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Module D: Care Transition after CSC
&
Building a statewide Learning Health System

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Outline

Key concepts:

1. Transitions in care after CSC: the challenge
2. STEP's Population Health model of care
3. Building a statewide Learning Health System (LHS)

Early Intervention Service Care Pathway

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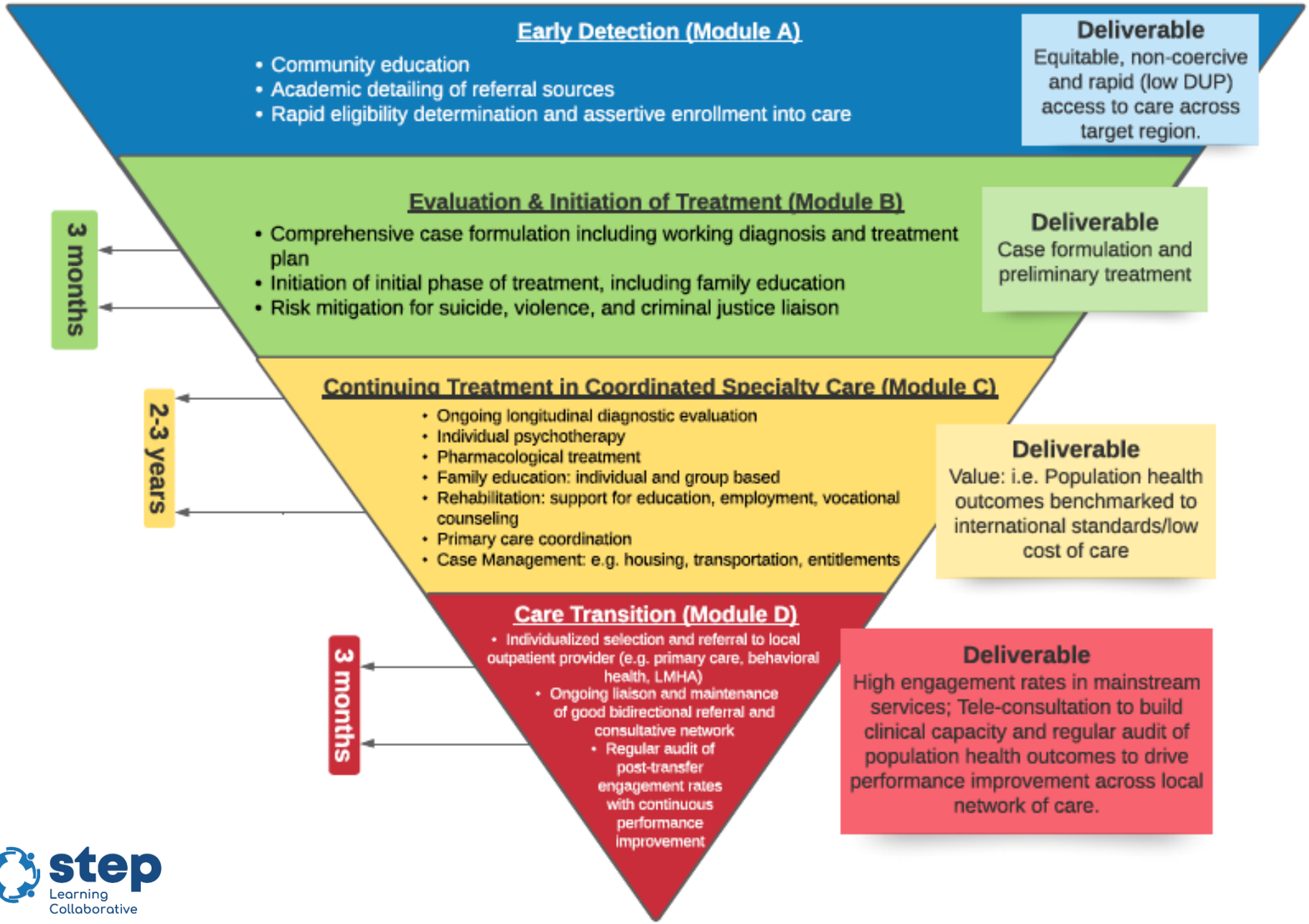

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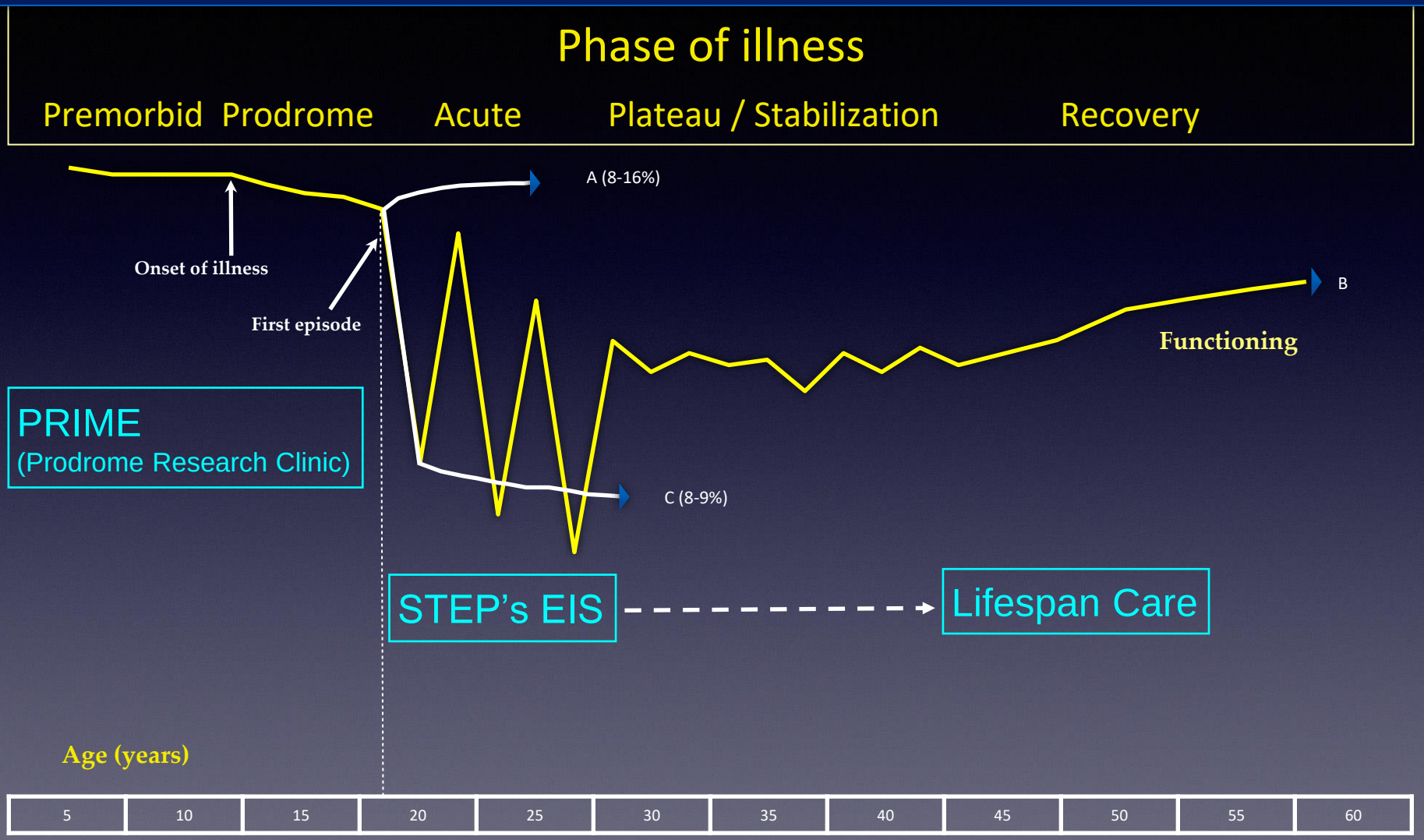
Early Intervention (EI): current best practices in CT



from Srihari et al. Psych Clin of N America, 2012

The Challenge of Care Transitions

TABLE 1 Disposition and transfer of care outcomes by phase of quality improvement

	Pre-PDSA (*n* = 35) *n* (% of all discharged patients)	Post-PDSA (*n* = 109) *n* (% of all discharged patients)
Transfer status[a]		
Confirmed in treatment at 3 months	13 (37.2%)	59 (54.1%)
Confirmed not in treatment at 3 months	4 (11.4%)	22 (20.2%)
Unknown treatment status at 3 months	18 (51.4%)	28 (25.7%)
Disposition[b]		
Referred	17 (48.6%)	76 (69.7%)
Refused	7 (20.0%)	12 (11.0%)
Lost to follow-up	9 (25.7%)	15 (13.8%)
Other (moved, deceased, or incarcerated)	2 (5.7%)	6 (5.5%)

[a]Pre-PDSA versus. post-PDSA, $p = .02$ (Fisher's exact test).
[b]Pre-PDSA versus post-PDSA, $p = .03$ (Fisher's exact test).

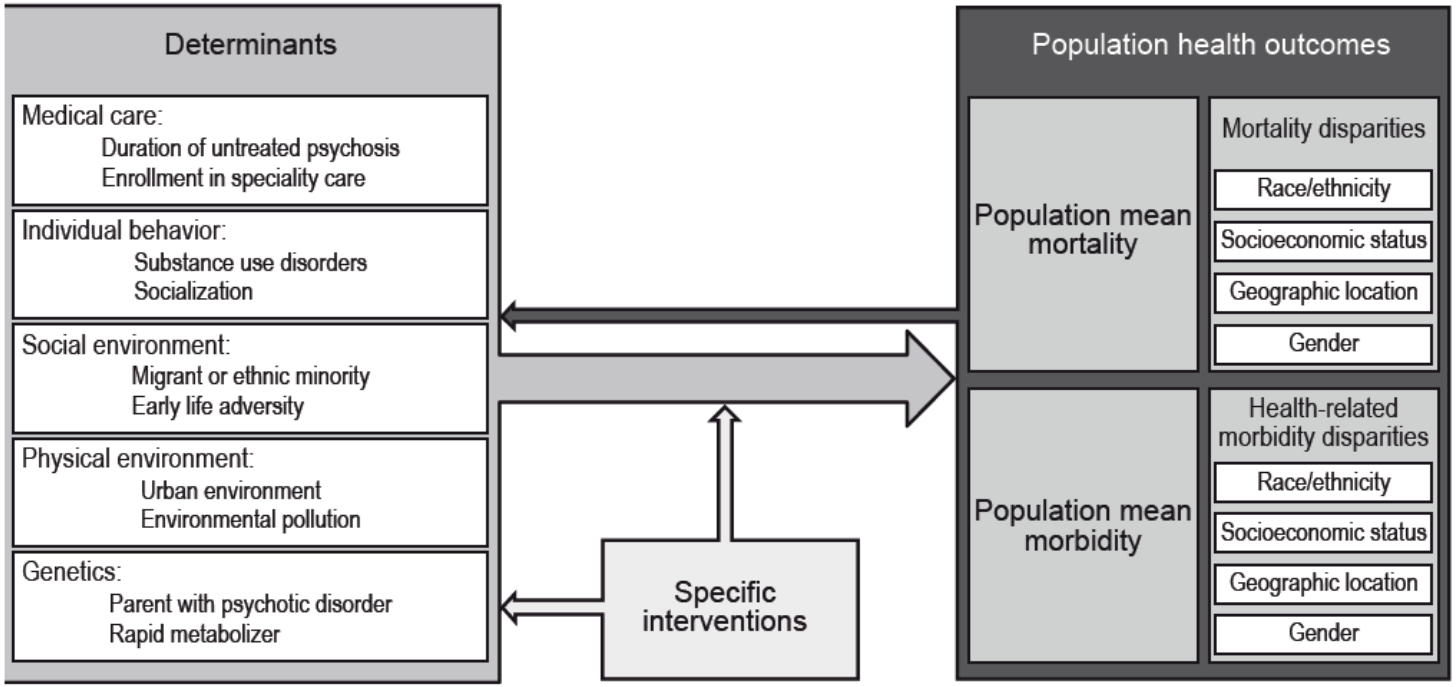
Procedures:

- D/C planning 1-3 months in advance of 2yr. mark
- 1 month reminders
- 3-month f/u

(from October 1, 2014 to December 31, 2016)

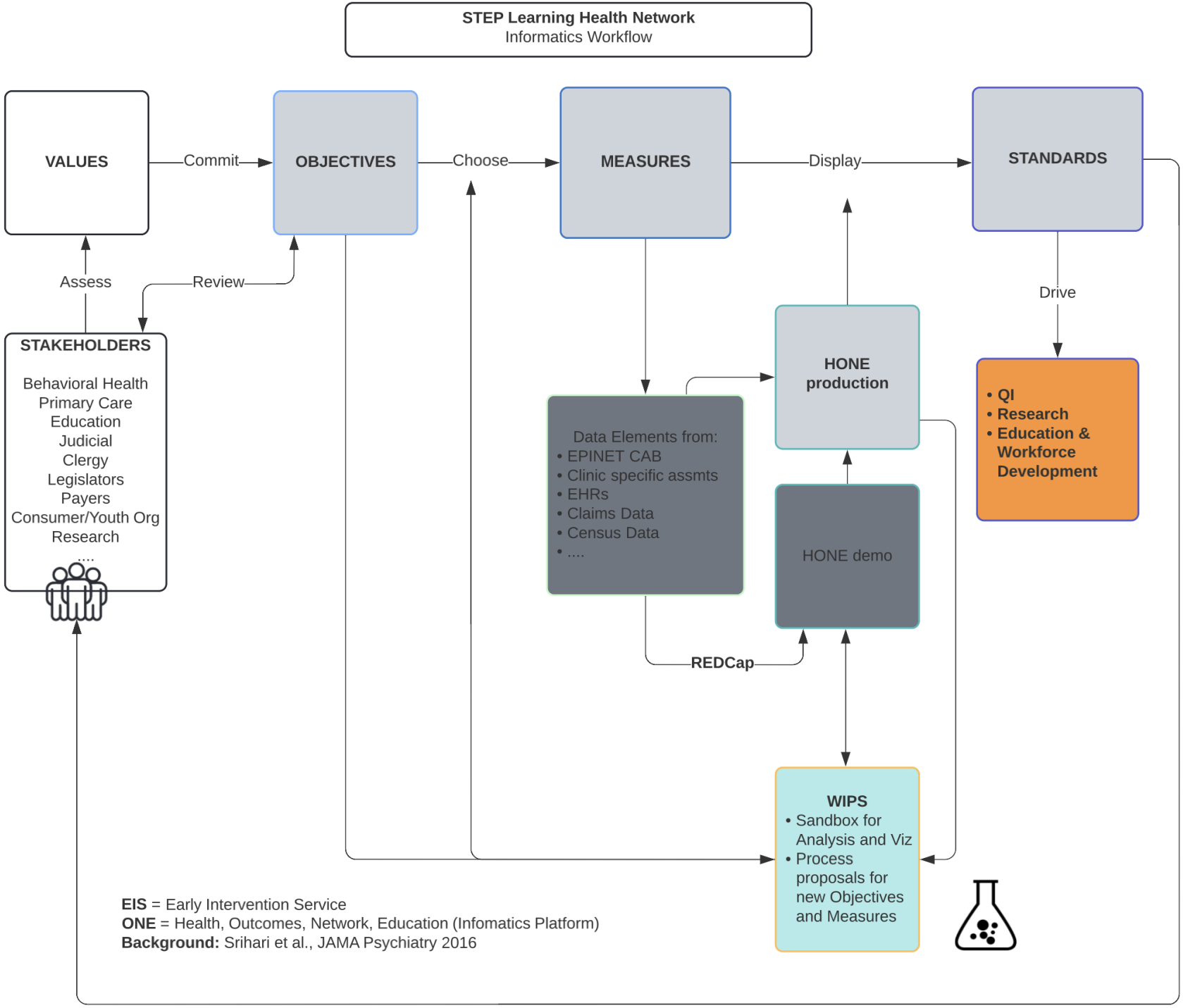
Gallagher K et al. Taking the next step: Improving care transitions from a first-episode psychosis service. Early Intervention in Psychiatry. 2021;1–6.

STEP's Population Health approach



Population Health: (i) target a 'geopolitically defined ***catchment*** (ii) intervene across ALL ***determinants*** (iii) measure population ***outcomes*** (address ***disparities***)

David Kindig, Milbank Quarterly 2007; Srihari & Cahill 2019.


STEP Learning Health Network
Informatics Workflow
VALUES
Commit
OBJECTIVES
Choose
MEASURES
Display
STANDARDS
Assess
Review
Drive
STAKEHOLDERS
Behavioral Health
Primary Care
Education
Judicial
Clergy
Legislators
Payers
Consumer/Youth Org
Research
....
HONE production
Data Elements from:
• EPINET CAB
• Clinic specific assmts
• EHRs
• Claims Data
• Census Data
• ....
HONE demo
• QI
• Research
• Education & Workforce Development
REDCap
WIPS
• Sandbox for Analysis and Viz
• Process proposals for new Objectives and Measures
EIS = Early Intervention Service
ONE = Health, Outcomes, Network, Education (Infomatics Platform)
Background: Srihari et al., JAMA Psychiatry 2016

STEP's PH System Specification

Table. Population Health System for Early Intervention, With an Overall Aim to "Transform Outcomes of All Individuals Within the First 3 Years of Psychosis Onset Within a Catchment Zone of 10 Surrounding Towns"[a]

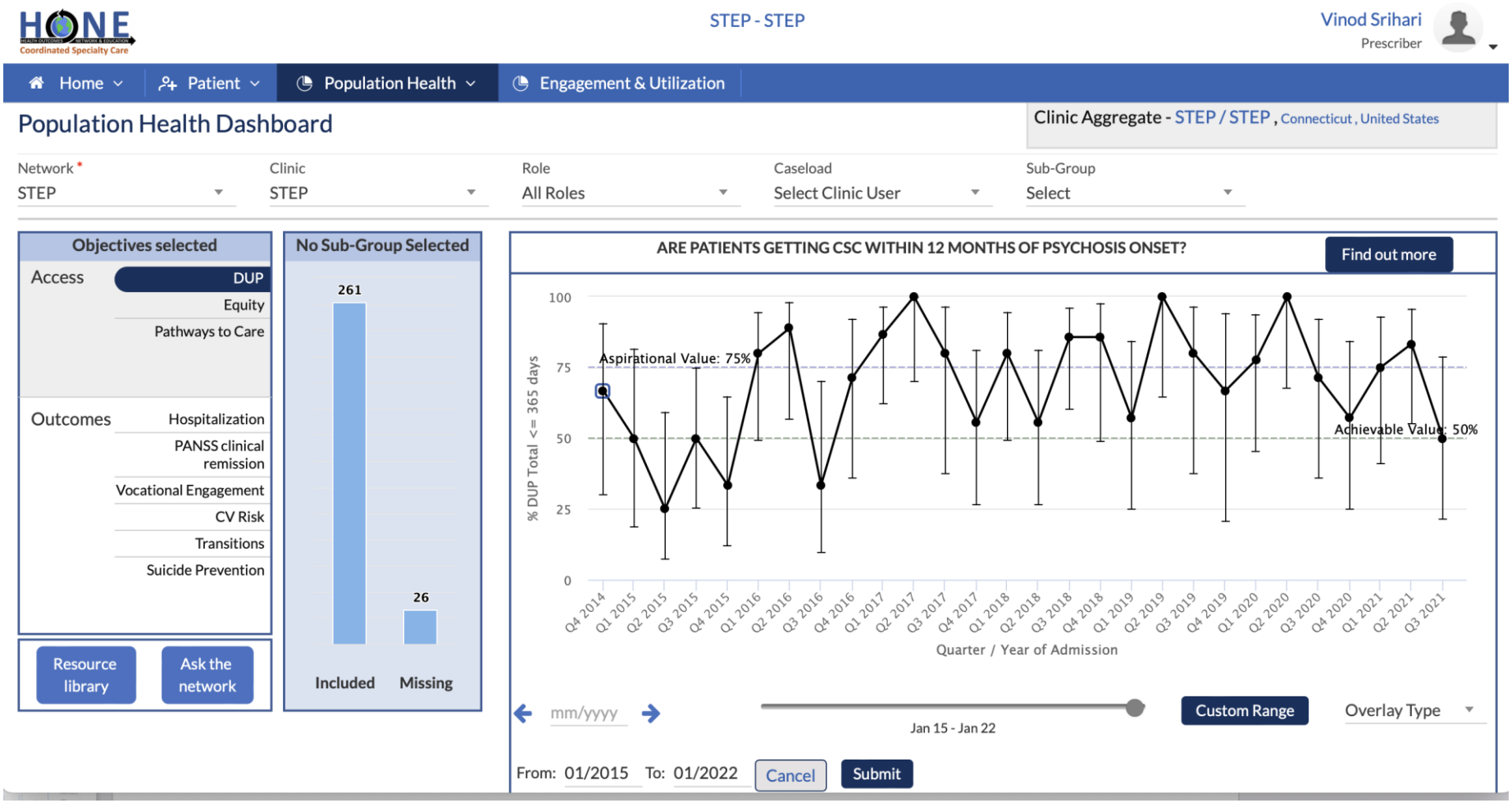
Objective	Measure	Standard
A. Access		
A.1. Rapidity	DUP 1 < 3 mo[b]	Achievable (30%); aspirational (75%)
	DUP 2 < 12 mo[c]	Achievable (50%); aspirational (75%)
A.2. Equity	Proportion of female patients, ethnic groups, town of residence, age	% of Female patients: achievable (20%); aspirational (40%). Aspirational: % of minorities will meet Census minimal proportions; aspirational: all 10 target towns will be represented at enrollment. % of Patients 16 or 17 y: achievable (5%); aspirational (10%)
A.3. Coverage	No. of patients annually offered STEP care/expected annual incidence	Achievable (15%); aspirational (80%)
A.4. Pathway to care	Proportion of patients admitted to STEP after psychiatric hospitalization	Achievable (80%); aspirational (30%)
B. Engagement		
B.1. Overall	In contact with FES at 1 y	Achievable (70%); aspirational (90%)
B.2. Engagement	% of Patients with at least 2 visits in 1st month	Achievable (70%); aspirational (90%)
B.3. Exposure to family education	Family attendance at 1 education session in 1st month	Achievable (75%); aspirational (90%)
C. Outcomes		
C.1. Hospitalization	No psychiatric admission in 1st year after enrollment in FES	Achievable (<25%); aspirational (<10%)
C.2. Remission	PANSS 8-item score < 3 at 6 mo PANSS 8-item score < 3 at 1 y	Achievable (50%-70%); aspirational (85%) Achievable (80%); aspirational (90%)
C.3. Vocational engagement	Not in labor market (NEET and not a full-time caregiver)	Achievable (<20%); aspirational (<10%)
C.4. Cardiovascular risk		
Smoking	New smokers at 1 y	Achievable (20%); aspirational (10%)
	% of Smokers at 1 y	Achievable (60%); aspirational (30%)
Overweight or obese	BMI < 25 at 1 y	Achievable (30%); aspirational (75%)
	Retain normal BMI at 1 y	Achievable (60%); aspirational (75%)
C.5. Disposition	% Successfully transitioned to routine community services after 2 y in FES	Achievable (80%); aspirational (90%)

From Srihari et al., JAMA Psychiatry 2016

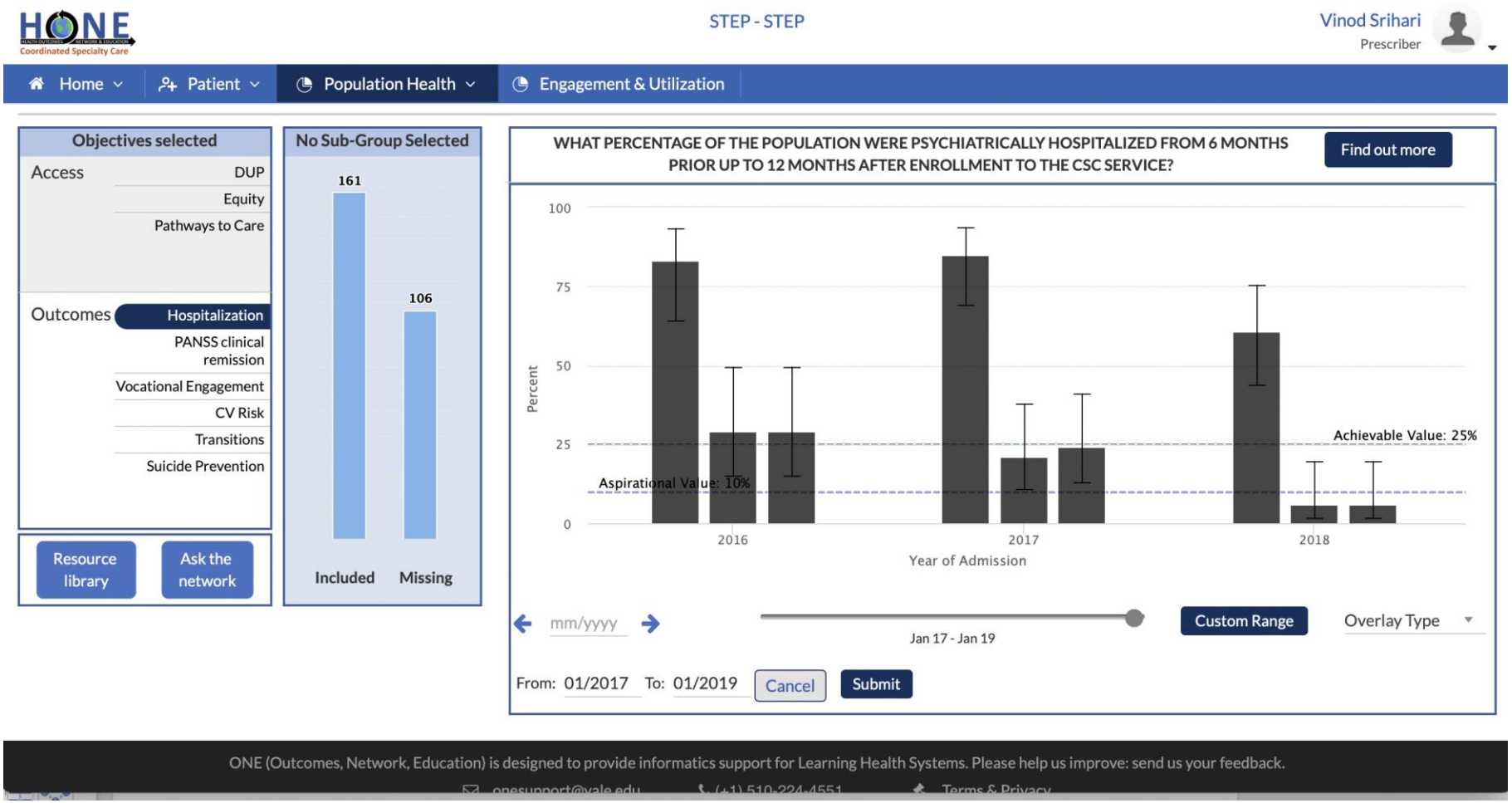
System Specification: Implications

- Individualized, phase-specific care
- Care *Processes* responsive to Population Outcomes across domains of access, disease-related morbidity and broader determinants of social & vocational functioning.
- Fidelity (like adherence) as a variably important mediator of patient oriented outcomes, not ends in themselves
- Ownership: Local implementation choices
- Creative resourcing of & disinvestment from services
- Accountability: e.g. annual report focused on outcomes of value to local stakeholders

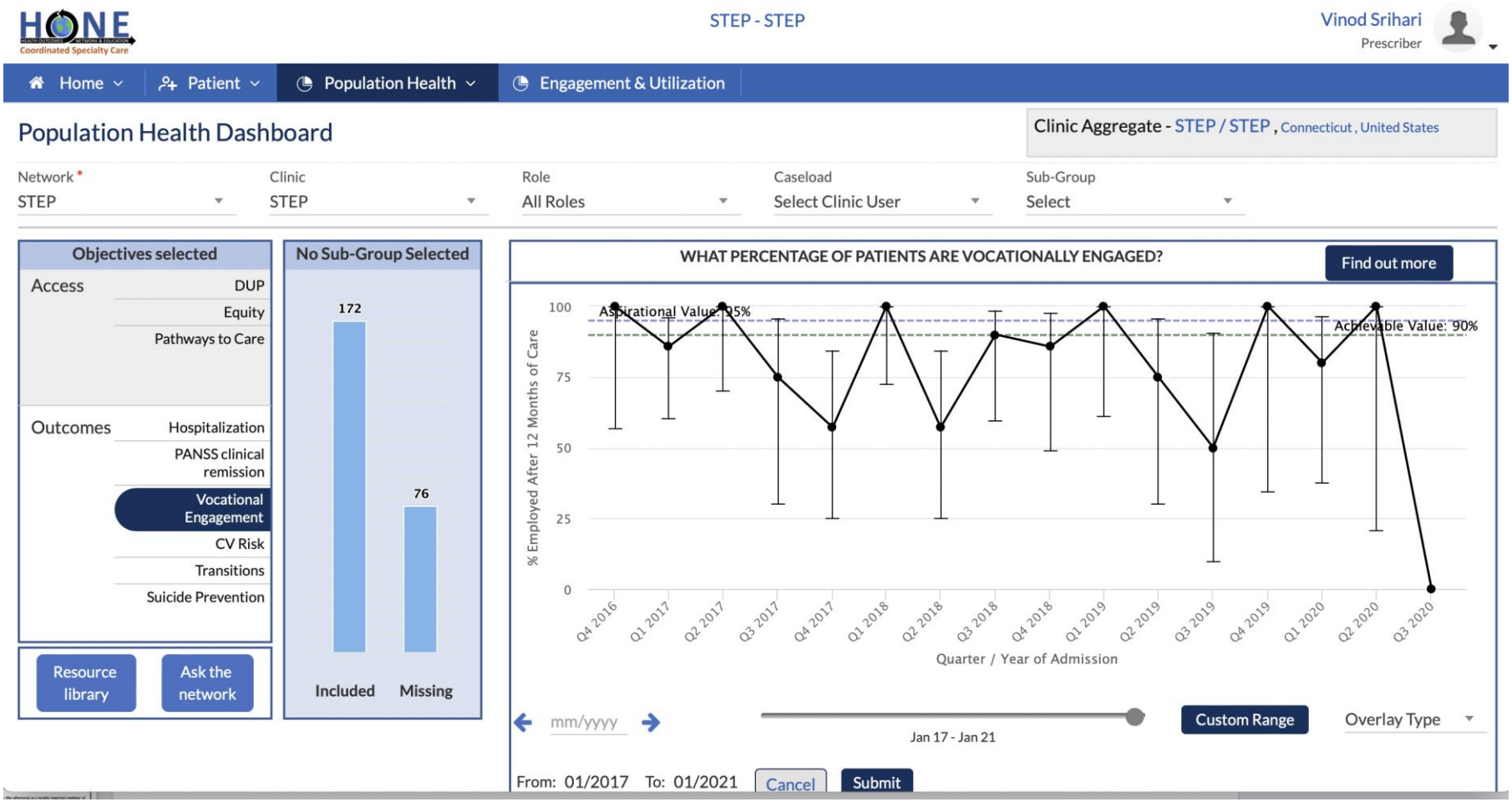
Access: DUP

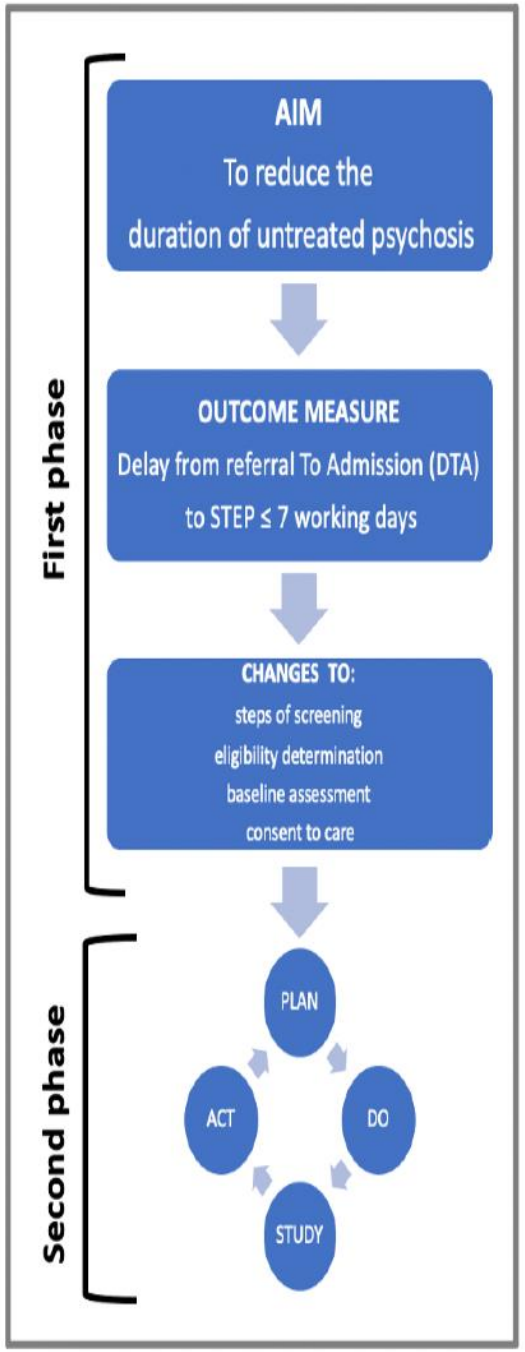

HONE
Coordinated Specialty Care
STEP - STEP
Vinod Srihari
Prescriber
Home
Patient
Population Health
Engagement & Utilization
Population Health Dashboard
Clinic Aggregate - STEP / STEP , Connecticut , United States
Network *
STEP
Clinic
STEP
Role
All Roles
Caseload
Select Clinic User
Sub-Group
Select
Objectives selected
Access
DUP
Equity
Pathways to Care
Outcomes
Hospitalization
PANSS clinical remission
Vocational Engagement
CV Risk
Transitions
Suicide Prevention
Resource library
Ask the network
No Sub-Group Selected
261
26
Included
Missing
ARE PATIENTS GETTING CSC WITHIN 12 MONTHS OF PSYCHOSIS ONSET?
Find out more
% DUP Total <= 365 days
100
75
50
25
0
Aspirational Value: 75%
Achievable Value: 50%
Q4 2014
Q1 2015
Q2 2015
Q3 2015
Q4 2015
Q1 2016
Q2 2016
Q3 2016
Q4 2016
Q1 2017
Q2 2017
Q3 2017
Q4 2017
Q1 2018
Q2 2018
Q3 2018
Q4 2018
Q1 2019
Q2 2019
Q3 2019
Q4 2019
Q1 2020
Q2 2020
Q3 2020
Q4 2020
Q1 2021
Q2 2021
Q3 2021
Quarter / Year of Admission
mm/yyyy
Jan 15 - Jan 22
Custom Range
Overlay Type
From: 01/2015
To: 01/2022
Cancel
Submit

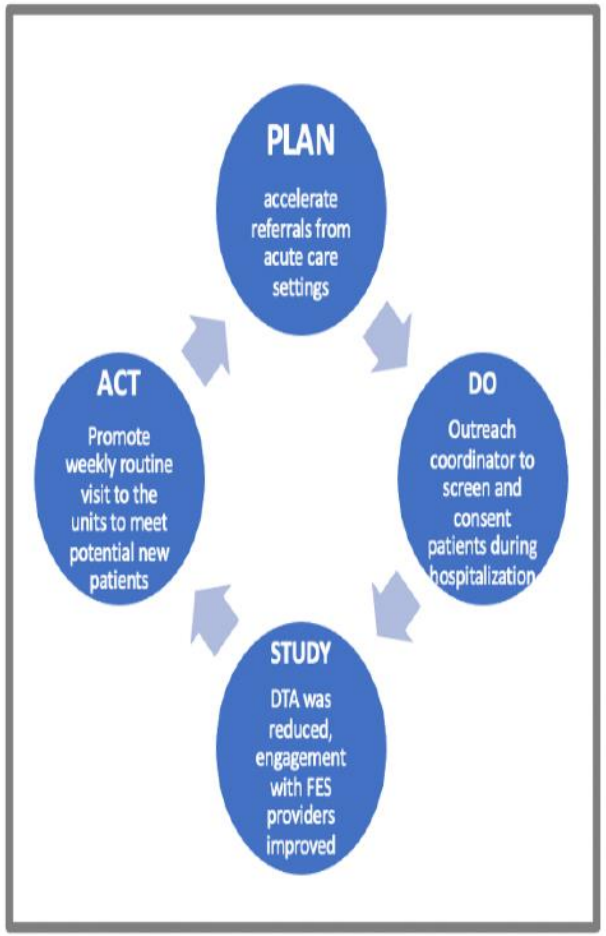
Outcome: Hospitalization



Outcome: Labor Force Participation







Using Quality Improvement (QI) methods to intervene on care processes toward improved population outcomes (standards)

www.ihi.org

From Ferrara et al. Reducing delay from referral to admission at a U.S. first episode psychosis service. A Quality-Improvement initiative (Psychiatric Services, 2022)

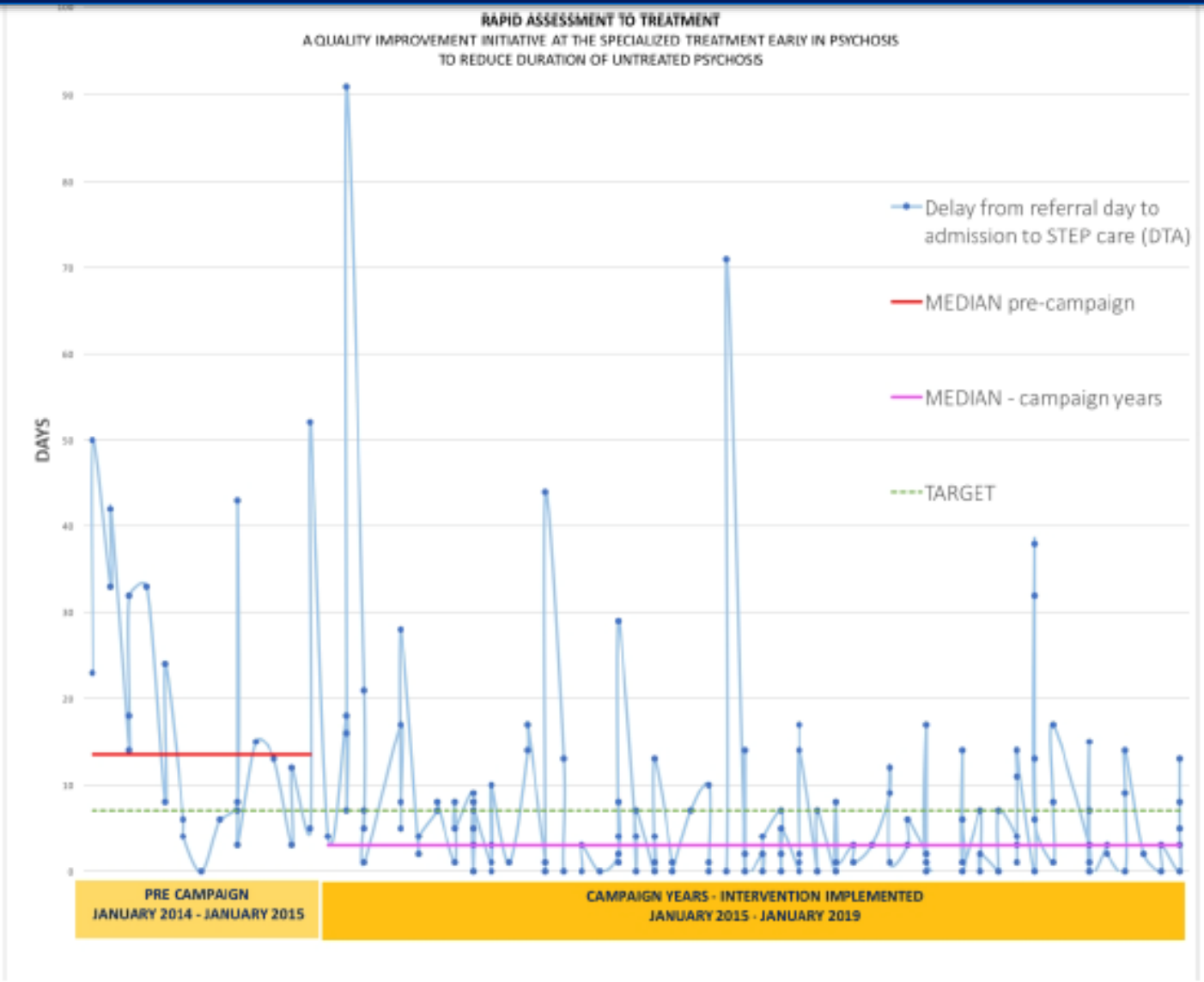
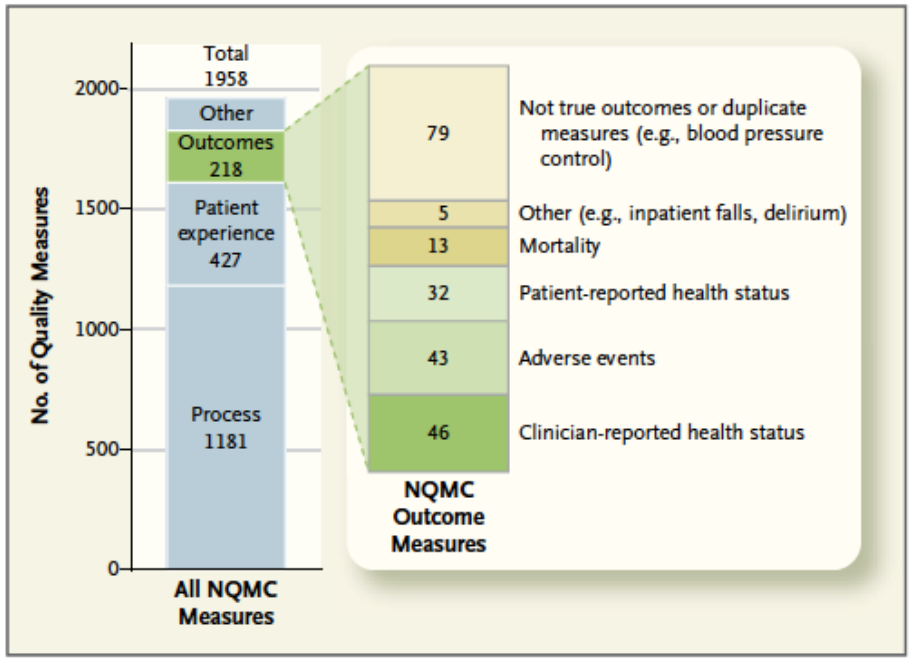


Figure 1. Run chart of the quality improvement informed initiative at the Specialized Treatment Early in Psychosis Program, New Haven, CT.

‘Value’ = patient outcomes achieved per dollar spent

“< 2% are ‘patient reported outcomes”



Categories of Quality Measures Listed in the National Quality Measures Clearinghouse (NQMC).

- Commit to measure a minimum sufficient set of outcomes
- Consider outcomes across a full ‘care delivery value chain’
- Well-defined methods for collection & risk adjustment of measures of outcomes
- Standardization of sets nationally and globally.
- Maximizing ‘Value’ (= health outcomes achieved per dollar spent)

Quality of healthcare: Compliance with evidence-based practice guidelines or improvement in outcomes? Porter et al., NEJM 374;6; February 11, 2016

Building a Learning Health System for First-Episode Psychosis across Connecticut

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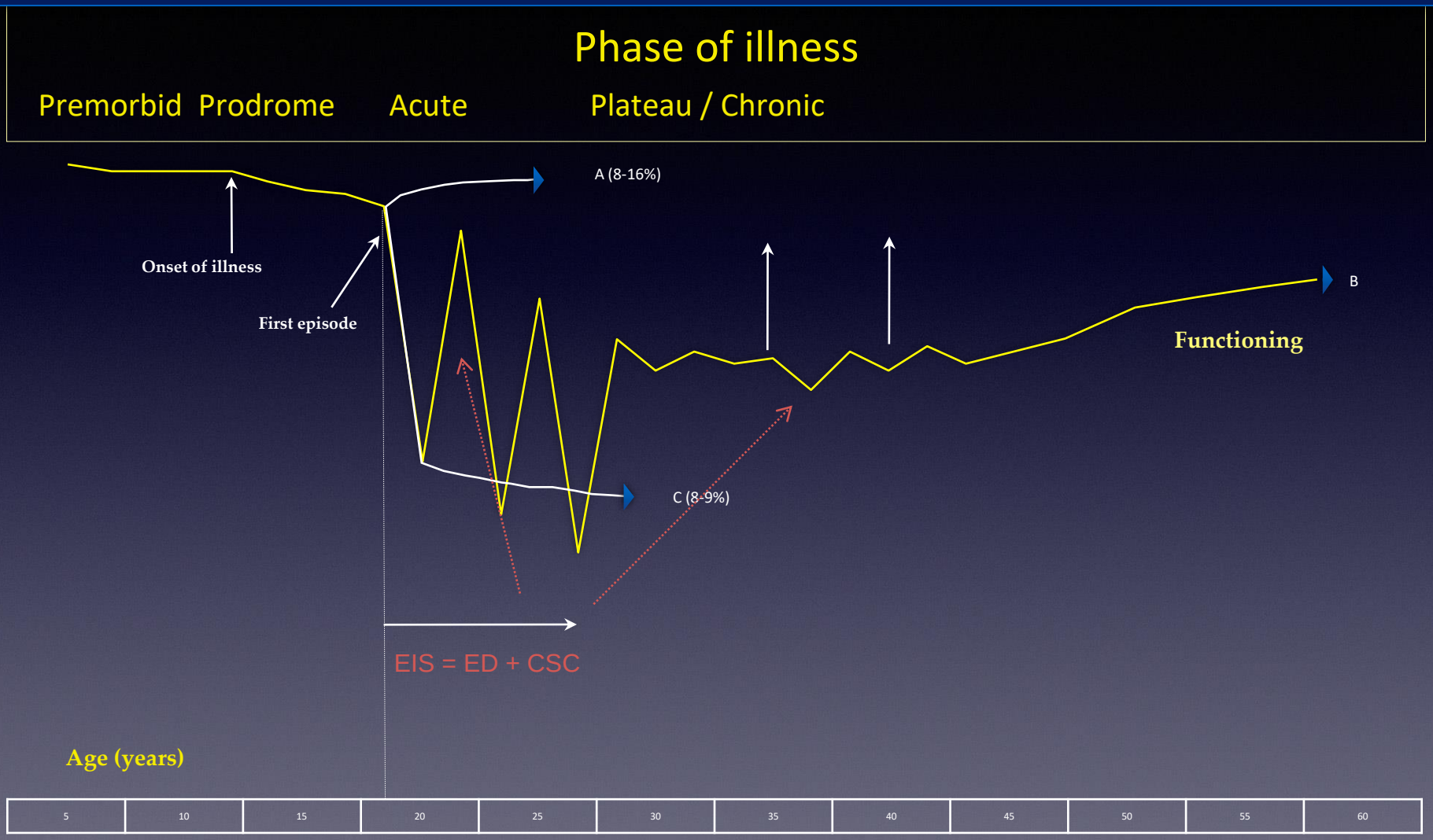
The Evidence: developed in CT

STEP has demonstrated both improved **quality** AND **access** across a defined catchment

This public-academic partnership has delivered an empirically-based care pathway for all recent onset Schizophrenia in the Greater New Haven area (population ~400,000)

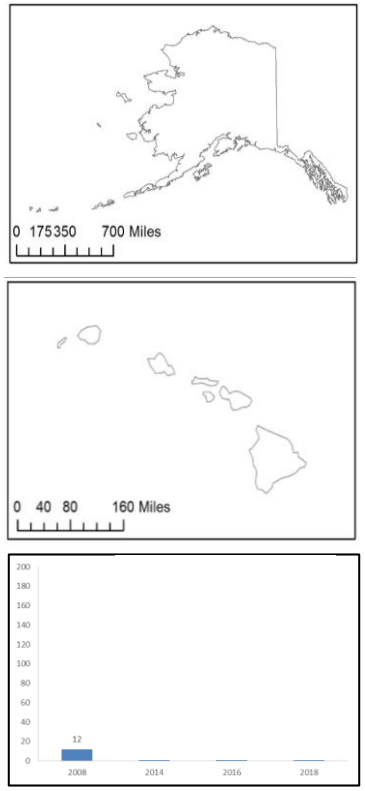
Can we leverage this toward unmet need statewide?

Schizophrenia(s): The Opportunity



from Srihari et al. Psych Clin of N America, 2012

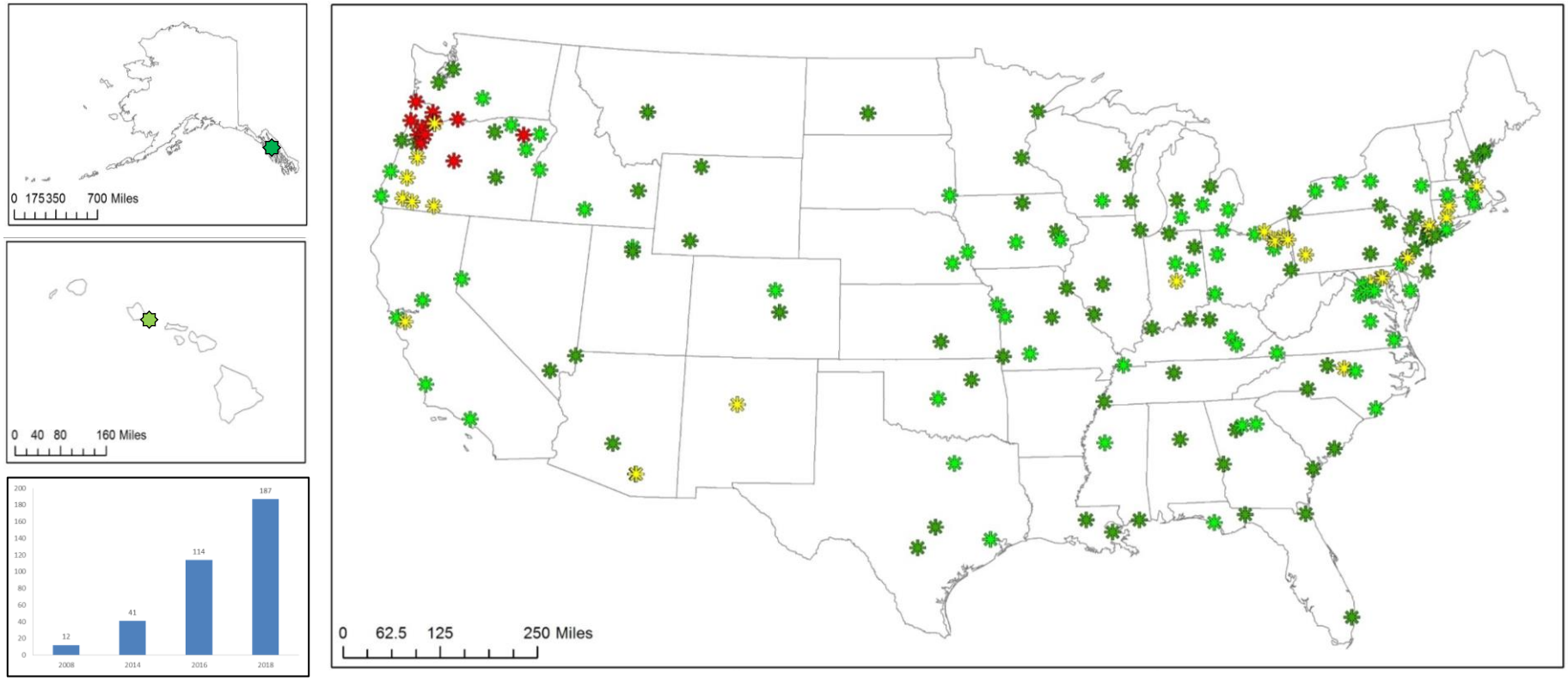
Public FES clinics before 2008



2008 2014 2016 2018

from Robert Heinssen, NIMH

Rapid Growth of CSCs in US



from Robert Heinssen, NIMH

The U.S. EPINET Initiative

Early Psychosis Intervention Network

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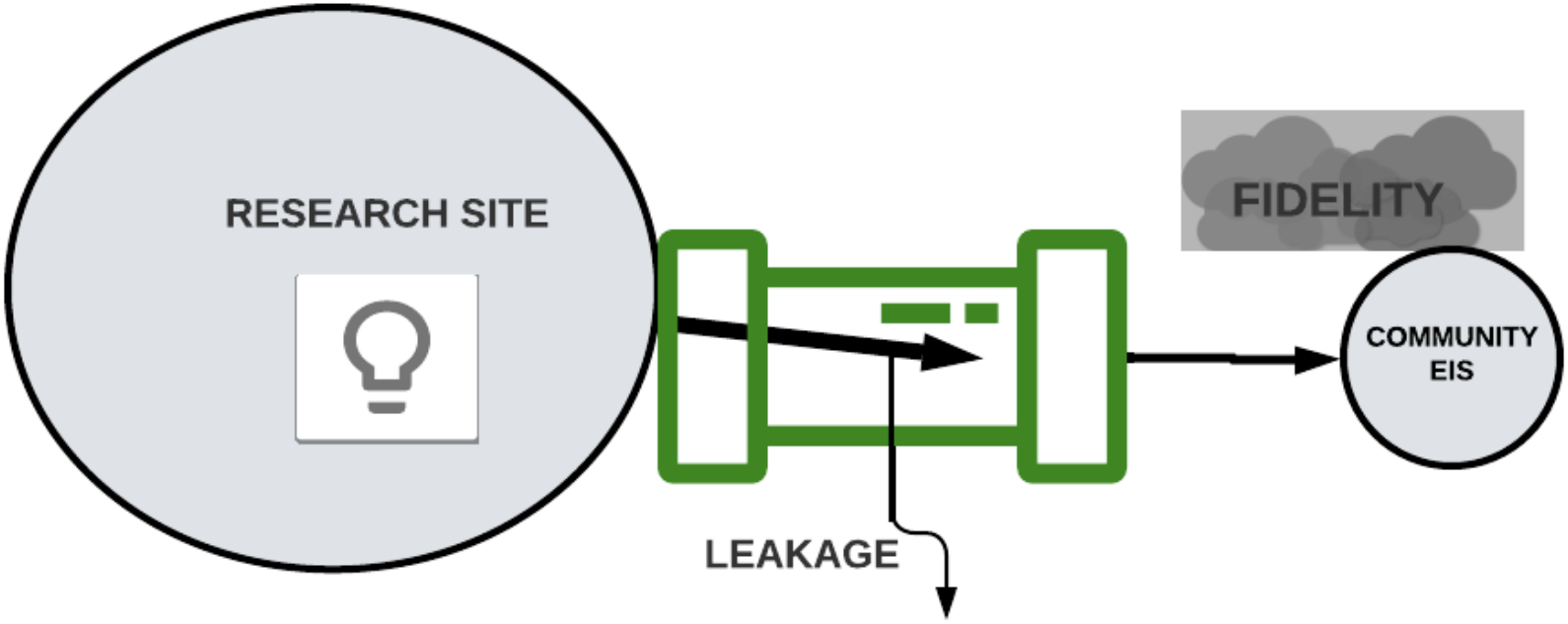
HOW DO WE BUILD A NATIONWIDE EARLY PSYCHOSIS ECOSYSTEM THAT PROVIDES THE BEST AVAILABLE CARE TO AFFECTED INDIVIDUALS and their FAMILIES, WHILE ALSO DRIVING RELEVANT RESEARCH TO CONTINUOUSLY IMPROVE THE EFFECTIVENESS OF THIS CARE?

National Institute of Mental Health
September 7-8, 2017

The Problem: How to Disseminate *Best Practice Care*, Drive continuous *Quality Improvement* and support *Research*?



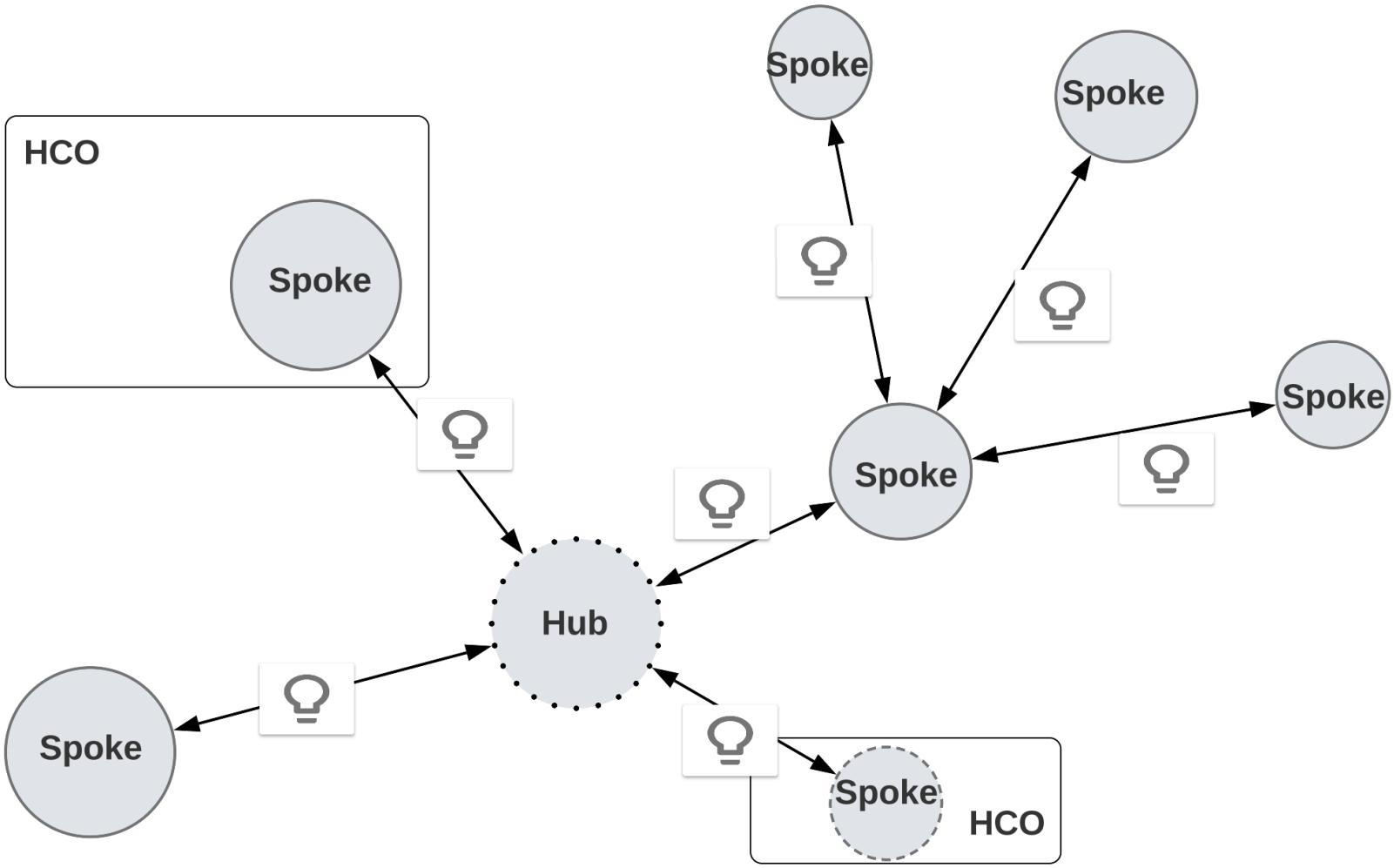
Srihari & Jani, 2016; Srihari & Cahill, 2020

The Solution: Learning Health Systems

A Learning Health System occurs when "science, informatics, incentives, and culture are aligned for continuous improvement and innovation...and new knowledge is captured as an integral by-product of the care experience"

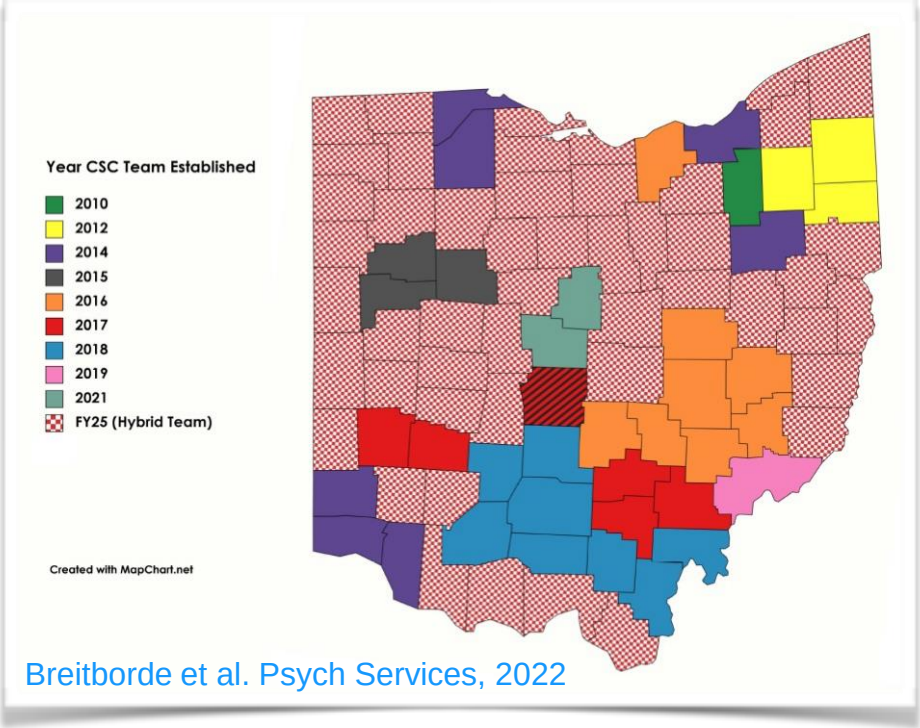
Roundtable on Value and Science-Driven Health Care, Institute of Medicine. National Academies Press (US); 2013

Dissemination: A variety of models



Ohio: implementation of early intervention

18 CSC Teams, 39/88 Counties, ~70% of population



Breitborde et al. Psych Services, 2022

'First-break' ~ 1000/yr

- Improve *Access* to High *Quality* Care
- Do this within a Learning Health System

Developing a Learning Health System across Connecticut

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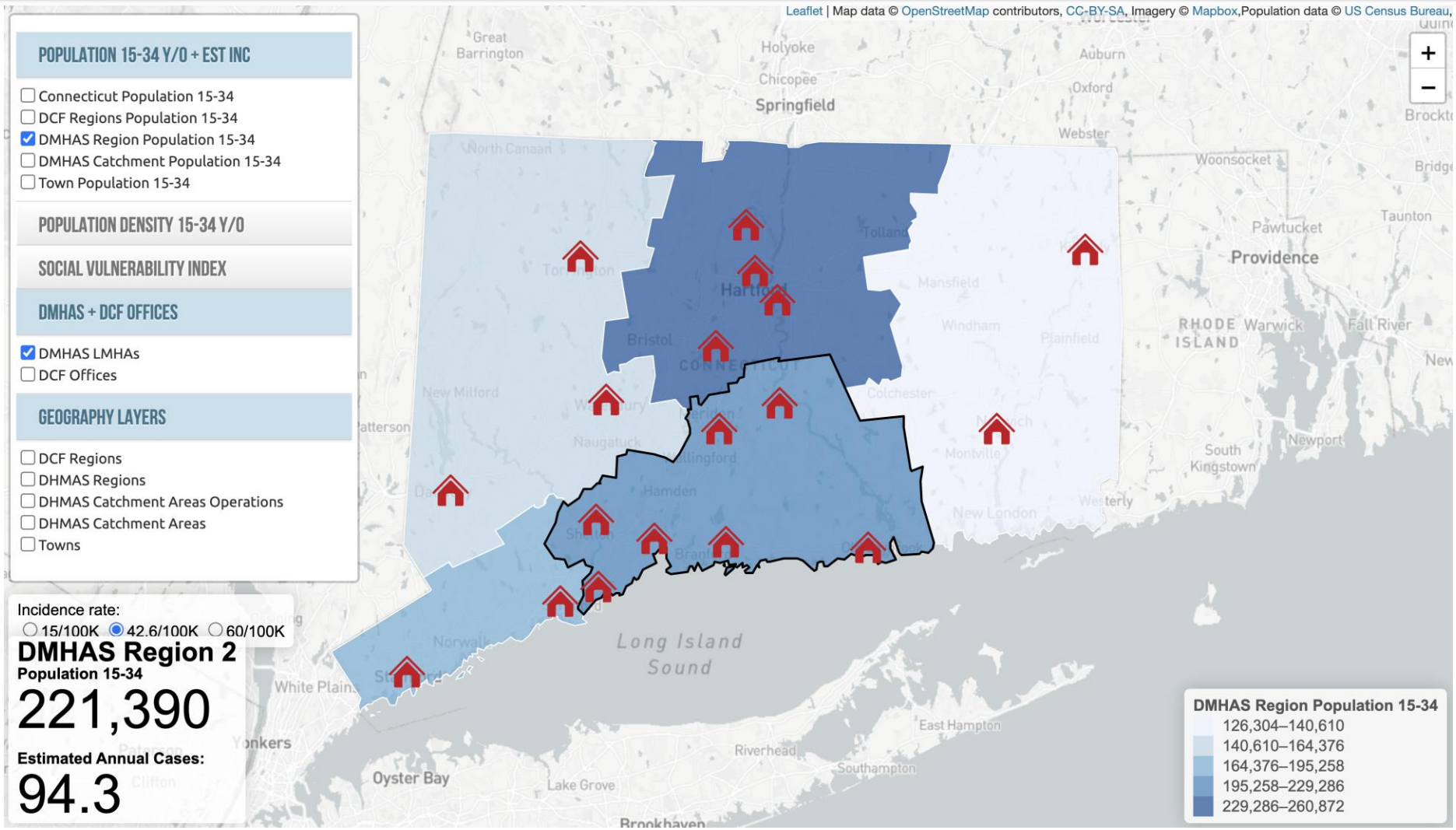

www.step.yale.edu; www.ctearlypsychosisnetwork.org; nina.levine@yale.edu