially suitable for **abstinence**
- ✓ Initial evidence of reliability and validity (clinical sample coming soon!)



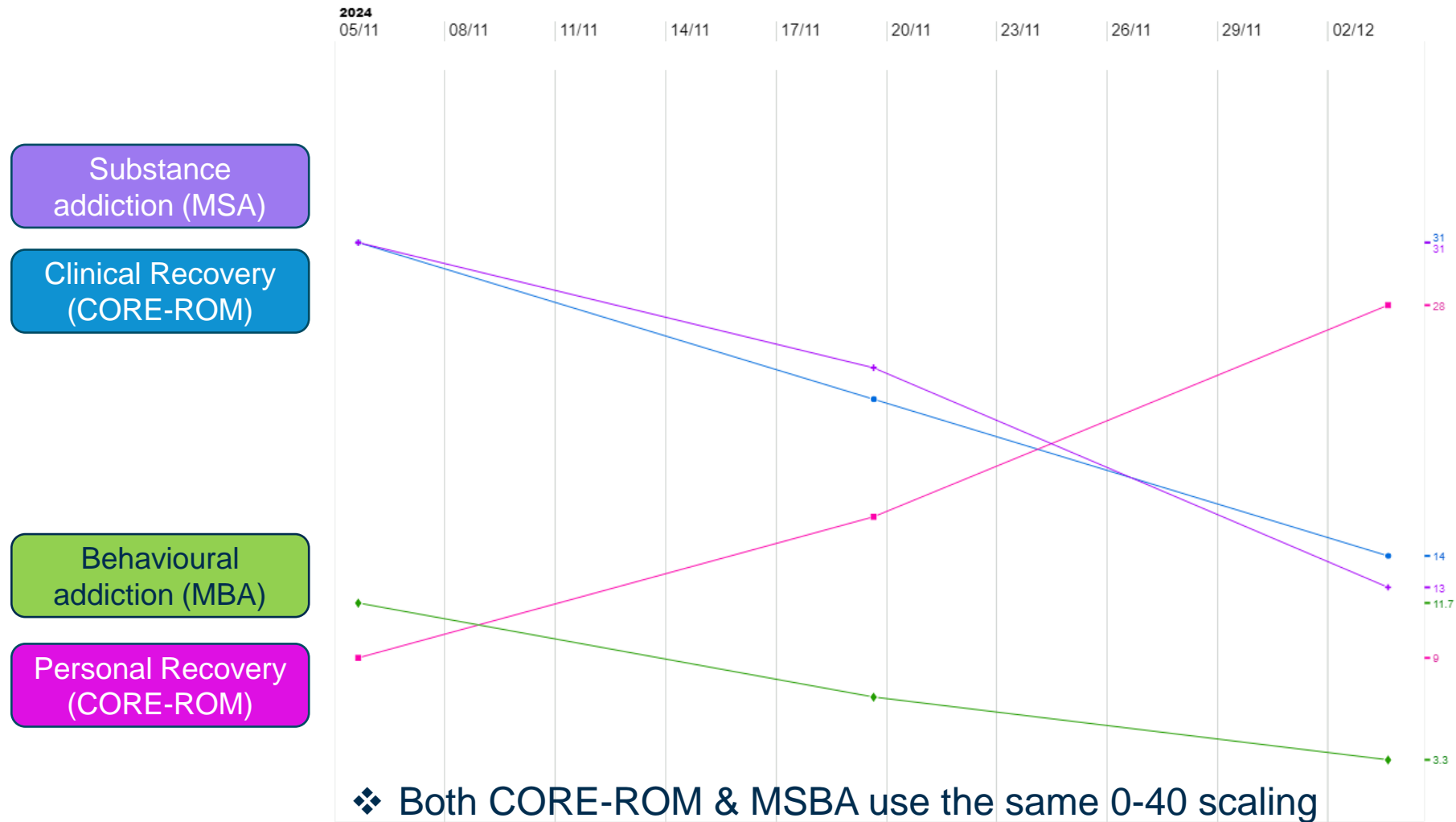
Implementation of CORE-ROM and MSBA in Recovery Alberta

Digital MBC with the **CORE** and **MSBA**



[Umbrella line icon Royalty Free Vector Image - VectorStock](#)

Using CORE-ROM & MSBA in Connect Care



Advancing to the Next Stage



Complete MSBA measure validation (CORE-ROM validation complete!)



Recovery Alberta endorsement

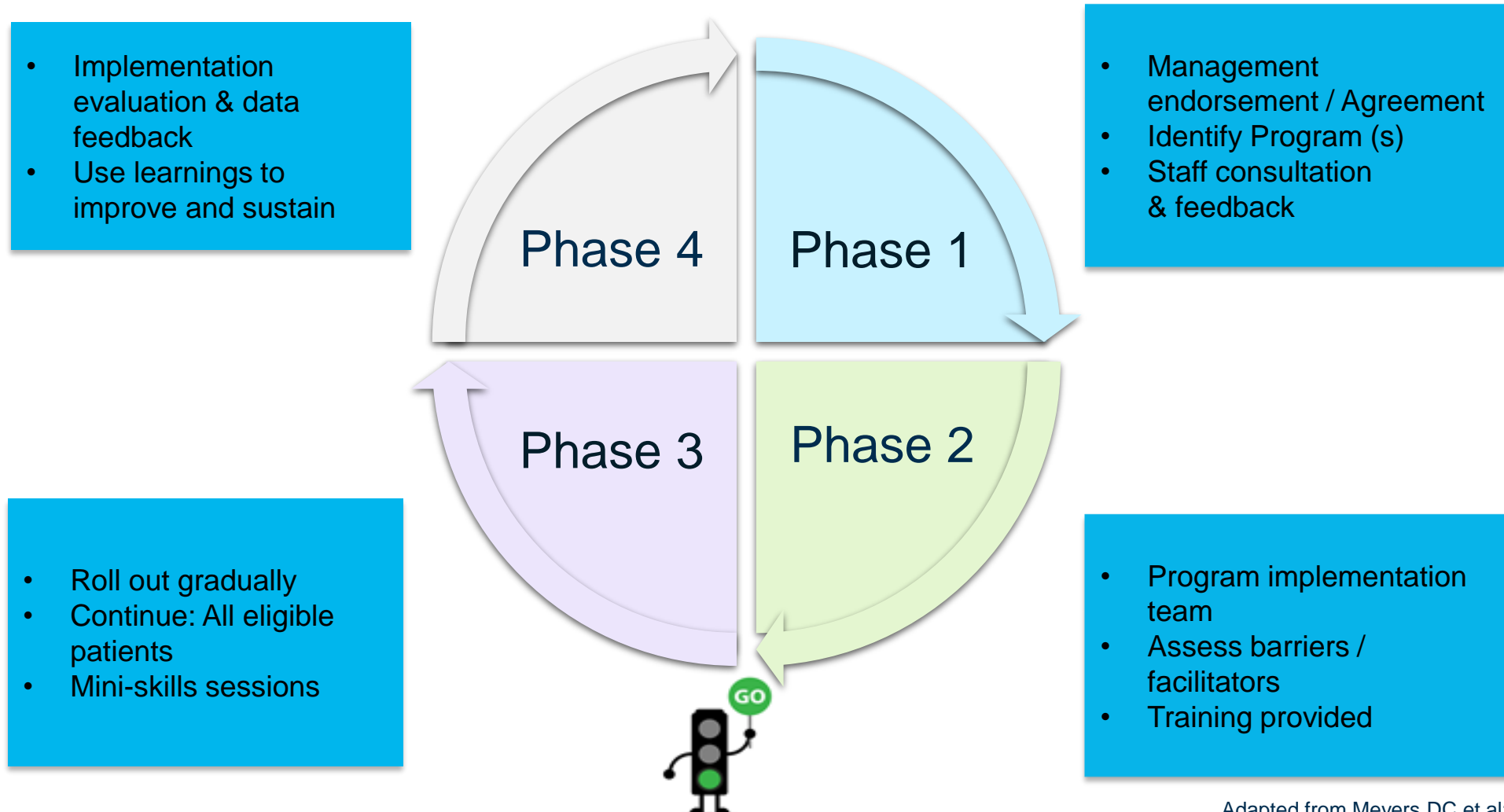


Connect Care build



Implementation

Program-level Implementation Process

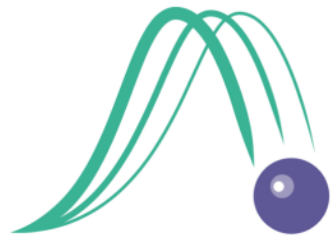


Our Journey Doesn't End with Adults!



Measuring Recovery in Adolescents

- Young Person's Recovery CORE (YPR-CORE)



YP-CORE
(10 Items)



**Remaining 5
personal
recovery items
from CORE-OM**



YPR-CORE
(15 Items)

The Young Person's Recovery CORE (YPR-CORE)

Personal Recovery	Clinical Recovery	Total Recovery
8 positively framed items	7 negatively framed items	Total of 15 items
<ul style="list-style-type: none"> Measures connection, hope, identity, meaning, & empowerment 	<ul style="list-style-type: none"> Measures anxiety, depression, trauma, sleep difficulties, & suicide risk 	<ul style="list-style-type: none"> Balanced assessment of recovery
<ol style="list-style-type: none"> I've felt able to cope when things go wrong There's been someone I felt able to ask for help I've done all the things I wanted to I felt O.K. about myself I've been happy with the things I have done I've felt really close to someone in my life I've been able to do most things I needed to I've thought the future will be good 	<ol style="list-style-type: none"> I've felt edgy or nervous I haven't felt like talking to anyone I've thought of hurting myself My thoughts and feelings distressed me My problems have felt too much for me It's hard to go to sleep or stay asleep I've felt unhappy 	

Coming Soon!



Initial validation of YPR-CORE and MSBA in adolescents (Fall 2025)



Recovery Alberta

MENTAL HEALTH AND ADDICTION SERVICES

Thank you!

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