Reference #: [S13]



Early Psychosis Intervention – Spreading Evidence-based Treatment: Improving early psychosis care through the EPI-SET study

Aristotle Voineskos, MD, PhD, FRCPC Nicole Kozloff, MD, SM, FRCPC Janet Durbin, PhD, MSc George Foussias, MD, PhD, FRCPC Sanjeev Sockalingam, MD, FRCPC, MHPE



October 19, 2023



AGENDA

Overview

Fidelity Outcomes

Patient-Level Outcomes

ECHO EPI-SET

Discussion and Q&A

Learning Objectives

- 1. Describe the NAVIGATE model for early psychosis care and patient level outcomes following implementation of this model in Ontario.
- 2. Reflect on barriers and facilitators to implementing the NAVIGATE early psychosis care model across multiple provincial sites.
- 3. Identify training needs and how evidence-based education models can support capacity building in early psychosis care.



Nicole Kozloff, MD, SM, FRCPC

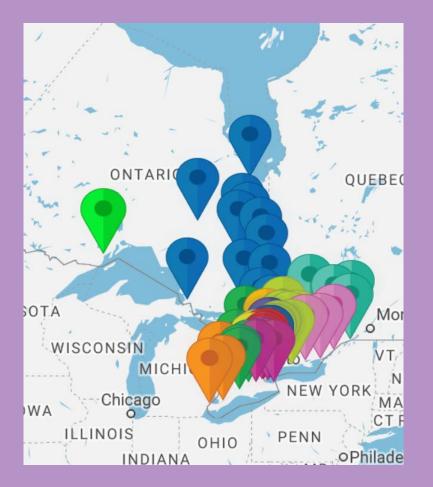
Co-Director, Slaight Family Centre for Youth in Transition Centre for Addiction and Mental Health



The Staggering Toll of Mental Illness in Youth: Conditions with Early Psychosis (Schizophrenia & Bipolar) are the TOP Cause of Disability in Youth

	Males		Females		Total	
	Cause	Total DALYs (100 000s) (%)	Cause	Total DALYs (100 000s) (%)	Cause	Total DALYs (100 000s) (%)
15-19 years						
1	Unipolar depressive disorders	34 (8.0%)	Unipolar depressive disorders	53 (11·7%)	Unipolar depressive disorders	86 (9.9%)
2	Road traffic accidents	33 (7·8%)	Schizophrenia	23 (5·2%)	Schizophrenia	46 (5·3%)
3	Alcohol use	30 (7·2%)	Bipolar disorder	22 (4·9%)	Road traffic accidents	46 (5·3%)
4	Schizophrenia	23 (5·4%)	Abortion	17 (3·8%)	Bipolar disorder	44 (5·1%)
5	Bipolar disorder	23 (5·3%)	Panic disorder	16 (3.5%)	Alcohol use	34 (4·0%)

EPI Services in Ontario



Early Psychosis Intervention Program Standards

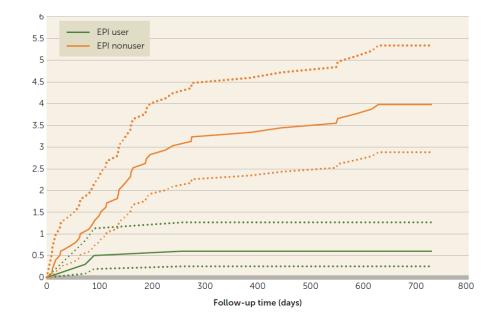


Life-Saving but Recovery Limited

- Outcomes for EPI users:
 - More likely to receive care from a psychiatrist
 - Reduced burden on emergency departments
 - Reduced all-cause mortality

(Anderson, Norman, MacDougall, Edwards,

Palaniyappan, Lau, Kurdyak 2018)



• **Despite this**, recovery rates remain low, and associated disability has not improved under routine clinical care (Craig, Garety, Power, Rahaman, Colbert, Fornells-Ambrojo, & Dunn, 2004)



Ontario Studies Identified Three Main Challenges in Delivering High Quality EPI Care

1 → Challenge: Considerable variability, particularly in recoveryoriented care; difficult to deliver all aspects of care; Requests for manualized protocols

 $2 \rightarrow$ Challenge: Need for consistent access to training (and time) for the latest in evidence-based practices

 $3 \rightarrow$ Challenge:

Need/interest to bolster a community of practice and receive ongoing access to expertise



Individualized Medication Treatment

 Reducing symptoms and preventing relapses in order to help people achieve their desired goals

Individualized Resiliency Training

- Helping clients achieve personal goals by teaching them about their disorder and its treatment
- Reducing selfstigmatizing beliefs
- Helping them learn social and resiliency skills

Supported Employment & Education

- Helping clients to develop education and employment goals related septo their career interests
- Specialists work with clients to help them obtain jobs or enroll in educational programs

Family Education

- Teaching families about psychosis and its treatment
- Reducing relapses by encouraging medication adherence & monitoring signs of relapse
- Reducing family stress via improved communication & problem solving





- NAVIGATE recipients remained in treatment longer, experienced greater improvement in quality of life and psychopathology, and experienced greater involvement in work and school compared with community care
- Shorter DUP had greater improvement

Kane et al., Am J Psychiatry, 2015

Solutions that Meet the Challenges in EPI Care Across the Province

1 —> Challenge: Need to standardize care, particularly recovery-oriented care and manualized protocols

Solution: The four NAVIGATE components are systematically applied in collaboration with the patient and modules are completed in a systematic time-oriented fashion (reducing variability in care among sites). At each patient visit, a contact/progress note is completed including the modules delivered, that the team reviews to assess patient progress, fidelity, and determine need for adjustments.

$2 \rightarrow$ Challenge: Need for consistent access to training, to investigate and implement new practices

Solution: Regional PSSP teams will support implementation and work closely with NAVIGATE content experts from the Slaight Centre (CAMH's EPI program), and community site leads.

Challenge: Need to bolster a community of practice, provide ongoing access to expertise

Solution:

Project ECHO consists of specialist hubs that connect with multiple spoke (learner) teams in remote areas through tele-videoconferencing technology, and thus can bridge the geographic gap required to bolster the Ontario EPI community of practice

Early Psychosis Intervention – Spreading Evidence-Based Treatment (EPI-SET)

1. Implementation and Fidelity Outcomes

Assess whether implementation of NAVIGATE leads to improvement in fidelity to the EPI standard (using the First Episode Psychosis Services Fidelity Scale (Addington et al.); also assess factors that may impact implementation

2. System Level Outcomes

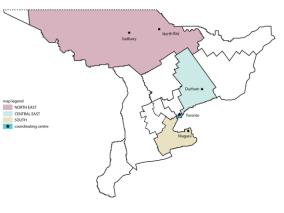
Compare system use – i.e. days in hospital, emergency department visits, suicide attempts, system costs at Ontario EPI NAVIGATE sites (and non-NAVIGATE sites) using data held at ICES

3. Patient Level Outcomes

Determine longitudinal change in functioning and symptoms among NAVIGATE patients

4. Youth and Family Engagement

Evaluate patient and family member engagement according to the SPOR framework





Janet Durbin, PhD, MSc

Independent Research Scientist, Provincial System Support Program Centre for Addiction and Mental Health





EPI-SET Study Objectives

Assess whether implementation of NAVIGATE leads to improved fidelity to the EPI standards.

Assess if people getting NAVIGATE have better system-level outcomes (e.g., fewer days in hospital, fewer emergency department visits) than people using non-NAVIGATE services.

Assess if people getting NAVIGATE services improve over time in their functioning in their lives and experiences of symptoms.

Assess how do youth and family members feel about their engagement in the study (based on the SPOR framework).

Measuring Fidelity

• First Episode Psychosis Fidelity Scale (FEPS-FS-R)*

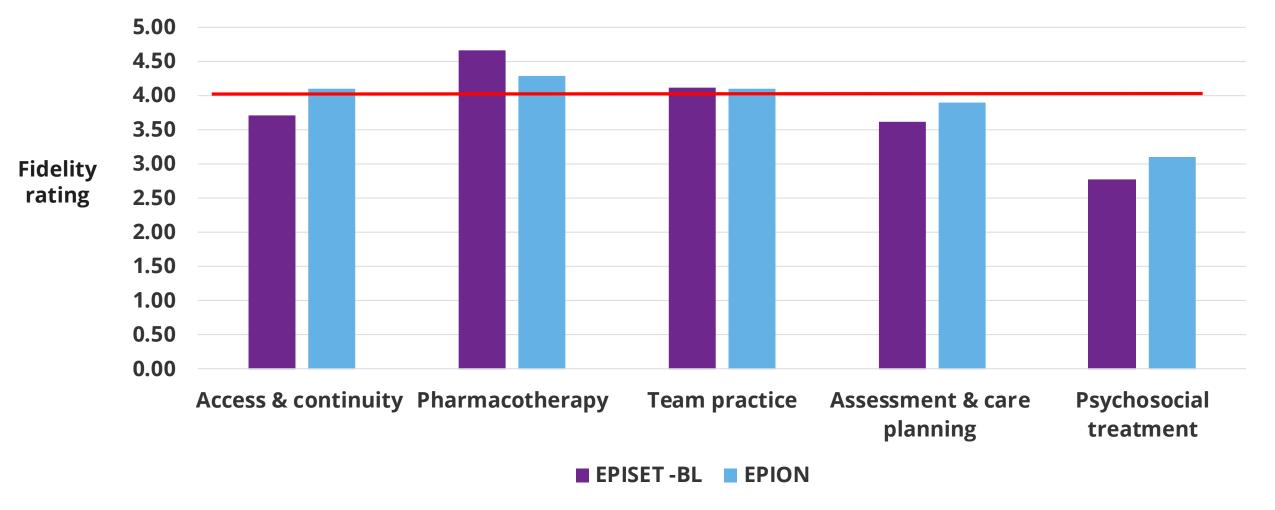
- o Assesses delivery in relation to current best practice standards for EPI
- o 27 items rated on a 5 point scale: 4 or more indicates good adherence
- Based on staff interviews (virtual), chart data, program data, team lead survey

• Fidelity assessed at 3 points in time:

- Pre NAVIGATE implementation 2018-19 (pre COVID) BL
- \circ 20 months after implementation 2020-21 (during COVID) T1
- \circ 32 months after implementation 2021-22 (underway) T2
- At T1, we met with each team to review their results & discuss reasons for any rating changes
 NAVIGATE related, COVID related, other

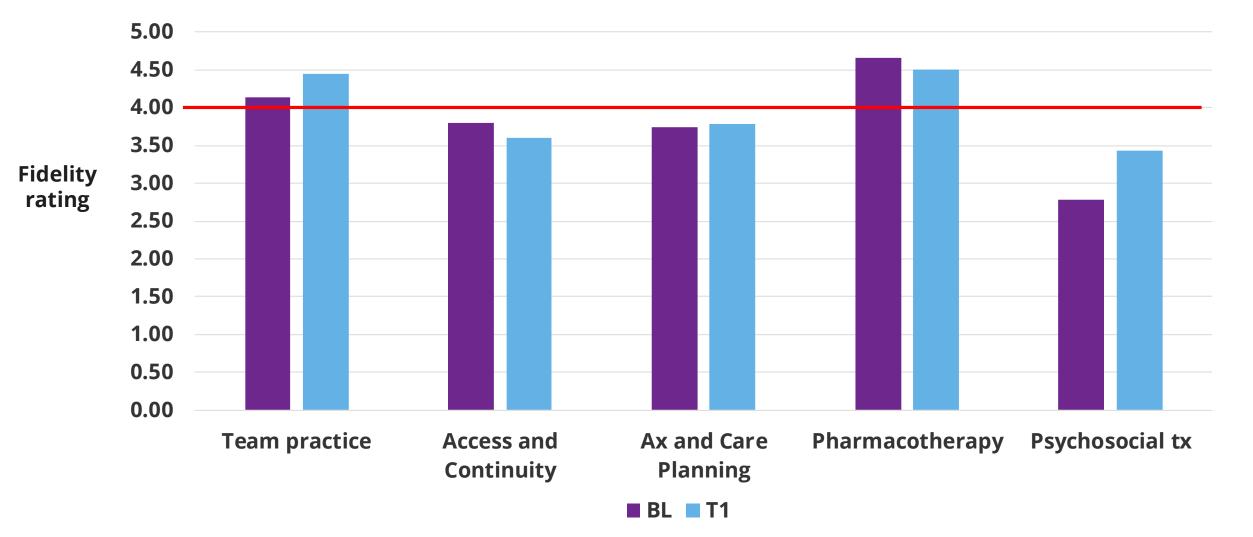
Fidelity Domains: Team Practice Access and Continuity Assessment and Care Planning Medical Management Psychosocial Treatment

Pre NAVIGATE Domain Ratings* EPI-SET (6 Sites) and EPION (17 Sites)

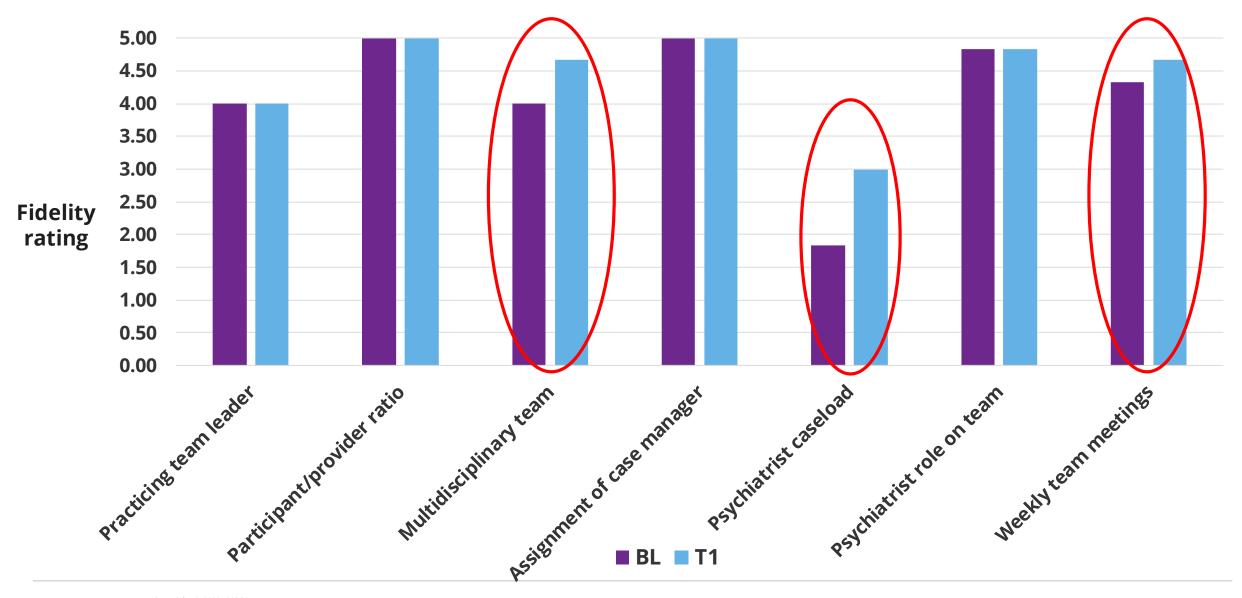


* Note: FEPS-FS content has been refined over time, only comparable items are reported.

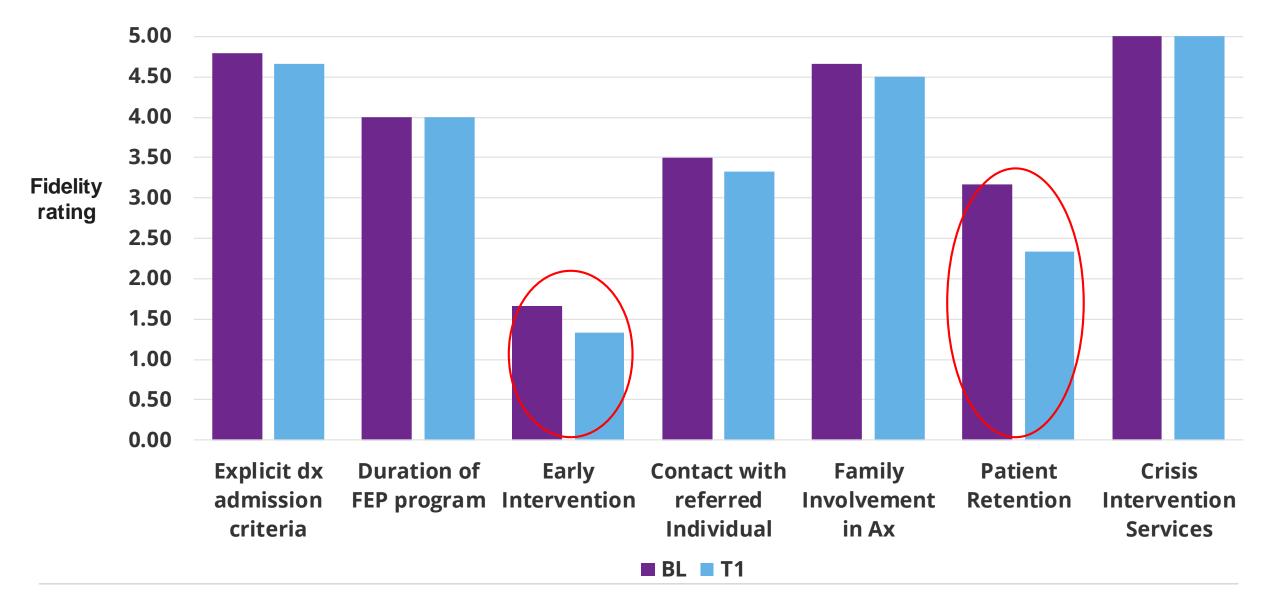
EPI-SET Sites: Domain Ratings BL and T1



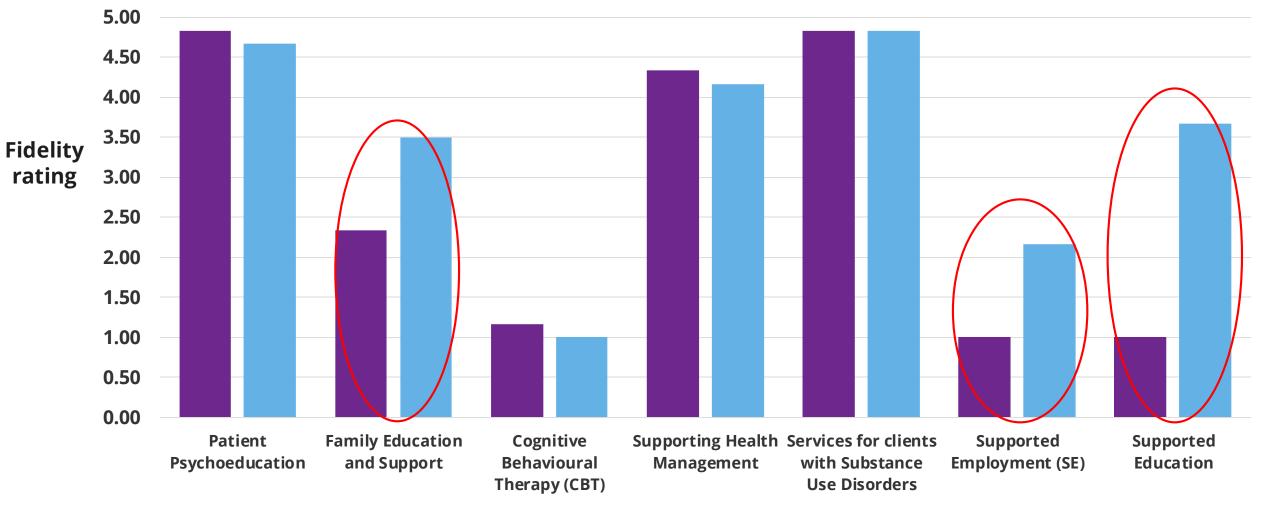
Team Practice Ratings BL and T1



Access and Continuity: BL and T1



Psychosocial Treatments: BL and T1



■ BL ■ T1

Staff Survey - Views of NAVIGATE

Snapshot 2 Time Points:

After Initial Training; n = 40	After More Experience 2022; n = 35
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- ~60% response rate
- $_{\odot}\,$ Sample varied in years with team, management and front line
- o 35 items, rating 1-7, higher rating more positive implementation environment

Key Findings

- I have a good understanding of the intervention increased from 53% to 74% of sample
- Motivation (relative advantage, compatibility, observability) positive & stable (5.4)
- Specific capacity (skills, program support) positive & stable (5.7)
 - $\circ~$ Notable increase in inter-organizational support
 - Variability at program level
- General capacity (climate, leadership, innovation) decrease although still positive 5.7 may reflect COVID related turbulence

Discussion

What We Learned

- 1. NAVIGATE was implemented during a time of extensive health care system turmoil.
- 2. Despite this, after 20 months, programs reported implementing many NAVIGATE related practice changes and fidelity ratings improved in areas which are a particular focus of the model team practice and delivery of psychosocial treatments.
- 3. Nevertheless, continued improvement is needed to reach good fidelity in a number of areas.

Next Steps

- 1. A third fidelity review will determine whether improvement is sustained and inform continued improvement
- 2. The fidelity review feedback was generally valued by the programs to guide delivery efforts and stimulated further practice changes.
- 3. The fidelity scale reflects best evidence on EPI model components and does not specifically measure quality of delivery of NAVIGATE. Study completed initial work to specifically measure NAV delivery.

Patient-Level Outcomes

George Foussias, MD, PhD, FRCPC

Scientific Director, Slaight Family Centre for Youth in Transition Chief, Schizophrenia Division Centre for Addiction and Mental Health

EPI-SET Study Objectives

- Assess implementation of NAVIGATE and whether it leads to improved fidelity to the EPI standards.
- 2 Assess if people getting NAVIGATE have better system-level outcomes (e.g., fewer days in hospital, fewer emergency department visits) than people using non-NAVIGATE services.

3

Assess if people getting NAVIGATE services improve over time in their functioning in their lives and experiences of symptoms.

4

Assess how do youth and family members feel about their engagement in the study (based on the SPOR framework).



EPI-SET Study Objectives

Assess if people getting NAVIGATE services improve over time in their functioning in their lives and experiences of symptoms.

Aim:

Investigate longitudinal change in functioning and symptoms over the first 12 months in youth participants receiving NAVIGATE.

Research Recruitment





Early Psychosis Intervention – Spreading Evidence Based Treatment (EPI-SET)

RESEARCH OPPORTUNITY

Interested in **improving** mental health care in Ontario?

We are **actively recruiting** participants for a research study!

Your participation will help us understand the benefits of the NAVIGATE program for young adults experiencing psychosis. Participation involves answering questionnaires about your health and care experiences. You will be compensated for your time.

You may be eligible if you are:Between the ages of 14 and 35Have experienced psychosis

- Are receiving care in an Early Psychosis
- Intervention program

Interested in participating? Let your care provider know that you would like to be contacted by the research team.

For more information about the study, you can contact slaightepi.setproject@camh.ca



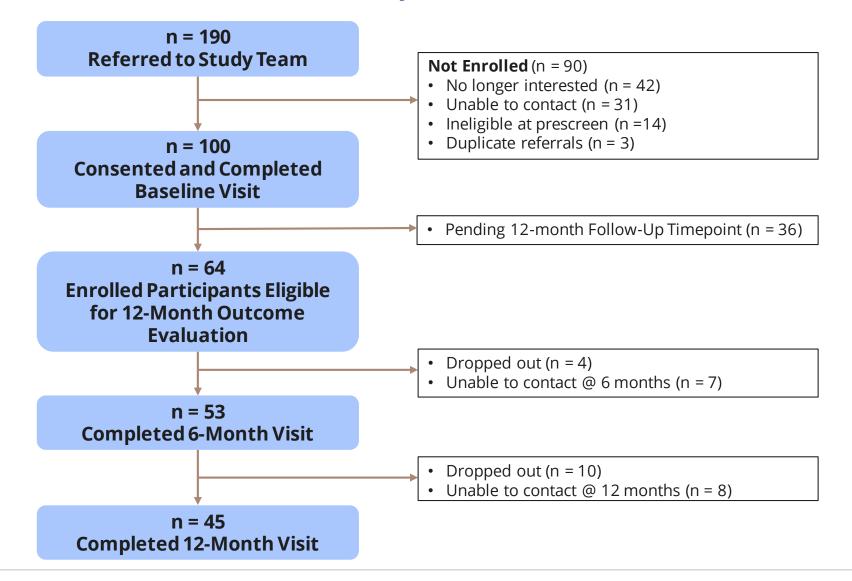
Who is Participating?

- Youth ages 14-35 experiencing an early episode of any DSM5 psychotic disorder
- Within the first two years of receiving NAVIGATE at 6 participating sites
- Able and willing to consent to study participation

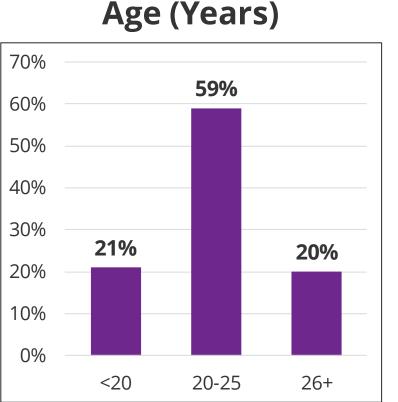
Study Procedures

- Trained interviewers completed remote video-based assessments at baseline, and every six months over the course of two years
- Functioning outcomes:
 - Quality of Life Scale (QLS)
 - Social and Occupational Functioning Assessment Scale (SOFAS)
 - self-report World Health Organization Disability Assessment Schedule 2.0 (WHODAS)
- Symptom outcomes:
 - Brief Psychiatric Rating Scale (BPRS)
 - Patient Health Questionnaire (PHQ-9)
 - Clinical Global Impression (CGI) scale.

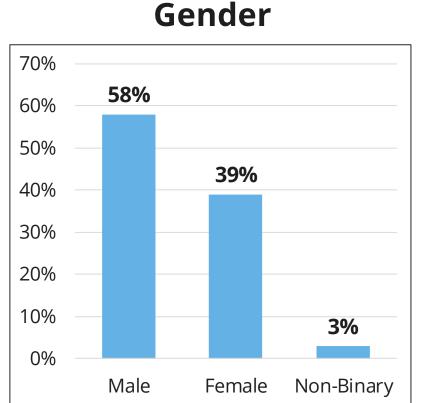
Participant Recruitment and Retention (as of May 2023)



Results: **Baseline Youth Participant Characteristics**



- Youngest participant = 14 years
- Oldest participant = 33 years
- Mean Age (SD) = 22.7 (4.15) years
- Median Age = 22 years

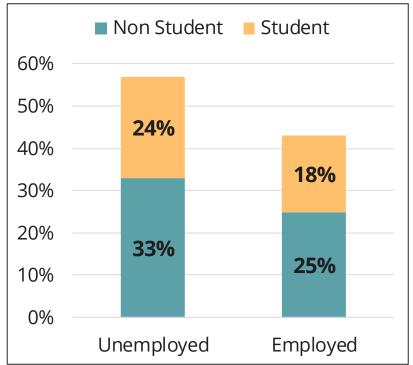


Birth sex figures essentially the same

Intersex

- Options not selected by our sample:
 - Trans Man
 - Don't Know Trans Woman • Other
 - Two-Spirit

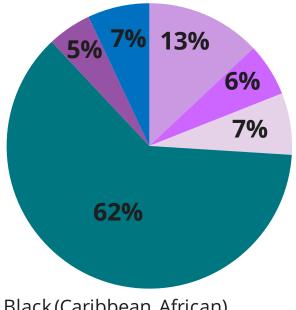
Education & Employment



- 80% completed high school
- Of these, 20% completed a postsecondary college or university program
- 39% of employed participants are fulltime

Results: Baseline Youth Participant Characteristics

Race / Ethnicity

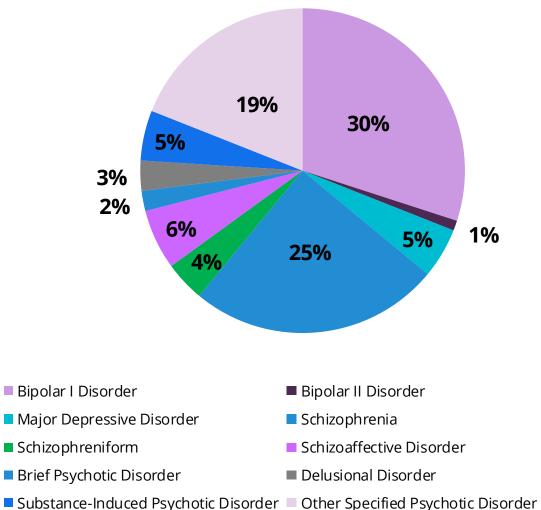


- Black (Caribbean, African)
- Southeast Asian
- First Nations, Indigenous, Aboriginal
- White (North American, European)
- Middle Eastern

Not Represented:

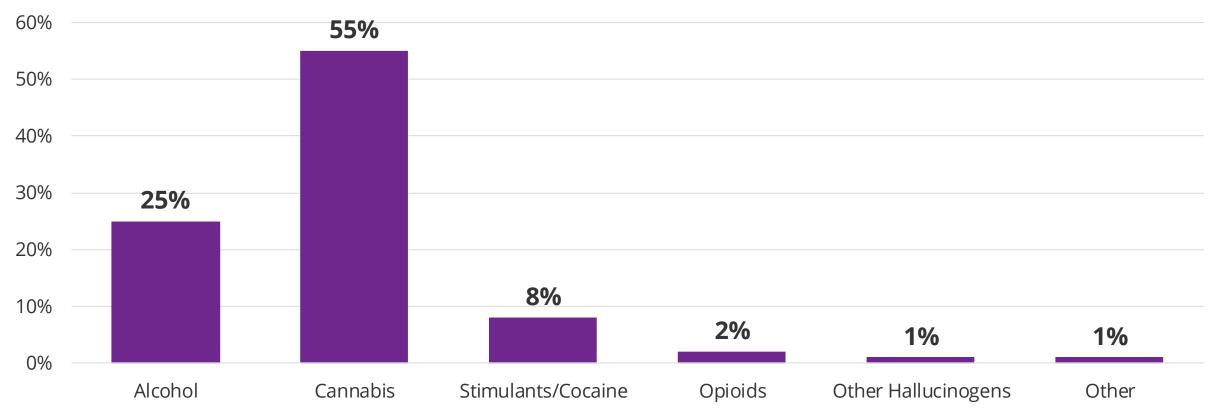
- East Asian
- Latin/Hispanic
- Black (North American)

Primary DSM-5 Diagnosis



Results: Baseline Youth Participant Characteristics

Comorbid Substance Use Disorders



In total, **63 participants** present with **at least 1** comorbid substance use disorder.

Of these participants, **23 participants** present with **2 or more** comorbid substance use disorders.

Preliminary 12-Month Outcomes: Participant Characteristics

Baseline Characteristics	Mean (SD) N=64
Age	22.8 (4.0)
Sex(% Female)	42%
Gender (% Female)	42%
Primary DSM5 Diagnosis Schizophrenia Spectrum, Affective Psychosis (N)	41, 23
Student (%)	44%
Employed (%)	39%
QLS Total Score	82.6 (20.6)
SOFAS Score	64.6 (12.8)
WHODAS Total Score	58.9 (22.3)
BPRS Total Score	34.8 (8.7)
PHQ-9 Total Score	5.3 (5.4)
CGI-Severity	2.5 (1.3)

Preliminary 12-Month Outcome Findings

Quality of Life Scale

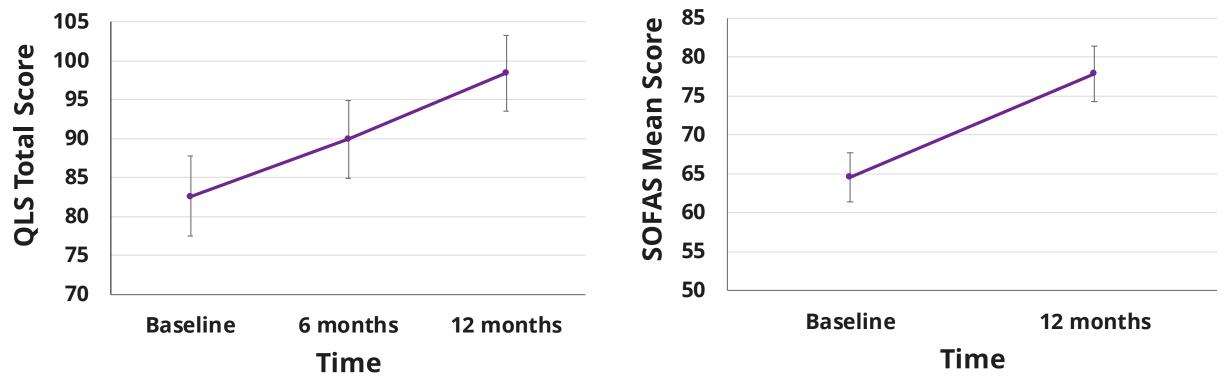
Social & Occupational Functioning Assessment Scale





Total scores range from 0 to 100, with higher

scores indicating improved functioning



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• Total scores range from 0 to 126, with higher scores indicating improved functioning

Preliminary 12-Month Outcome Findings

Outcome Measure	Baseline	Month 6	Month 12	Estimated Change From Baseline to Month 12
	Estimated Mean (SE)	Estimated Mean (SE)	Estimated Mean (SE)	Estimate, SE (95% Cl), p
QLS Total Score	82.6 (2.6)	89.9 (2.5)	98.5 (2.4)	15.8, 3.1 (9.7, 21.9), p < .001
Interpersonal Relations	30.6 (1.4)	33.2 (1.4)	35.7 (1.1)	5.1, 1.5 (2.2, 8.0), p < .001
Instrumental role	13.0 (0.8)	15.3 (1.0)	18.0 (1.0)	4.9, 1.3 (2.4, 7.4), p < .001
Intrapsychic foundations	31.4 (0.9)	32.9 (0.8)	35.7 (0.8)	4.4, 1.1 (2.2, 6.6), p < .001
Common object and activities	7.6 (0.2)	8.5 (0.2)	8.9 (0.2)	1.3, 0.3 (0.8, 1.8), p < .001
SOFAS Score	64.6 (1.6)		77.8 (1.7)	13.3, 1.9 (9.5, 17.1) p < .001
WHODAS Total Score	58.9 (2.6)	55.3 (2.7)	53.2 (2.9)	-5.7, 3.1 (-11.7, 0.40), p = .07
BPRS Total Score	34.8 (1.1)	35.2 (1.1)	32.6 (0.9)	-2.2, 1.3 (-4.7, 0.4) p = .09
PHQ-9 Total Score	5.3 (0.7)	5.3 (0.6)	4.9 (0.8)	-0.4, 0.9 (-2.1, 1.3), p = .64
CGI Severity	2.5 (0.2)	2.4 (0.2)	2.3 (0.2)	-0.2, 0.2 (-0.5, 0.2) p = .25

Discussion

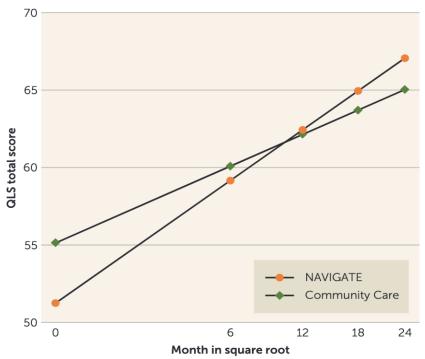
- Preliminary findings suggest that youth experiencing an early episode of psychosis who received NAVIGATE through their EPI service experienced significant improvements in functioning over the first year of treatment.
- The QLS improvements seen in these preliminary findings of NAVIGATE implementation in Ontario are of similar magnitude to those seen in the NIMH RAISE trial.
- Continued evaluation of outcomes for the entire sample over the full two years of treatment stands to further evidence on the effectiveness of NAVIGATE, and inform opportunities for EPI service design to provide comprehensive evidence-based care to enhance outcomes for youth experiencing early psychosis.

Comprehensive Versus Usual Community Care for First-Episode Psychosis: 2-Year Outcomes From the NIMH RAISE Early Treatment Program

John M. Kane, M.D., Delbert G. Robinson, M.D., Nina R. Schooler, Ph.D., Kim T. Mueser, Ph.D., David L. Penn, Ph.D., Robert A. Rosenheck, M.D., Jean Addington, Ph.D., Mary F. Brunette, M.D., Christoph U. Correll, M.D., Sue E. Estroff, Ph.D., Patricia Marcy, B.S.N., James Robinson, M.Ed., Piper S. Meyer-Kalos, Ph.D., L.P., Jennifer D. Gottlieb, Ph.D., Shirley M. Glynn, Ph.D., David W. Lynde, M.S.W., Ronny Pipes, M.A., L.P.C.-S., Benji T. Kurian, M.D., M.P.H., Alexander L. Miller, M.D., Susan T. Azrin, Ph.D., Army B. Goldstein, Ph.D., Joanne B. Severe, M.S., Haiqun Lin, M.D., Ph.D., Kyaw J. Sint, M.P.H., Majnu John, Ph.D., Robert K. Heinssen, Ph.D., A.B.,P.

Am J Psychiatry 173:4, April 2016

A. QLS total score^b



ECHO EPI-SET

Sanjeev Sockalingam, MD, FRCPC, MPHE

Vice President Education, Chief Medical Officer, and Senior Scientist Co-Chair, ECHO Ontario Mental Health Centre for Addiction and Mental Health

Project ECHO

Project ECHO is a **"hub and spoke"** technology enabled education and capacity building model.

ECHO Core Principles:

- » Use technology to leverage scarce resources
- » Share best practices
- » Utilize case-based learning
- » Improve and monitor outcomes
- » "All teach, all learn"

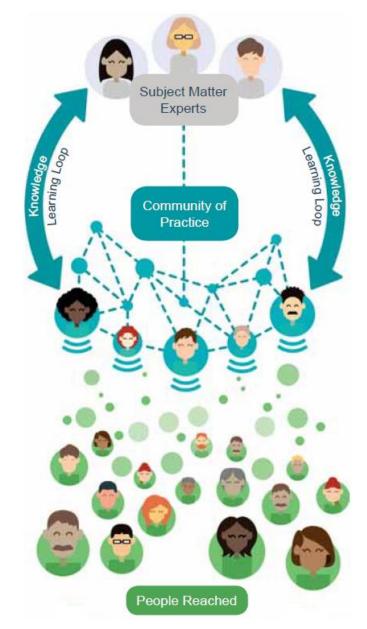
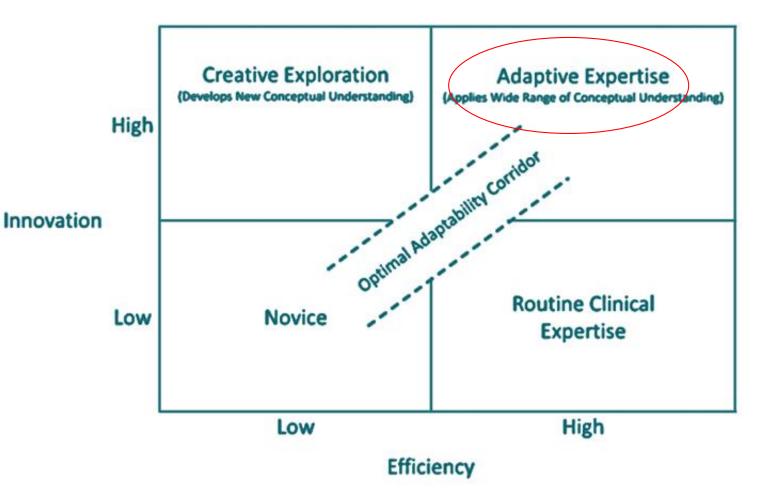


Figure 1. Project ECHO Model. From University of New Mexico School of Medicine.

Learning in ECHO

- » Individual and collective self-efficacy (Bandura)
- » Situated learning and communities of practice (Wenger)
- » Adult learning principles (Knowles)
- » Adaptive expertise (Schwartz)
- » Lifelong learning
- » Transformative learning



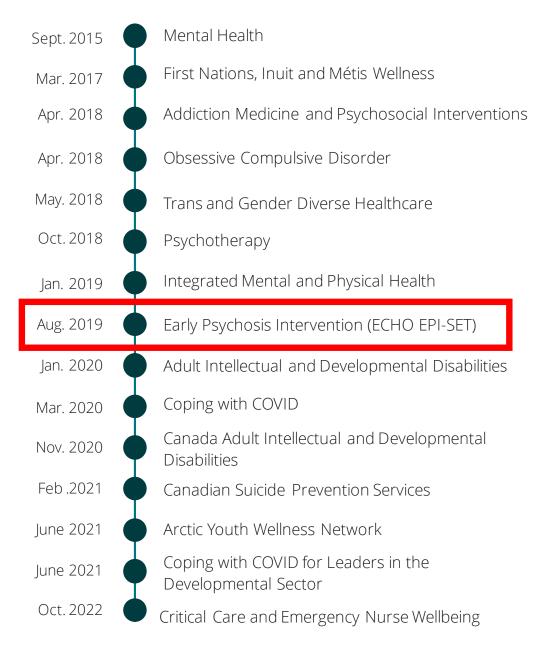


Socolovsky C et al. Prog Community Health Partnersh 2013 Carlin L, Zhao J, Dubin R, Taenzer P, Sidrak H, Furlan A. Pain Med 2018 Sockalingam S, Rajaratnam T, Zhou C, Serhal E, Crawford A, Mylopoulos M JCEHP 2021 Sheehan KA, Chaput J, Bond V, Alloo J, Soklaridis S, Zhang M, Sockalingam S. JACLP 2023

ECHO Ontario Mental Health (ECHO-ONMH)

ECHO Ontario Mental Health has expanded from 1 ECHO in 2015, to <u>**15**</u> operational ECHOs in 2022.





ECHO EPI-SET

- ECHO has a growing body of evidence to change knowledge, increase confidence, and to support practice change
 - Provides a community of practice
 - Resource sharing
- **Curriculum:** The NAVIGATE model for First Episode Psychosis treatment for youth and emerging adults
 - **Didactic Presentations:** Sharing of best practices of the NAVIGATE model of care
 - **Case Discussions:** Opportunity to apply NAVIGATE to real-world contexts
- Learning from and with one another, including youth/families with lived experience
 - Hub Team: Psychiatrists, Individual Resiliency Trainers (IRT), Family Clinician (FE), Supported Employment (SEE), Peer support, Research Analysts, Youth and Family Advisory Committee Representatives
 - **Spokes:** Partner sites

Zhou C, Crawford A, Serhal E, Kurdyak P, Sockalingam S. Acad Med 2016

ECHO EPI-SET Session Format

ECHO Session Component	Time
Introductions	10:00 – 10:05 AM
Case Presentation Discussion	10:05 – 10:35 AM
Presentation of case by a partner site member	10:05 – 10:10 AM
Questions – Partner sites and Hub	10:10 – 10:20 AM
Recommendations – Partner sites and Hub	10:20 – 10:30 AM
Summary of Recommendations	10:30 – 10:35 AM
Didactic Presentation, Q&A	10:35 – 10:58 PM
Wrap-Up, Closing Remarks	10:58 – 11:00 AM

ECHO EPI-SET Cycle 4 Curriculum (Sample Sessions)

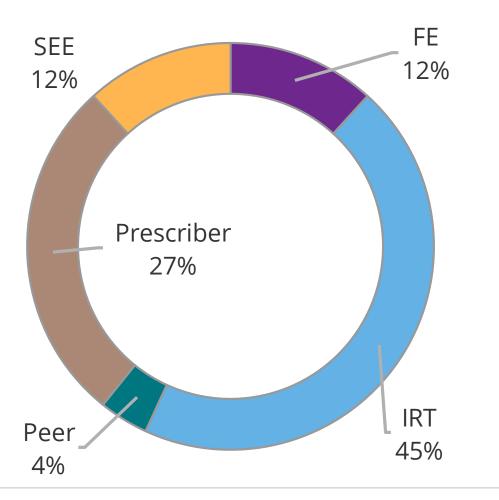
Weeks	Curriculum Topics
11	Digitization of IRT Manuals
12	Transitioning out of EPI Programs
13	IRT: Behaviour Activation
14	Prescriber – Side Effects and Discontinuation of Medication
15	Family Advisory Committee – Family Perspectives in Early Psychosis Care
16	Addictions
17	IRT: Groups

ECHO EPI-SET Evaluation

Moore's Evaluation Framework	Evaluation Measures
Level 1: Participation	Number of sessions attendedNumber of professions/disciplines participating
Level 2: Satisfaction	 Monthly satisfaction evaluation survey (IT, format, learning environment)
Level 3 and 4: Learning/Competence	 Changes in perceived confidence in participant's ability to perform core competencies related to NAVIGATE role (Measured at baseline + 2 other time points)
Level 5: Performance	• Degree to which attendees perform what ECHO intended them to do
Level 6: Patient Health	• How much does mental health of patients change as a result of ECHO
Level 7: Community Health	 Degree to which mental health in the community of patients changes due to ECHO-related changes in practice

ECHO EPI-SET Participation

Participant Role Breakdown



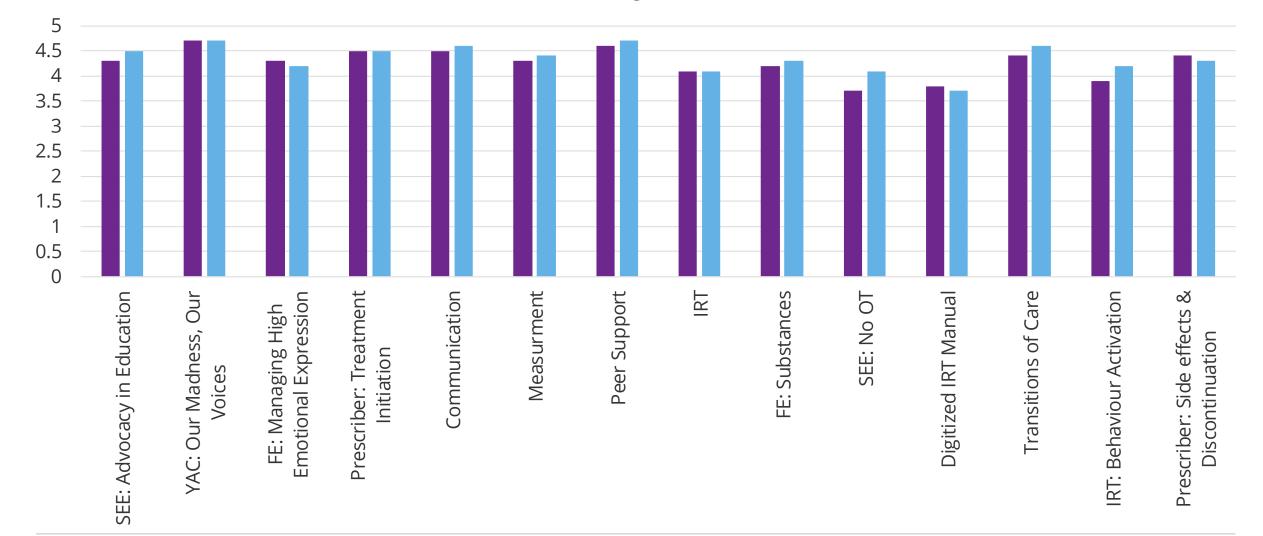
2 sessions per month | **67** sessions held todate

78 registered participants | **5** sites

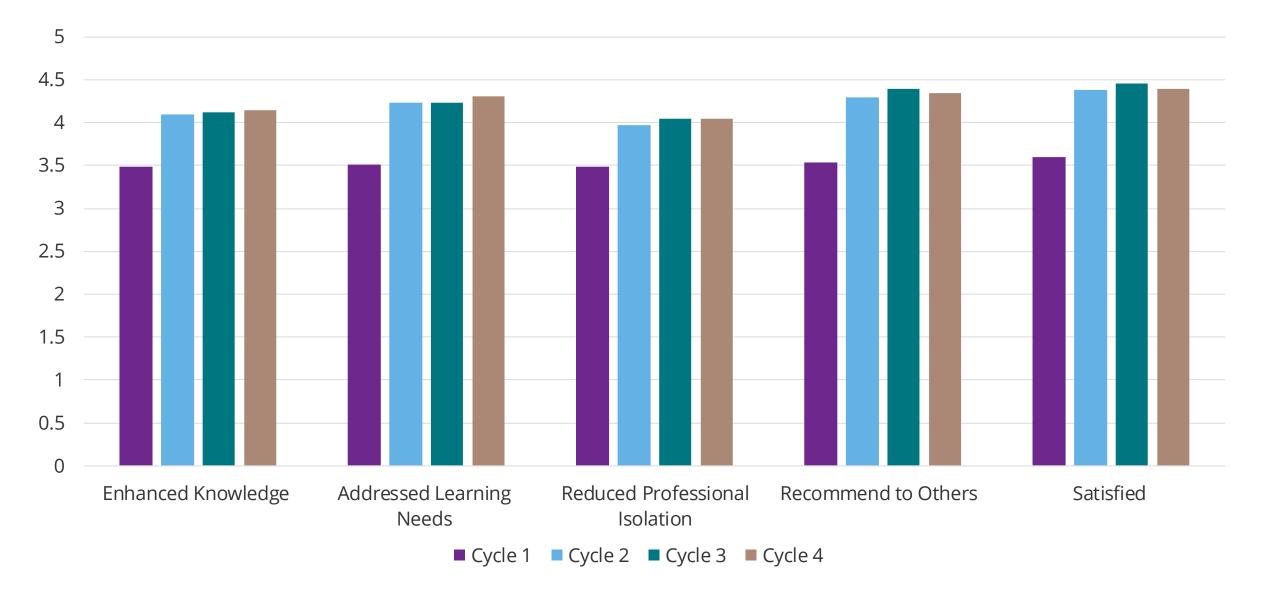
Mean attendance per session: 23 participants (spokes) | 5 sites

Average Satisfaction of and Learning from Cycle 4

Addressed Learning Needs
Satisfied



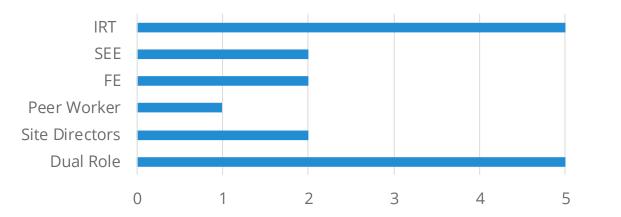
Feedback from ECHO EPI-SET Cycles



ECHO EPI-SET Qualitative Interviews

PURPOSE

- To measure the impact of ECHO EPI-SET on learning, change in practice, and communities of practice
- Assessing sustainability through uptake of the ECHO model, which will be measured by qualitative interviews of staff that attend the ECHO sessions



<u>RECRUITMENT</u> (n = 17)

6

Sharing New Impact of ECHO Creating a Knowledge and Skills **Change in Practice Structure** Community in EPI Care **THEMES** Interprofessional learning Accessible Reducing professional Application of Valuing lived knowledge and skills isolation Improvement experience into clinical settings opportunities Fostering inclusivity • Gaining new knowledge and skills

Creating a Community of Practice

It gives us that common language, a common purpose, where even though we have different service areas with different needs, there are still those commonalities and how to connect with those who are experiencing a first episode of psychosis and their families.

So I think **it's definitely a unique community of clinicians to be in**, so we can understand the challenges of working with the population. [...] we have our family group, with our family education around early psychosis.

We have a team of IRTs and SEE workers and they're nurses and they're child and youth workers, but there is specific education around psychosis. **So it just adds that specialty of service that I think is really important.**

- Family Education (FE) Clinician

Sharing New Knowledge and Skills in EPI Care

It's been a rich experience. Being able to learn about the case, and not only that, but people have questions and then the recommendations from everybody, it's interesting to see other's perspectives. **Everybody has great ideas and great recommendations.** I think it's a lot of professionals that have a lot of good skills and knowledge, so it's really great to hear from all of them and learn from them.

One part that is as important if not more is the people with lived experience. FAC and YAC, I mean, gosh, their questions and the points they bring back are so valuable, and we just couldn't do it without them.

- Site Lead

Discussion and Q&A

Aristotle Voineskos, MD, PhD, FRCPC

Vice President Research Director, Campbell Family Mental Health Research Institute Centre for Addiction and Mental Health

- 1. A role within NAVIGATE is NOT:
- a) Individual Resiliency Trainer
- b)Prescriber
- c) Therapist
- d)Supported Employment and Education Worker

1. A role within NAVIGATE is NOT:

a) Individual Resiliency Trainer

b)Prescriber

c) Therapist

d)Supported Employment and Education Worker

- 2. Which is NOT true of an early psychosis intervention program?
- a) They have been shown to reduce mortality
- b) They are a relatively new model of care in Canada and no standards have been developed
- c) Only around 50% of people with psychotic disorders in Ontario who are indicated for these programs actually access them
- d) One of their objectives is to reduce duration of untreated psychosis

- 2. Which is NOT true of an early psychosis intervention program?
- a) They have been shown to reduce mortality
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- c) Only around 50% of people with psychotic disorders in Ontario who are indicated for these programs actually access them
- d) One of their objectives is to reduce duration of untreated psychosis

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that has been used in mental health including early psychosis. Which of the

following is a core component to the ECHO model:

- a) Didactic lectures
- b) Case-based learning
- c) Online polling
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Closing Remarks

