



Science to Service: Improving Care for Early Psychosis

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National Institute
of Mental Health

Disclosures

- I have no personal financial relationships with commercial interests relevant to this presentation
- The views expressed are my own, and do not necessarily represent those of the NIH, NIMH, or the Federal Government



Limitations of Typical Care for Schizophrenia



Treatment is often delayed 1-3 years



Initial medications do not always conform to treatment guidelines



Health risks are rarely addressed



Many persons with psychosis die within one year of initial diagnosis

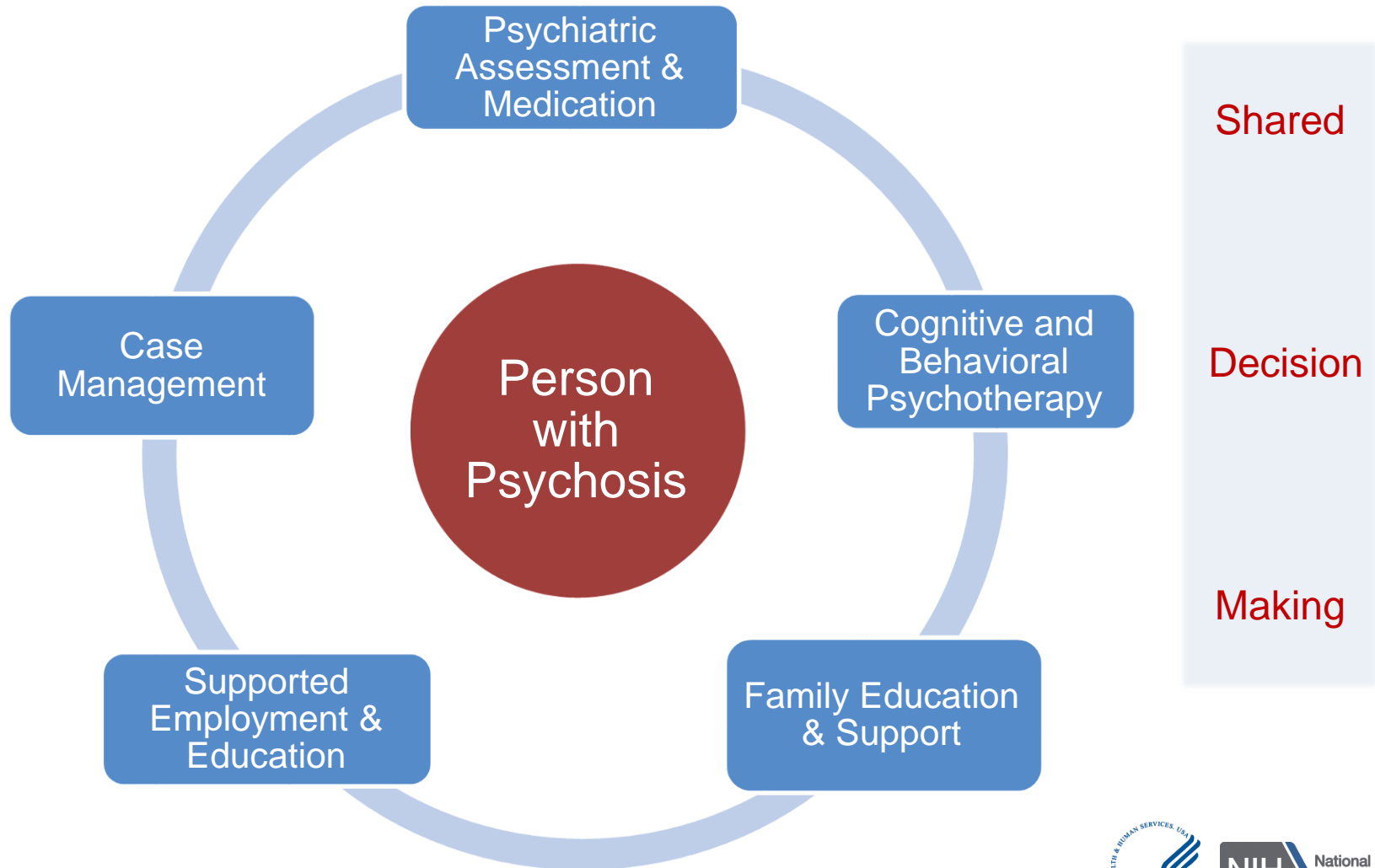


RA1SE

Recovery After an Initial
Schizophrenia Episode
A Research Project of the NIMH



Coordinated Specialty Care (CSC)



RAISE Research Questions

- Is early intervention feasible?
- Is early intervention effective?
- Are evidence-based services scalable?



RAISE Early Treatment Program

After 2 years, Coordinated Specialty Care was superior to usual community care on:

- Engagement in treatment
- Symptomatic improvement
- Involvement in work and school
- Quality of life
- Cost-effectiveness



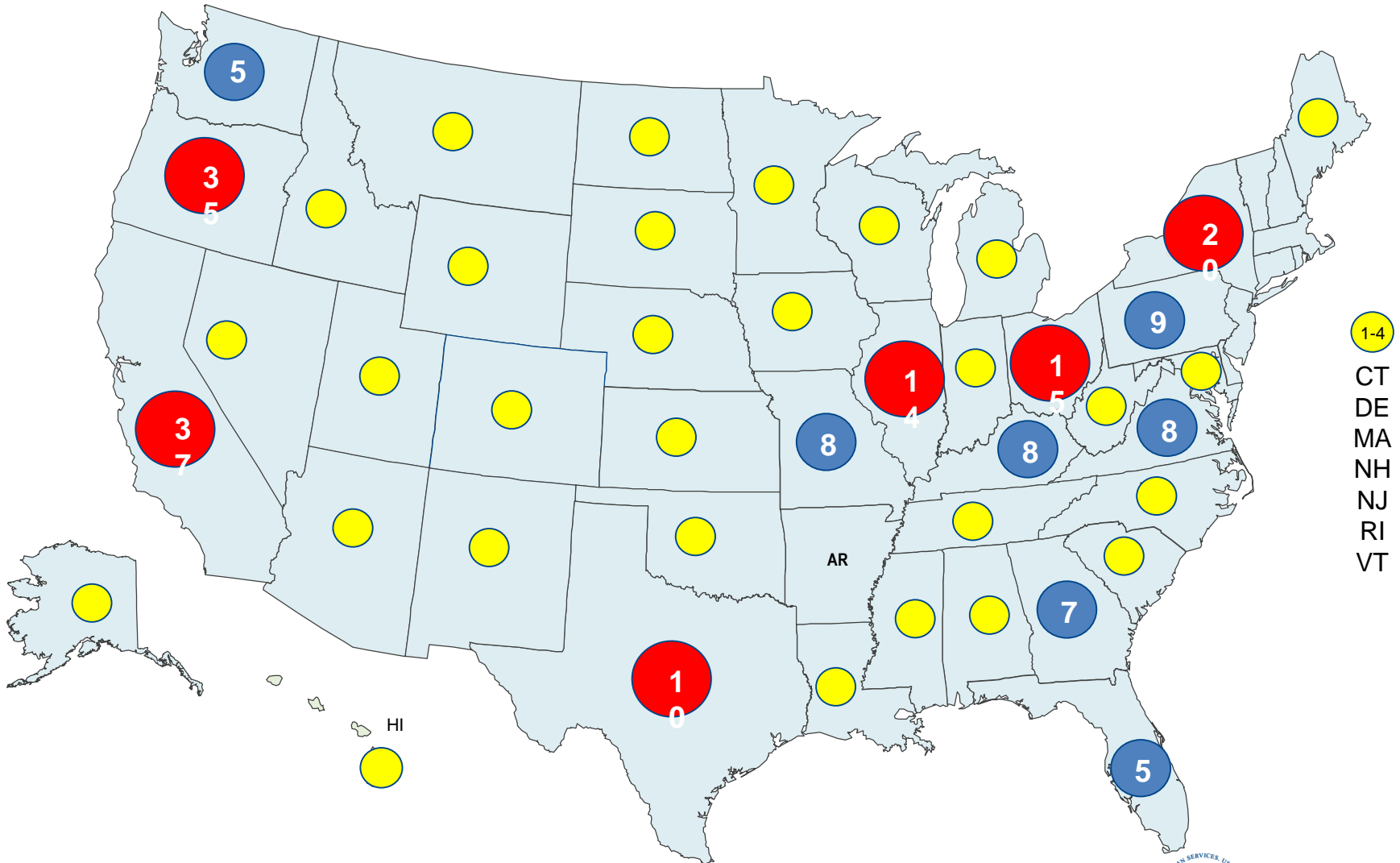
Federal Funding 2014-2017

New Funding for First Episode Psychosis Treatment Programs

- H.R. 3547 – \$25M in 2014
- H.R. 88 – \$25M in 2015
- H.R. 2029 – \$50M in 2016
- H.R. 34 – 21st Century Cures Act, 2017-2027



Early Intervention Programs, 2018



August 2018 – 265

programs



RAISE Research Questions

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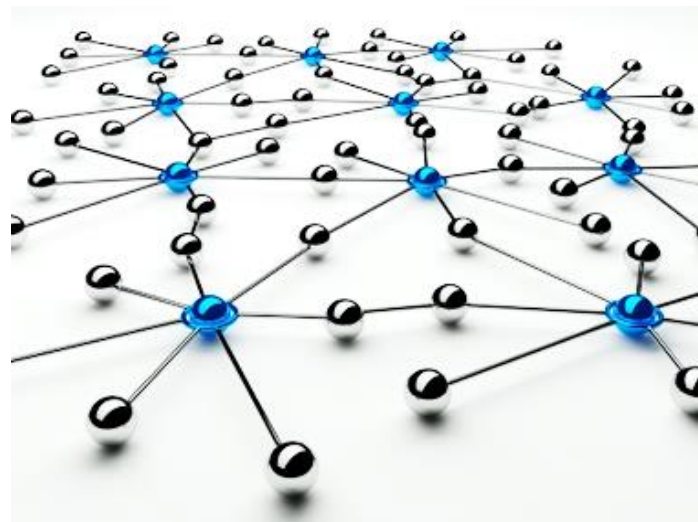
Early Psychosis Intervention Network

EPINET: Connecting the U.S.
early psychosis community



EPINET Goals

- Establish a national learning healthcare network among early psychosis clinics
- Standardize measures of clinical characteristics, interventions, and early psychosis outcomes
- Adopt a unified informatics approach to study variations in treatment quality, clinical impact, and value
- Cultivate a culture of collaborative research participation in academic and community early psychosis clinics



EPINET Timeline

	2016				2017				2018				2019				2020			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phenx Early Psychosis Common Data Elements		█	█	█	█															
MHBH 10% Set-Aside Fidelity Evaluation Study				█	█	█	█	█	█	█	█	█	█	█						
NIMH Healthcare Informatics Platform						█	█	█	█	█	█	█	█	█	█					
Harmonizing Clinical Data Collection in Community CSC							█													
EPINET-Alpha													█	█	█	█	█	█	█	█
EPINET-Beta																			█	█

Mental Health Block Grant 10% Set Aside Evaluation

A collaboration among 3 federal agencies:



National Institute
of Mental Health



Assistant Secretary for
Planning and Evaluation



Mental Health Block Grant Evaluation Team



Westat[®]

Project Director: Abram Rosenblatt, Ph.D.



Analytics Improving Behavioral HealthSM



National Association of State
Mental Health Program Directors



Objectives of the MHBG 10% Evaluation

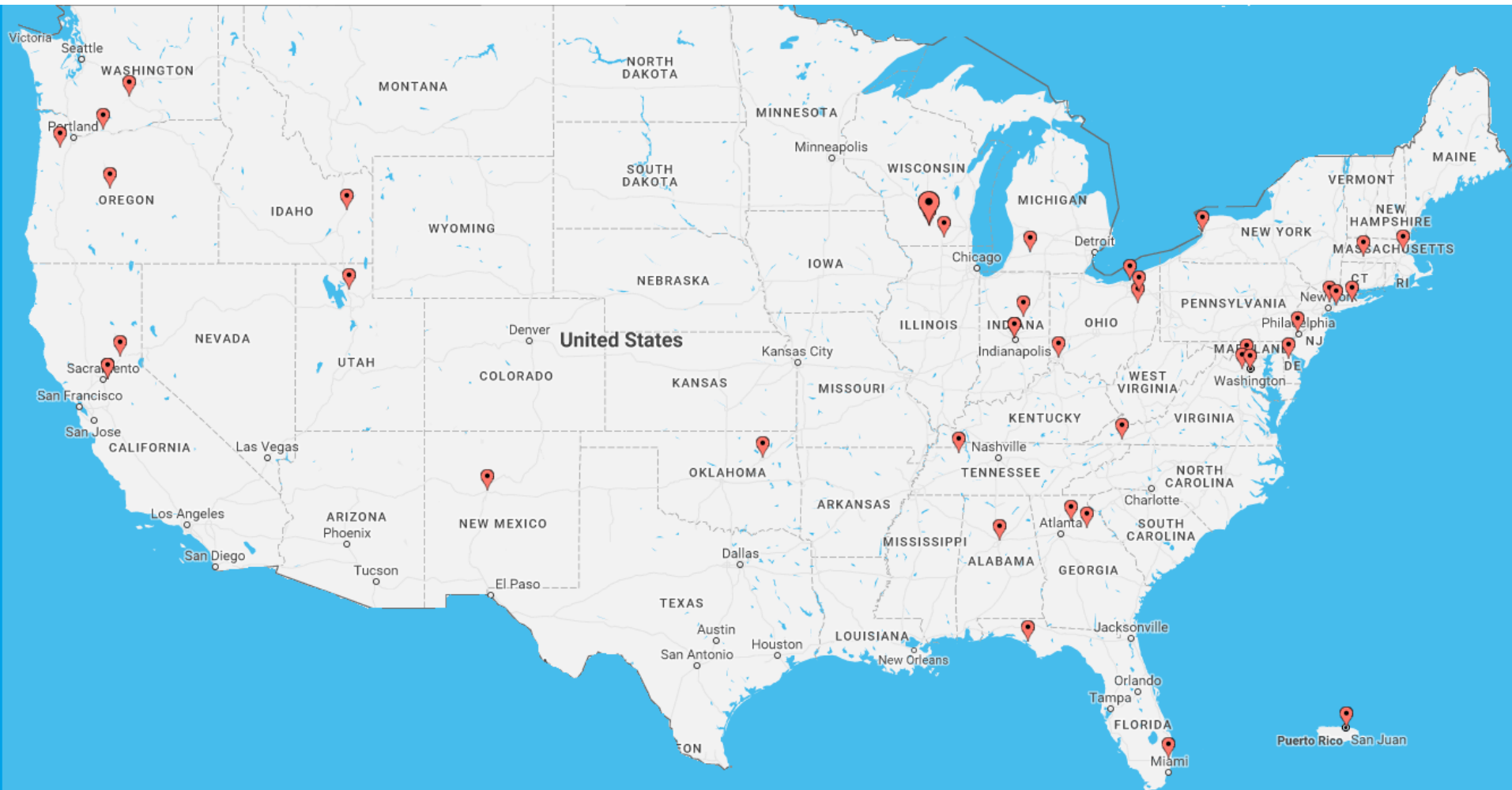
- Identify and describe Coordinated Specialty Care (CSC) program services offered nationally.
- Assess program fidelity to the NIMH CSC model.
- Explore local environments and contextual factors related to how CSC programs are implemented.
- Explore how CSC program participation is associated with improved client outcomes, e.g., symptom severity, employment, education, and quality of life.

Study Design

- **Hypothesis:** Sites with higher fidelity to the CSC model will have better client outcomes than sites with low fidelity.
- **Mixed-methods design:** Qualitative & quantitative data
- **Site Survey:** Overview of CSC programs nationally (250 sites)
- **Outcomes analysis:** Client level outcomes on symptoms, functioning and quality of life (36 sites)
- **Fidelity assessment:** Site fidelity to the CSC model (36 sites)
- **Process assessment:** Environmental context in which CSC is implemented (36 sites)

Note: All sites receive MHBG 10% Set Aside funds for early psychosis.

36 MHBG 10% study sites in 21 states & Puerto Rico

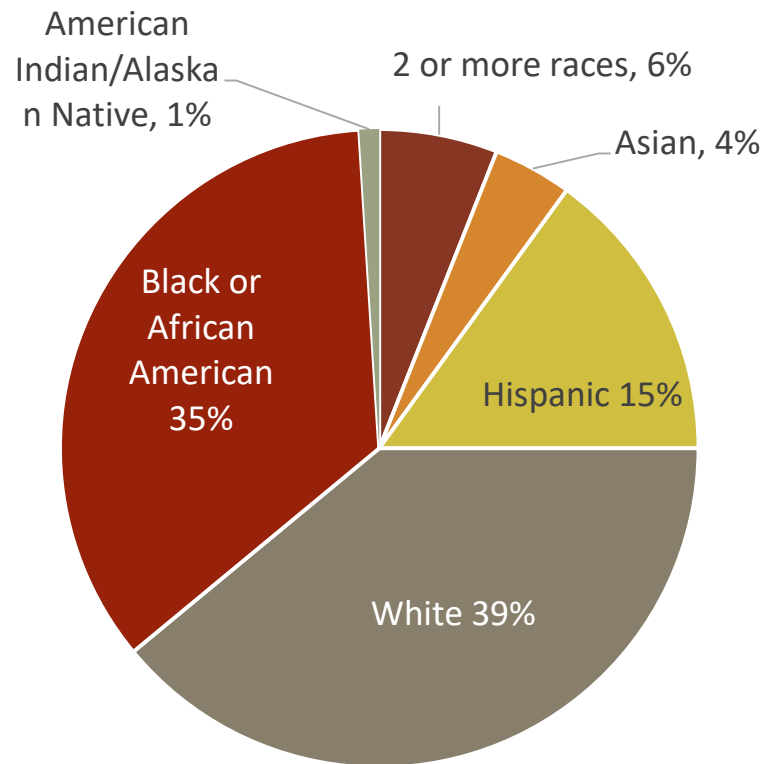


Number of client interviews & percent of total enrolled at each assessment point

	Baseline	6 Months	12 Months	18 Months
Count (percent)	780 (100%)	486 (62.3%)	325 (41.7%)	173 (22.2%)

Participant Characteristics

- **Age:** Mean 20.6 years; 75% of clients 18-27 years
- **Gender:** 68% male, 30% female, 2% transgender or other



Participant Insurance Type

- 48% Medicaid
- 32% Private insurance
- 4% Medicare and/or other type
- 19% uninsured

The MHBG 10% Set Aside Study: Final Report. Prepared for SAMHSA by Westat, 2019

Changes over Time: School and Work

At Baseline

42% of clients were employed or in school



At Most Recent Interview

65% of clients were employed or in school

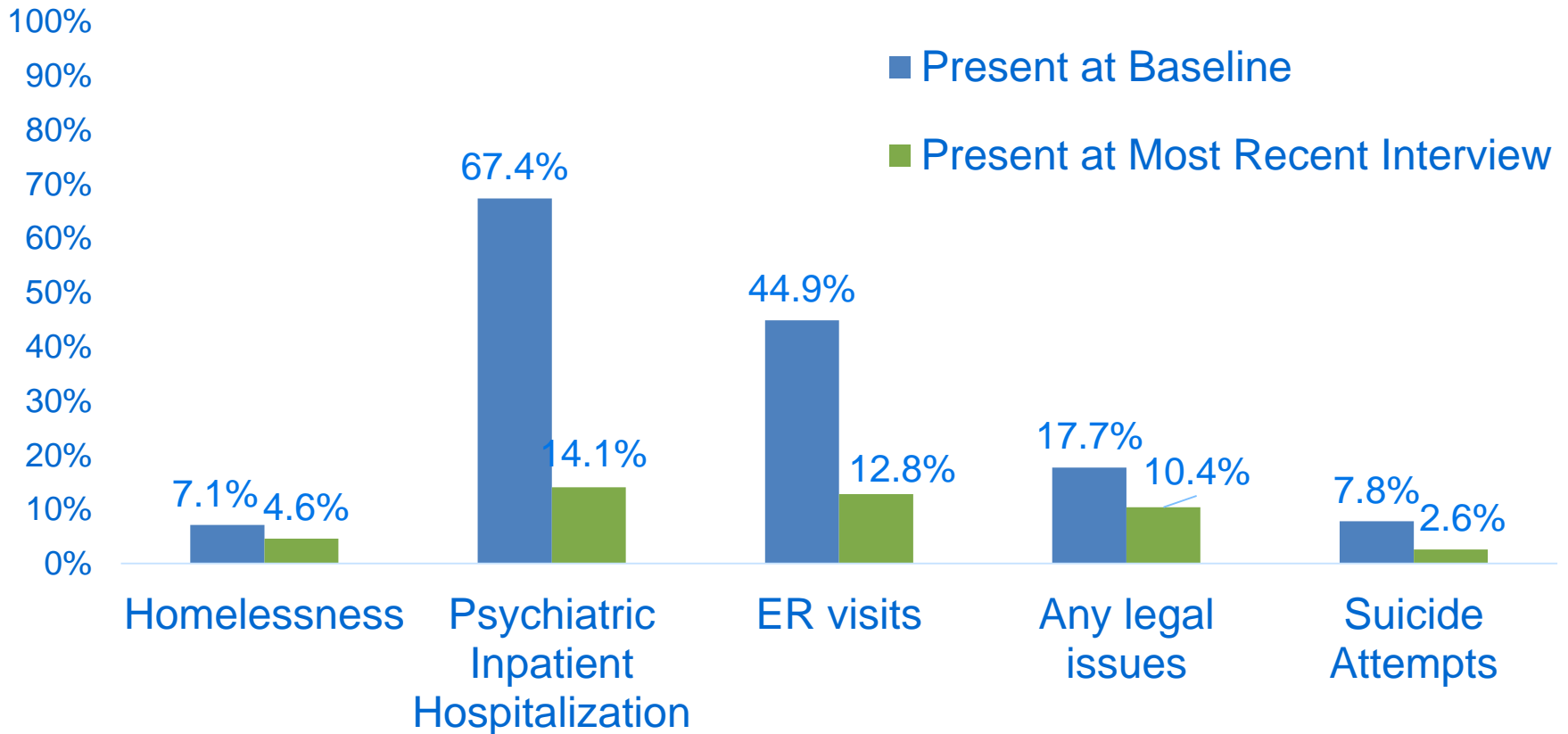


Changes over Time: Symptoms, Quality of Life & Social Functioning

Measure	Baseline (Mean, Std. dev.)	Most recent interview (Mean, Std. dev.)	p
Colorado Symptom Index	22.5 (13.1)	14.0 (11.6)	<.0001***
Lehman's QOL Score	4.1 (1.5)	5.0 (1.3)	<.0001***
Social Scale	5.0 (1.8)	6.1 (1.7)	<.0001***
Role Scale	4.5 (2.3)	6.0 (2.2)	<.0001***

- Clients showed significant improvements in severity of symptoms and had more positive feelings about their life.
- Clients were also functioning at a higher level socially and in occupational/educational roles.

Changes over Time: Adverse Life Events & Crises



Fidelity Assessment

Overall fidelity scores ranged from 119 to 150.

Fidelity Rating	N (%) of sites	Mean item rating
Excellent (149 or above)	2 (6%)	>4.5
Good (132-148)	25 (69%)	≥4.0
Fair (116-131)	9 (25%)	>3.5
Poor (Below 116)	0 (0%)	N/A

- 77% of sites attained good to excellent fidelity.
- 23% were rated in the fair range.
- Most sites achieved excellent fidelity on most fidelity items.

Fidelity and Client Outcomes

Primary Outcome Measure

(Mean Δ between baseline and most recent interview)

Colorado Symptom Index

-0.29 **0.0860**

Lehman's Quality of Life Scale

0.13 0.4742

The Global Functioning Social Scale

0.26 0.1360

The Global Functioning Role Scale

0.04 0.7516

- Statistically significant relationship (with alpha at .10) between site fidelity score and change in the Colorado Symptom Index severity score.
- Higher total fidelity scores associated with greater reductions in CSI scores.

Fidelity and Client Outcomes

Secondary Outcome Measure (% Δ between baseline and most recent interview)	r	p
Alcohol use	-0.53	0.0010
Tobacco use	0.16	0.3527
Marijuana use	-0.27	0.1266
Other drug use	0.13	0.4780
Homeless past 6 months	-0.24	0.1717
Psychiatric inpatient hospitalization past 6 months	-0.12	0.4940
ER visits past 6 months	-0.01	0.9451
Any legal issues past 6 months	0.08	0.6516
Suicide attempt past 6 months	-0.07	0.6911

Strong correlation between site's total fidelity score and reductions in alcohol use (-.53)

State Involvement in CSC Programs

- 36 study sites
- Reps from 22 states
- Interviews to understand role of the state in administering and supporting CSC programs.

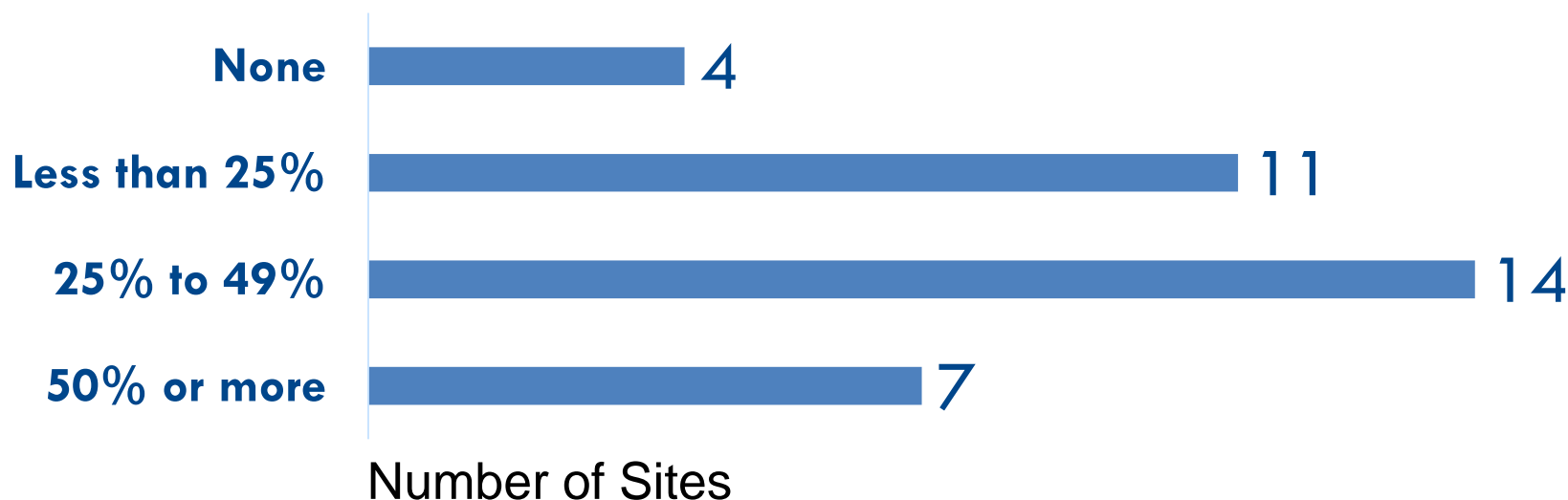
Study Site States	
Alabama	New York
California	Ohio
Delaware	Oklahoma
Florida	Oregon
Georgia	Pennsylvania
Idaho	Puerto Rico
Indiana	Tennessee
Massachusetts	Utah
Maryland	Virginia
Michigan	Washington
New Mexico	Wisconsin

Financing and Funding for CSC Programs

- 22 of 36 sites received more than half their funds from MHBG 10% Set Aside.
- Broad consensus that the frequent and extensive staff-client contact, team meetings, and services that were not billable to insurance would not be possible without Set Aside funding.
- Administrators generally said their programs could not be sustained at fidelity without the MHBG funds.

Staffing and Turnover

CSC Staff Turnover From Time 1 to Time 2

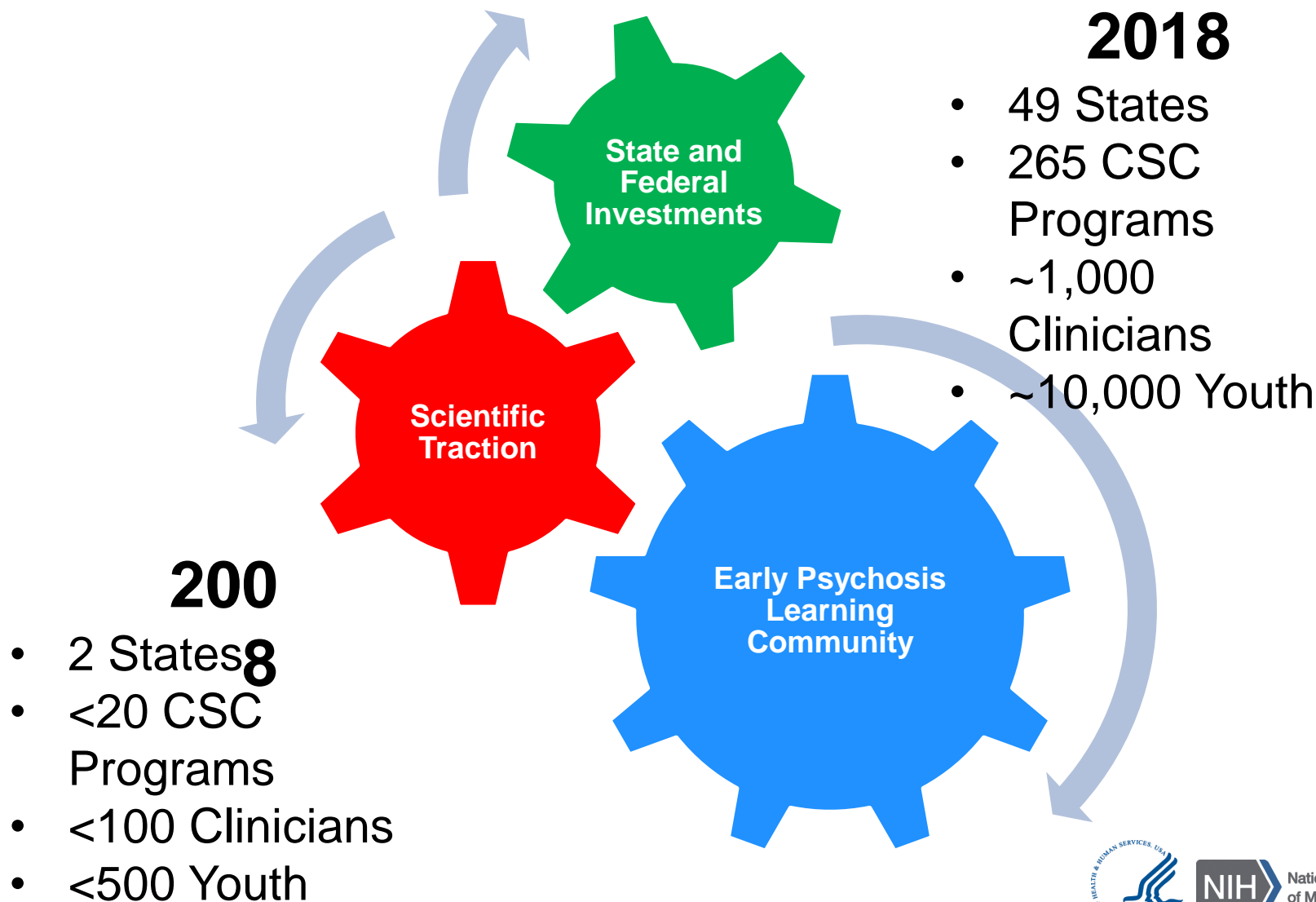


From 1st to 2nd round of site visits, 7 sites experienced $\geq 50\%$ turnover, including 2 sites that lost 70-75% of staff.

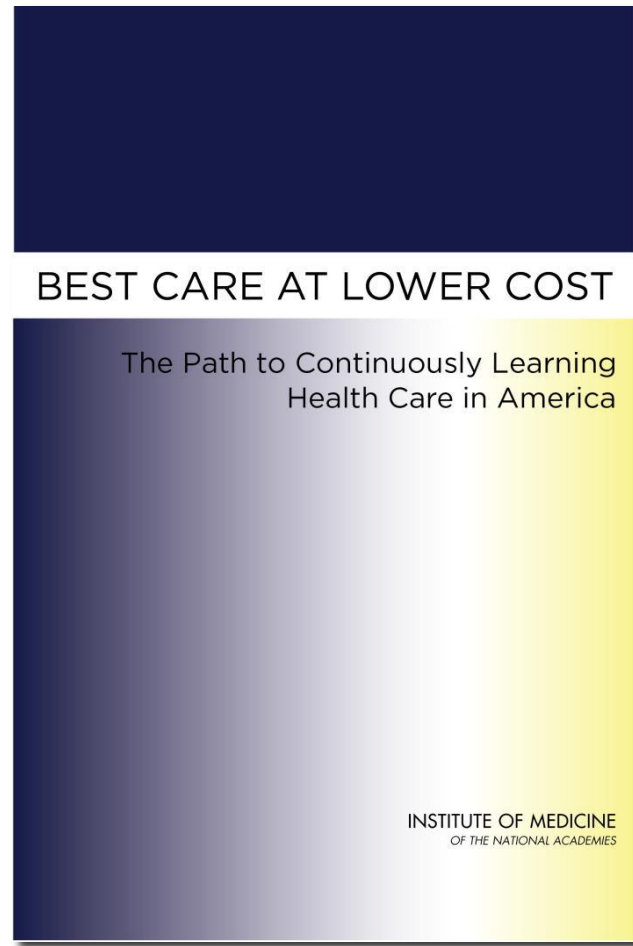
MHBG 10% Set Aside Evaluation: Summary and Conclusions

- The MHBG 10% Set Aside funds are critical to the implementation of Coordinated Specialty Care (CSC).
- Despite differences across sites, programs were generally able to implement CSC with fidelity.
- Clients experience improvements as they move through CSC.
- Initial results suggest that fidelity to the CSC model is related to specific clinical outcomes.

A Decade of Progress



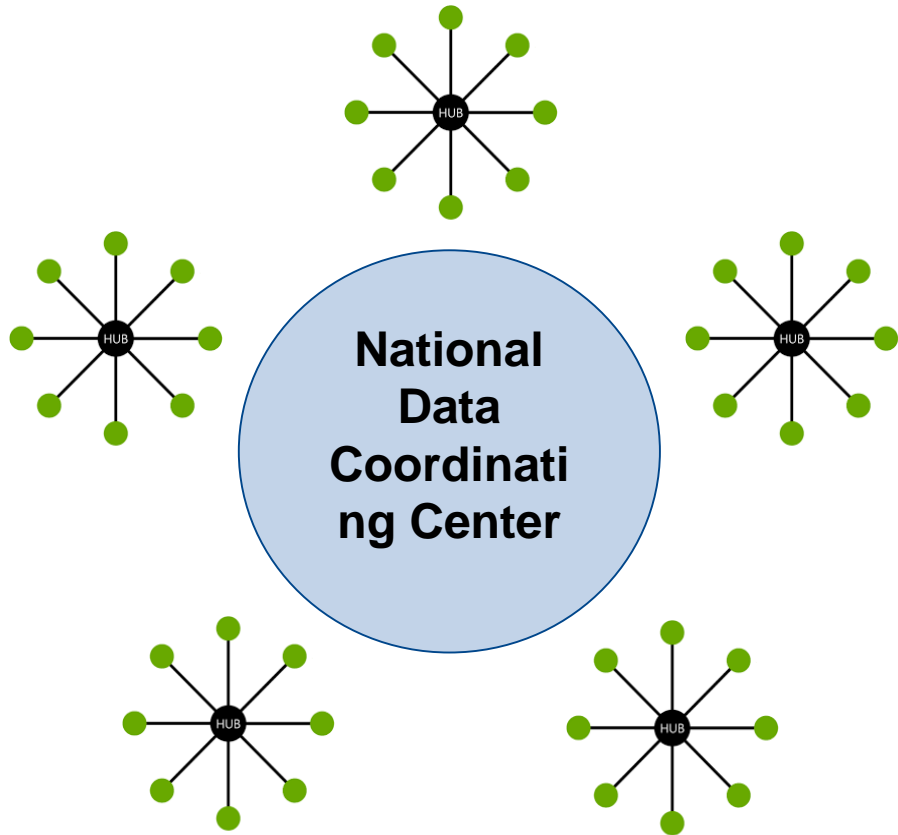
Learning Health Care



- Provide CSC services
- Measure results
- Improve services
- Examine variation
- Launch new research



Scope of EPINET



- 5 Regional CSC Networks
- ~55 CSC programs in 8 states
- ~75% community clinics
- ~2,300 currently enrolled
- ~5,000 target enrollment
- ~20,000 assessments/year

EPINET Practice Opportunities



Key Takeaways

1. Early intervention improves clinical outcomes among people with first episode psychosis (FEP).
2. Coordinated Specialty Care (CSC) is a feasible and effective approach to early intervention in FEP.
3. The Early Psychosis Intervention Network (EPINET) will test learning health care principles of measurement-based, science-driven, continuously improving care for early psychosis in community CSC programs nationwide.



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Thank You!



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Additional Slides

RAISE Studies

■ RAISE Early Treatment Program

- John Kane
- Nina Schooler
- Delbert Robinson

*The Feinstein Institute
for Medical Research*
North Shore-Long Island Jewish Health System



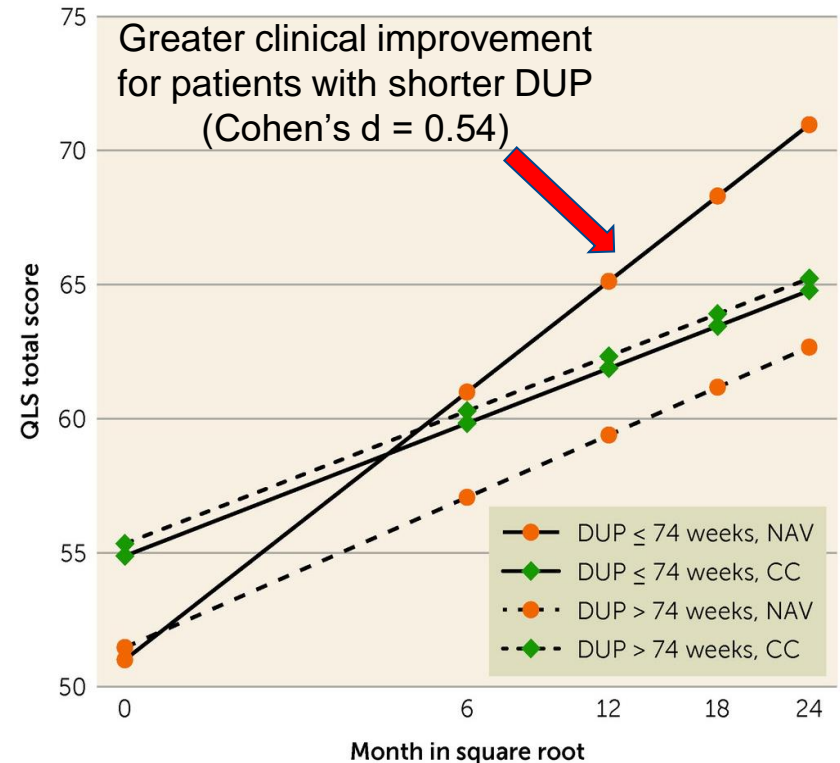
■ RAISE Connection Program

- Lisa Dixon
- Jeffrey Lieberman
- Susan Essock
- Howard Goldman



Timing is Important

Clinical improvement is greatest when CSC is delivered closer to the onset of psychosis.



Good science requires
independent replication.

Specialized Treatment Early in Psychosis Program

After 1 year, Specialized Treatment Early in Psychosis (STEP) was superior to usual care on:

- Symptomatic improvement
- Likelihood of hospitalization
- Number and length of inpatient episodes
- Vocational and academic engagement
- Cost-effectiveness

The STEP public-sector model supports the feasibility and effectiveness of CSC.

Srihari et al., *Psychiatric Services*, 2015

Murphy et al., *Journal of Mental Health Policy Economics*, 2018



OnTrackNY Program

Statewide CSC program 325 individuals ages 16–30 followed for 1 year:

- After 6 months, education and employment rates increased from 40% to 80%.
- After 3 months, hospitalization rates decreased from 70% to 10%.
- Global functioning improved continuously over 1 year.

RAISE Research Questions

- ✓ Is early intervention feasible?
- ✓ Is early intervention effective?
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Additional RAISE Findings



Optimized medication administration contributes to better FEP outcomes and fewer side effects

Robinson et al., 2018, *American Journal of Psychiatry*



FEP specialty care improves symptoms and functioning for persons from racial and ethnic minority groups

Oluwoye et al., 2018, *Psychiatric Services*

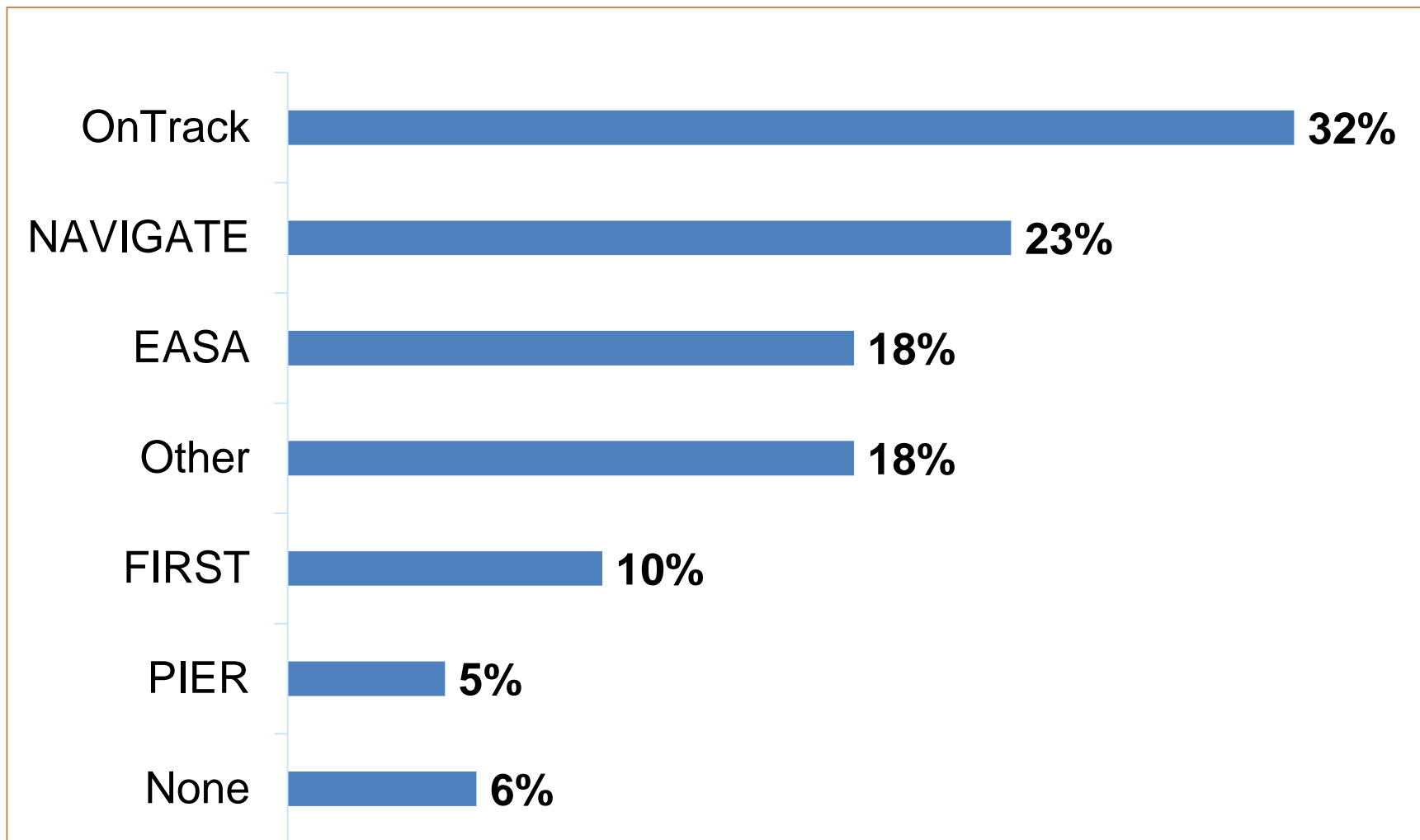


In the RAISE clinical trial, Coordinated Specialty Care did not reduce alcohol or substance misuse

Cather et al., 2018, *Psychiatry Research*



Site Survey: Technical Assistance/Training Models



Fidelity Assessment

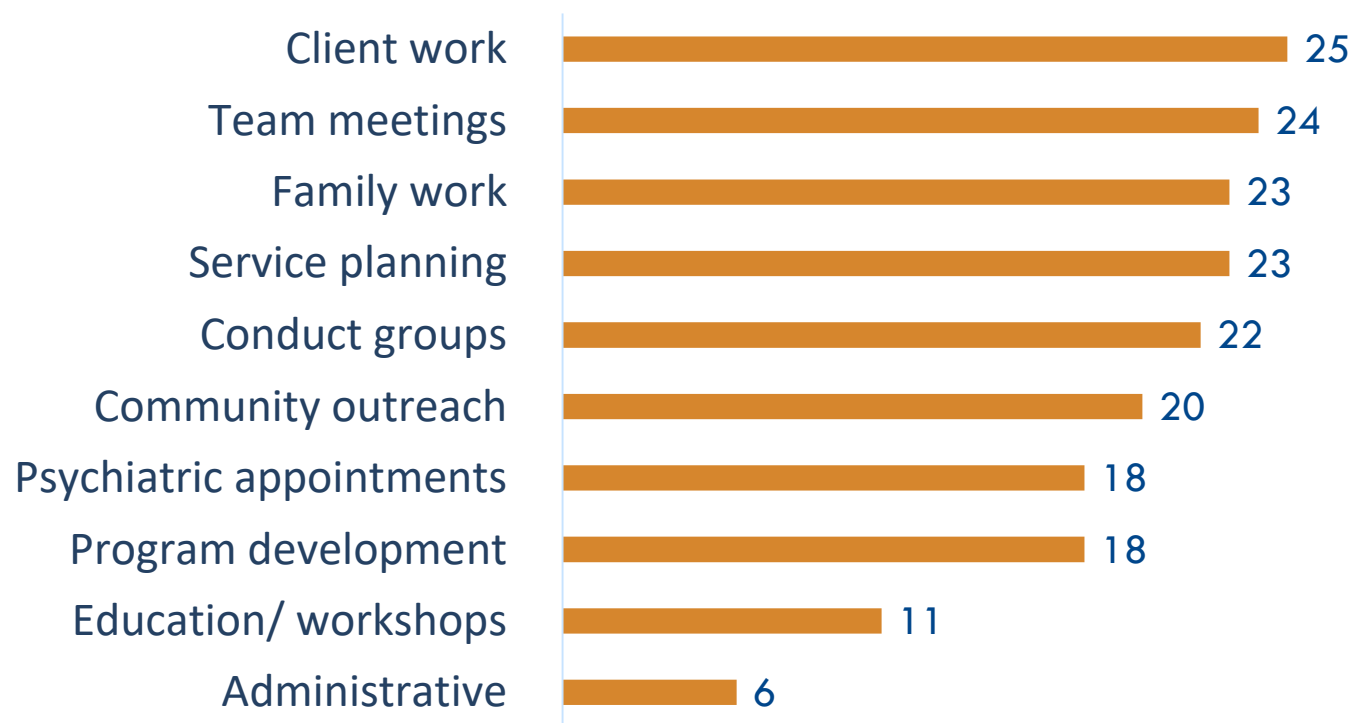
5 items were rated at low fidelity in the majority of sites:

- Family Education and Support
- Supported Employment
- Early Intervention
- Duration of CSC Program
- Population Served

Peer Support in CSC

25 of 36 sites reported having a Peer Support component.

Peer Roles Across CSC Study Sites (N=25)



Reported Effects of Turnover

- ***Reduced enrollment:*** Slowing or stopping CSC enrollment while new staff are hired.
- ***Increased staff stress:*** Hiring a replacement can take months, increasing stress for other team members and making it harder to provide quality care.
- ***Reduced client trust:*** Client may find it hard to develop rapport with a new clinician.
- ***Lost investment in training:*** Sites may spend as much as \$70,000 training staff who leave soon after.

EPINET Research Opportunities

- Reducing duration of untreated psychosis
- Mitigating suicide risk in early psychosis
- Determining optimal dose of initial CSC
- Evaluating new pharmacologic approaches
 - First Episode Psychosis
 - Clinical High Risk for Psychosis

