



Improving People's Lives Through Innovations in Personalized Health Care

### Specialized Care for First-Episode Psychosis: The OSU Early Psychosis Intervention Center

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The Ohio State University





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### Global Burden of Disease Study 2013

| Illness/Injury  | Disability Weight |
|---|-------------------|
| <b>1) Schizophrenia, Acute state</b>  | <b>0.778</b>      |
| 2) Spinal cord lesion, At neck: Untreated   | 0.732             |
| 3) Multiple sclerosis, Severe   | 0.719             |
| 4) Heroin and other opioid dependence, Moderate to severe                         | 0.697             |
| 5) Major depressive disorder, Severe episode                                      | 0.658             |
| Traumatic brain injury, Long-term consequences, severe, with or without treatment | 0.637             |
| Spinal cord lesion, Below neck: Untreated   | 0.623             |
| Spinal cord lesion, At neck: treated  | 0.589             |
| <b>Schizophrenia, Residual state</b>  | <b>0.588</b>      |
| Stroke, Long-term consequences, severe, plus cognition problems                   | 0.588             |

Salomon et al., 2015




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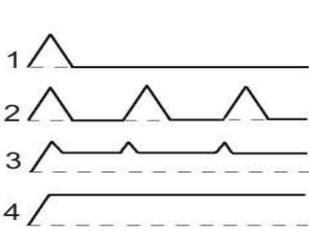
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### 20-Year Course of Schizophrenia



|   | <i>n</i> | %    |
|---|----------|------|
| 1 | 5        | 8.2  |
| 2 | 24       | 39.3 |
| 3 | 37       | 44.3 |
| 4 | 5        | 8.2  |

Thara, 2004




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### Course of Psychotic Disorders

- Elevated rates of depression, anxiety, and cognitive decline (Birchwood, 2000; Birchwood et al., 2007; Kahn et al., 2013)
- Chronic unemployment and low social support (Marwaha et al., 2004; Bengtsson-Tops et al., 2001)
- Poor physical health and reduced lifespan (Brown et al., 1997; Srinari et al., 2013)



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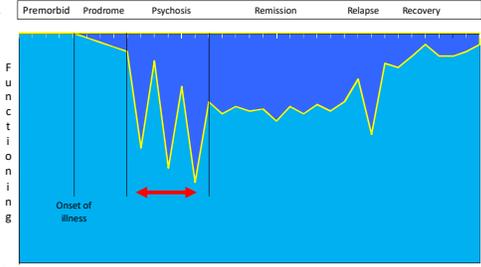
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### Critical Period for Intervention in Psychosis





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### Characteristics of the Early Course of Psychotic Disorders

- Risk of relapse greatest during first few years of illness

**Table 4. Risk of subsequent relapses of psychotic episodes of nonaffective type in relation to time of previous remission**

|                         | Within 1 year (%) | Between 1-2 years (%) | Longer than 2 years (%) | Total (%) |
|-------------------------|-------------------|-----------------------|-------------------------|-----------|
| First relapse (n = 72)  | 36                | 17                    | 15                      | 68        |
| Second relapse (n = 49) | 30                | 11                    | 17                      | 58        |
| Third relapse (n = 31)  | 23                | 16                    | 10                      | 49        |
| Fourth relapse (n = 17) | 12                | 6                     | 29                      | 47        |

D. Wiersma et al. 1998



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### Early Intervention for First-Episode Psychosis: Does it Work?

- TIPS: Standardized treatment with or without early detection (ED) services
- Baseline: Fewer positive, negative, and general symptoms in ED group
- 1 Year: Fewer negative symptoms in ED group
- 2 Year: Fewer negative symptoms in ED group

I. Melle et al., 2008




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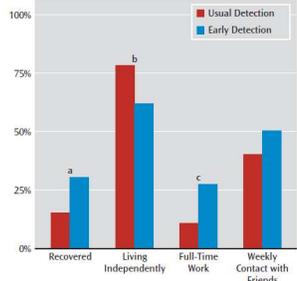
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### TIPS 10-Year Follow-up

FIGURE 2. Functional Outcome and Recovery in a 10-Year Follow-Up Study of Early Detection in Psychosis



| Outcome                     | Usual Detection (%) | Early Detection (%) |
|-----------------------------|---------------------|---------------------|
| Recovered                   | ~15%                | ~35%                |
| Living Independently        | ~80%                | ~65%                |
| Full-Time Work              | ~10%                | ~30%                |
| Weekly Contact with Friends | ~45%                | ~55%                |

W. T. Hegelstad et al. 2012




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### A Continuum of Care

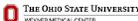
*More Is Not Always Better*

Leonard Bickman  
Yanderbilt University

*This article describes an \$80-million project designed to see whether a continuum of mental health and substance abuse services for children and adolescents is more cost-effective than services delivered in the more typical fragmented system. The study showed that an integrated continuum was successfully implemented that had better access, greater continuity of care, more client satisfaction, and treated children in less restrictive environments. However, the cost was higher, and clinical outcomes were no better than those at the comparison site. The article concludes that reform of mental health systems alone is unlikely to affect clinical outcomes. Cooperation is needed between mental health providers and researchers to better understand how to improve services delivered in the community.*

*of different ways of managing service delivery. The Fort Bragg Child and Adolescent Mental Health Demonstration and the Fort Bragg Evaluation Project were designed to "demonstrate that this continuum of services [would] result in improved treatment outcomes while the cost of care per client is decreased when compared to current CHAMPUS' costs." This \$80-million Demonstration provided a rare opportunity to examine both costs and clinical outcomes in a careful and comprehensive evaluation of the implementation of an innovative system of care.*

**The Fort Bragg Demonstration Project**  
On June 1, 1990, after a 10-month start-up period, mental health and substance abuse services were offered to more than 42,000 child and adolescent dependents of military




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## Intensive Treatment for First-Episode Psychosis: Does it Work?

- OPUS: RCT of intensive treatment vs. usual care
- Intensive Treatment
  - ACT
  - Family Psychoeducation
  - Social Skills Training
  - Medication Management

M. Bertelsen et al. 2008




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## OPUS 1-Year Follow-Up

- Relative to usual care, individuals in the intensive treatment condition experienced greater:
  - Reductions in positive and negative symptoms
  - Improvements in functioning (including work/school)
  - Reductions in substance use
- Individuals in the intensive treatment condition were also less likely to be homeless or living in a supervised setting

L. Petersen et al. 2005




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## OPUS 5-Year Follow-Up

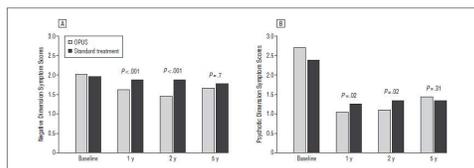


Figure 2. Mean symptom values for patients in the intensive early intervention program (OPUS) vs standard treatment, according to the Scale for Assessment of Psychotic Symptoms and Scale for Assessment of Negative Symptoms<sup>®</sup> at baseline, 2-year follow-up, and 5-year follow-up for the negative (A) and psychotic (B) dimensions. Values range from 0 to 5.

M. Bertelsen et al. 2008




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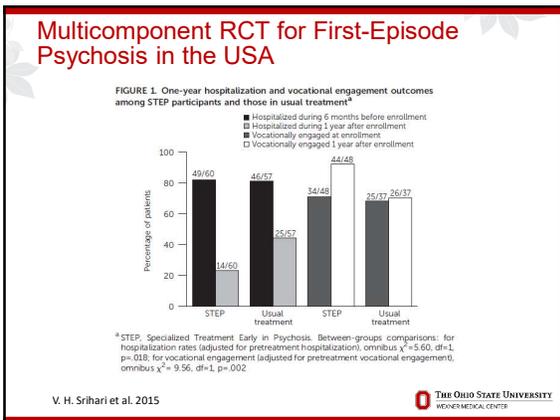
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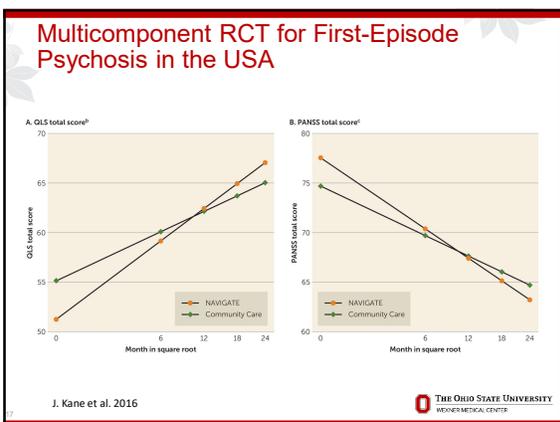
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- ### Coordinated Specialty Care (CSC)
- Case Management
  - Individual psychotherapy
  - Family psychoeducation and support
  - Medication Management
  - Supported Employment and Education
- <https://www.nimh.nih.gov/health/topics/schizophrenia/raise/what-is-coordinated-specialty-care-csc.shtml>
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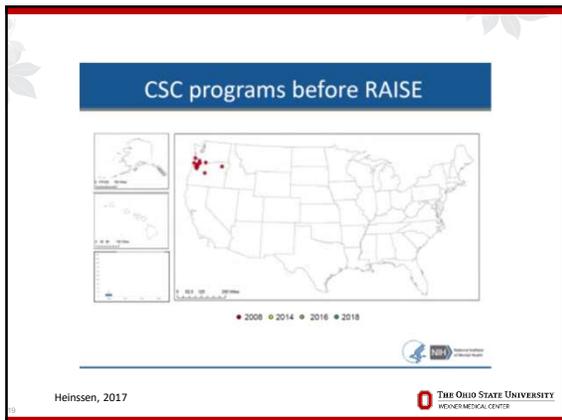
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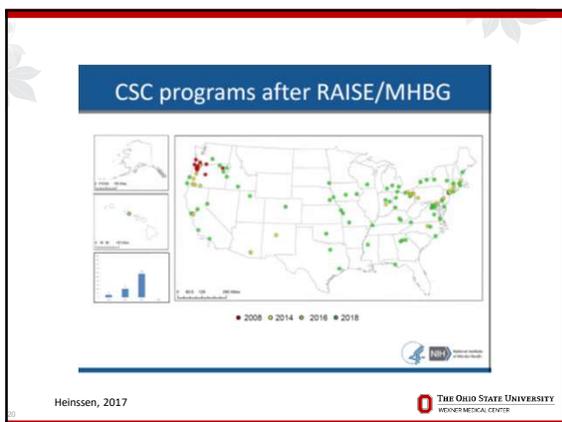
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### Growing Edges For CSC

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### CSC Programs with Demonstrated Effectiveness

| CSC Program | Date of Publication |
|-------------|---------------------|
| OASIS       | 2012                |
| STEP        | 2015                |
| RAISE-IES   | 2015                |
| EPICENTER   | 2015                |
| RAISE-ETP   | 2016                |

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*Regardless of the intensity or duration of early intervention, and regardless of whatever creative mix of biopsychosocial treatments we use, the clinical and functional outcomes for people with psychosis are suboptimal*

J.J. McGrath, 2012

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### "Current" Interventions for Psychosis?

| Treatment                     | Publication Date |
|-------------------------------|------------------|
| Cognitive Remediation         | 1968             |
| Family Psychoeducation        | 1978             |
| Cognitive Behavioral Therapy  | 1993             |
| Supported Employment          | 1995             |
| Personal Therapy              | 1997             |
| Motivational Interviewing     | 2003             |
| Cognitive Enhancement Therapy | 2004             |
| Supported Education           | 2008             |

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### First Generation Antipsychotics

| FDA Approval | Generic Name    | Brand Name |
|--------------|-----------------|------------|
| 1953         | chlorpromazine  | Thorazine  |
| 1958         | trifluoperazine | Stelazine  |
| 1958         | perphenazine    | Trilifon   |
| 1959         | fluphenazine    | Prolixin   |
| 1959         | thioridazine    | Mellaril   |
| 1967         | haloperidol     | Haldol     |
| 1967         | thiothixine     | Navane     |
| 1970         | mesoridazine    | Serentil   |
| 1975         | loxapine        | Loxitane   |
| 1977         | molindone       | Moban      |
| 1984         | pimozide        | Orap       |

S. Stroup 2004




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### Second Generation Antipsychotics

| FDA Approval | Generic Name  | Brand Name |
|--------------|---------------|------------|
| 1990         | clozapine     | Clozaril   |
| 1994         | risperidone   | Risperdal  |
| 1996         | olanzapine    | Zyprexa    |
| 1997         | quetiapine    | Seroquel   |
| 2001         | ziprasidone   | Geodon     |
| 2002         | aripiprazole  | Abilify    |
| 2006         | paliperidone  | Invega     |
| 2009         | iloperidone   | Fanapt     |
| 2009         | asenapine     | Saphris    |
| 2010         | lurasidone    | Latuda     |
| 2015         | brexpiprazole | Rexulti    |
| 2015         | cariprazine   | Vraylar    |

Adapted From S. Stroup 2004




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Contents lists available at ScienceDirect

## Schizophrenia Research

journal homepage: [www.elsevier.com/locate/schres](http://www.elsevier.com/locate/schres)

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Invited commentary

### Innovations in first episode psychosis interventions: The case for a "RAISE-Plus" approach

Emily Kline<sup>a</sup>, Matcheri Keshavan<sup>b</sup>

<sup>a</sup> Beth Israel Deaconess Medical Center, Massachusetts General Health Center, Harvard Medical School, United States

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**ABSTRACT**

Several papers in the current issue of Schizophrenia Research show evidence supporting interventions that are not yet proposed with standard care practices in REP. Taken together, these studies make the case for a more intensive approach for early psychosis care than what is considered to be REP, although providing all interventions to all patients, however, will be impractical and expensive, a personalized approach to each intervention, whereby the appropriate interventions are implemented in a phase specific and individually tailored manner after a careful assessment of each person's case deficits within a coordinated specialty care model, is likely to improve lives and be cost-effective.

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### OSU EPICENTER

- Individuals 15-35 who are first episode of psychosis occurred < 5 years prior
- Services
  - CBT (Individual/Group)
  - Family psychoeducation
  - Medication management
  - Metacognitive remediation therapy



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### EPICENTER Across Levels of Care at OSU

| Inpatient                   | Outpatient | Emergency Department |
|-----------------------------|------------|----------------------|
| Stearns                     |            |                      |
| Guirgis                     |            |                      |
| Moe, Stewart, Weiss, Wilson |            |                      |
| Jones                       |            | Breitborde           |

- Medication Management
- Psychosocial Care

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### Measurement-Based Care

- Standardized assessment battery completed upon enrollment and q6 months
- Data used to
  - Inform initial treatment planning
  - Evaluate response to treatment
  - Quality improvement

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## Developing New Treatment for People with FEP



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## Metacognitive Remediation Therapy (MCR)



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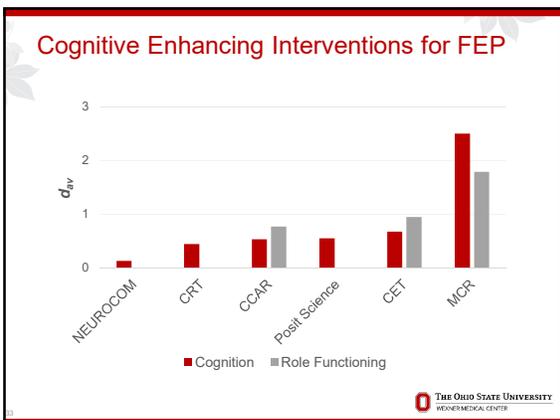
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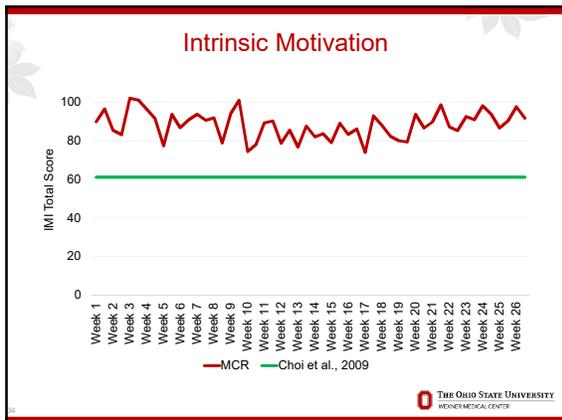
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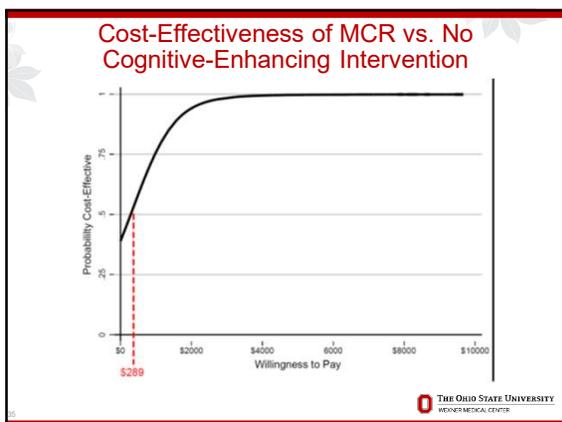
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## OSU EPICENTER Outcomes

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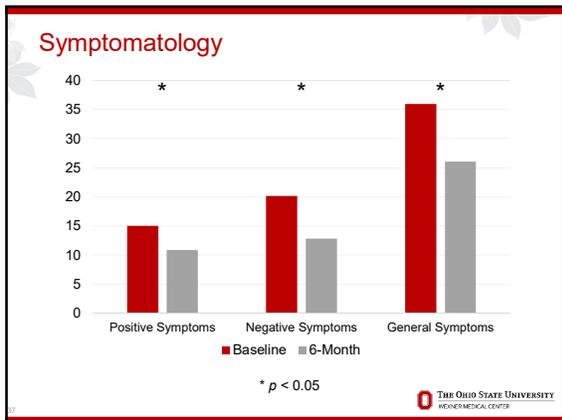
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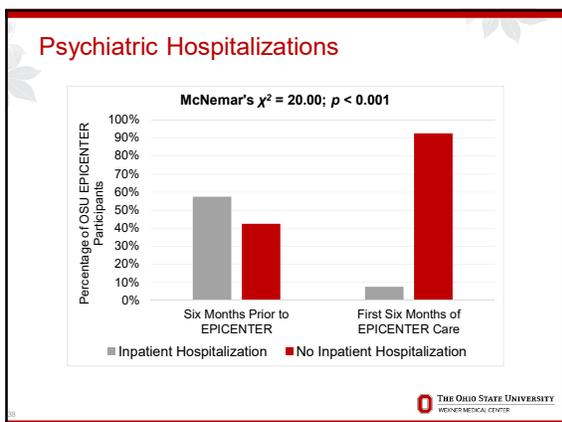
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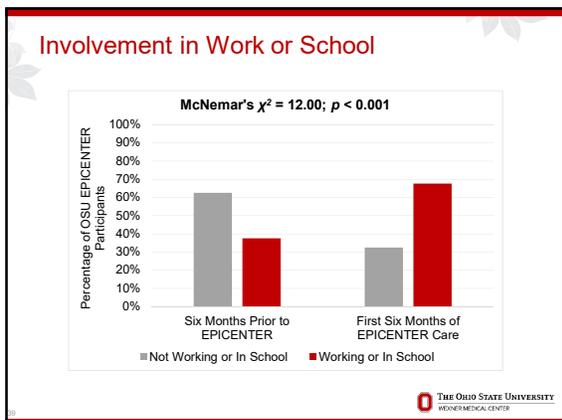
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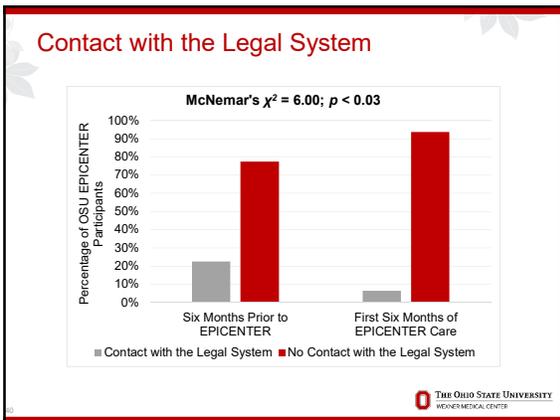
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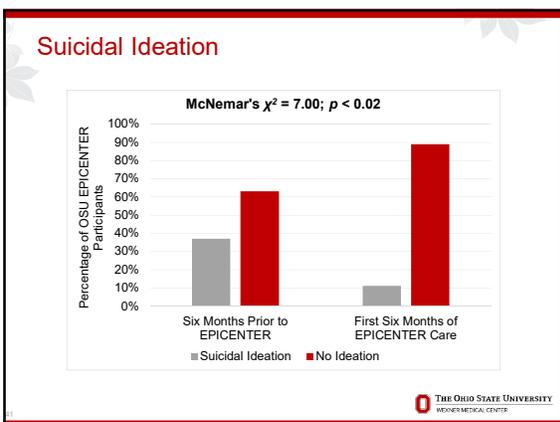
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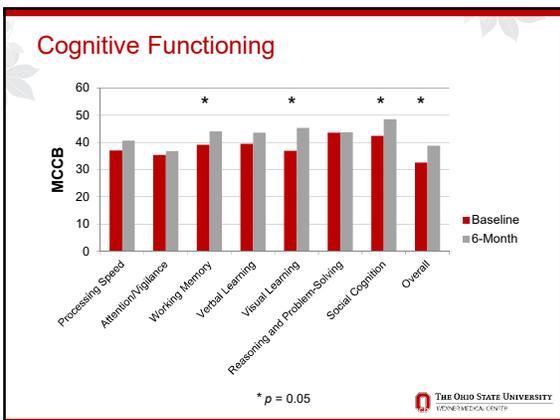
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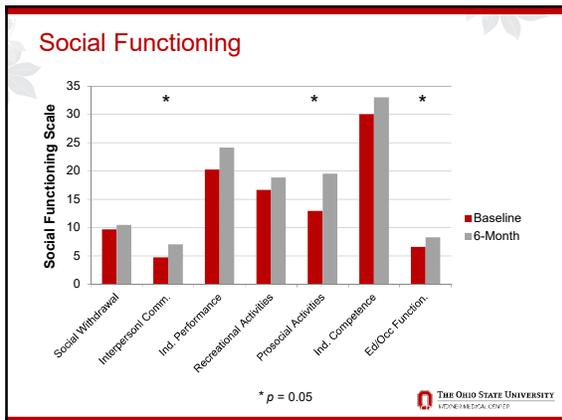
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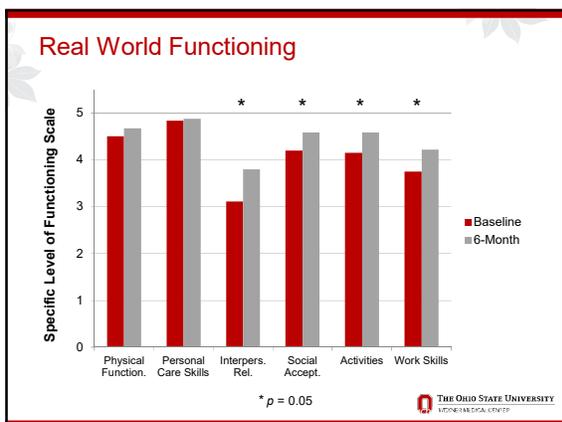
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## OSU EPICENTER: Current Treatment Studies

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### Metacognitive Remediation Therapy to Quit

- Modified version of larger MCR intervention that specifically targets behavioral risk factors for smoking:
  - Working Memory
  - Impulsivity
- Six week intervention combined with bupropion/varenicline/NRT



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### Social Skills Training

- The Program for Enrichment and Education of Social Skills (PEERS; Laugeson, 2011)
  - Developed for People with High-Functioning Autism
  - Modified Version for Young Adults
- Focus on Specific, Concrete Skills/Approaches
  - Engaging Didactics
  - Supplemental Role-Play Demonstrations
  - Metacognitive Processing of Demonstrations



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### Starting Conversations



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**Starting Conversations**

1. Look Over Casually
2. Use a Prop
3. Notice a Common Interest
4. Mention the Common Interest
5. Trade Information
6. Assess Interest
7. Introduce Yourself

Laugeson, 2017



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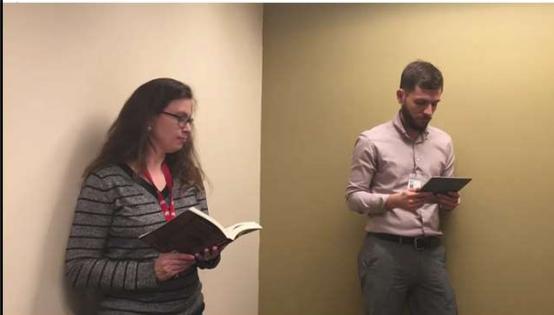
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**Starting Conversations**



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**Attending to the Setting....**



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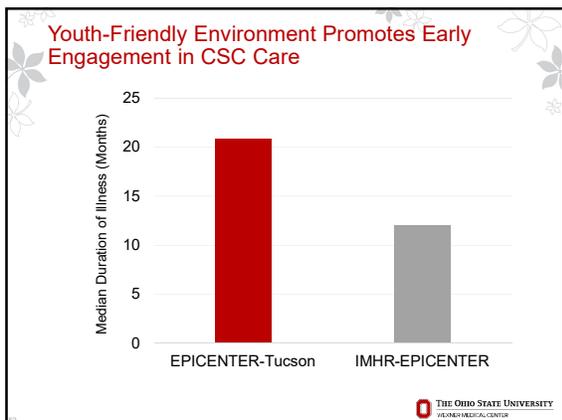
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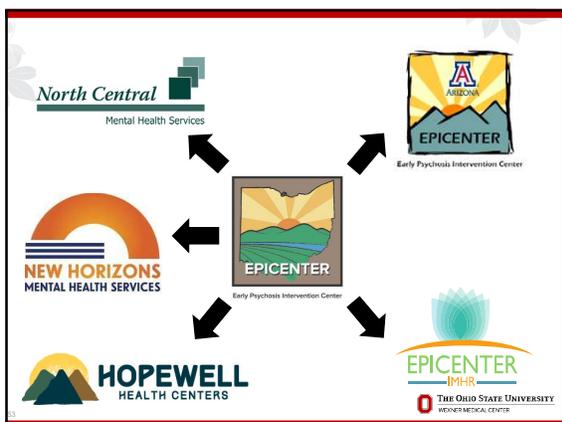
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## Thank You

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