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Overview of Early Intervention Services for Schizophrenia

Introduction to Early Intervention for Schizophrenia in CT

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Yale SCHOOL OF MEDICINE dmhas step Clinic DCF CONNECTICUT

Overview of Early Intervention Services for Schizophrenia

Thursdays 2-3pm EST

Session 1: Introduction (April 27th)

Session 2: Module A - Early Detection (May 4th)

Session 3: Module B: Case Formulation (May 11th)

Session 4 and 5: Module C: Coordinated Specialty Care (CSC) (May 18th & May 25th)

Session 6: Module D: Transitions of Care and Review of Population Health based EIS (June 1st)

Offerings

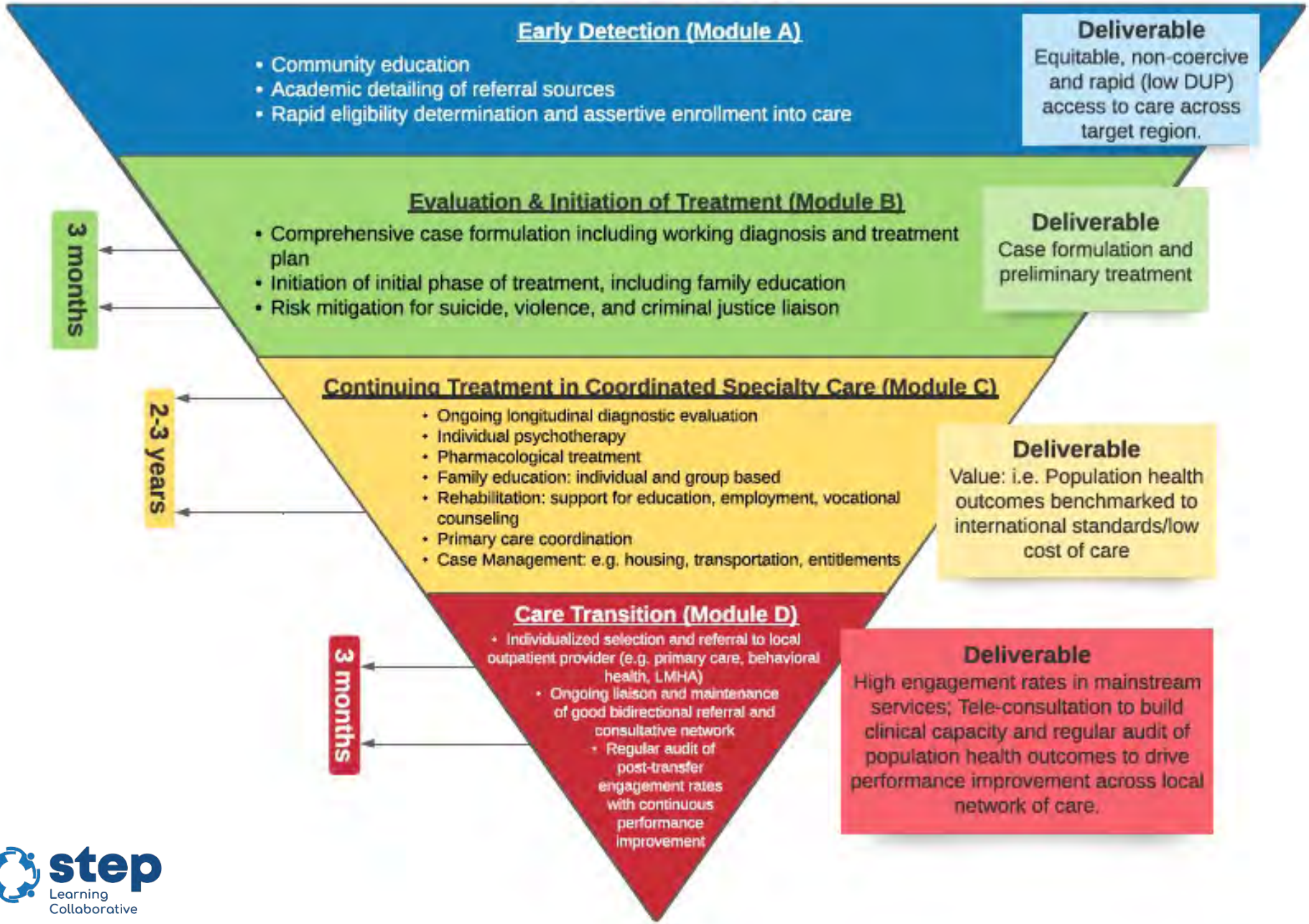
- STEP Learning Collaborative – workforce development and community education initiative to bolster provider capacity to serve folks experiencing recent onset schizophrenia spectrum disorders across Connecticut

- *for* **Behavioral Health Providers:**
  - "Overview of EIS for Schizophrenia" Course
  - Early Psychosis ECHO - Case Discussions and brief didactics
  - Webinars: e.g.) Early Psychosis Basics, Early Psychosis Treatment Approaches

- *for* **Community Education:**
  - Family and community workshops
  - Virtual resources– http://www.ctearlypsychosisnetwork.org

Early Intervention Service Care Pathway

www.step.yale.edu



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Outline

Key concepts:

1. Introduction to STEP Learning Collaborative and orient to course and expectations
2. The target illnesses: Schizophrenia or *primary non-affective psychotic disorders*
3. The Critical period hypothesis and Early Intervention Services
4. Evidence for Early Intervention Services, STEP's comprehensive care pathway
5. Addressing unmet need in Connecticut: a statewide Learning Health System

The Schizophrenia(s)

El Loco, Picasso 1909

Syndromes that can (<u>but do not always</u>) include <u>symptoms/signs in 5 clusters</u>:

1. 'Positive' symptoms: 'Psychosis'
   - Reality distortion (delusions, hallucinations)
   - Disorganization (thought, behavior, expression of feeling)

The Schizophrenia(s)

2. 'Negative' symptoms
   - lack of motivation (*avolition*)
   - reduction in spontaneous speech (*alogia*)
   - social withdrawal (*apathy*)

Loss of <u>anticipatory</u> but not <u>consummatory</u> pleasure

(Felix Garcia, d. 1941)

The Schizophrenia(s)

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3. Cognitive deficits

- Memory (working and long term)
- Attention, processing speed
- Executive functioning
- Social cognition

4 & 5. Affective dysregulation

- Depressive symptoms
- Manic symptoms

Primary Psychotic Disorders

The current *Field-Guide** approach to classification (DSM 5)

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Non-affective psychotic disorders

- Schizophrenia
- Schizoaffective disorder
- Schizophreniform disorder
- Delusional disorder
- Brief psychotic disorder/ Schizophreniform disorder
- ~~Psychotic disorder not otherwise specified~~
- Unspecified Schizophrenia Spectrum and Other Psychotic Disorder
- Other specified Schizophrenia Spectrum and Other Psychotic Disorder

The Schizophrenia(s)

Affective psychoses

- Bipolar disorder with psychotic features
- Major depressive disorder with psychotic features

*Paul McHugh, NEJM 2012

Age at onset of schizophrenia(s)

(Hafner, Maurer, Loffler & Reicher-Rossler, 1993)

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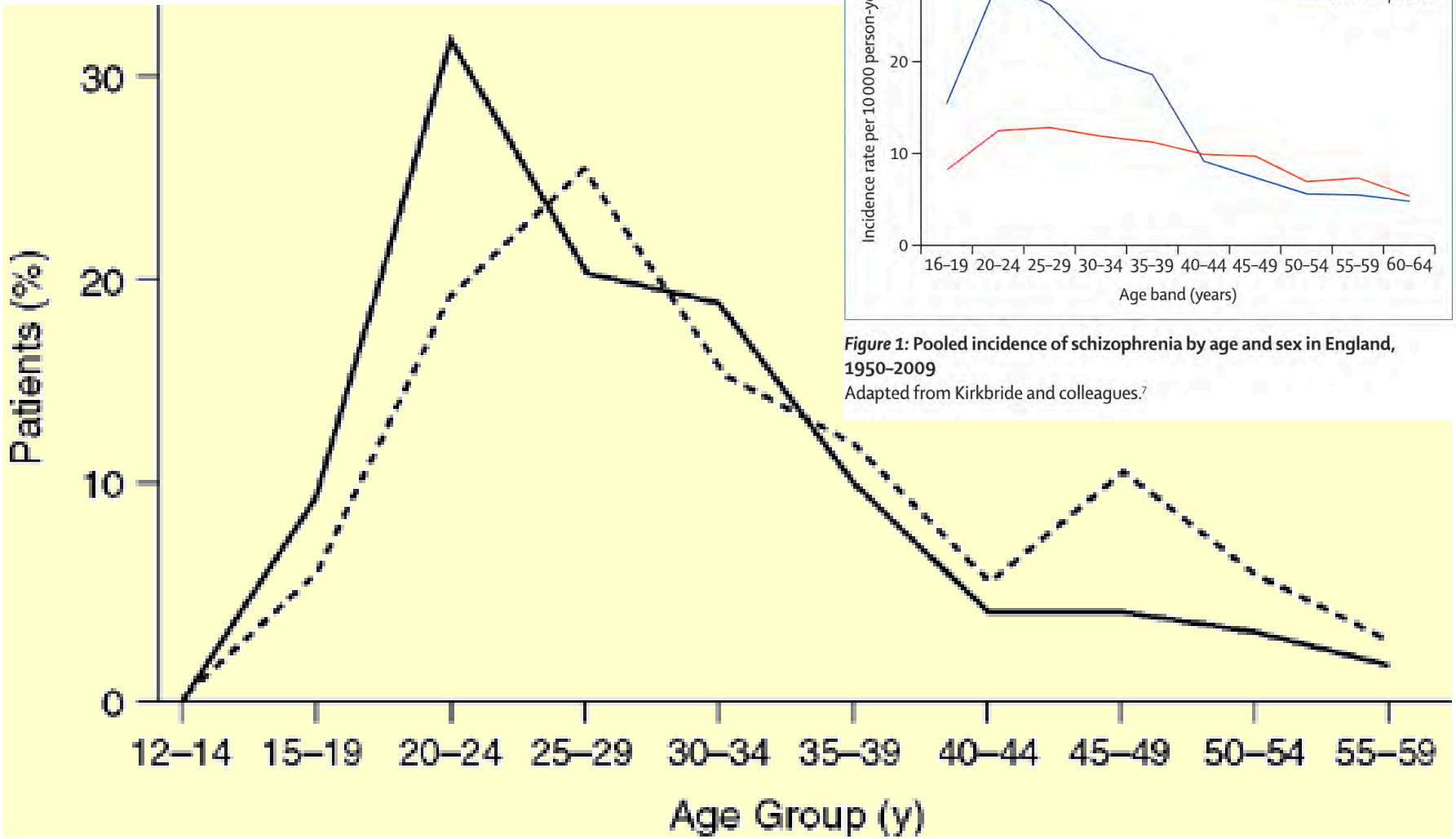

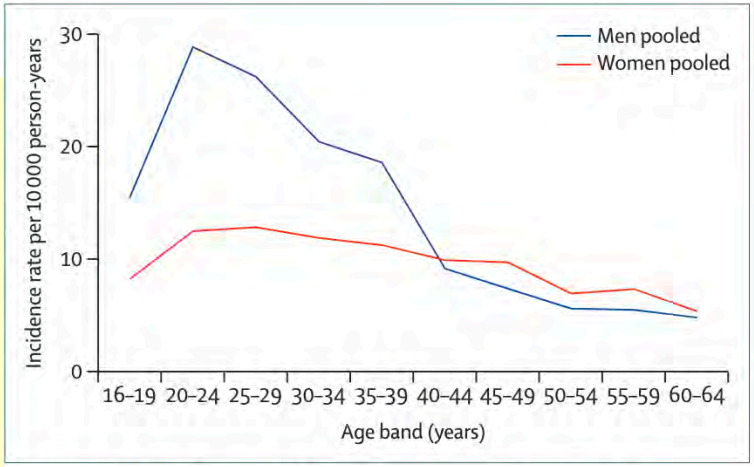

Figure 1: **Pooled incidence of schizophrenia by age and sex in England, 1950–2009**

Adapted from Kirkbride and colleagues.[7]

Schizophrenia(s): The Critical Period & Opportunities for Early Intervention

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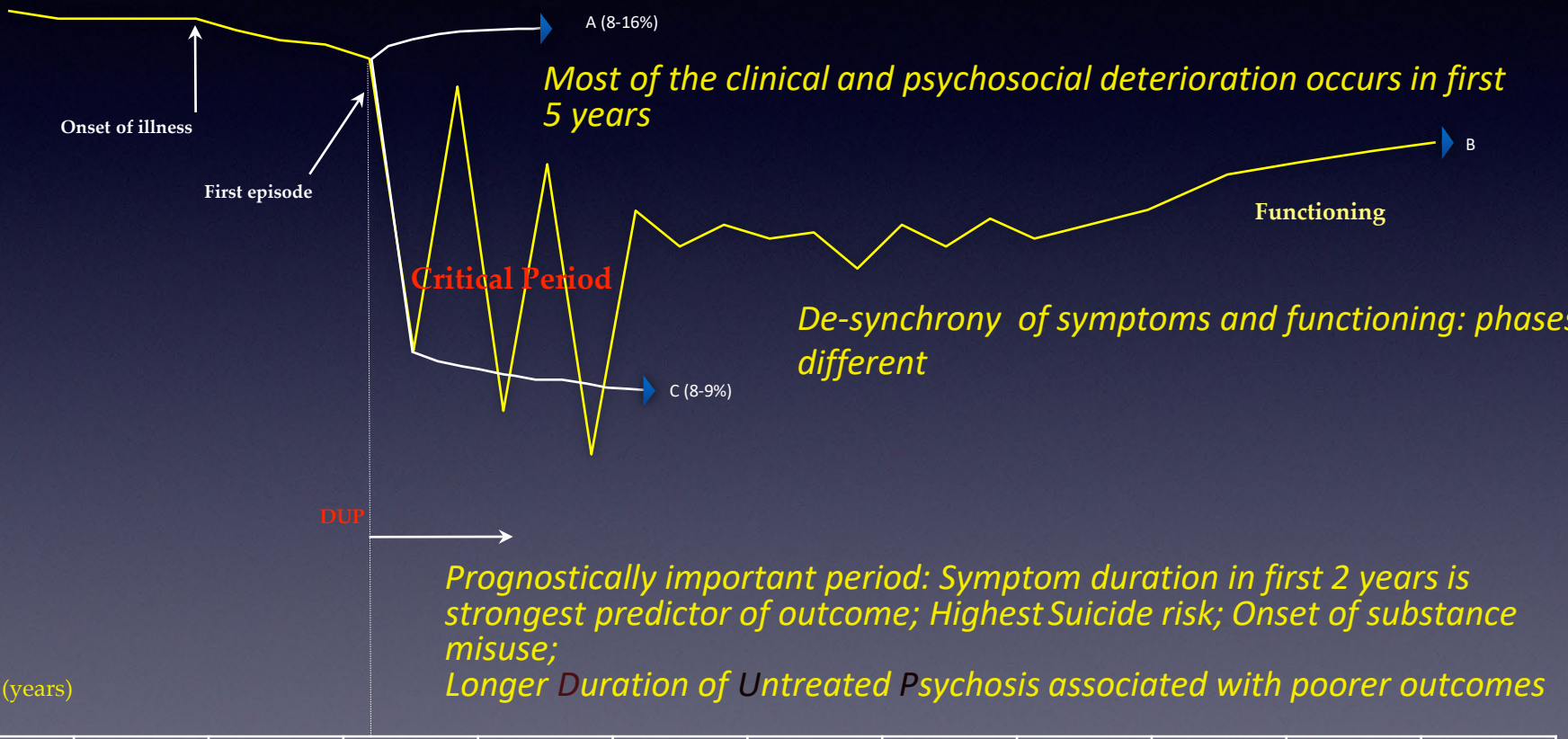
Phase of illness

Premorbid Prodrome Acute Plateau / Chronic



Most of the clinical and psychosocial deterioration occurs in first 5 years

De-synchrony of symptoms and functioning: phases are different

Prognostically important period: Symptom duration in first 2 years is strongest predictor of outcome; Highest Suicide risk; Onset of substance misuse;
Longer Duration of Untreated Psychosis associated with poorer outcomes

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

The Schizophrenia(s) Prognostic Heterogeneity

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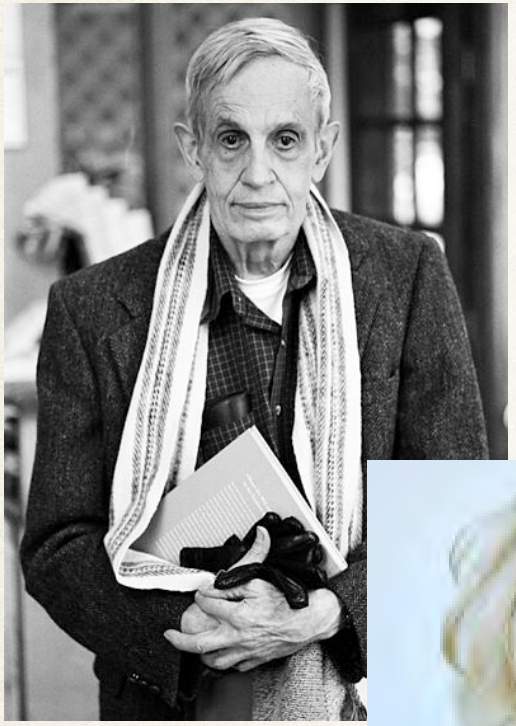
John Nash, 'A Beautiful Mind'



Elyn Saks, 'The Centre Cannot Hold'

Cecilia McGough
CEO & Founder,
Students With Schizophrenia

Felix Garcia

Schizophrenia(s): *'chronic diseases of the young'*

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- Less than 1/3 'recover' over 5 years in usual care systems (Menezes, Psychol Medicine '06)
- Costs: ~$156 billion. Direct* (24%); indirect (76%) ** (Cloutier, J Clin Psychiatry '16)

*mostly (re)hospitalizations; **mostly unemployment, caregiving

(Affective d/o: $210.5 billion)

Summary

- Schizophrenia spectrum disorders are distressing, disabling and costly *under usual care*

- These are *chronic illnesses of the young*

- The early illness course reveals many opportunities for early intervention

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Early Intervention Services

Rationale and Evidence

Early Intervention (EI): current best practices in CT

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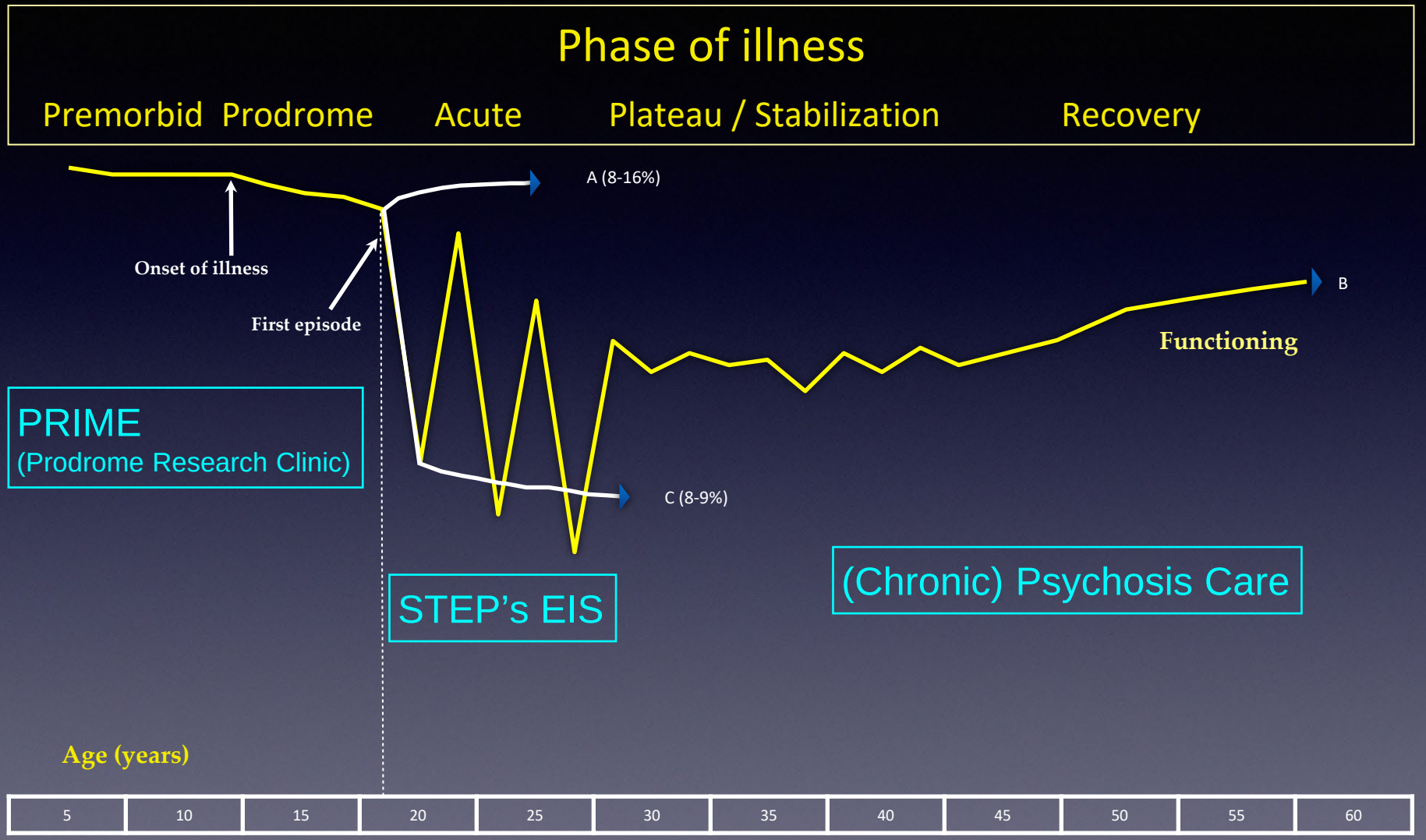

from Srihari et al. Psych Clin of N America, 2012

The Evidence for EIS

A. **ED:** Intervening earlier (even without enriching care) appears to have durable effects on outcome (Hegelstad et al, 2012)

B. **FES:** Intervening intensively after the onset of psychosis improves outcomes over usual care (OPUS, Lambeth, STEP and RAISE studies) at 2+ years (Correll et al., 2018)

The Clinic for **Specialized Treatment Early in Psychosis (STEP)** est. 2006

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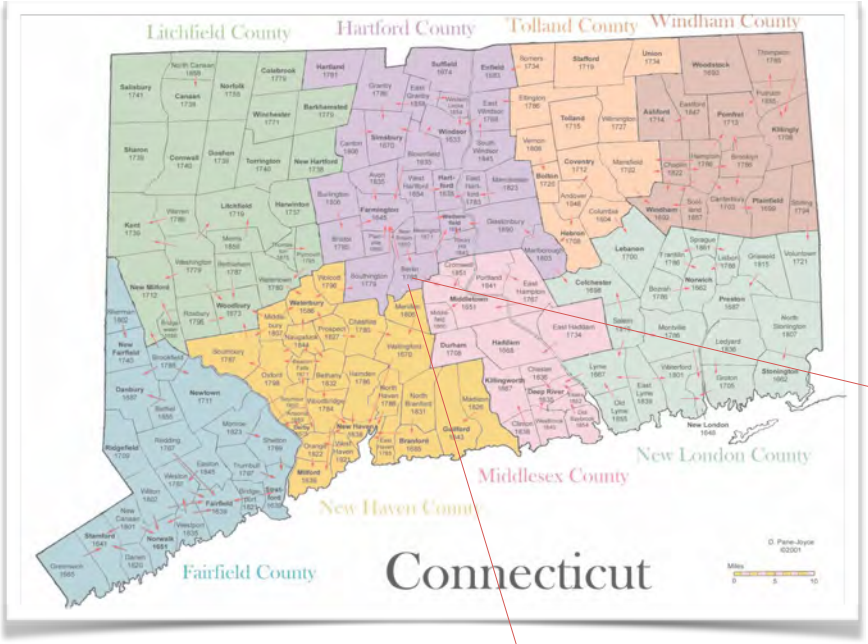


- **Pragmatic RCT** (2007-'13)
  - Broad recruitment
  - Feasible interventions
  - Relevant outcomes

- **Based in public sector**
  CMHC: *DMHAS-Yale partnership*

- **Addressed barriers to access**
  - Insurance status
  - Catchment of residence
  - Adolescent-Adult agencies

The STEP Trial

2007-'13

ClinicalTrails.gov NCT00309452
NIH MH088971-01

REFERENCE POPULATION
Individuals in early stages of psychotic illnesses in CT ~400-500/yr

SOURCE POPULATION

STUDY POPULATION

Referrals from ~
-CMHC triage
-Private Hospitals/ERs
-Area Clinics/PRIME
-Colleges

Age: 16-45 yo
Duration of illness: ≤12wks lifetime antipsychotic Rx AND <5yrs illness
Exclusion: sub-induced psychotic d/o
Exclusion: DDS (DMR) eligibility

TAU

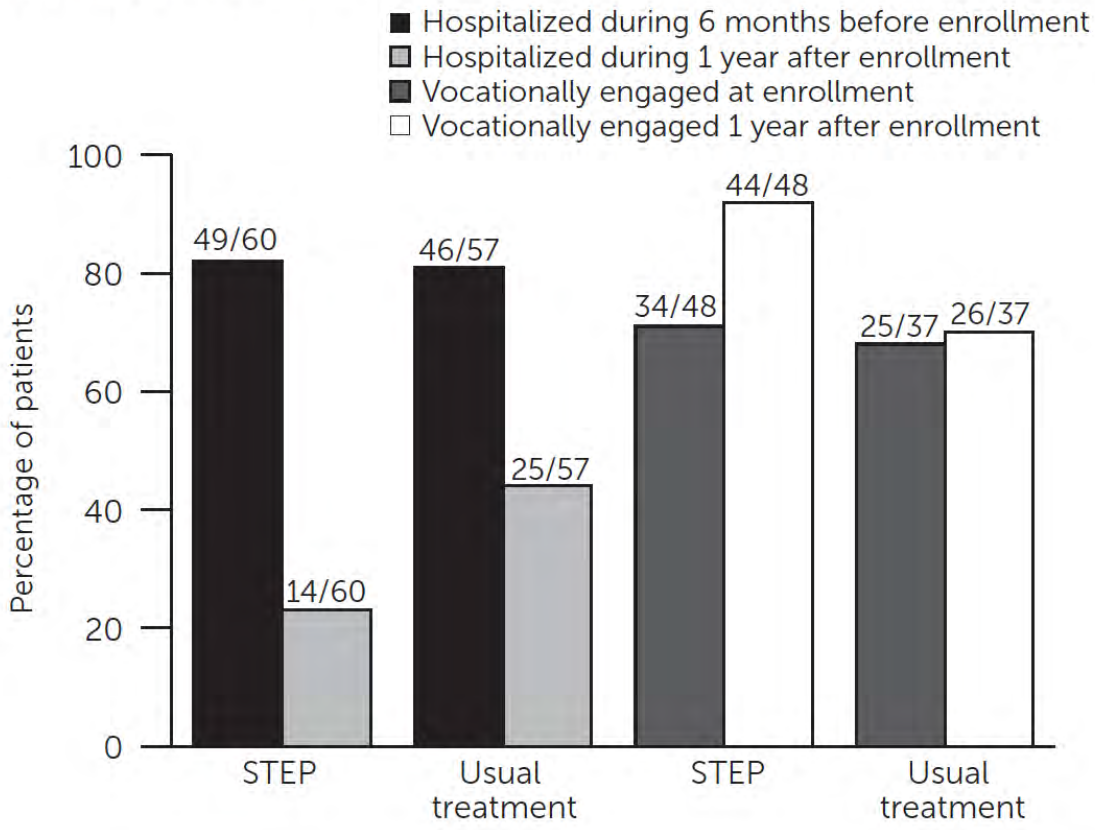
Referral to private or public-sector care

STEP Care

Based within CMHC ambulatory services

The Evidence for EIS

FIGURE 1. One-year hospitalization and vocational engagement outcomes among STEP participants and those in usual treatment[a]

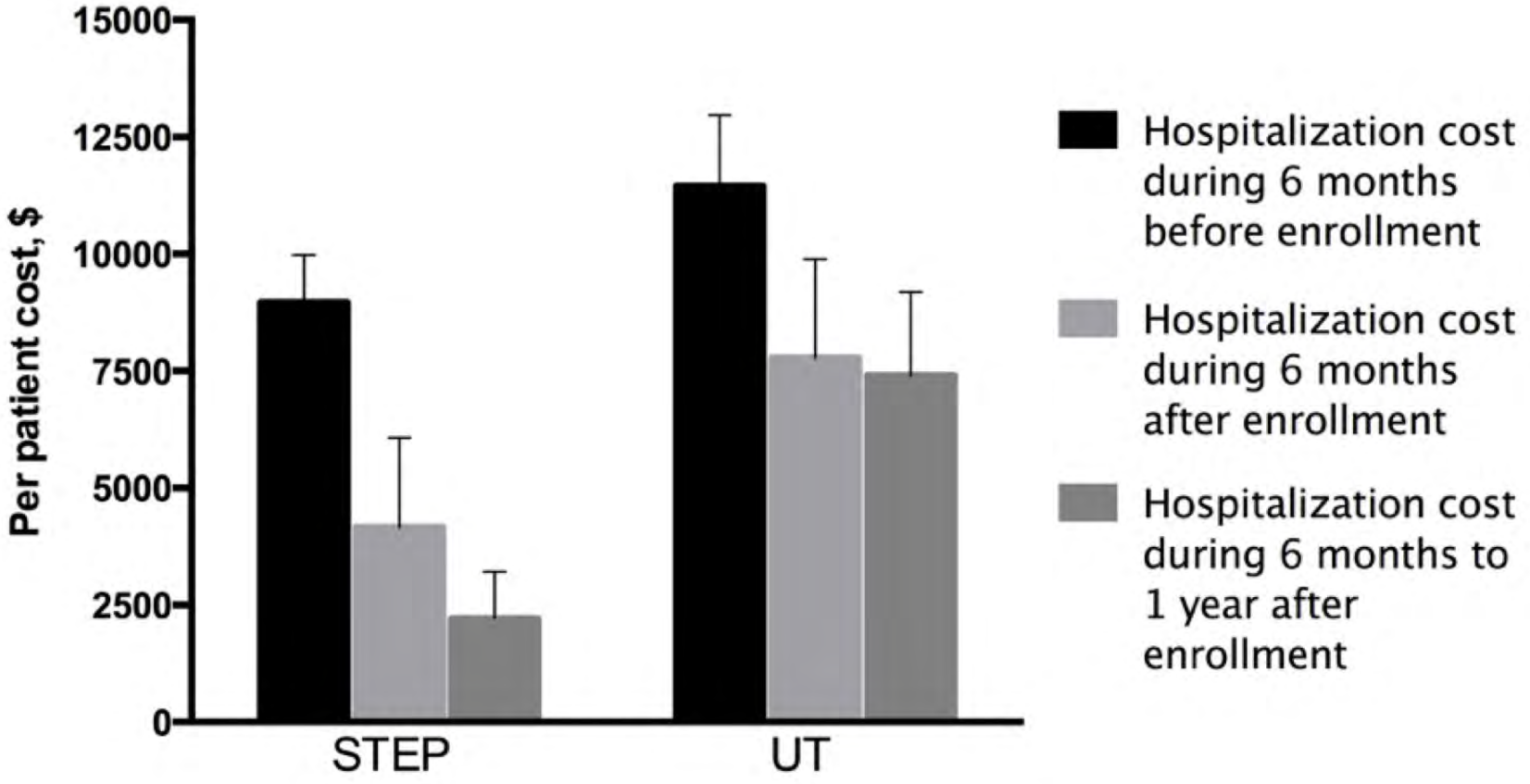


1. NNT of 5 for Hospitalization over first year
2. Fewer in STEP had 'dropped' out of labor force 8% (vs. 33% in Usual Treatment)

Srihari et al., Psych Services 2015

The Evidence for EIS

STEP progressively reduced frequency, duration of acute hospitalizations

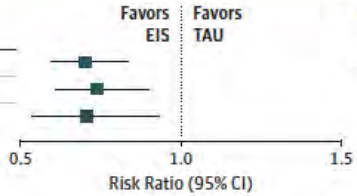


Murphy et al., J of Mental Health Policy and Economics, 2018

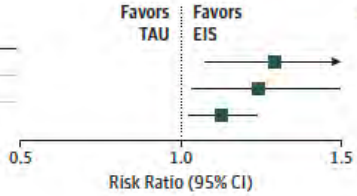
The Evidence for EIS

Figure 2. Summary of Pooled Results

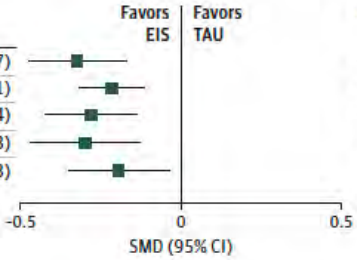
	No. of Studies	No. of Patients	Risk Ratio (95% CI)	P Value
All-cause treatment discontinuation	10	2173	0.70 (0.61 to 0.80)	<.001
≥1 Psychiatric hospitalization	10	2105	0.74 (0.61 to 0.90)	.003
Relapse	7	1275	0.71 (0.53 to 0.93)	.01



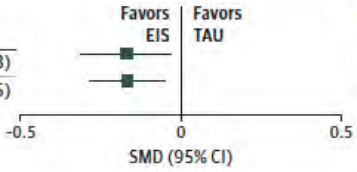
	No. of Studies	No. of Patients	Risk Ratio (95% CI)	P Value
Remission	7	1229	1.29 (1.07 to 1.55)	.007
Recovery	3	640	1.24 (1.03 to 1.50)	.02
Involvement in school or work	6	1743	1.13 (1.03 to 1.24)	.01



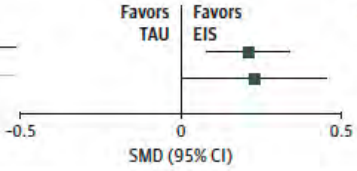
	No. of Studies	No. of Patients	SMD (95% CI)	P Value
Total symptom severity	8	1179	-0.32 (-0.47 to -0.17)	<.001
Positive symptom severity	10	1532	-0.22 (-0.32 to -0.11)	<.001
Negative symptom severity	10	1532	-0.28 (-0.42 to -0.14)	<.001
General symptom severity	8	1118	-0.30 (-0.47 to -0.13)	.001
Depressive symptom severity	5	874	-0.19 (-0.35 to -0.03)	.02



	No. of Studies	No. of Patients	SMD (95% CI)	P Value
No. of psychiatric hospitalizations	8	1412	-0.17 (-0.31 to -0.03)	.02
Duration of psychiatric hospitalizations	6	1107	-0.17 (-0.29 to -0.05)	.02

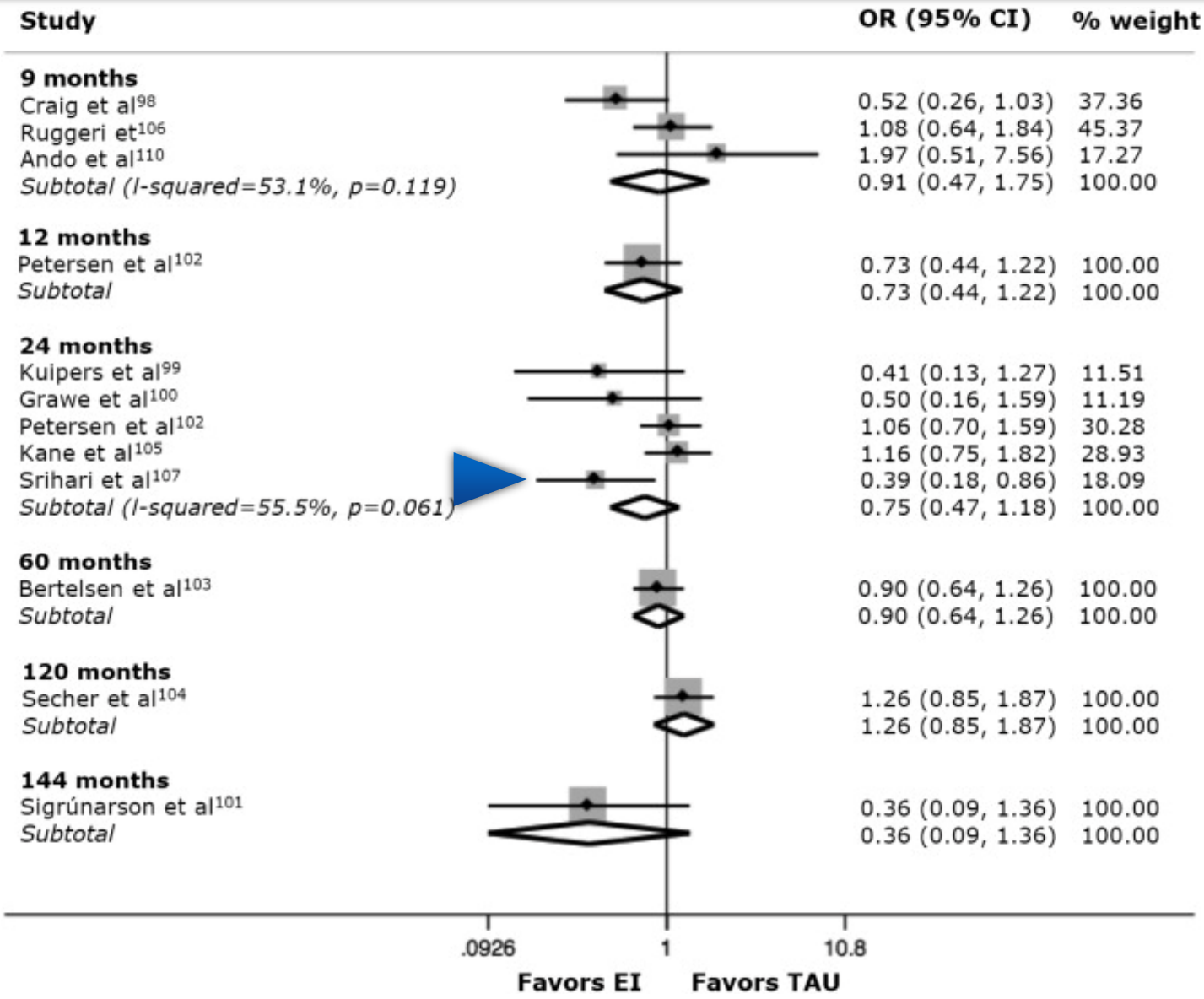


	No. of Studies	No. of Patients	SMD (95% CI)	P Value
Global functioning	7	1005	0.21 (0.09 to 0.34)	.001
Quality of life	4	505	0.23 (0.00 to 0.46)	.046



Correll et al., JAMA Psychiatry 2018

Risk of Relapse (Re-admission) for FES vs. Usual Care (TAU): RCTs as of 2017



Improving outcomes of first-episode psychosis: an overview. Fusar-Poli et al., World Psychiatry, 2017

Evolution of the evidence for FES or **Coordinated Specialty Care (CSC)** in early psychosis

- Efficacy (can it work?) ✓ LEO (U.K.), OPUS (Denmark) (high intensity ACT level services) 2005

- Effectiveness (does it work?) ✓ STEP, RAISE-Navigate (pragmatic office-based services) 2015

- Costs (is it worth the cost?) ✓ STEP, RAISE-Navigate

- Dissemination (is it scalable?) ✓ (UK, Denmark);
  - USA: NY, MA, OR, MD, …

    Connecticut: The STEP Learning Collaborative

Lt. Murgo, East Haven Police Department

Mindmap

Testing **Early Detection**
Feb. 2015- Feb. 2019

Maria Ferrara, MD: Non-scary Psychiatrist

PREP / (CEDAR)[2]

Metropolitan Boston
Population: 646,000
Area: 232.1 km²

10 Towns
Population: 408,874
Area: 506 km²

New England's Early Detection initiative
The STEP-ED Study (NIH) 2014-2019
Reducing DUP via media, outreach and performance improvement

Srihari et al., BMC Psychiatry 2014

Mindmap: 3 interleaved components

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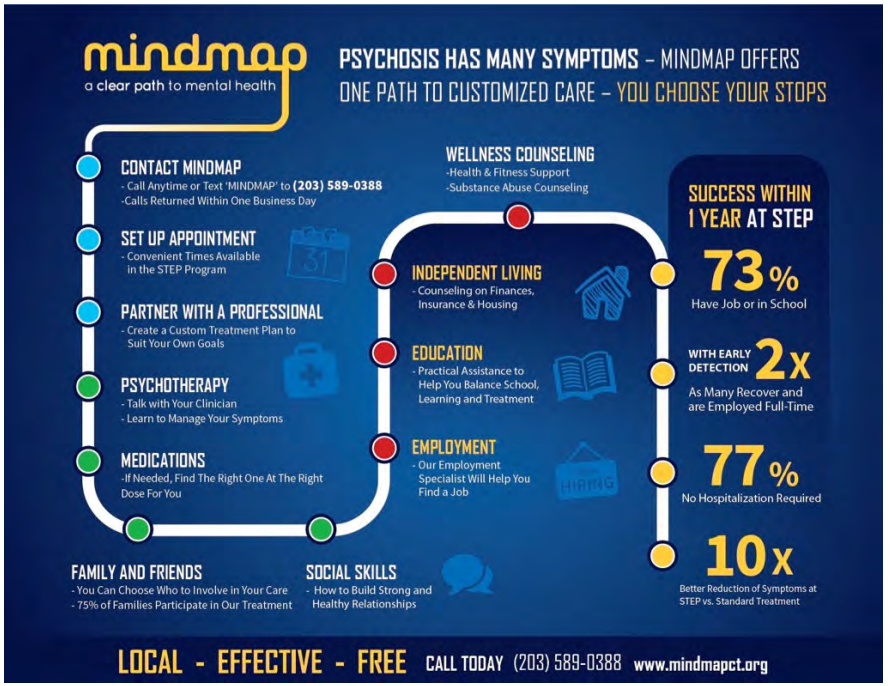
1. **Public Education Campaign (Social and Mass Media)**

2. **Professional Outreach & Detailing**

3. **Wait-time reduction**

HOME
CONTACT
LOCATIONS
ABOUT
SPONSORS
MENTAL HEALTH
mindmap
a clear path to mental health
PSYCHOSIS
AM I LOSING MY MIND?
IF SOMETHING IS WRONG WITH YOUR CHILD
BE THE FIRST TO GET THEM HELP
WHERE
CHECK IN
#mindcheck
quiz here
SHARE
IF YOUR FRIEND WAS HURTING
YOU'D CALL A DOCTOR
PSYCHOSIS
DON'T LET THE SYPTOMS SET IN


mindmap
a clear path to mental health
PSYCHOSIS HAS MANY SYMPTOMS – MINDMAP OFFERS
ONE PATH TO CUSTOMIZED CARE – YOU CHOOSE YOUR STOPS
CONTACT MINDMAP
- Call Anytime or Text 'MINDMAP' to (203) 589-0388
-Calls Returned Within One Business Day
SET UP APPOINTMENT
- Convenient Times Available in the STEP Program
PARTNER WITH A PROFESSIONAL
- Create a Custom Treatment Plan to Suit Your Own Goals
PSYCHOTHERAPY
- Talk with Your Clinician
- Learn to Manage Your Symptoms
MEDICATIONS
-If Needed, Find The Right One At The Right Dose For You
WELLNESS COUNSELING
-Health & Fitness Support
-Substance Abuse Counseling
INDEPENDENT LIVING
- Counseling on Finances, Insurance & Housing
EDUCATION
- Practical Assistance to Help You Balance School, Learning and Treatment
EMPLOYMENT
- Our Employment Specialist Will Help You Find a Job
FAMILY AND FRIENDS
- You Can Choose Who to Involve in Your Care
- 75% of Families Participate in Our Treatment
SOCIAL SKILLS
- How to Build Strong and Healthy Relationships
SUCCESS WITHIN 1 YEAR AT STEP
73%
Have Job or in School
WITH EARLY DETECTION 2x
As Many Recover and are Employed Full-Time
77%
No Hospitalization Required
10x
Better Reduction of Symptoms at STEP vs. Standard Treatment
LOCAL - EFFECTIVE - FREE
CALL TODAY (203) 589-0388
www.mindmapct.org

I was only choking a little bit.
It's not a big deal, this happens all the time.
I'm just going to walk this one off.
YOU WOULDN'T IGNORE OTHER PARTS OF THE BODY.
DON'T IGNORE YOUR BRAIN.
EARLY DETECTION SAVES MINDS.
mindmap
a clear path to mental health

#1
PSYCHOSIS IS THE MOST COMMON
BRAIN-BASED ILLNESS FOR AGES 10-24 WORLDWIDE
1-2 YEARS FOR A YOUNG PERSON EXPERIENCING PSYCHOSIS TO GET TREATMENT
$300 BILLION
SPENT ON SERIOUS MENTAL ILLNESSES IN THE USA.
EARLY DETECTION SAVES MINDS.
mindmap
a clear path to mental health

PEOPLE WITH PSYCHOSIS
ARE 14 X MORE LIKELY
TO BE THE VICTIM OF VIOLENCE
THAN TO COMMIT IT.
PSYCHOSIS IS NOT PSYCHO
EARLY DETECTION SAVES MINDS.
mindmap
a clear path to mental health

NEWS 8 wtnh.com

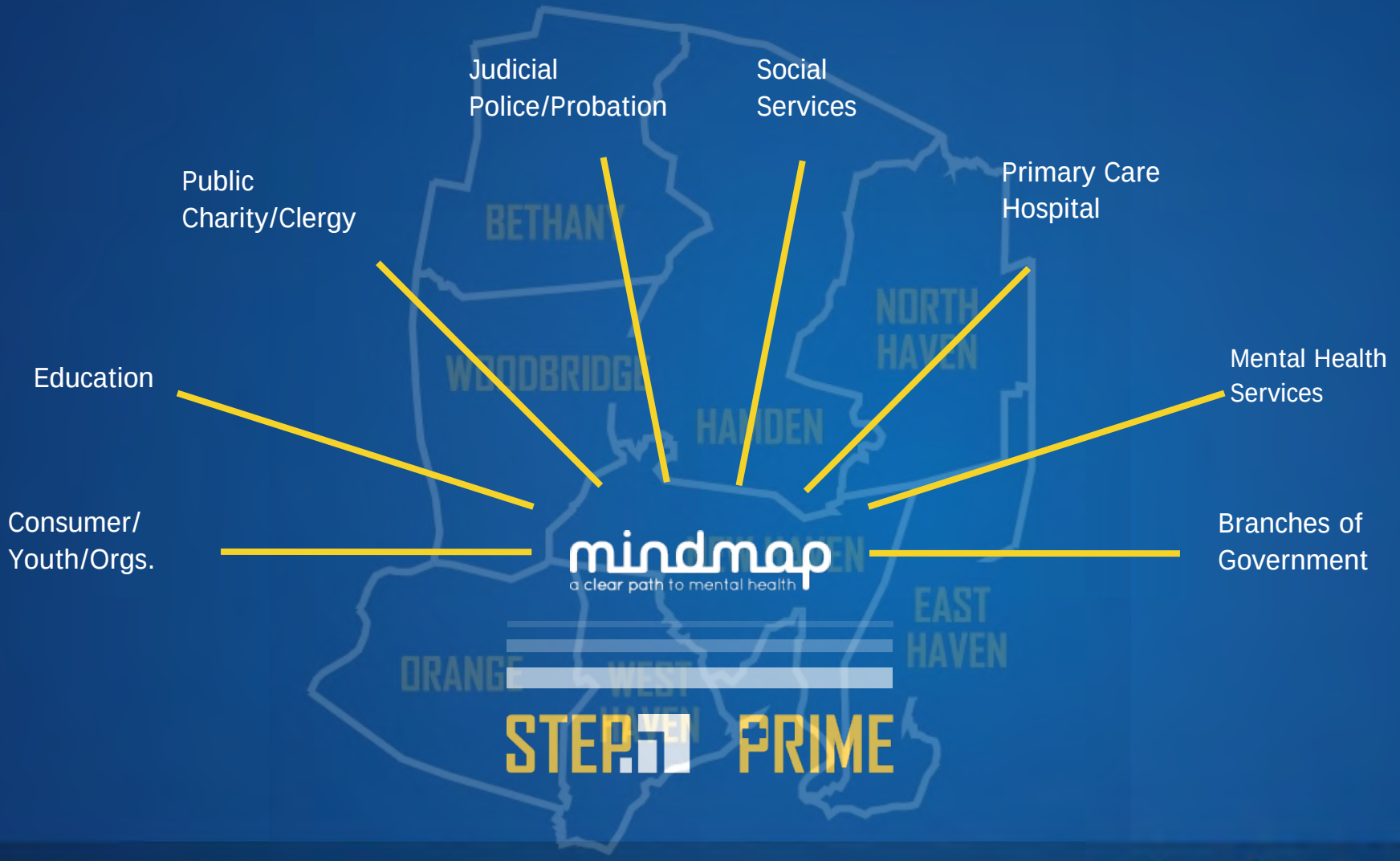
NEWS ▾ WEATHER ▾ TR

Innovative treatment for young people with psychosis at no cost for two years

By Jocelyn Maminta Medical/Health Reporter
Published: January 4, 2016, 6:49 pm

Integrating mass & social media: multiple channels with clear call to action

Professional Outreach & Detailing



Public outreach and education

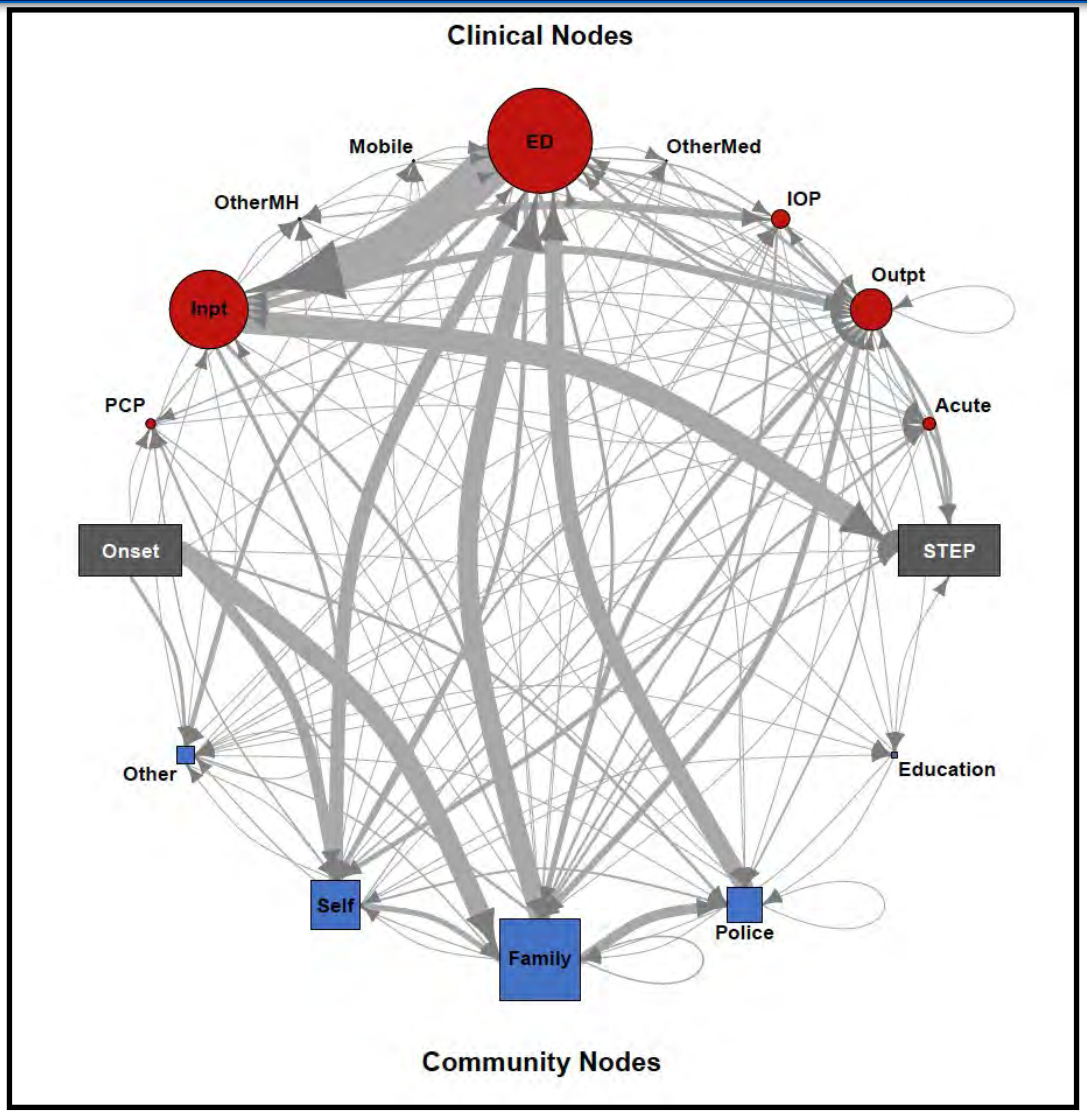
Did 'Early Detection' work?

Median Total DUP at STEP

311.5 →	149 Days
44.5 →	21 Weeks
~10 →	~ 5 Months

Srihari et al., ***Early Detection of First-Episode Psychosis in a U.S. community: A Nonrandomized Controlled Trial*** *(Under review)*

What happens to a person with recent onset psychosis in Greater New Haven? **Pathways** through the regional **Network**



Mathis et al . Granular analysis of pathways to care and durations of untreated psychosis (PLOS ONE, 2022)

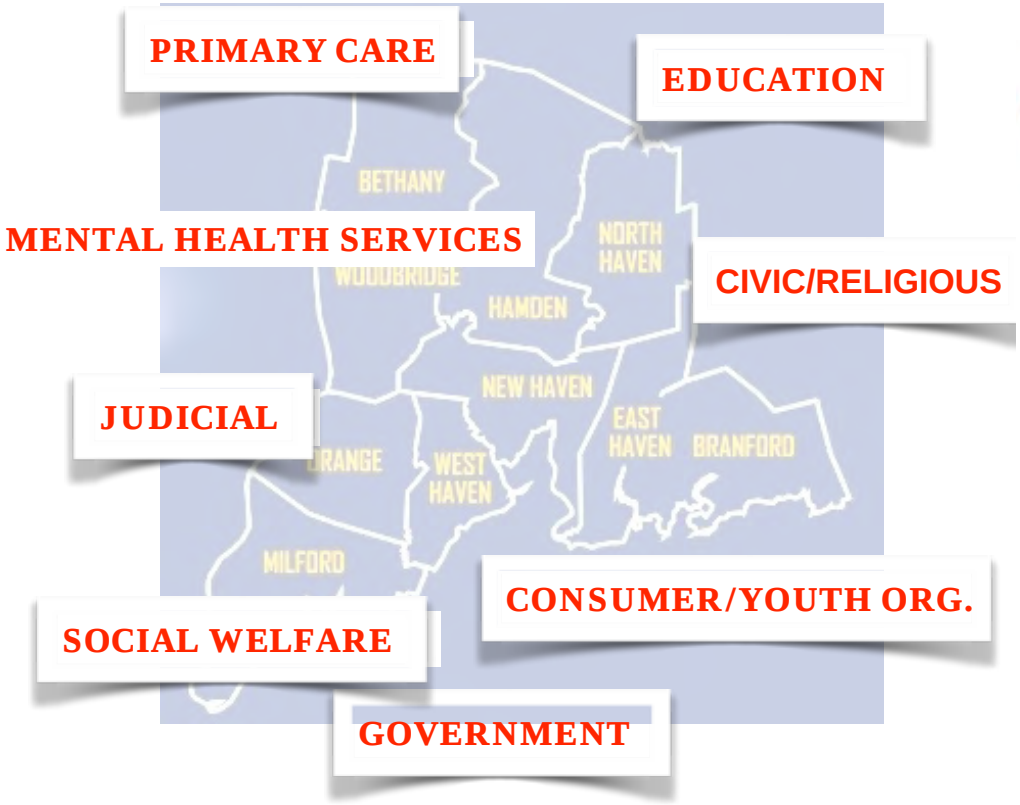
Summary

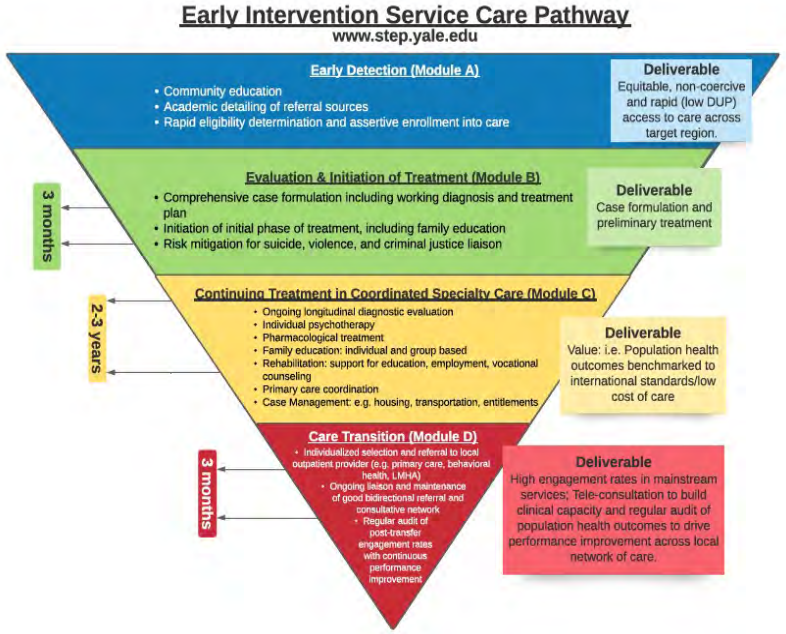
STEP has demonstrated both improved **quality** (outcomes) for those in care AND improved **access** targeting a defined catchment

This public-academic partnership has informed a comprehensive care pathway in the Greater New Haven area

Can we leverage this toward unmet need statewide?

STEP's model in Southern CT (2015- present)





This course will overview EIS as a regional integrator of care pathways

Srihari et al., Schiz Bull Open 2022, Srihari & Cahill, Strungman Forum Report, 2018

Developing a Learning Health System across Connecticut

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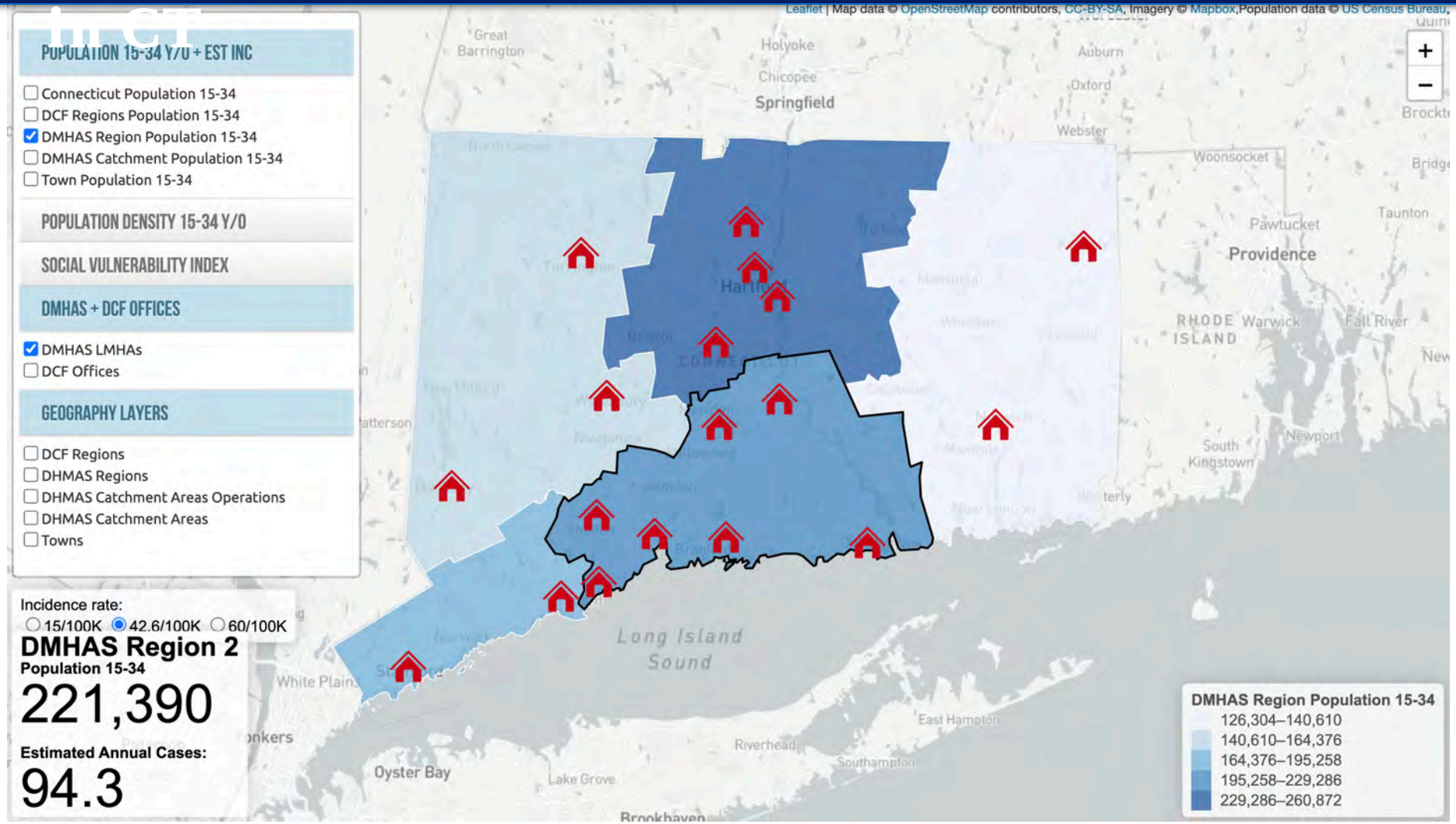

www.step.yale.edu; www.ctearlypsychosisnetwork.org; nina.levine@yale.edu