

Interactive Client Assessment Survey (iCCAS) for Common Mental Disorders: A Pilot in Community Health Center Serving Vulnerable Communities

Presenter:

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Outline

- Background
 - Mental health burden
 - Barriers to access/provide care
 - iCCAS development
- Methods
 - Setting
 - Mix-method design
 - Measurement
- Results and Discussion

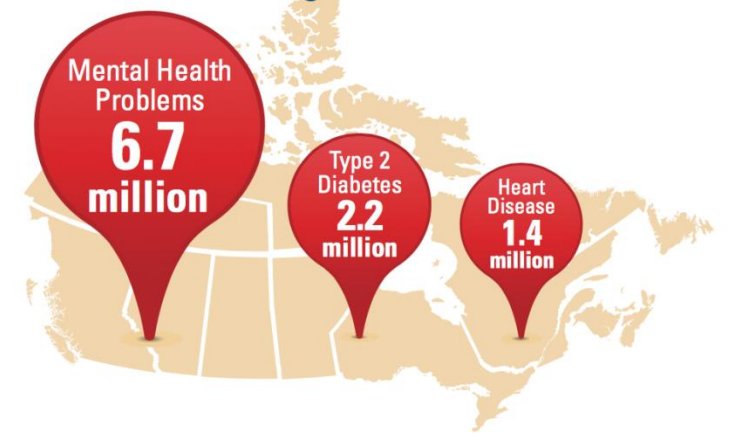


Mental Health: Canada

(i.e. 9.1 million)
meet the criteria for
at least one CMD at
some point in their
life



Canadians are living with:



Barriers to Provide Care in Primary Care



▶ **Provider's barriers**

- Time constraints
- Incorporation of new evidence
- Coordination challenges

▶ **Missed Opportunity**

Example: 50% of depressed cases are not recognized in primary care (Montano, 1994; Miller, 2005)

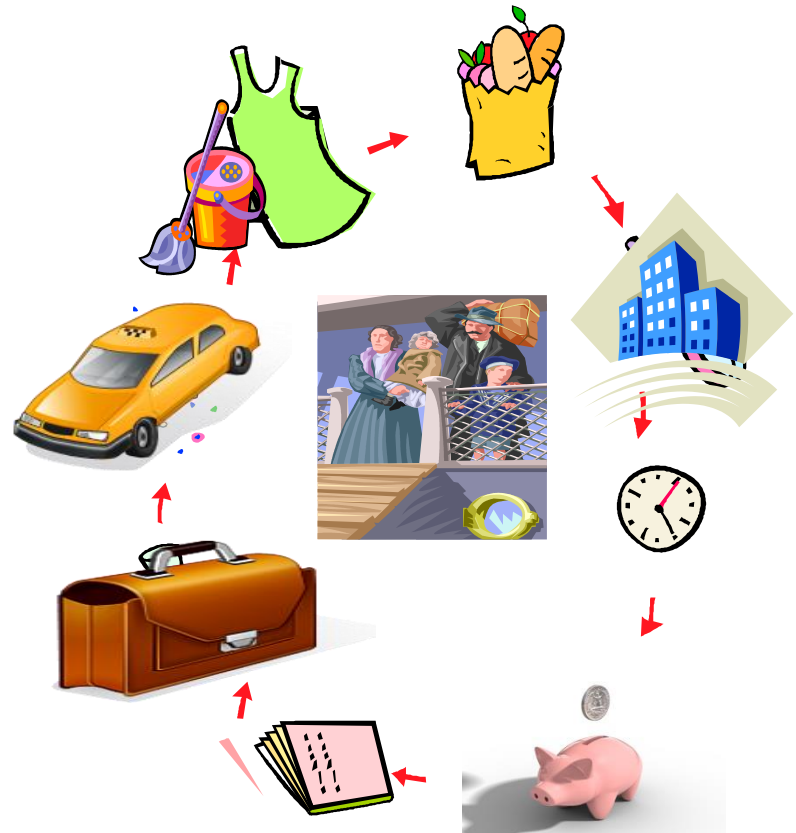
Barriers to Access Care

▶ Social stigma

➤ ↑ magnitude
among vulnerable groups

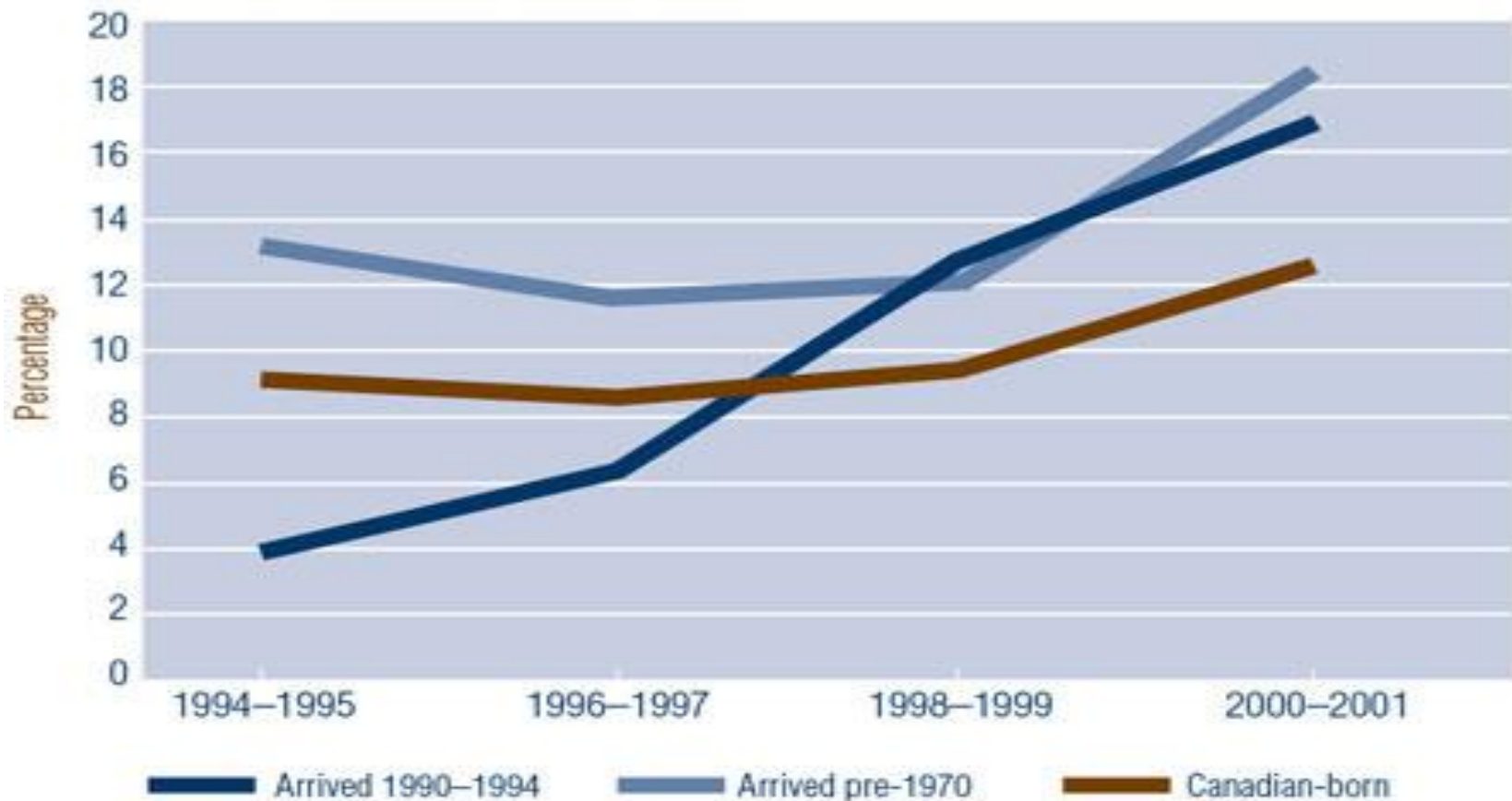
▶ Limited understanding about MH

▶ Low knowledge about treatment and care options



Social Determinants of Health

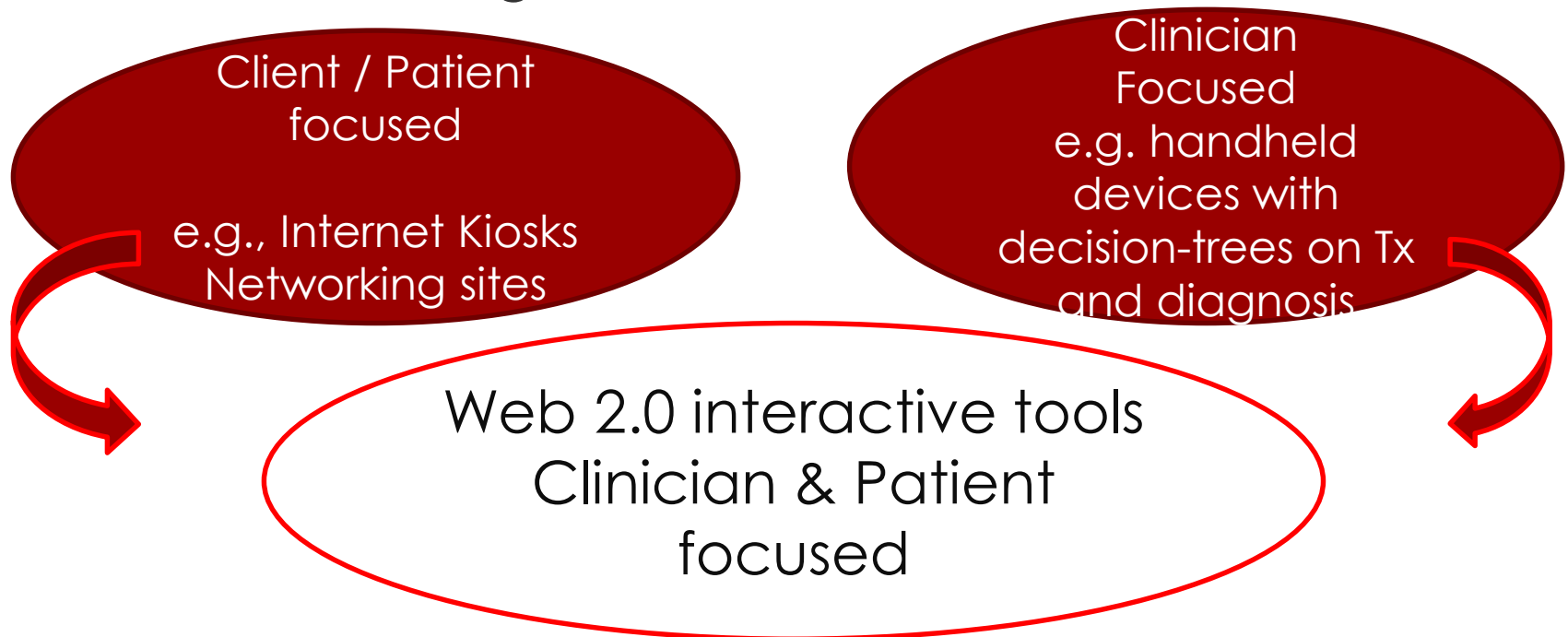
Immigrant Population Reporting "Fair" or "Poor" Health



Source: Newbold KB. Self-rated health within the Canadian immigrant population: Risk and the healthy immigrant effect. *Social Science and Medicine*, 2005.¹⁶

eHealth Innovation

Computer-Assisted Client Assessment Survey (iCCAS) is a user-friendly, touch-screen tablet self-assessment completed by clients during their waiting time before seeing their clinician.



Researchers, clinicians, advisors



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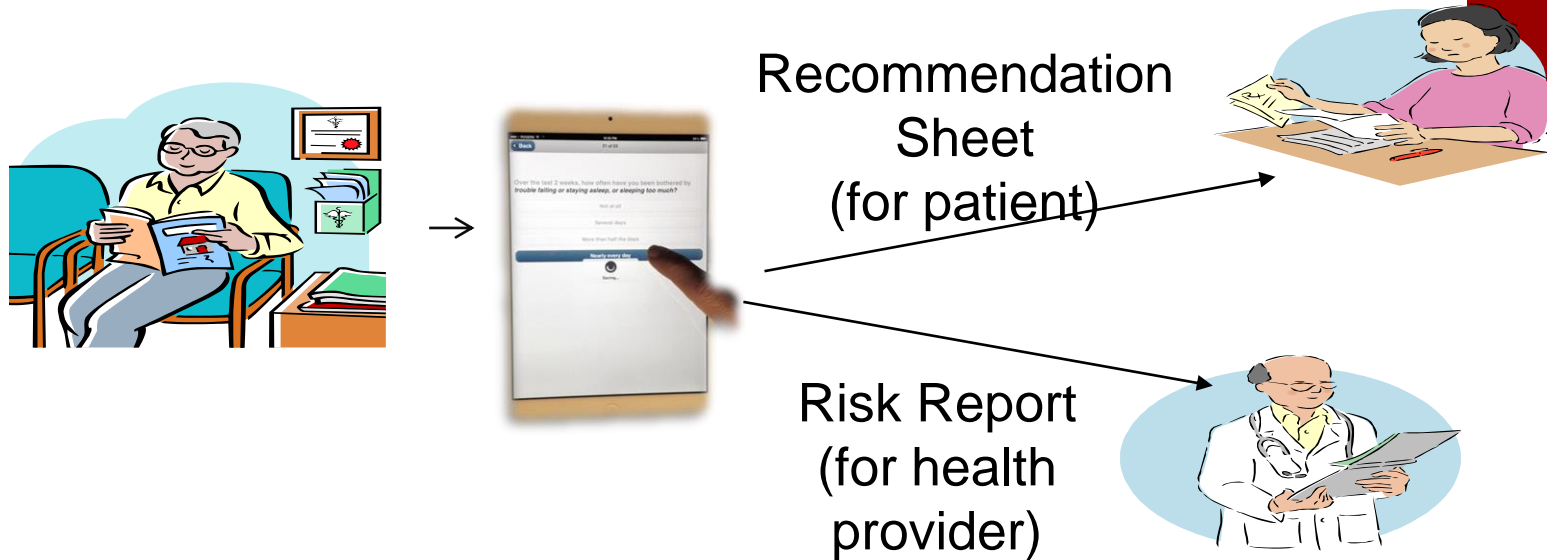

Access Alliance
Multicultural Health and Community Services
Cliff Ledwos
Yogendra Shakya


COSTI
Immigrant Services
EMBRACING DIVERSITY
Vince Pietropaolo


NORTH YORK GENERAL *Making*
Alan Fung


CIHR IRSC
Canadian Institutes of Health Research
Instituts de recherche en santé du Canada

What is iCCAS?



- ✓ Assess depression, anxiety, post-traumatic stress & alcohol use via validated scales
- ✓ Ask about key social determinants of health
- ✓ Produce tailored reports for patients and providers
- ✓ Reach pts in multiple languages -> English & Spanish

What iCCAS screens for?

- Depressive disorders: PHQ-9
- Anxiety disorders: GAD-7
- Post-traumatic stress disorder (PTSD): PTSD-Primary Care
- Alcohol problems: CAGE



Advantages

Patient level comfort

- Non-judgemental mode of inquiry
- Reflection time prior to disclosure
- Skip patterns for time efficiency
- Accuracy of responses
- Tailored feedback

Provider level convenience

- Save screening time for enhanced focus on care
- Standardize screening/assessment

Organization level data

- Service improvement, resource allocation & advocacy



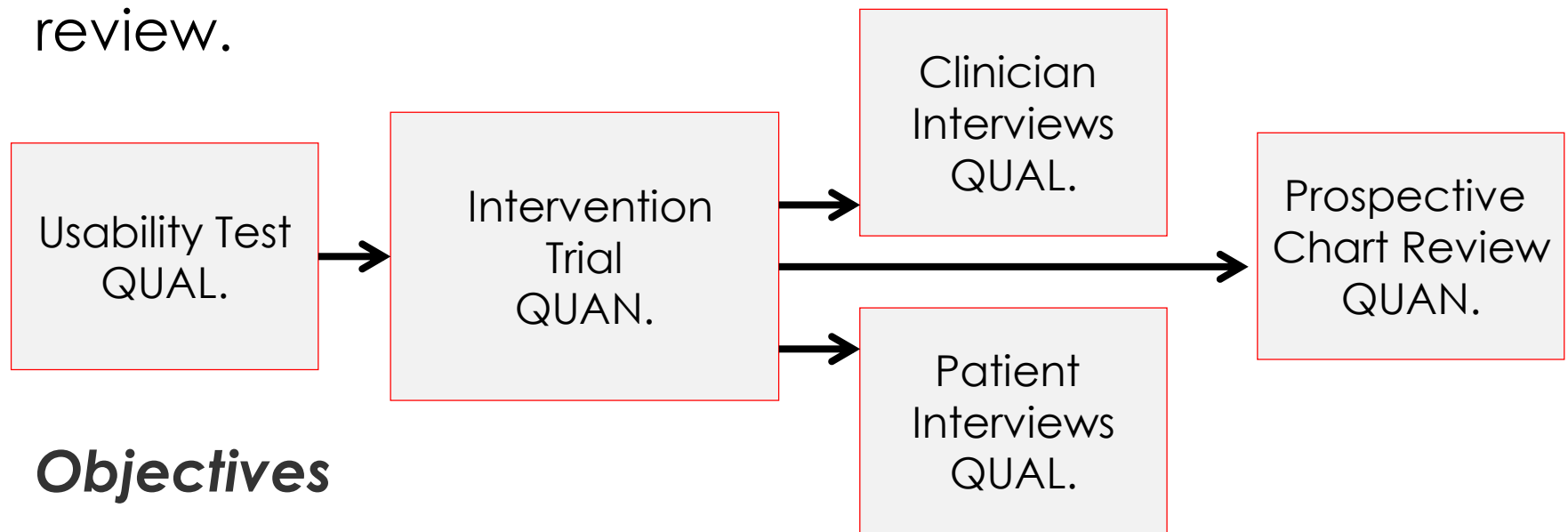
Study Setting



- Access Alliance Multicultural Health and Community Services' mandate is to serve vulnerable immigrants, refugees, and their communities.
- Three locations in Toronto
- Access Alliance provides
 - Primary care
 - Illness prevention and health promotion
 - Community capacity building
 - Service integration

Study design

Mix-method: Two-arm pilot randomized controlled trial (RCT) followed by qualitative clinician and patient interviews, and chart review.



Objectives

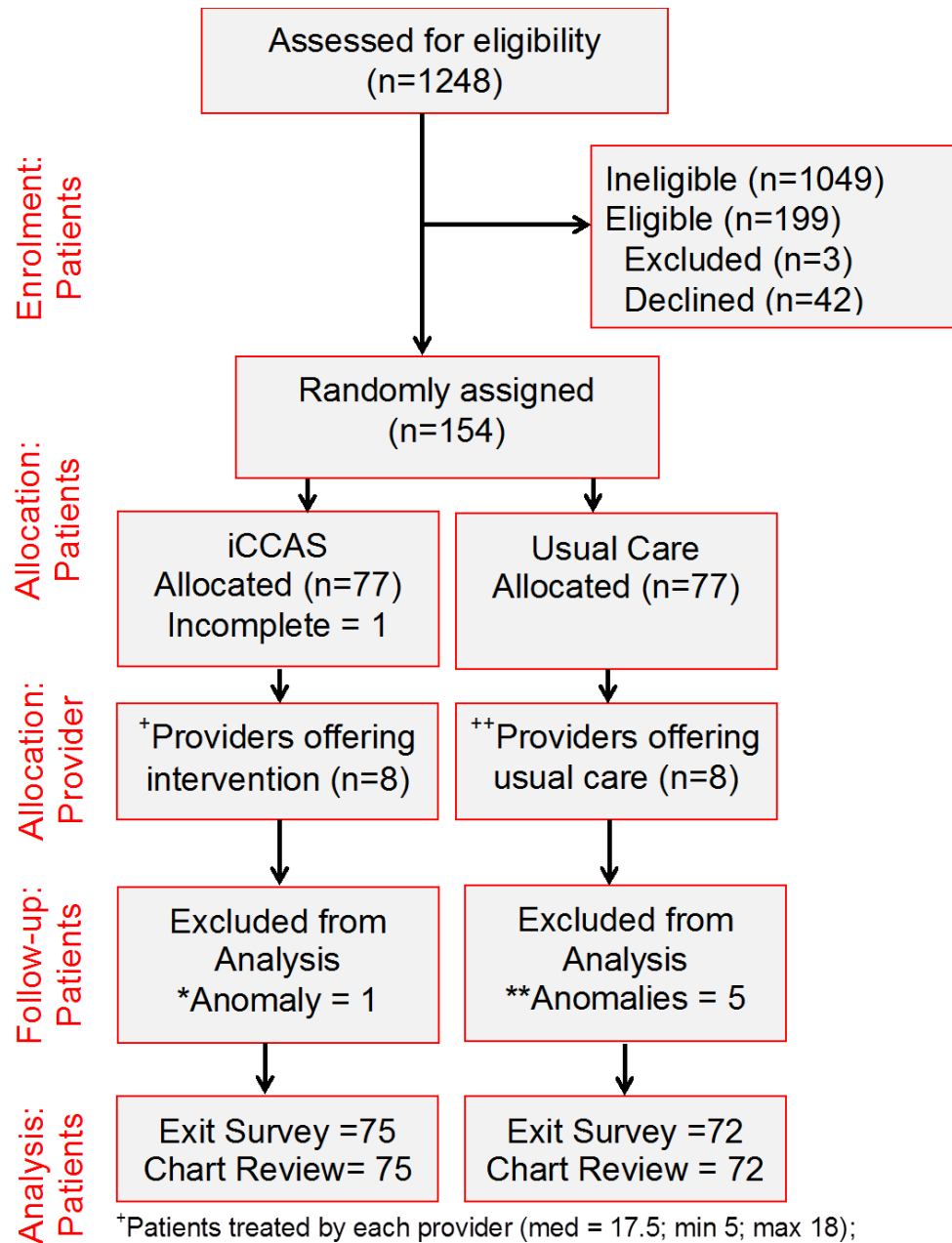
- Efficacy of iCCAS in improving patient discussion (via exit survey) and clinician detection (via chart review) of the four included CMDs, compared to usual care.
- Perspectives of clinicians and patients

Study Participants



- *Participants*
 - FPs and NPs
 - Patients ≥ 18 yrs (English or Spanish speaking) seeing a FP or NP
- *Measurement*
 - Patient Exit Survey
 - Chart Review
 - Semi-structured qualitative interviews

Randomized Controlled Trial - RCT



⁺Patients treated by each provider (med = 17.5; min 5; max 18);
⁺⁺ Patients treated by each provider (med 16.5; min 5; max 17)
 * repeat participation; ** 1 under age; 2 seeing other provider; 2 repeat participation

Demographics

Variable	iCCAS (n = 75)	Usual Care (n = 72)
Age, m (SD)	36.5 (12.7)	37.5 (12.2)
Sex, n (%)		
Male	26 (34.7)	27 (37.5)
Female	49 (65.3)	41 (56.9)
Transgender	0 (0.0)	4 (5.6)
Language, n (%)		
English	59 (78.7)	56 (77.8)
Spanish	16 (21.3)	16 (22.2)
Relationship, n (%)		
Married/In relationship	47 (62.6)	47 (65.3)
Separated/Div/Widow	11 (14.7)	10 (13.9)
Single, not in relationship	18 (24.0)	16 (22.2)
Immigrant, n (%)	74 (98.7)	70 (97.2)
Citizenship, n (%)		
Canada/Resident	54 (72.0)	50 (69.4)
Other	21 (28.0)	22 (30.6)
Yrs in Canada, n (%)		
Less than 5	41 (54.7)	36 (50.0)
Five or more	34 (45.3)	36 (50.0)



Demographics

Variable	iCCAS (n = 75)	Usual Care (n = 72)
Education, n (%)		
Less than grade 12	38 (50.7)	34 (47.2)
College or more	37 (49.3)	38 (52.8)
English language, n (%)		
Less than good	19 (25.3)	18 (25.0)
Good or more	56 (74.7)	54 (75.0)
Employment, n (%)		
Employed	26 (34.7)	25 (34.7)
Not employed	49 (65.3)	47 (65.3)
Annual HH income, n (%)		
Less than 20k	48 (64.0)	46 (63.9)
20k-30k	12 (16.0)	18 (25.0)
30k-40k	8 (10.7)	2 (2.8)
40k-60k	2 (2.7)	4 (5.6)
More than 60k	5 (6.7)	2 (2.8)



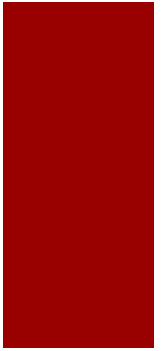
Comparing 2 groups

- ✓ Similar in socio-demographics
- ✓ Self-rated health – poor/fair
 - 36% iCCAS
 - 33.3% usual care
- ✓ Purpose of visit – routine/follow-up
 - 72% iCCAS
 - 83.3% usual care
- ✓ Visit satisfaction - satisfied/v. satisfied
 - 78.7% iCCAS
 - 84.7% usual care



Comparing 2 groups

- ✓ Discussion on mental health
 - 59% iCCAS
 - 41% usual care
- ✓ Mental health related referrals
 - 20% iCCAS
 - 15% usual care
- ✓ Clinician detection, mental health concerns
 - 38.7% iCCAS
 - 27.8% usual care



Outcome 1

Patient Discussion

Parameter	OR	95% CI		Sig.
		Upper	Lower	
Language (English 1; Spanish 2)	3.02	1.26	7.25	0.01
Sex (female 1; male 2)	1.56	0.76	3.20	0.23
Group (iCCAS 1; Usual Care 2)	2.13	1.08	4.22	0.03

Sample 147

Generalized Linear Mix Model (GLMM)

Outcome 2

Clinician Detection

Parameter	OR	95% CI		Sig.
		Upper	Lower	
Language (English 1; Spanish 2)	3.02	1.01	9.03	0.05
Sex (female 1; male 2)	0.79	0.36	1.72	0.55
Education (college 1; <12 grade 2)	2.31	1.08	4.96	0.03
Working (FT 1; PT 2; none 3)	0.17	0.04	0.66	0.03
	0.56	0.21	1.56	
Group (iCCAS 1; Usual Care 2)	1.93	0.91	4.11	0.08

Sample 147

Generalized Linear Mix Model (GLMM)

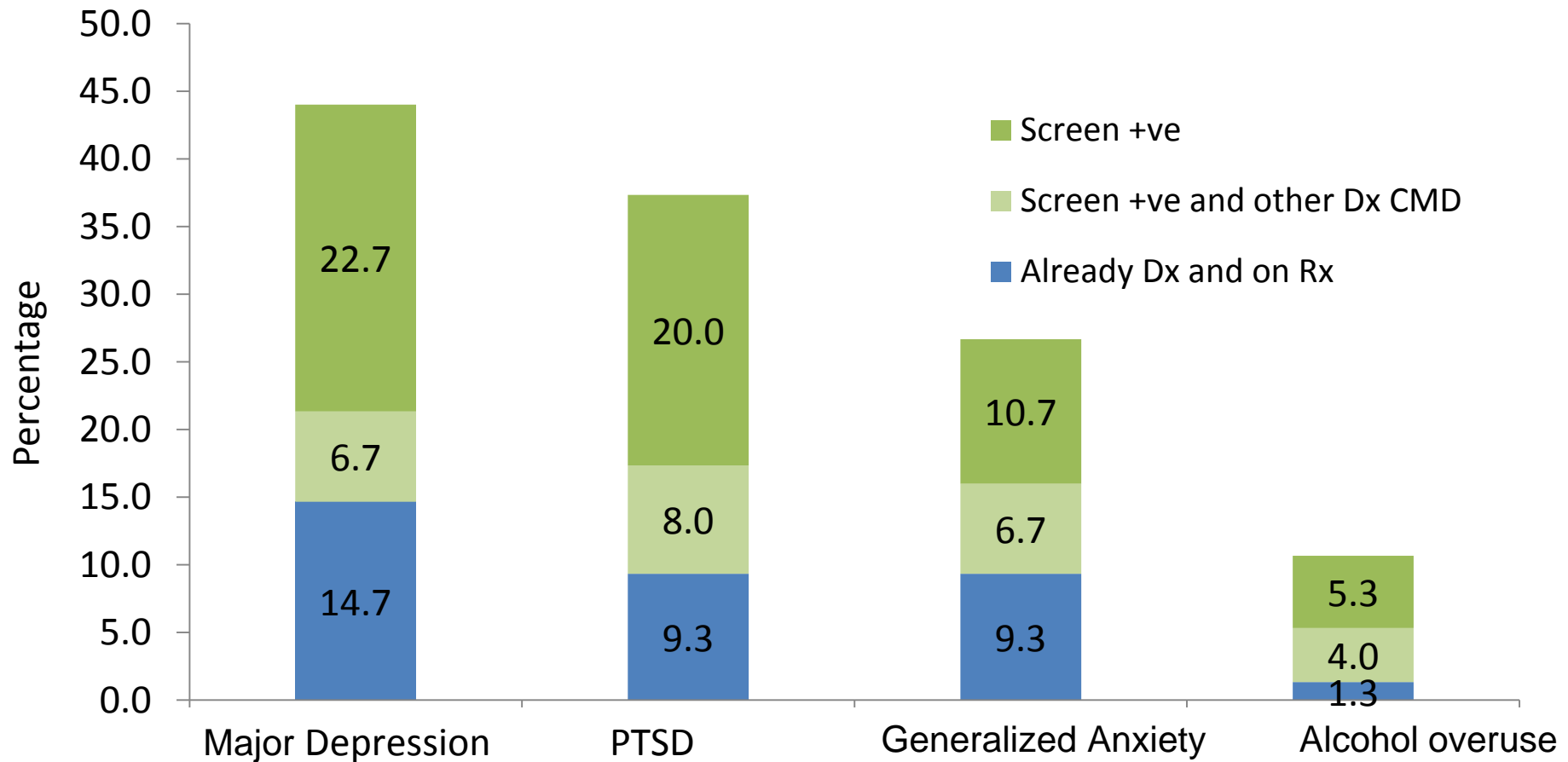
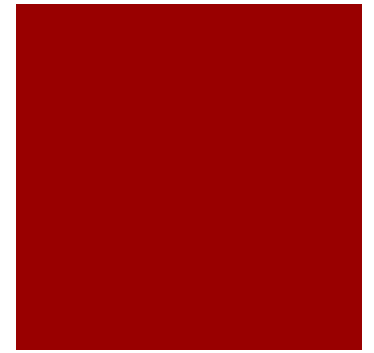
CMD assessment in iCCAS



CMD assessment in iCCAS group

- Already Dx & on Tx: 16%
- Depression, PHQ-9 ≥ 10 : 30%
- Generalized anxiety, GAD-7 ≥ 10 : 17.7%
- Post-traumatic stress, PTSD-PC ≥ 3 : 28%
- Alcohol overuse, CAGE ≥ 2 : 9%

CMDs screen positive & already diagnosed



Patient acceptance in iCCAS



✓ **Computerized Lifestyle Assessment Scale**

(12 items; 5-point rating disagree, not sure, agree)

- Benefits: 4.08 (SD .56)
- Barriers to info privacy: 2.64 (SD .79)
- Barriers to provider interaction: 2.82 (SD .86)

✓ **Technology use**

- Completion time as acceptable: 94.7%
- Using touch-screen easily: 97.3%
- Following instructions easily: 93.3%
- Reading questions easily: 94.7%

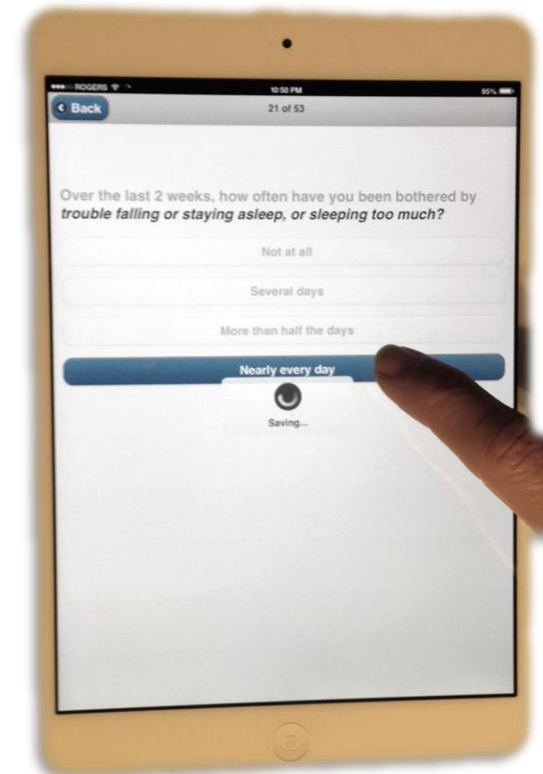
Discussion

✓ **Practice**

- iCCAS is a useful assessment tool to incorporate into everyday practice at community health centers
- iCCAS increases detection of mental health concerns

✓ **Policy**

- High rates of CMDs call for attention to systematically assess mental health conditions in similar settings



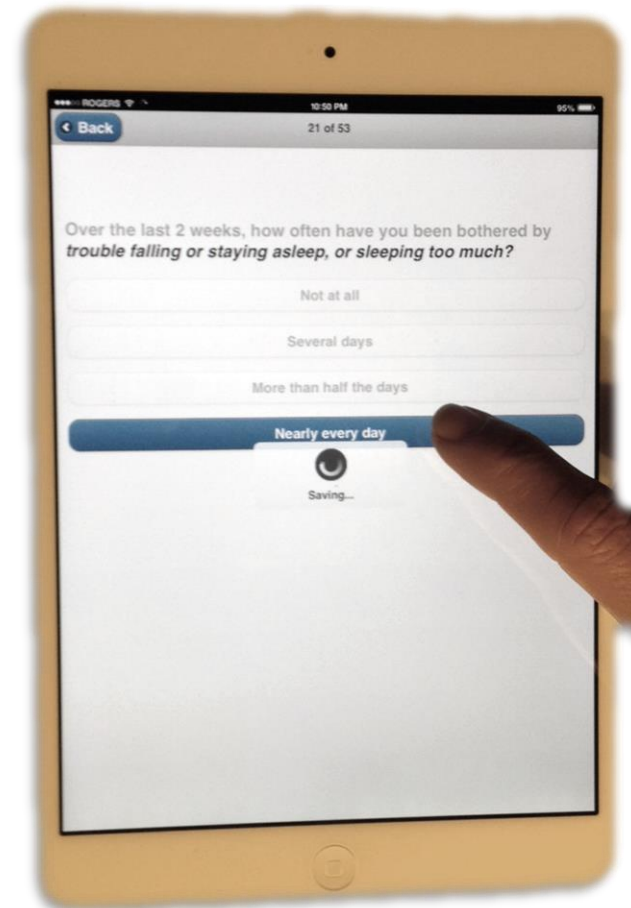
Future directions

✓ **Research**

- A multi-site study with larger sample is needed to enhance generalizability and assess impact on health outcomes

✓ **Technology**

- Future use of iCCAS would benefit by integration with electronic medical records and home accessibility for patients



Question?

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