# An Update on Early Intervention Services for First Episode Psychosis Treatment in Michigan

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# Disclosures

Dr. Achtyes has served on advisory boards or consulted for Alkermes, Atheneum, Janssen, Karuna, Lundbeck/Otsuka, Roche, Sunovion and Teva.

Dr. Achtyes has received research support from Alkermes, Astellas, Biogen, Boehringer-Ingelheim, InnateVR, Janssen, National Network of Depression Centers, Neurocrine Biosciences, Novartis, Otsuka, Pear Therapeutics, and Takeda.

Dr. Achtyes serves as an advisor to CAPNOS Zero, the World Psychiatric Association and Clubhouse International, and the SMI Adviser LAI Center of Excellence (all unpaid).


Mental
illness
#1 threat
to young lives
and futures

# AGE OF ONSET OF DISORDERS

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REVIEW ARTICLE

## Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies

Marco Solmi[1,2,3] · Joaquim Radua[3,4,5] · Miriam Olivola[3] · Enrico Croce[6] · Livia Soardo[7] · Gonzalo Salazar de Pablo[3,8,9] · Jae Il Shin[10] · James B. Kirkbride[11] · Peter Jones[12,13] · Jae Han Kim[14] · Jong Yeob Kim[14] · André F. Carvalho[15] · Mary V. Seeman[16] · Christoph U. Correll[17,18,19,20] · Paolo Fusar-Poli[3,7,21,22]

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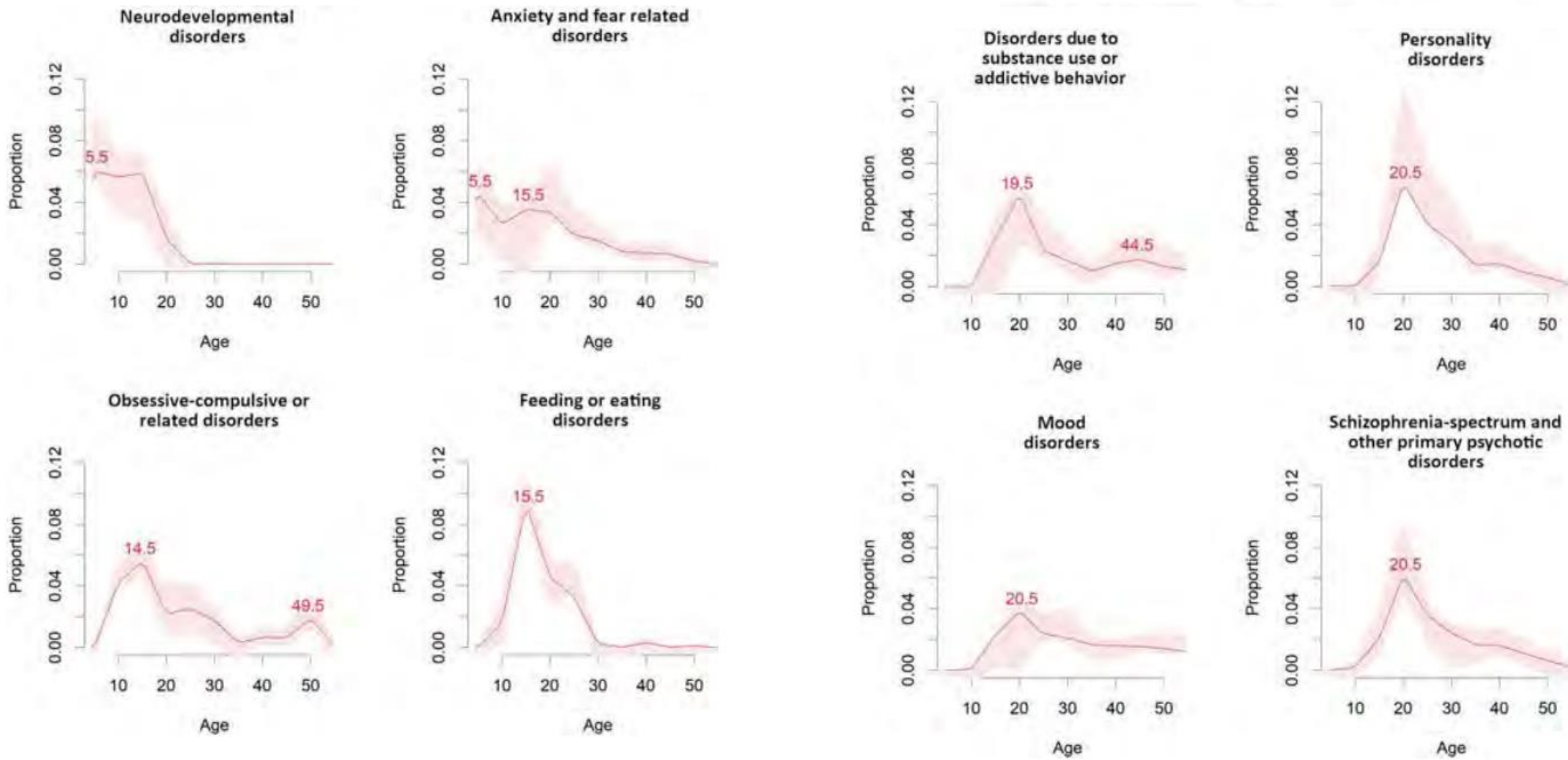
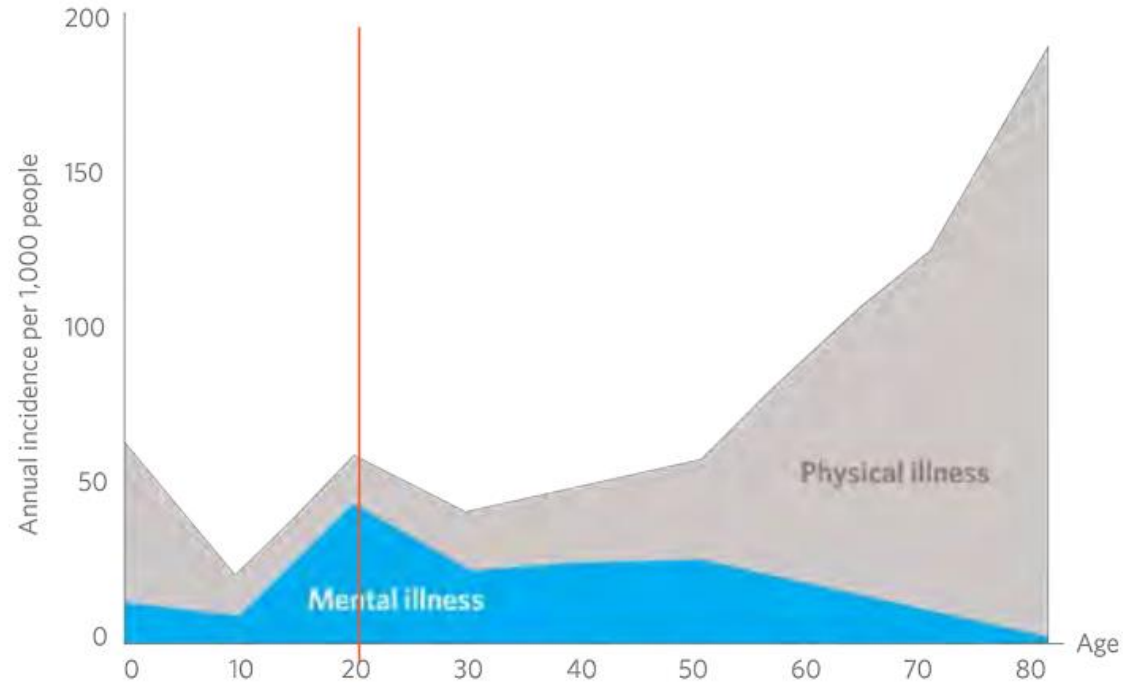


# TIMING IS EVERYTHING

- 75% of mental health problems have their onset in young people aged 12 to 25
- The developmental trajectory for young people has changed
- Current service system not equipped to deal with economic and social challenges associated with mental health
- Peak need for care, worst access
- Loss of lives, futures and ”mental wealth”



# Did you know…

- Approximately 100,000 youth and young adults experience an episode of psychosis each year—that's 274 young people each day.[1]
- The average duration of untreated psychosis in the US is up to 2 years. Systems of care wait for patients with the illness to come to them.[2]
- 3X as many young people who have experienced psychosis will drop out of school compared to their peers.[3]

[1] calculated from McGrath, J. et al. Epidemiologic Reviews. 2008; 30: 67-76.
[2] Marshall, M. et al. Arch Gen Psychiatry. 2005; 62: 975-983.
[3] Goulding, S. et al. Schizophr Res. 2010; 116(2-3): 228.

# Did you know…

- 75% of all brain disorders begin before the age of 24[4]
- Half of young people do not get help when they need it[5]
- The direct result is a myriad of downstream effects such as school drop-out, incarceration, homelessness and suicide, which is the second cause of death for teens and young adults[6]

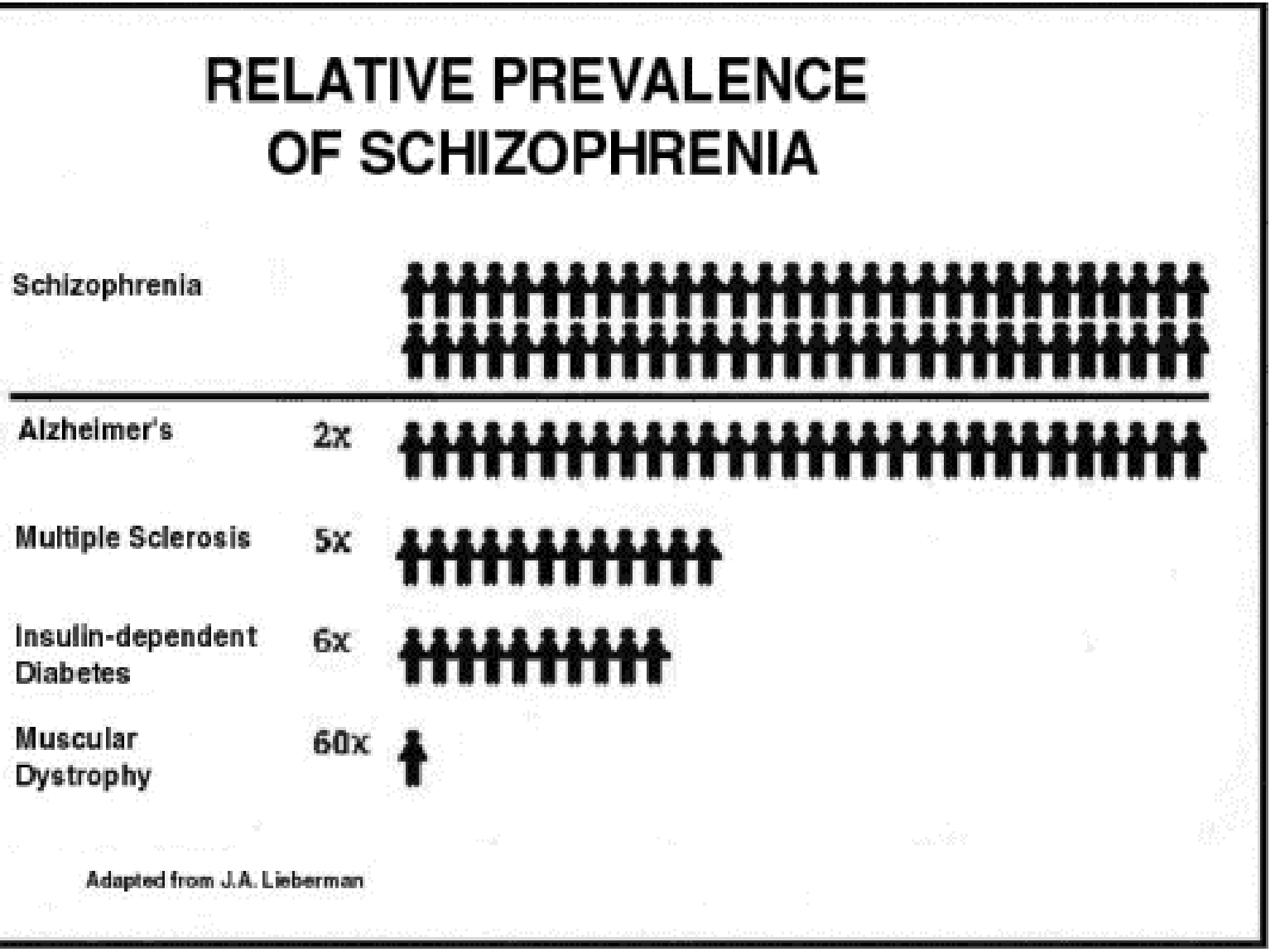
4 https://www.nimh.nih.gov/news/science-news/2005/mental-illness-exacts-heavy-toll-beginning-in-youth.shtml
5http://www.samhsa.gov/data/sites/default/files/National_BHBarometer_2014/National_BHBarometer_2014.pdf
6 http://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_02.pdf

# Did you know…

- The most common violent act by someone with psychosis is suicide.  At least 10% of people who experience schizophrenia will die by suicide compared with 1% for the general population.[7]
- The World Health Organization ranks psychosis as the 3rd most disabling condition in the world.[8]

[7] http://www.nimh.nih.gov/health/topics/schizophrenia/index.shtml (Retrieved 11/19/2014)
[8] http://www.who.int/whr/2001/chapter2/en/index4.html (Retrieved 11/19/2014)

# RELATIVE PREVALENCE OF SCHIZOPHRENIA




Adapted from J.A. Lieberman

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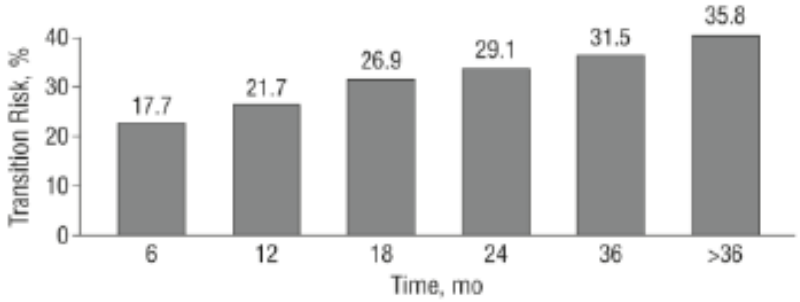
# At 3 Years, 36% Transition from UHR to FEP

The JAMA Network

**Predicting Psychosis: Meta-analysis of Transition Outcomes in Individuals at High Clinical Risk**
Arch Gen Psychiatry. 2012;69(3):220-229. doi:10.1001/archgenpsychiatry.2011.1472

Meta-analyses of transition risks from clinical high risk to full psychosis at different time points of follow up.




| No. of Studies | Follow-up, mo | Transition Risks, 95% CI |
|---|---|---|
| 9 | 6 | 17.7 (12.3-24.9) |
| 13 | 12 | 21.7 (16.6-27.8) |
| 4 | 18 | 26.9 (19.5-35.9) |
| 12 | 24 | 29.1 (23.2-35.7) |
| 6 | 36 | 31.5 (23.8-35.0) |
| 4 | >36 | 35.8 (29.6-42.5) |

*P*<.001 for all.

Fusar-Poli, et al. Arch Gen Psychiatry 2012

# SYNOPSIS: CLINICAL HIGH RISK PSYCHOSIS

–We can identify a clinical phenotype with a "need for care" which has a substantial risk of transition to psychosis

–Prediction can be sharpened but with falling transition rates "enrichment" is an issue

–We can reduce this risk through the provision of relatively specialised psychosocial care – CBT influenced…

–There are other comorbid or emerging/incident syndromes which means that there is valence for other exit syndromes and a range of outcomes including persistence or recurrence of the UHR stage and poor functioning

–Needs to be the target of new intervention strategies

–We need to clarify the sequence of optimal treatment for UHR stage

–Ideally this needs to be done in parallel with the prediction and treatment of other syndromes

–And guided by a parsing of heterogeneity (need to consider transdiagnostic perspective)

# Outcomes of Nontransitioned Cases in a Sample at Ultra-High Risk for Psychosis

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Amanda Beavan, B.Sc.

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Alison R. Yung, M.D., F.R.A.N.Z.C.P.

**Objective:** Two-thirds of individuals identified as at ultra-high risk for psychosis do not develop psychotic disorder over the medium term. The authors examined outcomes in a group of such patients.

**Method:** Participants were help-seeking individuals identified as being at ultra-high risk for psychosis 2–14 years previously. The 226 participants (125 female, 101 male) completed a follow-up assessment and had not developed psychosis. Their mean age at follow-up was 25.5 years (SD=4.8).

**Results:** At follow-up, 28% of the participants reported attenuated psychotic symptoms. Over the follow-up period, 68% experienced nonpsychotic disorders: mood disorder in 49%, anxiety disorder in 35%, and substance use disorder in 29%. For the majority (90%), nonpsychotic disorder was present at baseline, and it persisted for 52% of them. During follow-up, 26% of the cohort had remission of a disorder, but 38% developed a new disorder. Only 7% did not experience any disorder at baseline or during follow up. The incidence of nonpsychotic disorder was associated with more negative symptoms at baseline. Female participants experienced higher rates of persistent or recurrent disorder. Meeting criteria for brief limited intermittent psychotic symptoms at intake was associated with lower risk for persistent or recurrent disorder.

**Conclusions:** Individuals at ultra-high risk for psychosis who do not transition to psychosis are at significant risk for continued attenuated psychotic symptoms, persistent or recurrent disorders, and incident disorders. Findings have implications for ongoing clinical care.



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# Some background: Clinical Characteristics of First Episode Psychosis

- Typically adolescent or young adult
- Clients often living with or in high contact with families. Goals are to return to mainstream functioning
- Have lived with severe untreated psychotic symptoms
  - On average for at least a year
- Responsive to initial trials of antipsychotics
- Compared to peers:
  - Cognitively impaired
  - Poorer psychosocial functioning
  - More likely to smoke
  - More likely to abuse substances

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# Most common signs of emerging psychosis

- Performance in school, work, or family life is rapidly dropping
- Spending a lot of time alone, in their room
- Doing or saying things that seem strange, even bizarre
- Seems like they are depressed, or irritable
- Having problems sleeping

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# Additional signs of emerging psychosis

- Social withdrawal
- Hostility or suspiciousness
- Decline in personal hygiene
- Flat, expressionless gaze
- Inability to cry or express joy
- Inappropriate laughter or crying
- Depression
- Oversleeping or insomnia
- Odd or irrational statements
- Forgetful; unable to concentrate
- Extreme reaction to criticism
- Strange use of words or way of speaking/odd social media posts

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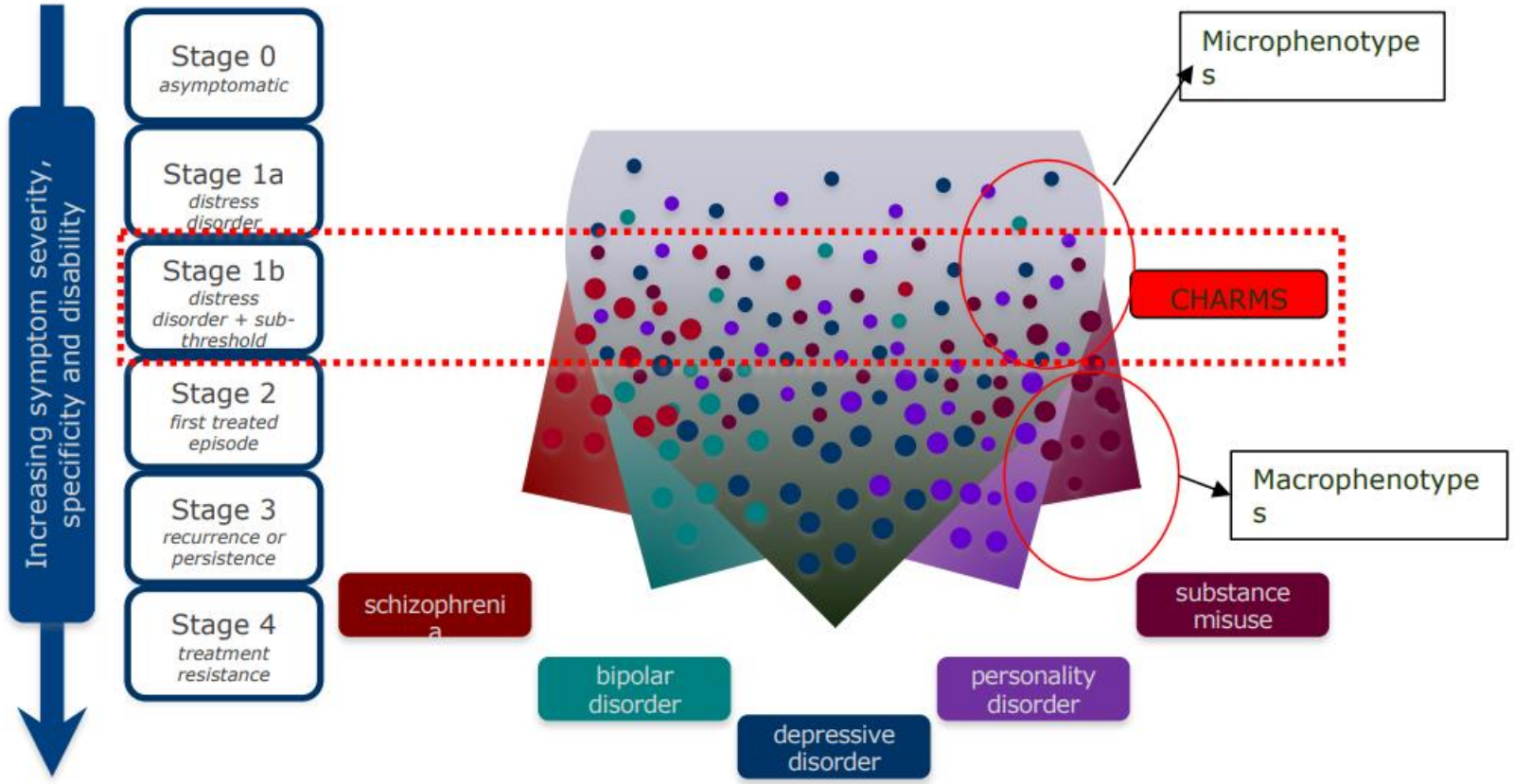
# New Transdiagnostic Approach to Early Illness

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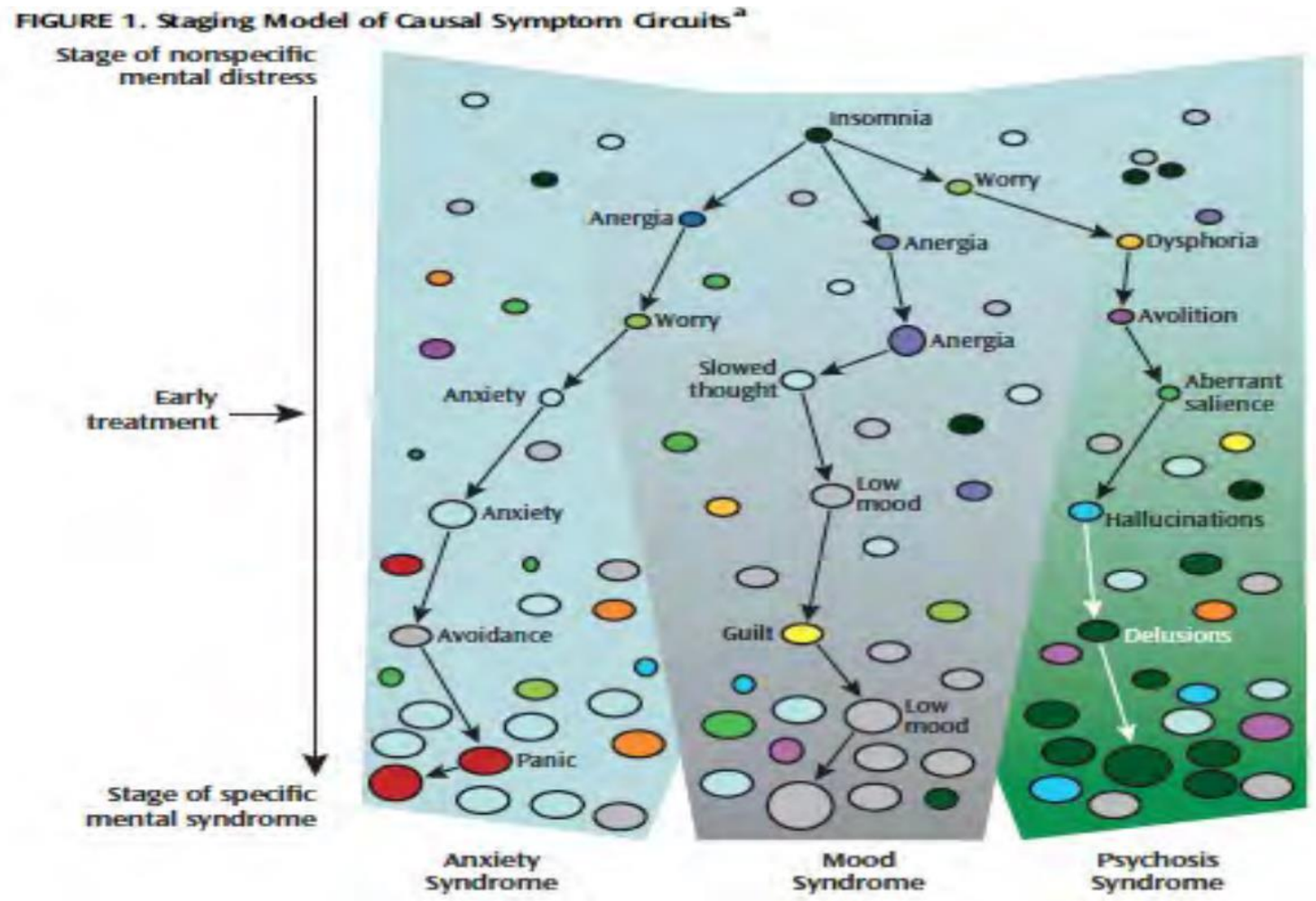
# Symptom and Syndrome Driven Approach

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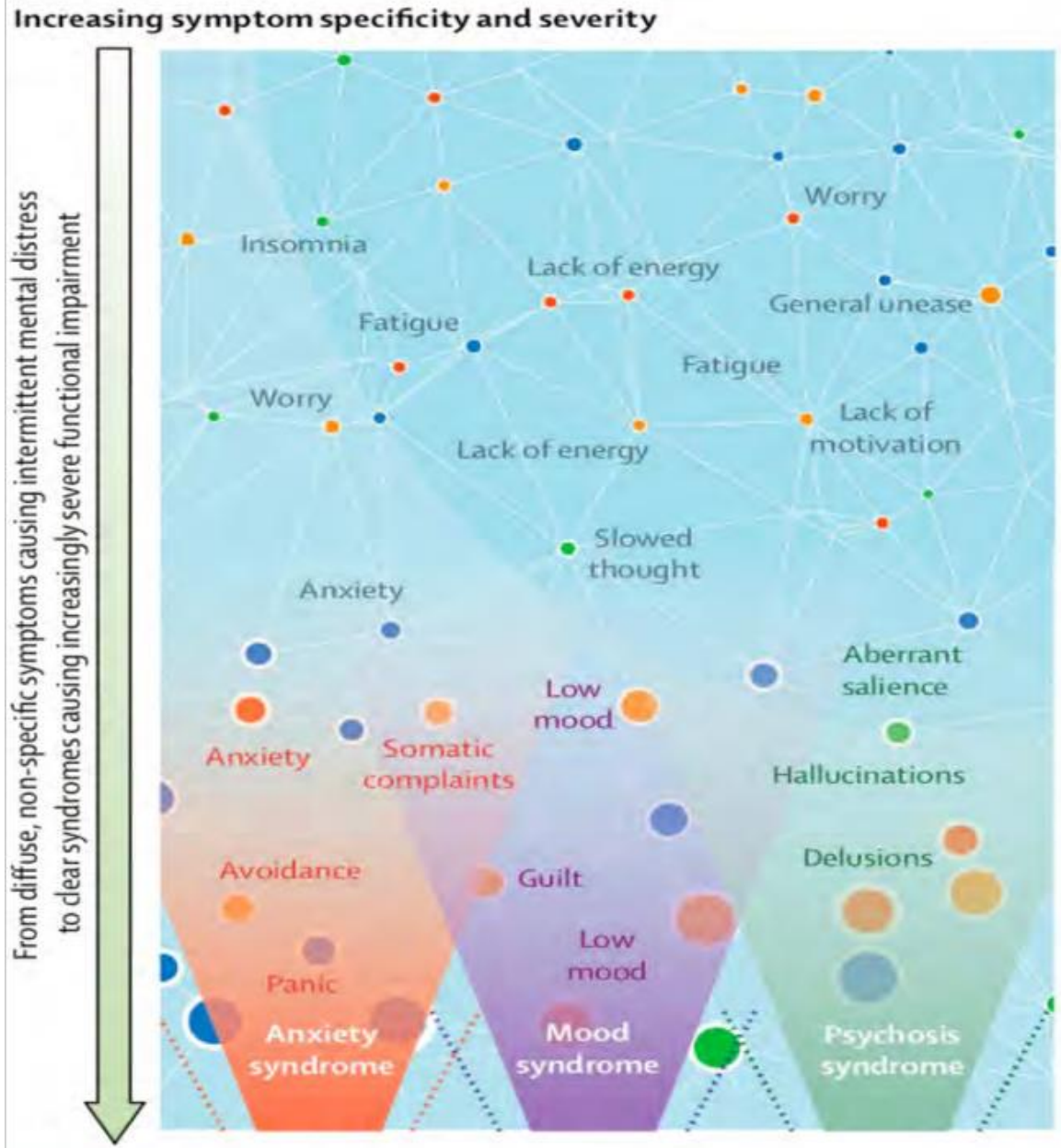


**Mental wellbeing**
No distress

**Stage of non-specific mental distress**
Need more awareness and understanding to promote self-help

**Early treatment**
Better management and prevention for improvement of overall mental health and reduction of symptoms

**State of specific mental syndrome**
Progressive treatment aligned to evidence related to specific disorders

**Stage 0** **Asymptomatic**
- Public mental health promotion and illness prevention
- No individual treatment or intervention

**Stage 1a** **Non-specific mental distress**
- Self-help and support from informal networks
- Interventions raising population mental health literacy
- Identification of stressful or noxious environmental exposures
- Exploration of environmental modification or development of coping strategies

**Stage 1b** **Subsyndromal or subthreshold symptom profile**
- Advice and transdiagnostic psychosocial support from PHC
- Identification of high-risk individuals and monitoring

**Stage 2** **Full defined syndrome**
- First episode treatment in primary care
- Specialist care available for primary health service through properly resourced collaborative models
- Effective referral through stepped care for comple or unresponsive cases

**Stage 3** **Recurrence, persistence**
- Specialist mental health service in collaboration with PHC
- Ongoing community and multisectoral support

**Stage 4** **Treatment resistance**
- Specialist mental health service in collaboration with PHC
- Rehabilitation and ongoing community support

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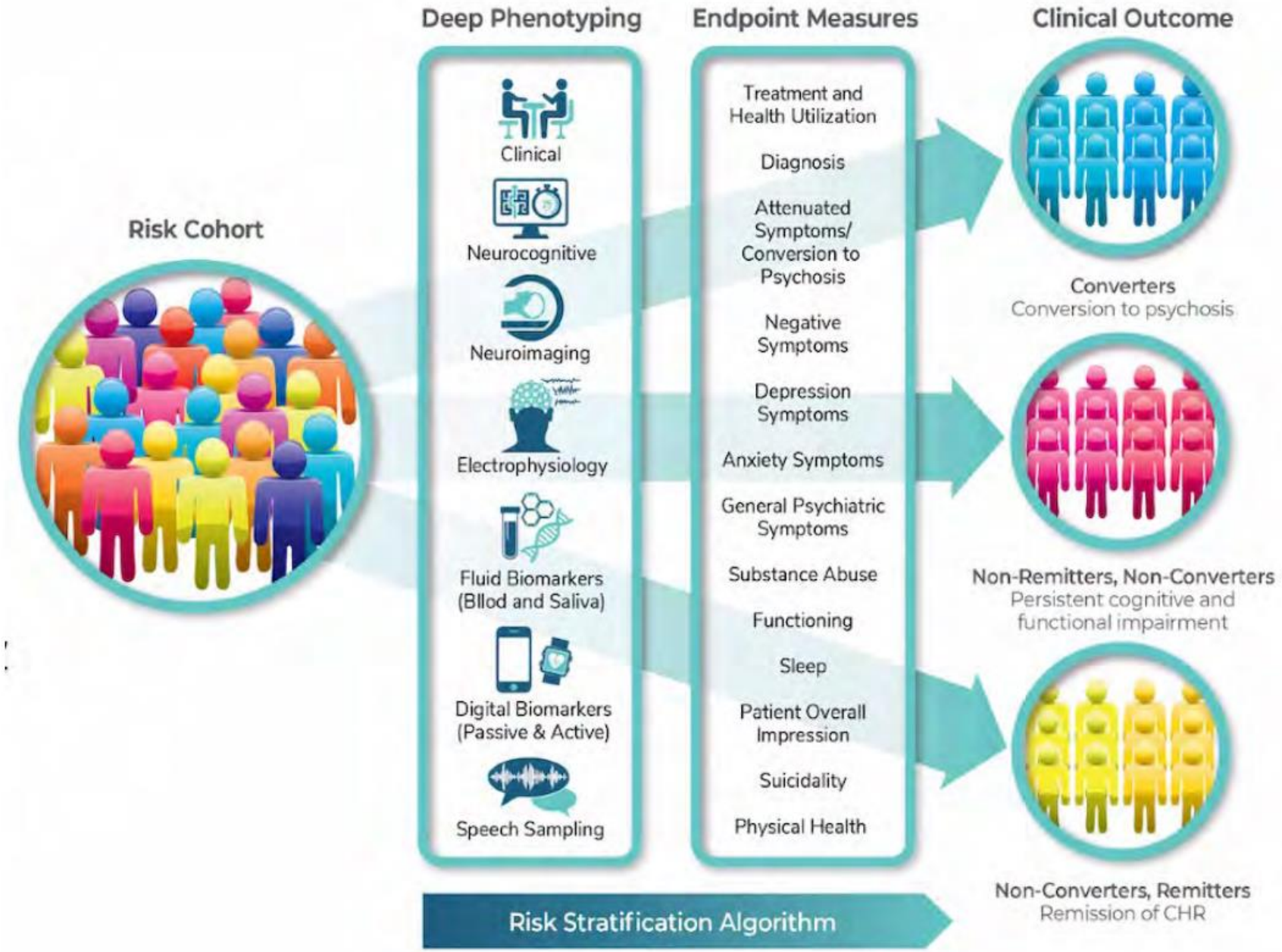
Deep Phenotyping
Endpoint Measures
Clinical Outcome
Risk Cohort
Clinical
Neurocognitive
Neuroimaging
Electrophysiology
Fluid Biomarkers (Bllod and Saliva)
Digital Biomarkers (Passive & Active)
Speech Sampling
Treatment and Health Utilization
Diagnosis
Attenuated Symptoms/ Conversion to Psychosis
Negative Symptoms
Depression Symptoms
Anxiety Symptoms
General Psychiatric Symptoms
Substance Abuse
Functioning
Sleep
Patient Overall Impression
Suicidality
Physical Health
Converters
Conversion to psychosis
Non-Remitters, Non-Converters
Persistent cognitive and functional impairment
Non-Converters, Remitters
Remission of CHR
Risk Stratification Algorithm

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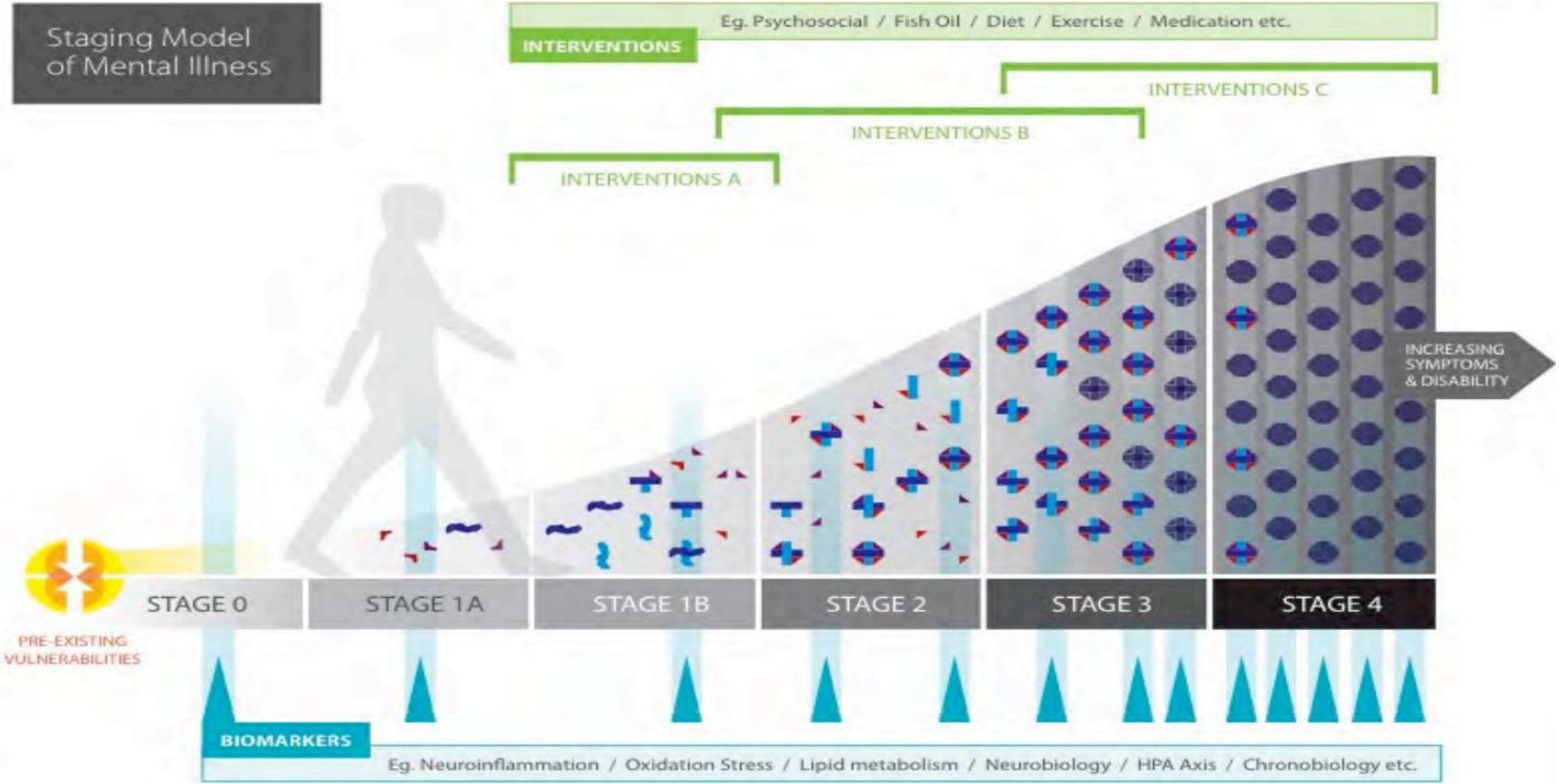
# Staging Model of Mental Illness

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# Help Seeking Concerns

(Pathways to Care Study, Addington 2003)

| Concern Presented | Percent |
|---|---|
| Depression | 88 % |
| ↓ in Functioning | 55 % |
| Delusions/Paranoia | 39 % |
| Hallucinations | 27 % |
| Stess/anxiety | 27 % |
| ↓ Concentration | 24 % |
| Negative Symptoms | 21 % |
| Suicidal ideation | 18 % |
| ↓ Social contact | 18 % |
| Sleeping disturbances | 12 % |
| Aggression | 9 % |

# Contacts: pre- and post-onset of psychosis

| Contact | Percent |
|---|---|
| Emergency Services | 33 % |
| Family Physician | 23 % |
| Psychologist | 11 % |
| Psychiatrist | 10 % |
| Family | 8 % |
| Teacher/Counselor | 5 % |
| Social Worker | 5 % |
| Friend | 5 % |
| Clergy | 4 % |
| Police | 2 % |

# MOFFIT & CASPI 2019

"psychiatry is well situated to prevent disability among older people by doing something it does well: **treat young people**.

Risk-prediction research shows that the same people who have poor mental and cognitive health while young tend to have age-related diseases years later.[1,2] Moreover, the timing is right.

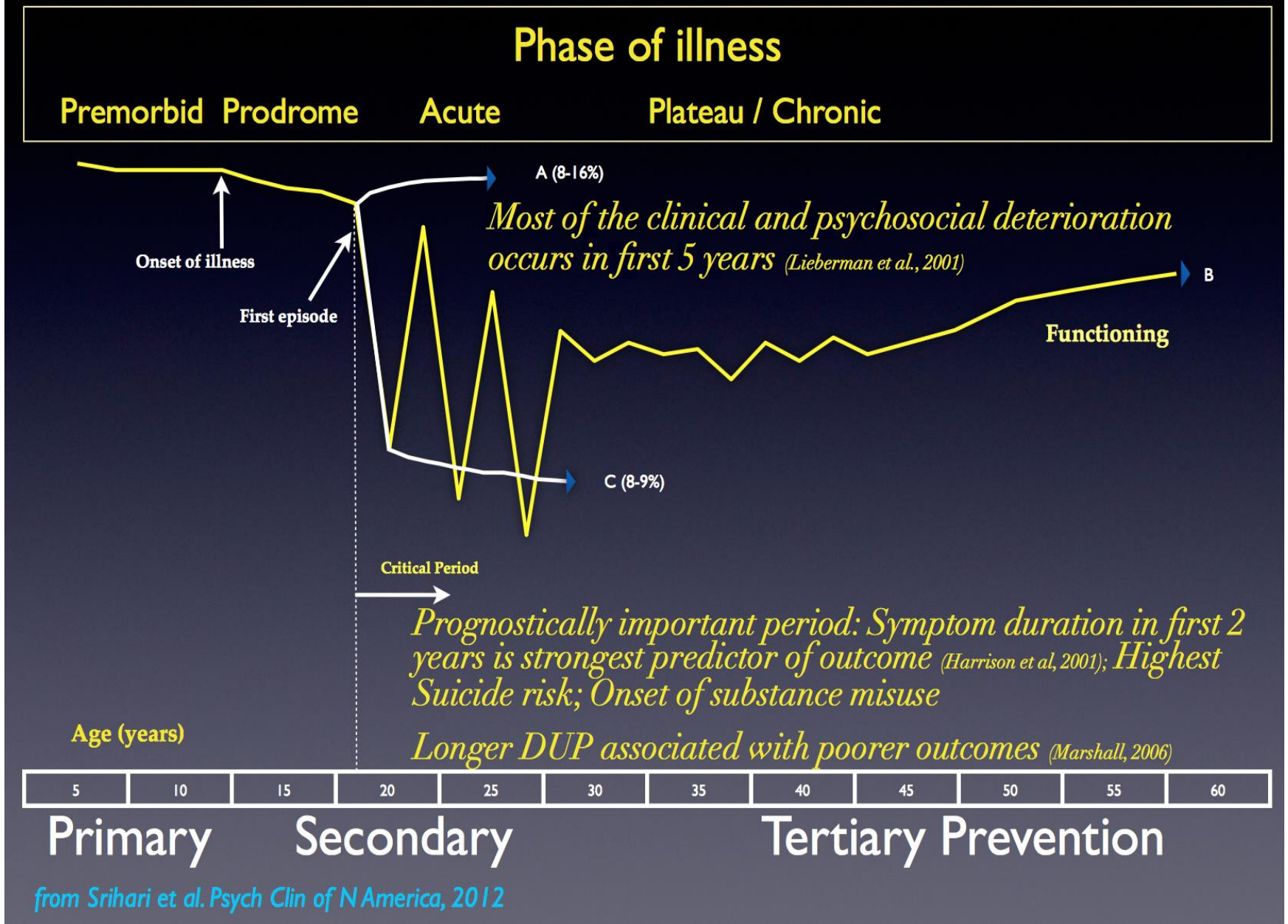
Mental disorders peak in adolescence and young adulthood, whereas noninfectious diseases peak in midlife and neurodegenerative conditions peak in late life"

# Did you know…

- Treatment works! 77% of those experiencing first episode psychosis will have a remission of symptoms with medication.[6]
- However, 2/3 of those individuals will experience very limited functional recovery (e.g. social, school, work).[6]

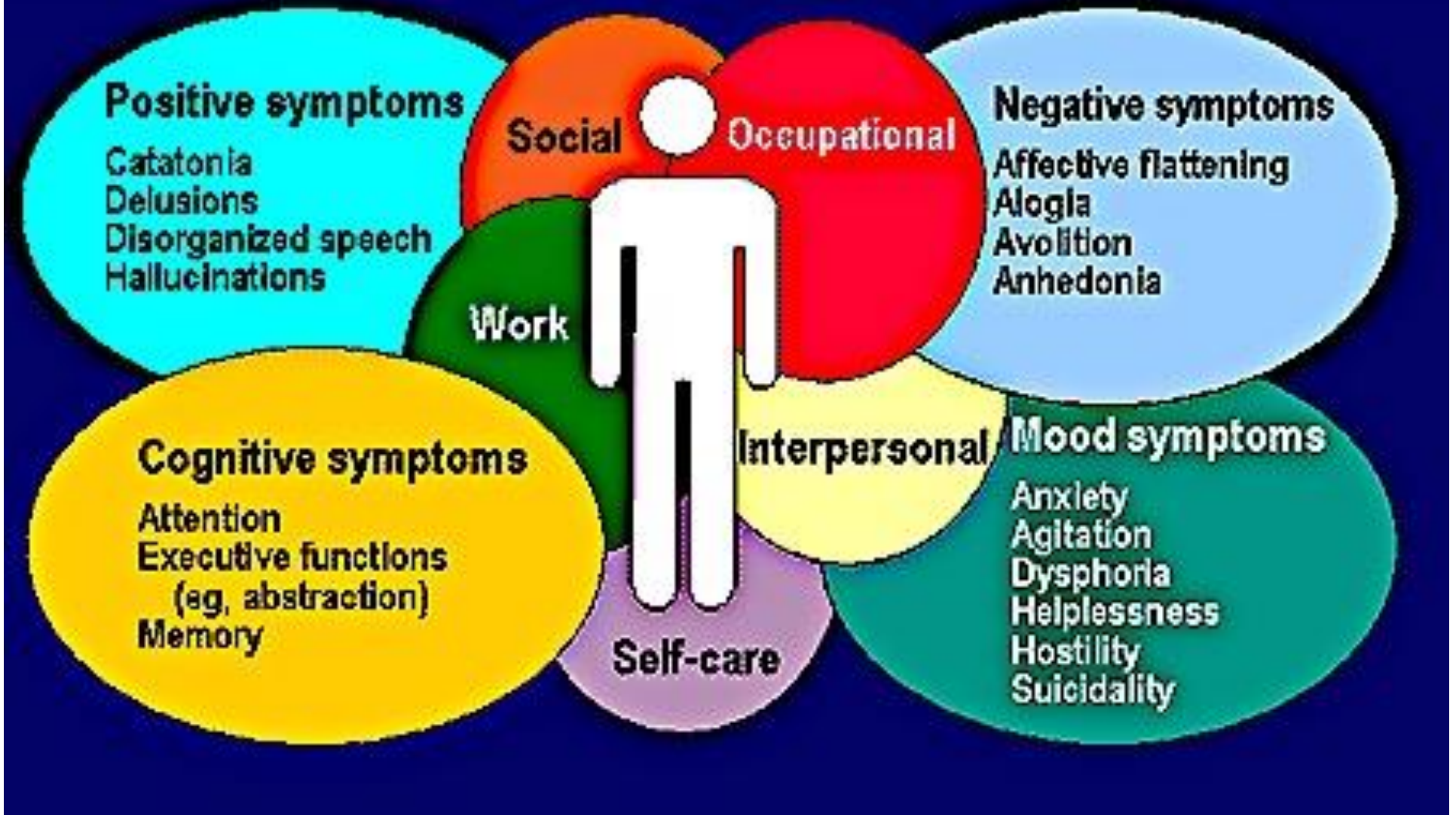
[6] Tohen M. et al. Biol Psychiatry. 2000; 48: 467–476.

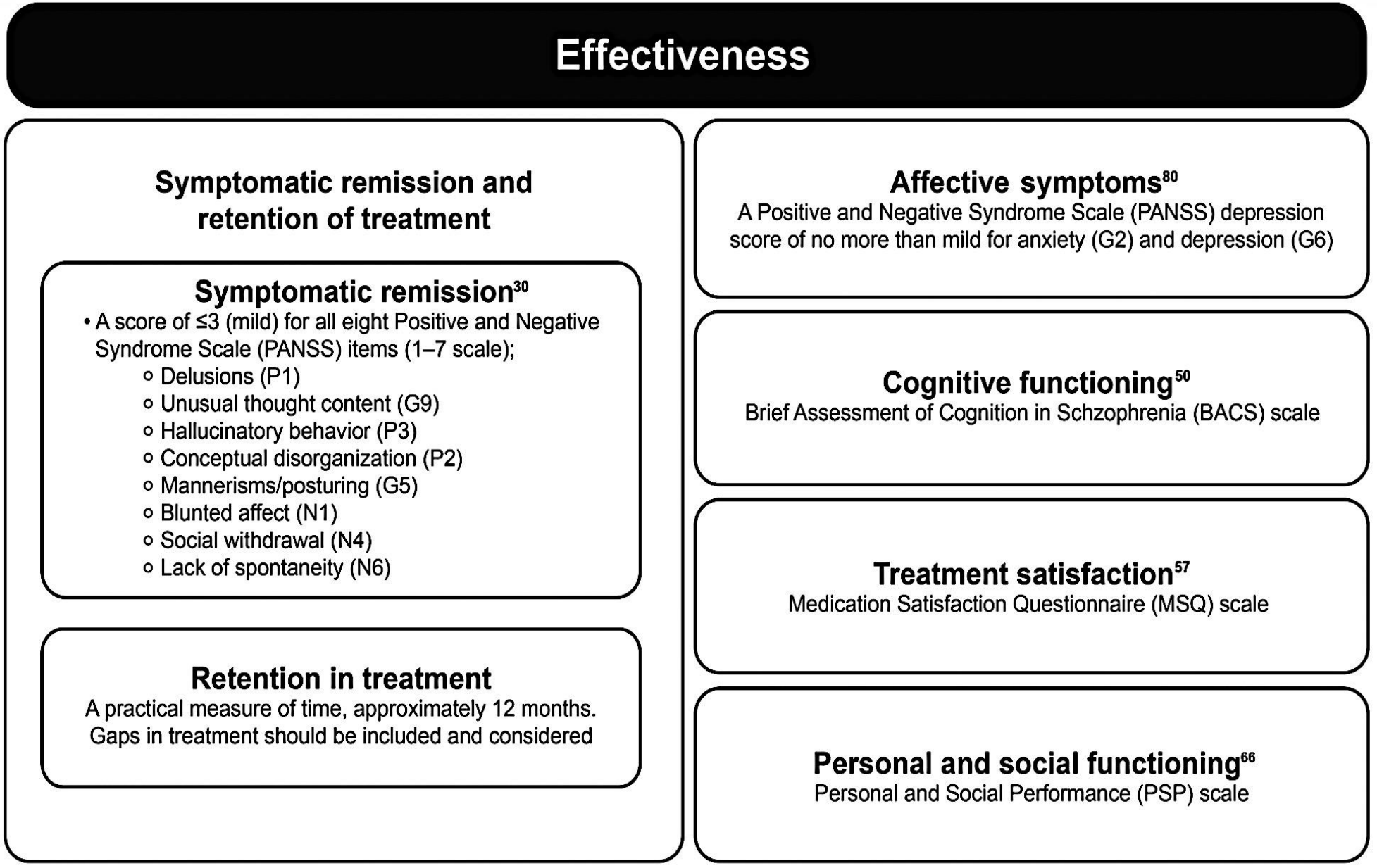
# Course of the 'Schizophrenias:' a critical period ?




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

# The Impact of Schizophrenia on Overall Functioning

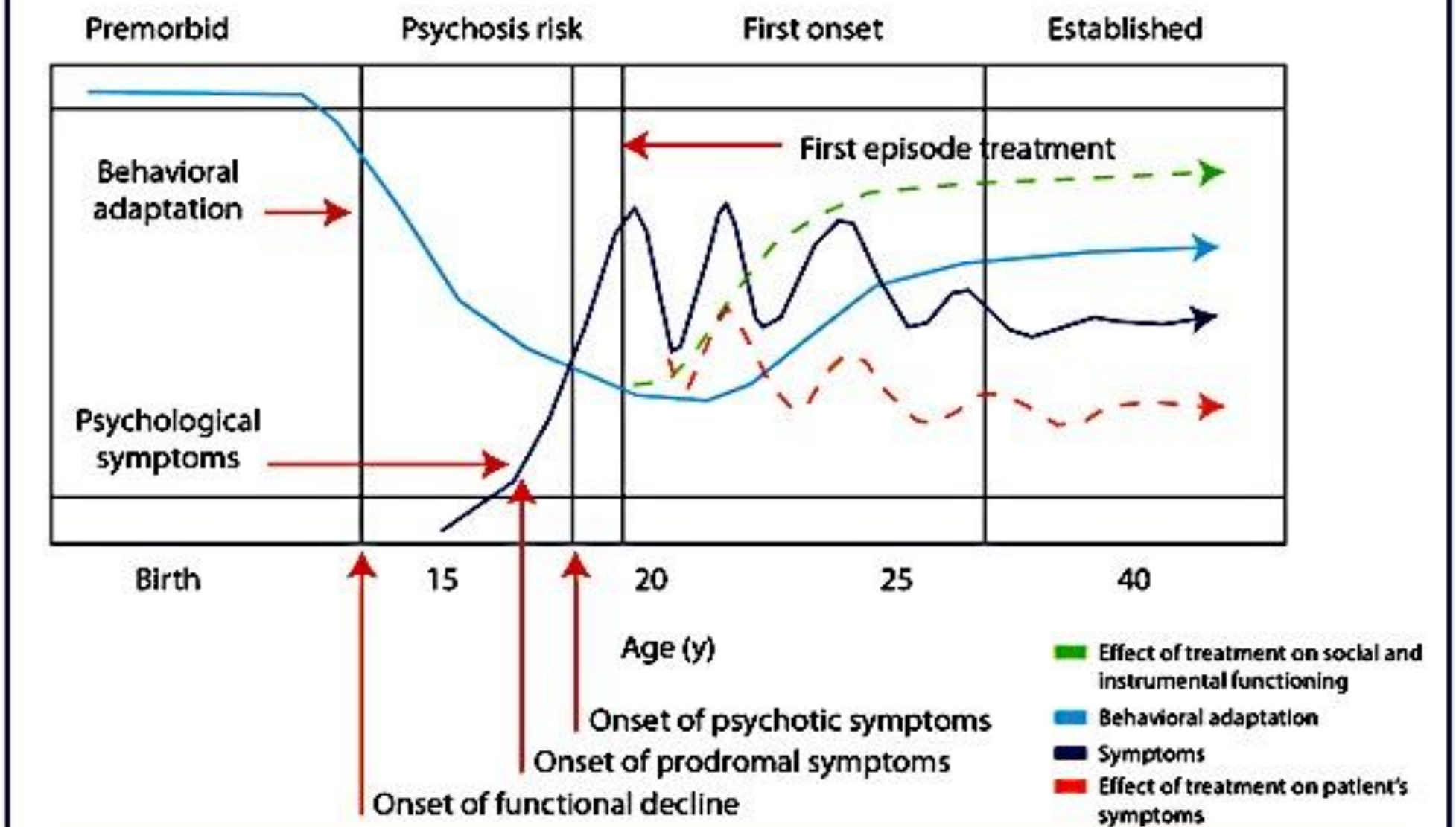





Juckel et al, Towards a framework for treatment effectiveness in schizophrenia, Neuropsychiatric Disease and Treatment 2014:10 1867-1878

# Figure 1

## The early stages of psychosis



# Defining Remission in Early Intervention Trials Measuring Clinical Significance

- DSM-5:
  - Partial Remission: a period of time during which an improvement after a previous episode is maintained and in which the defining criteria of the disorder are only partially fulfilled.
  - Full Remission: a period of time after a previous episode during which no disorder specific symptoms are present. (Disorder specific symptom includes markedly decreased level of function in one or more areas)

# Table 2

Cross-tabulation of Patients Meeting Operational Criteria for Symptom Remission and Good Functional Outcome in the Early Course of Schizophrenia (n = 77)

| | Symptom Remission | |
|---|---|---|
| **Good Functional Outcome** | **No** | **Yes** |
| No | 35 (74%) | 21 (70%) |
| Yes | 12 (26%) | 9 (30%) |

Note: There was no association between symptom remission and good functional outcome ($chi^2$(1df)=0.18, p=.67)

## Table 1

Percent of Patients Meeting Operational Criteria for Symptom Remission and Recovery in the Early Course of Schizophrenia (n = 77)

| Symptom Remission[1] and Recovery[2] Categories | Patients meeting criteria for any 6 months | Patients meeting criteria for all 12 months |
|---|---|---|
| **No Hospitalizations** | **100%** | **83%** |
| **Symptom Remission[1]** | **36%** | **22%** |
| Disorganization Symptoms | 93% | 82% |
| Reality Distortion | 65% | 48% |
| Negative Symptoms | 55% | 40% |
| **Good Functional Outcome[2]** | **25%** | **7%** |
| Social Functioning | 60% | 40% |
| Work Functioning | 38% | 10% |
| **Recovery[3]** | **10%** | **1%** |

[1] Andreasen et al (2005) Symptom remission criteria that includes three symptom groups, reality distortion (positive), negative symptoms, and disorganization rated as mild or less for a duration of six months.

[2] Combined social and work functioning used to define good functional outcome.

[3] Harrow and Jobe (2007) Requires no hospitalizations, good or adequate social and work functioning, and symptom ratings of mild or less for a period of one year.

Schizophr Res. Author manuscript; available in PMC 2012 October 1.

# Recovery

From the perspective of psychiatry, **two main definitions of recovery** have achieved prominence

1

- A **service-based definition**, objective measures of recovery aligning with a medical, clinical and outcome orientation
- Service-based definitions of recovery for those with SMD may involve a ◦heterogeneous course demonstrated longitudinally, with remission indicated through improvement in symptoms and deficits back to a typical range of functioning. [4]

2

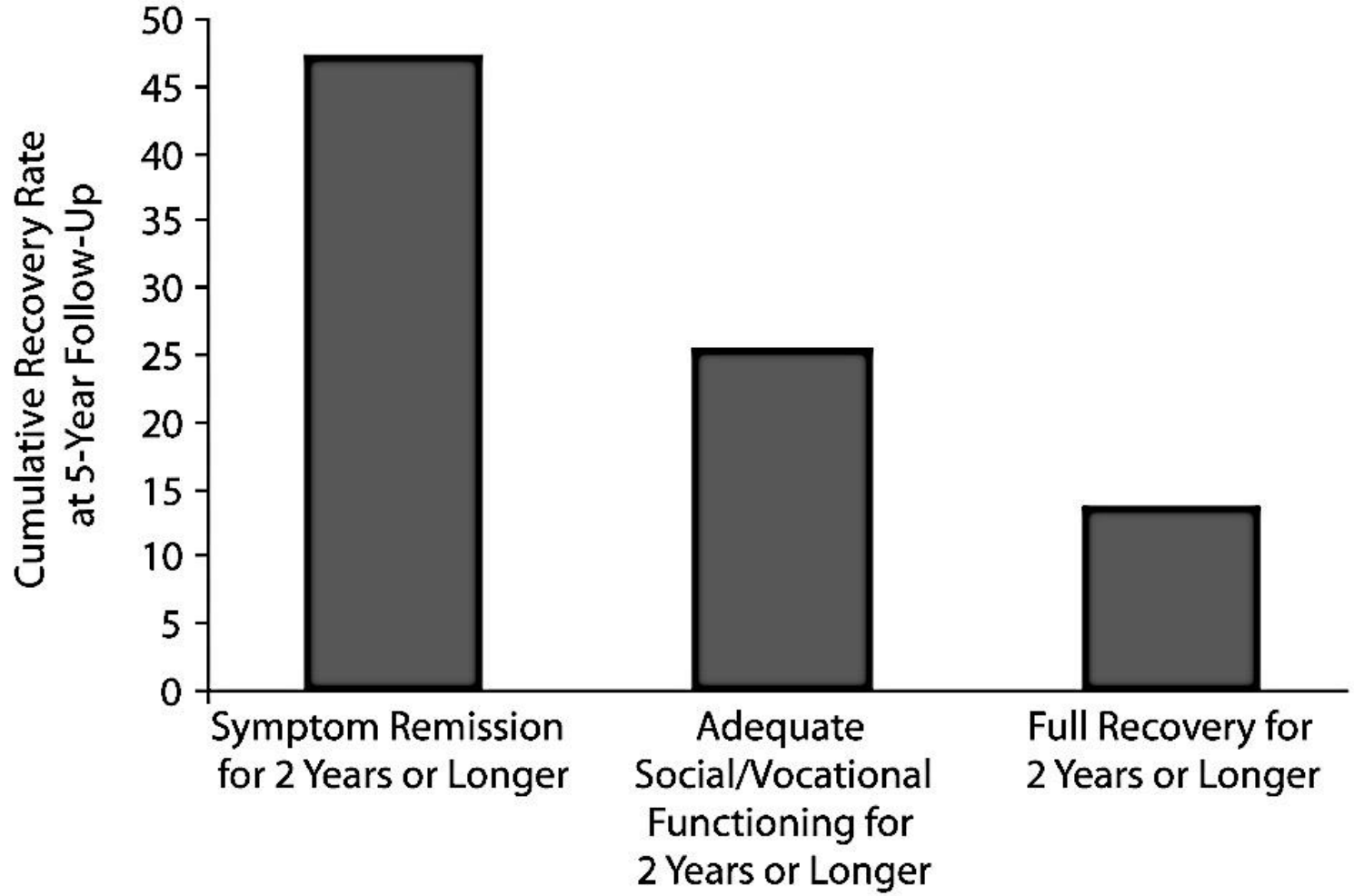
- **A user-based definition, aligning generally with a self-directed, personal and process orientation, from the patients' lived experiences** [5]
- **These definitions tend to be more subjective and non-linear**

# Definition of Recovery in Early Intervention Trials Measuring Clinical Significance

- Recovery (Robinson 2004)
  - Symptom Remission
  - Functional Remission
  - Both of the above for a two year period

- Recovery: (Liberman et al 2005)
  - Stable Remission of both positive and negative symptoms
  - No psychiatric hospitalization or living in supported housing for the past 2 years
  - Currently engaged in work/study
  - GAF-F score greater than 60

**Figure 1. Level of Recovery Achieved by Patients (N = 118) After Their First Episode of Schizophrenia or Schizoaffective Disorder[a]**



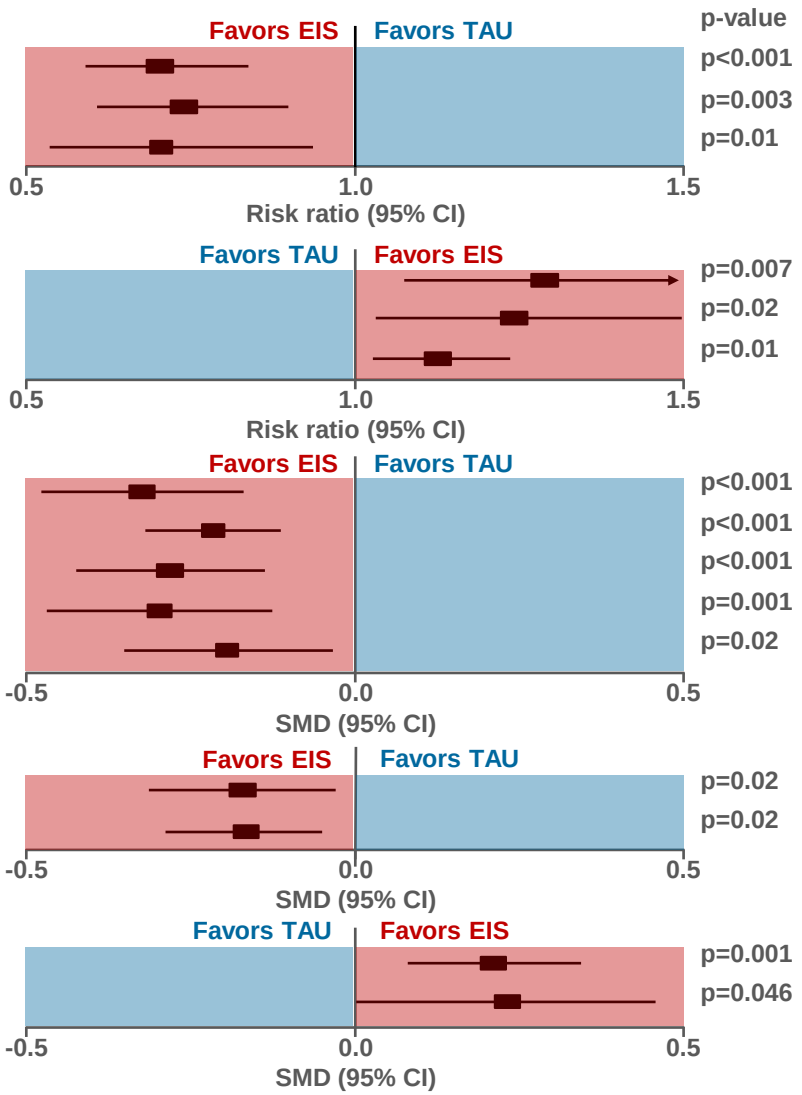

[a]Data from Robinson et al.[3]

# Recovery Defined by *Partners in Care*

**Recovery is a self-directed process through which individuals with histories of serious mental illness improve their health and wellness within their communities, developing opportunities, and identities not limited by their illness.**

# Efficacy and effectiveness of early intervention for early-phase psychosis

| | No. of studies | No. of patients |
|---|---|---|
| All-cause treatment discontinuation | 10 | 2,173 |
| ≥1 psychiatric hospitalization | 10 | 2,105 |
| Relapse | 7 | 1,275 |
| Remission | 7 | 1,229 |
| Recovery | 3 | 640 |
| Involvement in school or work | 6 | 1,743 |
| Total symptom severity | 8 | 1,179 |
| Positive symptom severity | 10 | 1,532 |
| Negative symptom severity | 10 | 1,532 |
| General symptom severity | 8 | 1,118 |
| Depressive symptom severity | 5 | 874 |
| No. of psychiatric hospitalizations | 8 | 1,412 |
| Duration of psychiatric hospitalizations | 6 | 1,107 |
| Global functioning | 7 | 1,005 |
| Health-related quality of life | 4 | 505 |




10 studies, n=2,176

CI=confidence interval; EIS=early intervention service; SMD=standardized mean difference; TAU=treatment as usual

Adapted from: Correll et al. JAMA Psychiatry 2018;75(6):555–565

# Goals of Early Intervention

- Early identification
- Reduce delays in initial treatment
- Treat primary symptoms of psychosis
- Reduce secondary morbidity
- Reduce frequency & severity of relapse
- Promote normal psychosocial development
- Reduce burden for families & caregivers

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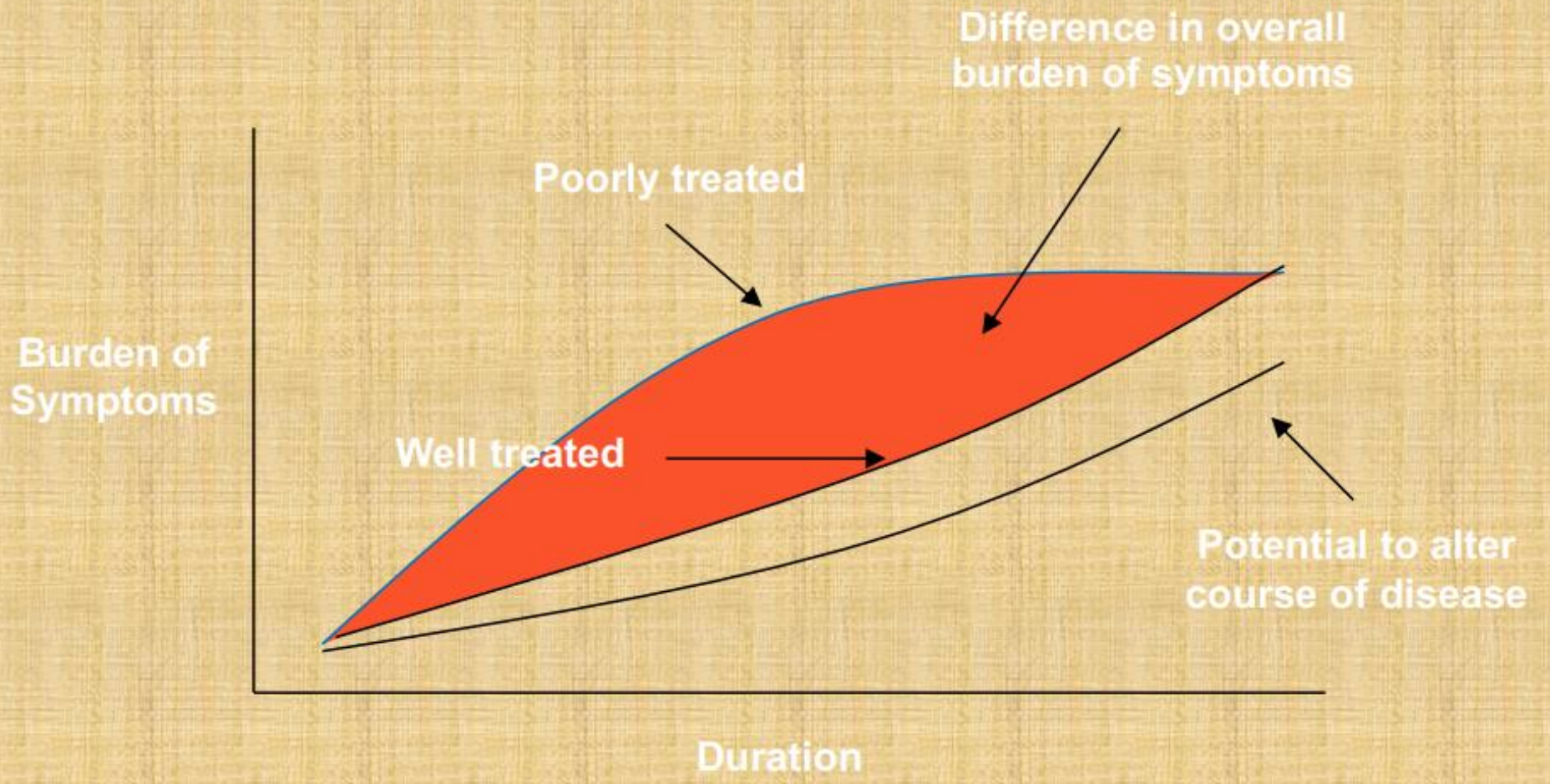
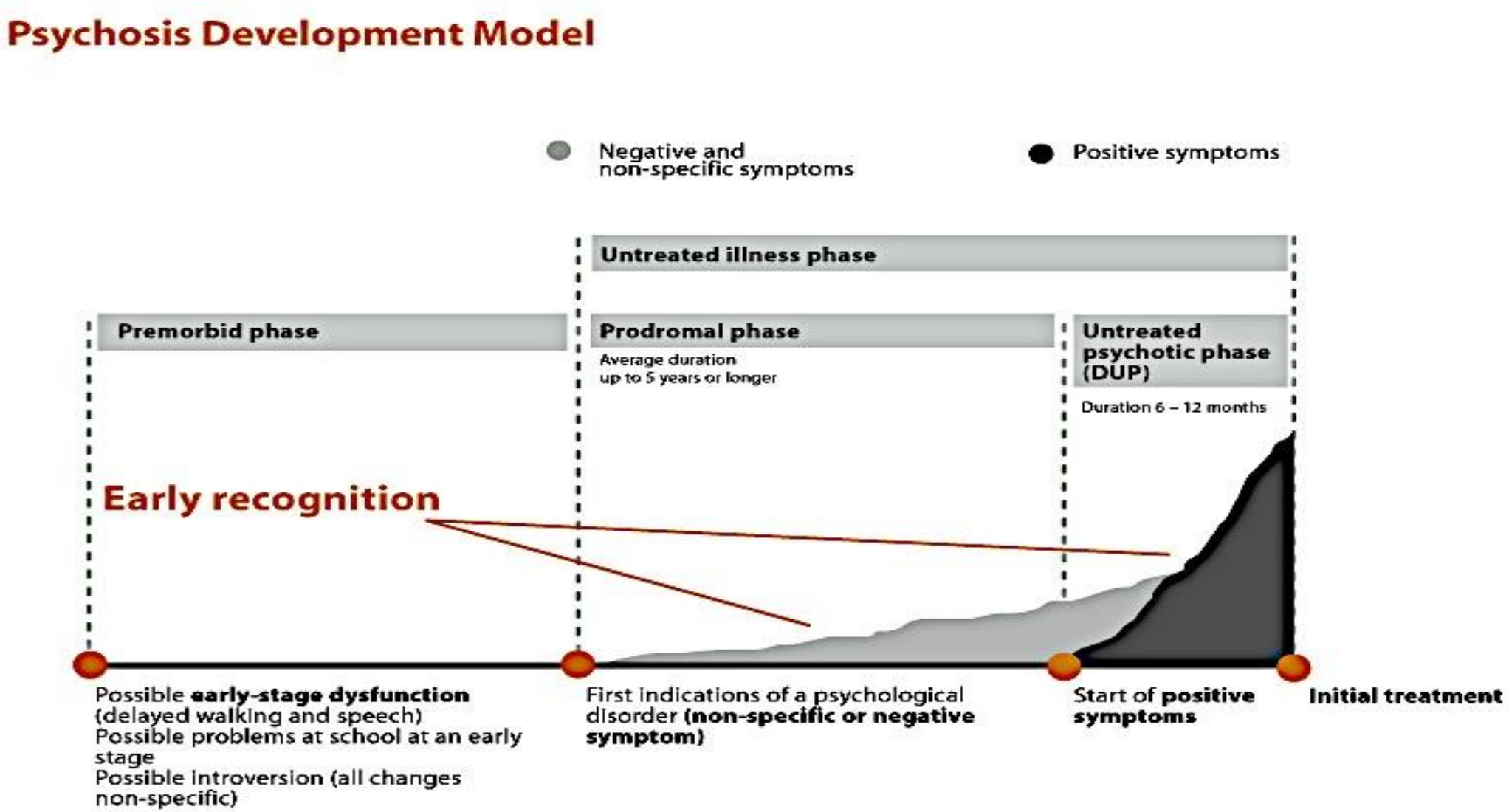
# BURDEN OF DISEASE



# Potential Focus for EIS



# Early Intervention
# DUP

- “Duration of untreated psychosis and the course of schizophrenia in a 20 year follow-up study”- Poland
  - DUP<23 weeks:
    - Lower psychopathology over 20 years
    - Higher GAF scores
    - Better social functioning
    - No difference in:
      - Employment
      - Number of relapses or rehospitalizations
      - Negative symptoms
- Marker of more severe illness or a malleable factor?
- World Health Organization target for mean DUP is 3 months

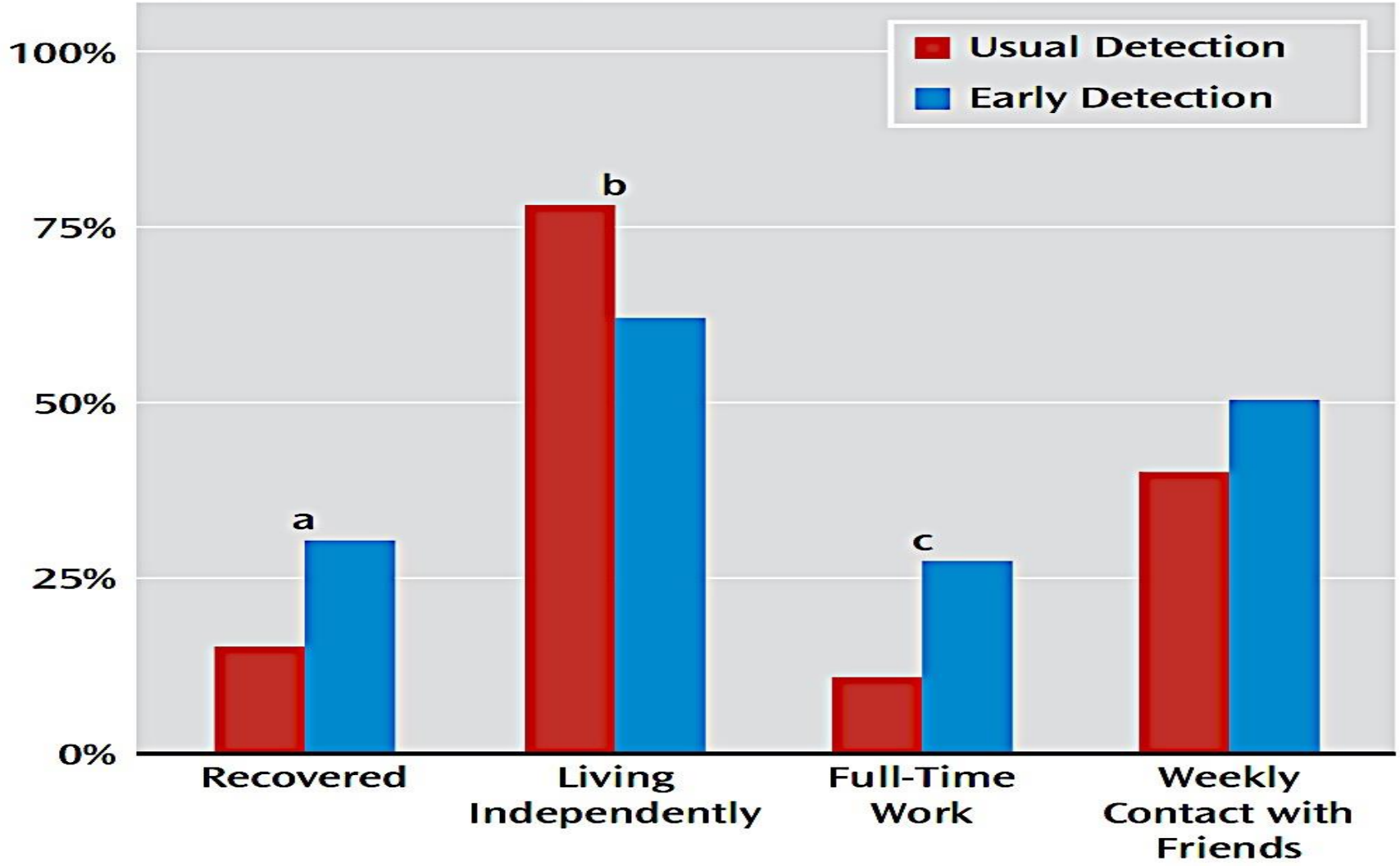
# Early Intervention
# DUP

- Multiple interventions tested to decrease DUP
  - Decrease time to self-help
    - Establishment of EIS NOT sufficient
    - Education of PCP's of some benefit but by itself not sufficient (REDIRECT, LEO)
    - Multifocused campaigns most successful (TIPS vs TIPS II)
      - Intense and sustained
      - Targeting professionals as well as the general public
      - Emphasis on promoting help-seeking
      - Directed to change attitudes about psychosis
  - Increase accessibility to treatment
    - Early Detection Teams- Mobile Units

# The Treatment and Intervention in Psychosis Trial (TIPS)

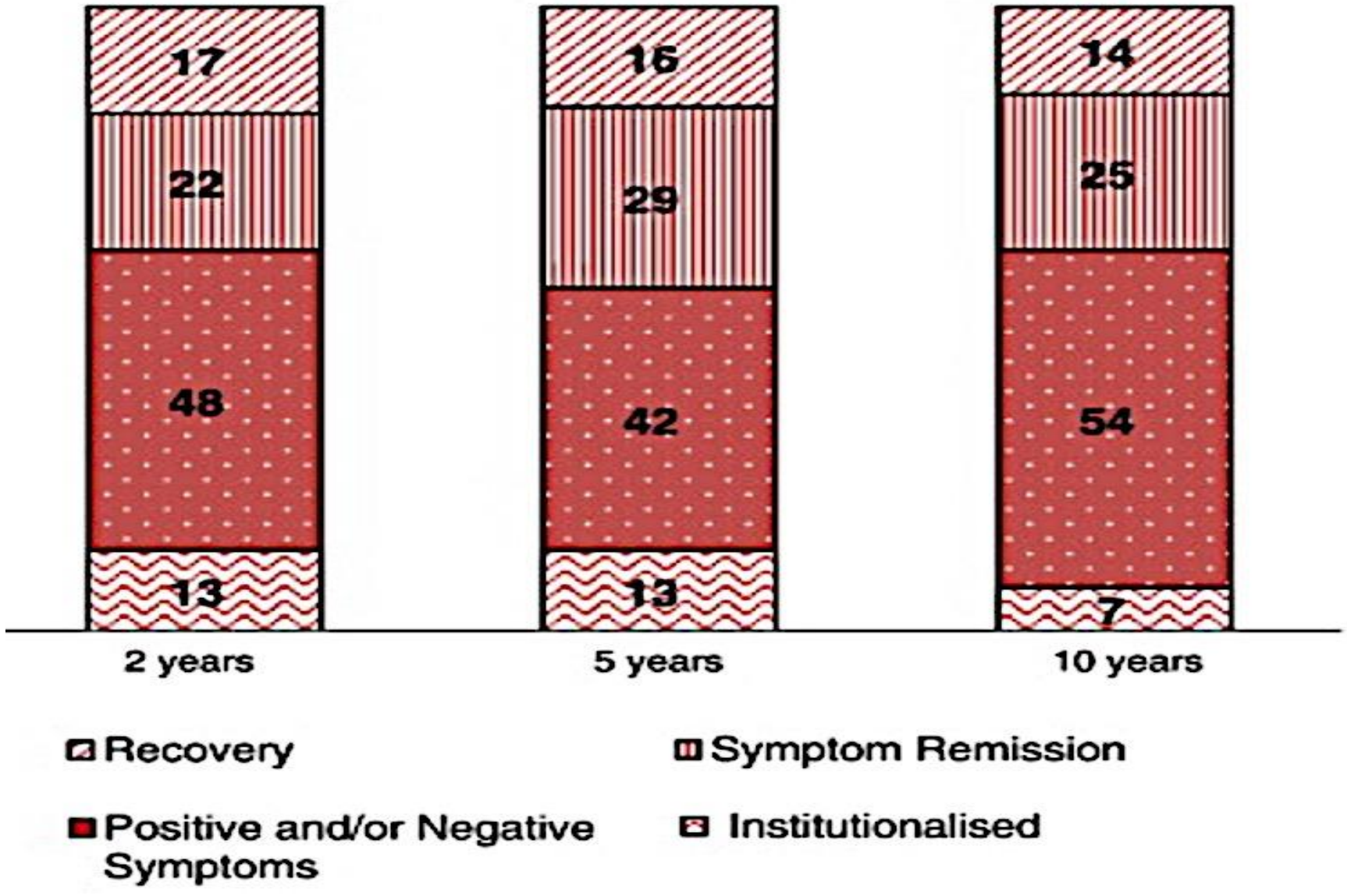
- Norway and Denmark between 1997-2001
- Included patients with schizophrenia spectrum disorder as well as delusional disorder and affective psychosis
- Early Detection System for Psychosis
  - Informational campaigns
  - Easy access to mental health care
- 23% of eligible participants declined
- ~50% had schizophrenia or schizophreniform dx
- DUP in intervention area decreased to 1/3 of that in the usual detection area- from 16 weeks to 5 weeks

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




[a] Early-detection compared with usual-detection odds ratio=2.5, 95% CI=1.2–5.4, p=0.017.
[b] Early-detection compared with usual-detection odds ratio=0.5, 95% CI=0.2–0.9, p=0.027 (corrected $\alpha$=0.017).
[c] Early-detection compared with usual-detection odds ratio=3.1, 95% CI=1.3–7.3, p=0.007 (corrected $\alpha$=0.017).

# The OPUS Cohort at 10 years



# Types of Interventions in FEP Programs

- Early Detection (ED) initiatives to decrease DUP
  - Professional and general public education
  - Mobile crisis units
  - Rapid access to treatment
- Treatment is team-based and multidimensional
  - Low dose antipsychotics – standardized protocols
  - Therapy-
    - Individual and/or groups or classroom setting
    - Psychoeducation, CBT, Family
  - Vocational/Educational Interventions
- Two years duration

# Early Intervention Trials
# Summary

- EI programs by themselves may improve some outcomes during the intervention but the improvements are not likely sustainable over time
- Initiatives to decrease DUP MUST be a part of any ET program to improve outcomes
- IPS is an important component of early treatment and may be necessary to increase rate of recovery
- Patients need life-long comprehensive phase-specific treatment, although the intensity of need may vacillate over time

# Early Intervention
# Where are we?

- 1984: Aubrey Lewis Unit and Recovery Program
- 1992: EPPIC which later added Early Psychosis Assessment Team- EPAT
- 2001: multiple Early Intervention Programs in US
  - Wayne State University- STEP
  - University of MI- includes Program for Risk Evaluation and Prevention (PREP)
- 2009: NIMH funds the RAISE-ETP and RAISE OnTrack studies.
- 2014: Under the direction of Congress, SAMHSA delegated 5% of the Community Mental Health Services Block Grant to support “evidence-based programs that address the needs of individuals with early serious mental illness, including psychotic disorders.”

# Brief History of RAISE and NAVIGATE

- In 2009, NIMH awarded contracts to two teams to develop early treatment programs for persons with first episode psychosis (RAISE: Recovery After an Initial Schizophrenia Episode)
  - The Connection Program (now OnTrackUSA) at the Research Foundation for Mental Hygiene at Columbia University in NYC
  - The Early Treatment Program (now NAVIGATE) at the Feinstein Institute for Medical Research in Manhasset, NY (www.navigateconsultants.org)

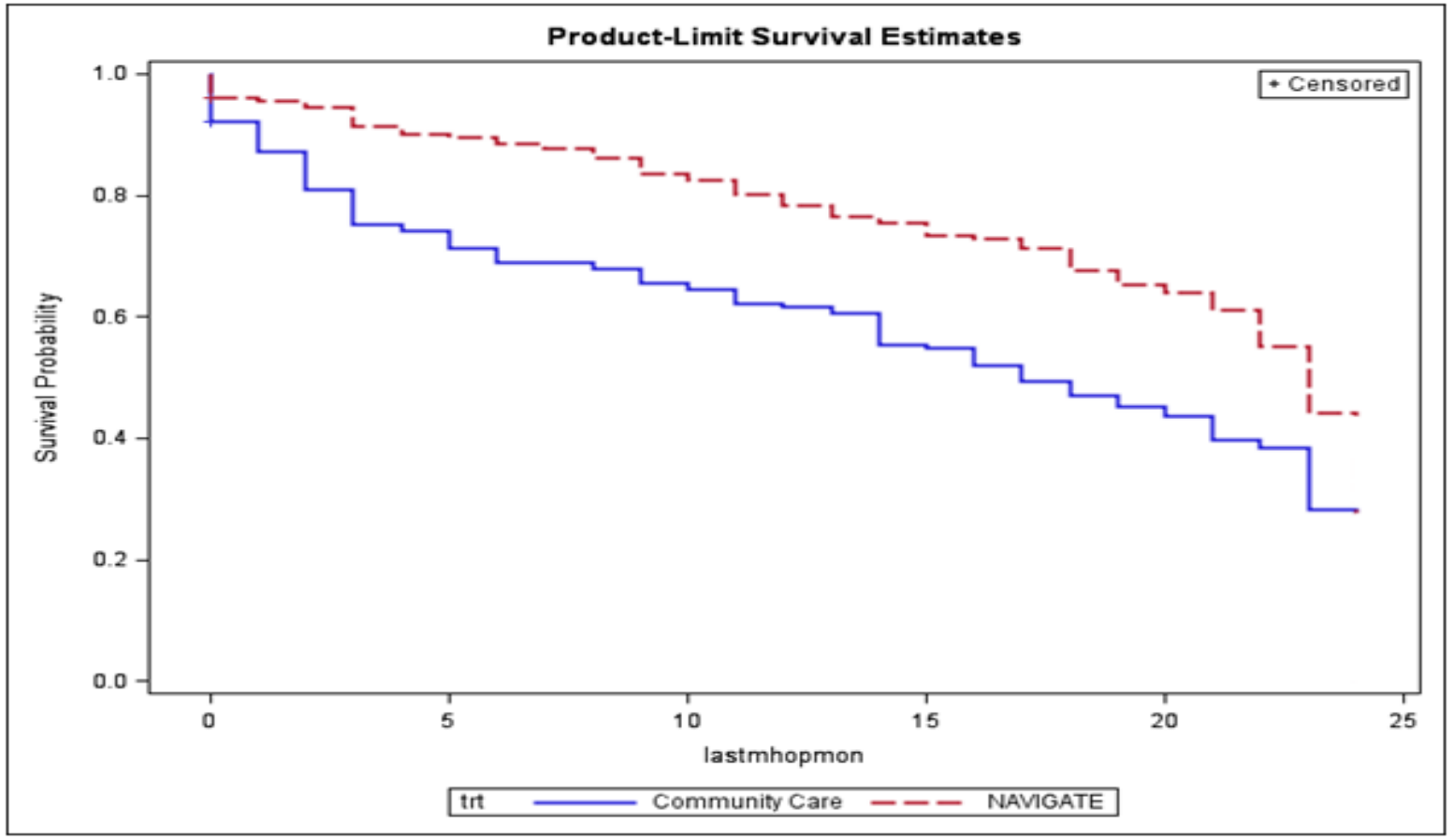
RA1SE

Recovery After an Initial Schizophrenia Episode

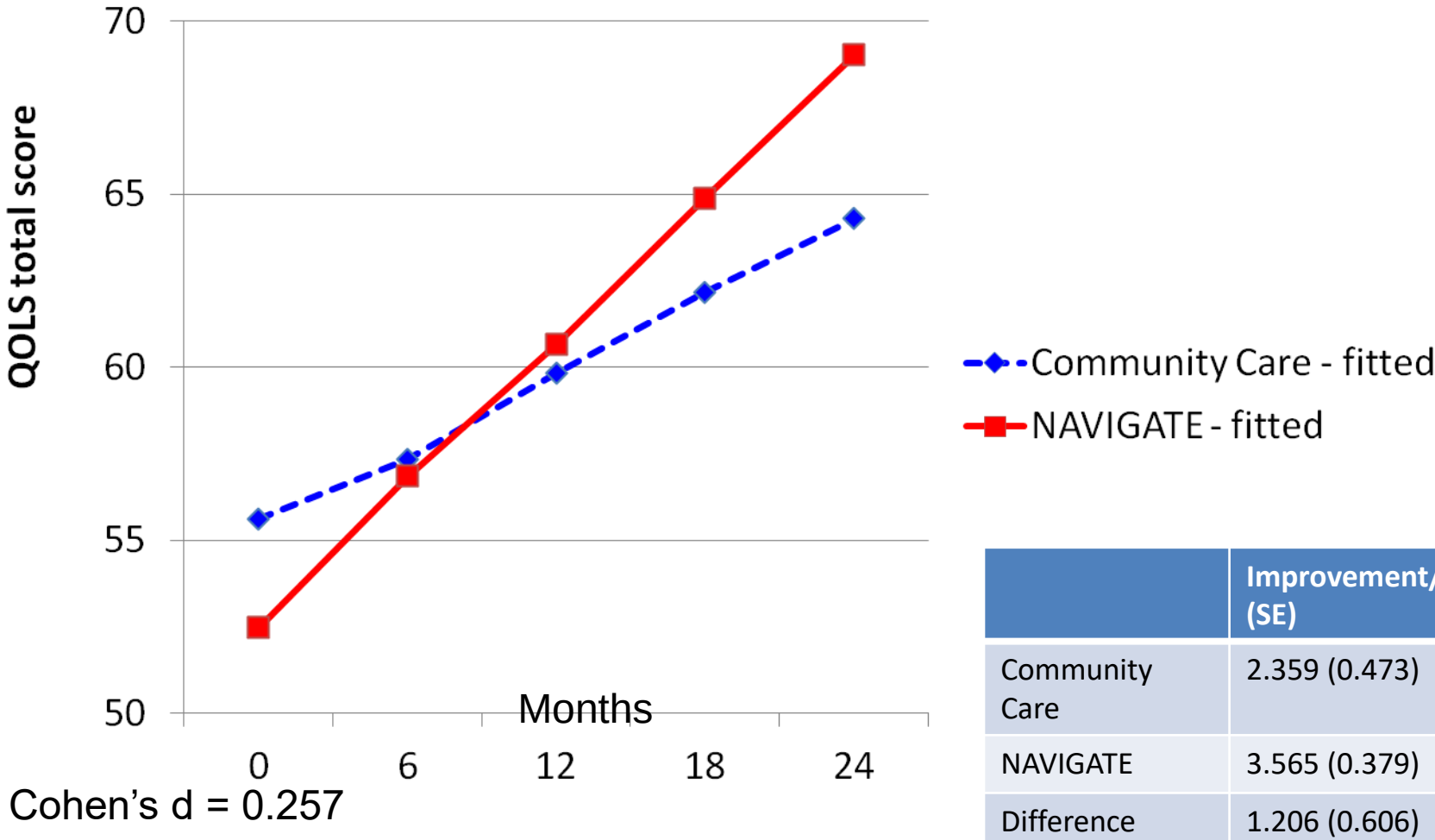
# NAVIGATE Participants Stayed in Treatment Longer (2 yr Results)

Time to Last Mental Health Visit

(Difference between treatments,  p=0.009)



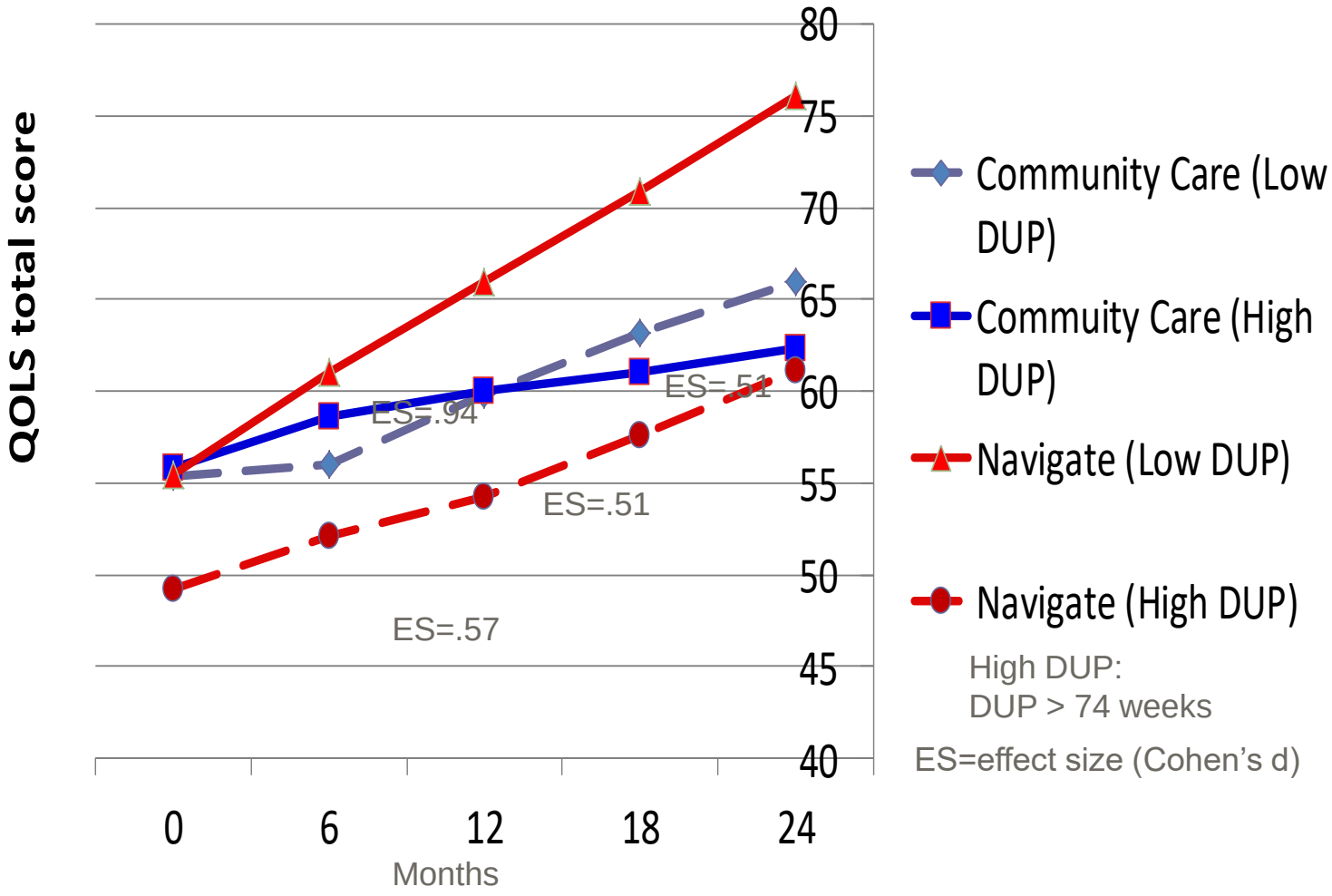
# RAISE-ETP Main Outcome: Quality of Life Scale
## Fitted Model
### Group by time interaction (p= 0.046)




Cohen's d = 0.257

| | Improvement/6mo (SE) |
|---|---|
| Community Care | 2.359 (0.473) |
| NAVIGATE | 3.565 (0.379) |
| Difference | 1.206 (0.606) |

# Quality of Life Scale: Effects of Shorter vs Longer Duration of Untreated Psychosis (DUP; p< 0.03)



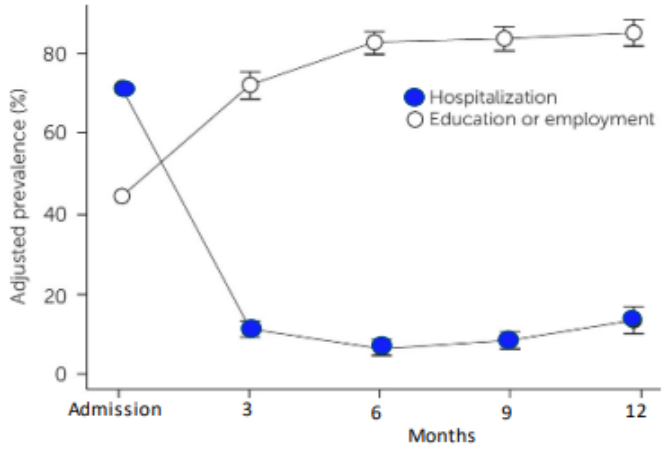

Kane et al, AJP 2015

NAVIGATE

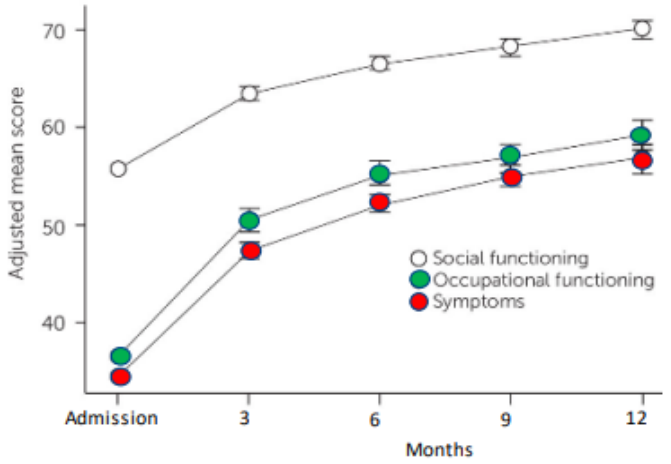
# OnTrackNY Outcomes

- A statewide CSC program for recent onset psychosis
- 325 individuals ages 16–30 were followed for 1 year
- Assertive outreach, evidence-based interventions, and continuous feedback to CSC teams

School/Work and Hospitalization Rates




Global Functioning Measures




Nossel et al., *Psychiatric Services,* 2018

NIH National Institute of Mental Health

Psychiatry Research 276 (2019) 60–68

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres


# Longitudinal associations of family burden and patient quality of life in the context of first-episode schizophrenia in the RAISE-ETP study

Amy K. Nuttall[a,b,*], Katharine N. Thakkar[b,c,d], Xiaochen Luo[c], Kim T. Mueser[e,f], Shirley M. Glynn[g], Eric D. Achtyes[d,h], John M. Kane[i,j,k]

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[k] The Zucker Hillside Hospital, Glen Oaks, NY, USA

# Recovery After an Initial Schizophrenia Episode (RAISE)

# Funding Quickly Followed RAISE

## H.R. 3547, 113th Congress

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

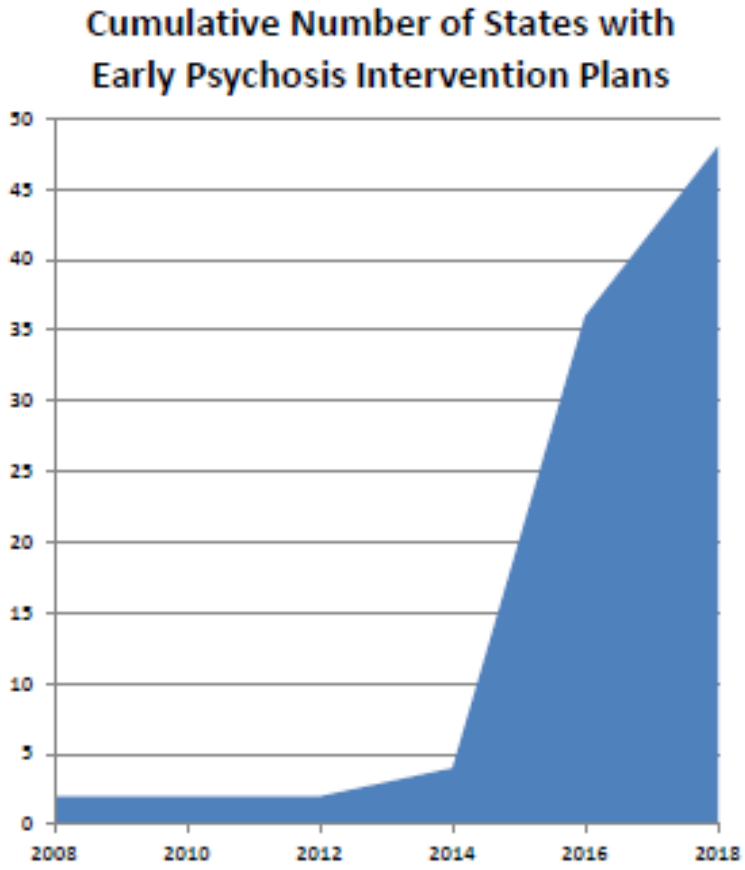


Slide courtesy of Dr. Robert Heinssen, NIMH

# Growth of CSC programs following the Mental Health Block Grants

**Dates and First Episode Psychosis (FEP) Milestones**

| | |
|---|---|
| Jul. 2009 | NIMH clinical trials for FEP commence |
| Dec. 2013 | NIMH implementation study completed |
| Jan. 2014 | P.L. 113-76: $22.8M set-aside for FEP |
| Apr. 2014 | NIMH/SAMHSA FEP guidance to states |
| May 2014 | SAMHSA technical support to states begins |
| Dec. 2014 | P.L. 113-483: $22.8M set-aside for FEP |
| Oct. 2015 | NIMH clinical trials for FEP completed |
| Oct. 2015 | CMS coverage of FEP intervention services |
| Dec. 2015 | P.L. 114-113: $50.5M set-aside for FEP |
| Dec. 2016 | P.L. 114-255: 21st Century Cures Act |
| May 2017 | P.L. 115-31: $53.3M set-aside for FEP |
| Mar. 2018 | P.L. 115-141: $68.5M set aside for FEP |
| Mar. 2019 | P.L. 115-245: $68.5M set aside for FEP |




Mental Health Block Grant Plans: https://bgas.samhsa.gov/

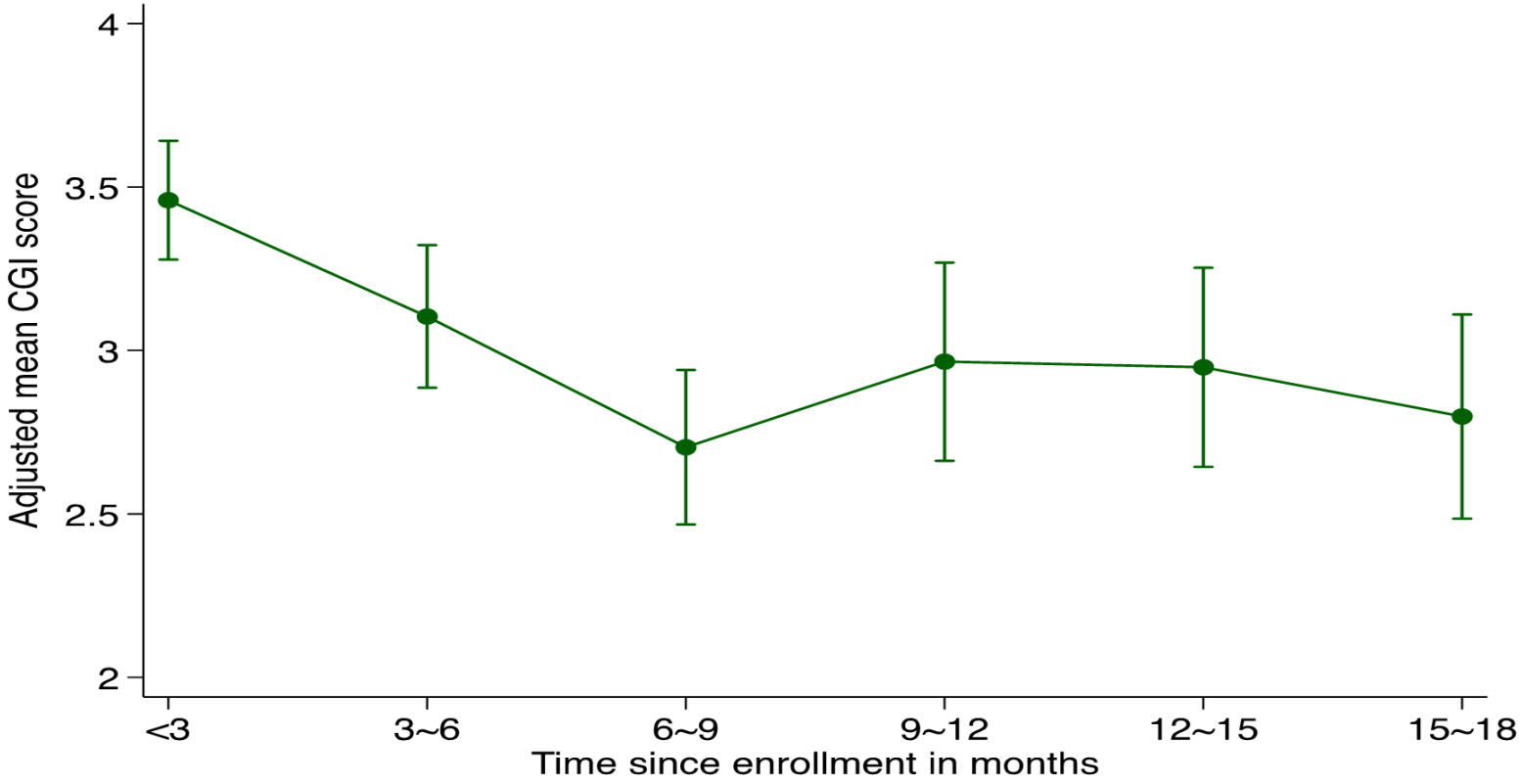
NIH National Institute of Mental Health

# Early Intervention
# Where are we?

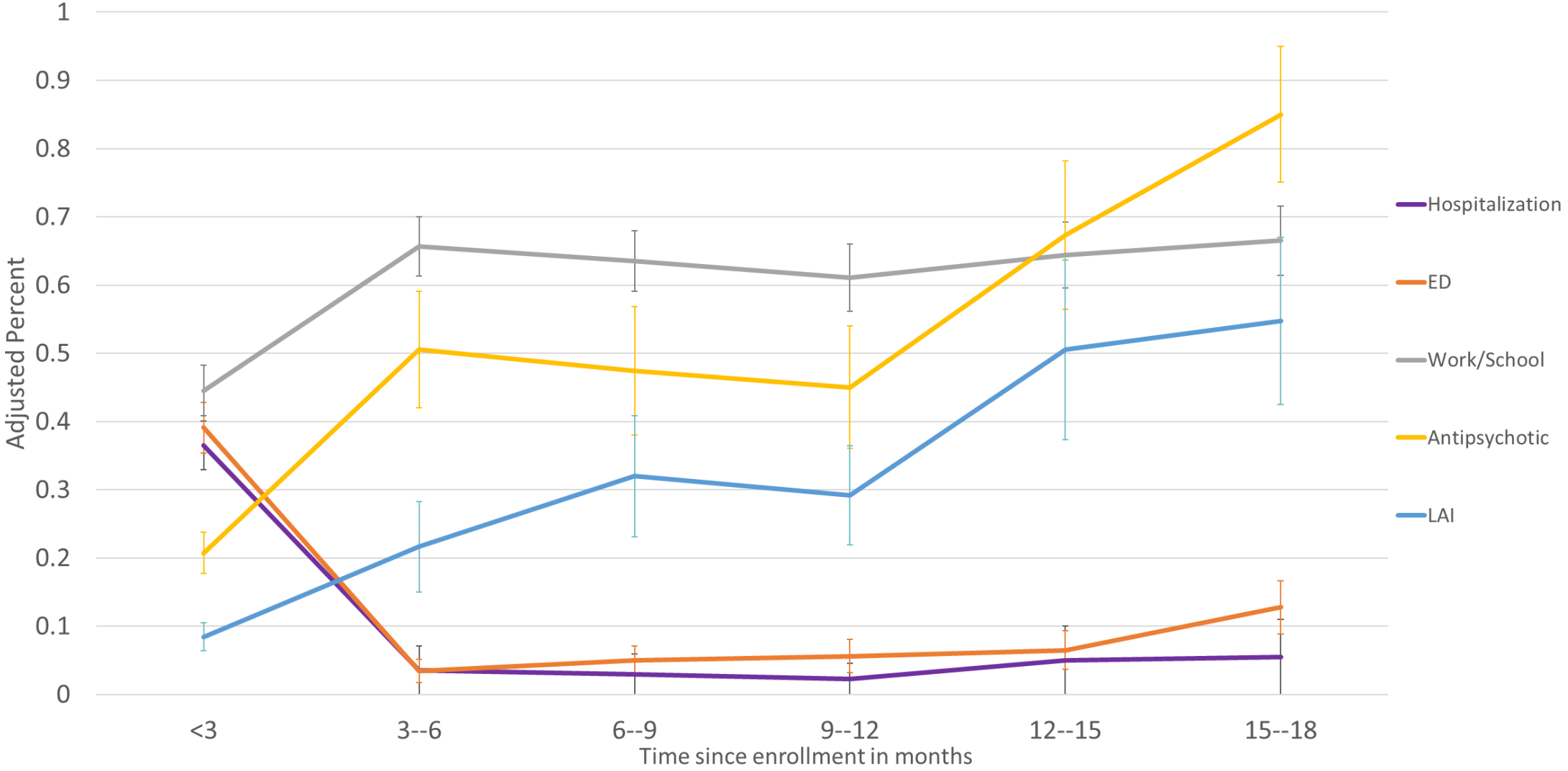
- Michigan: EIS for FEP
  - Network 180 was selected by the Michigan Dept. of Community Health to be the fiduciary of a pilot implementation in 3 Michigan communities (4th site in Kalamazoo was added in 2016)
    - ETCH: Lansing
    - Easter Seals: Southfield
    - Kent County CMH
    - Kalamazoo County CMH
  - Focuses on schizophrenia spectrum disorders using the RAISE Navigate model of CSC
  - Adding a 5th site in 2022
  - No active campaign to decrease DUP
  - Mobile crisis intervention only available in certain counties

# Implementation of NAVIGATE coordinated specialty care for first episode psychosis: the Michigan experience.

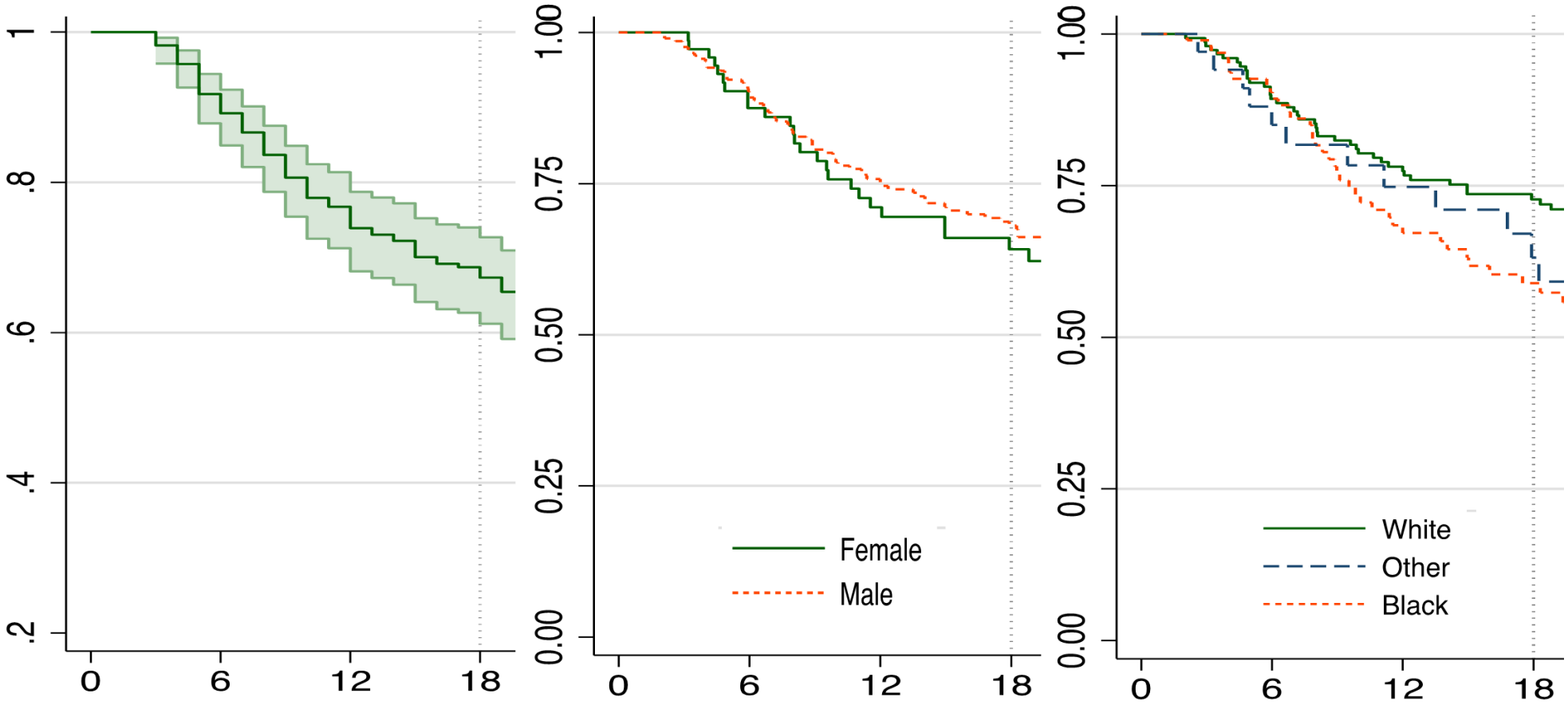
## CGI scores during the study period.



# Service utilization amongst study participants.



# Kaplan-Meier retention proportion estimates.



# NAVIGATE Components

1) Psychopharmacologic treatment
   - Compass--Computerized Decision Support System (CDSS)
   - Provides measurement-based treatment
2) Family treatment
   - Basic psychoeducation
   - Module based - communication and problem solving
3) Individual Resiliency Training
   - Module based and manual driven focused on recovery and growth
4) Supported employment/education
   - Return to community - not rehabilitation

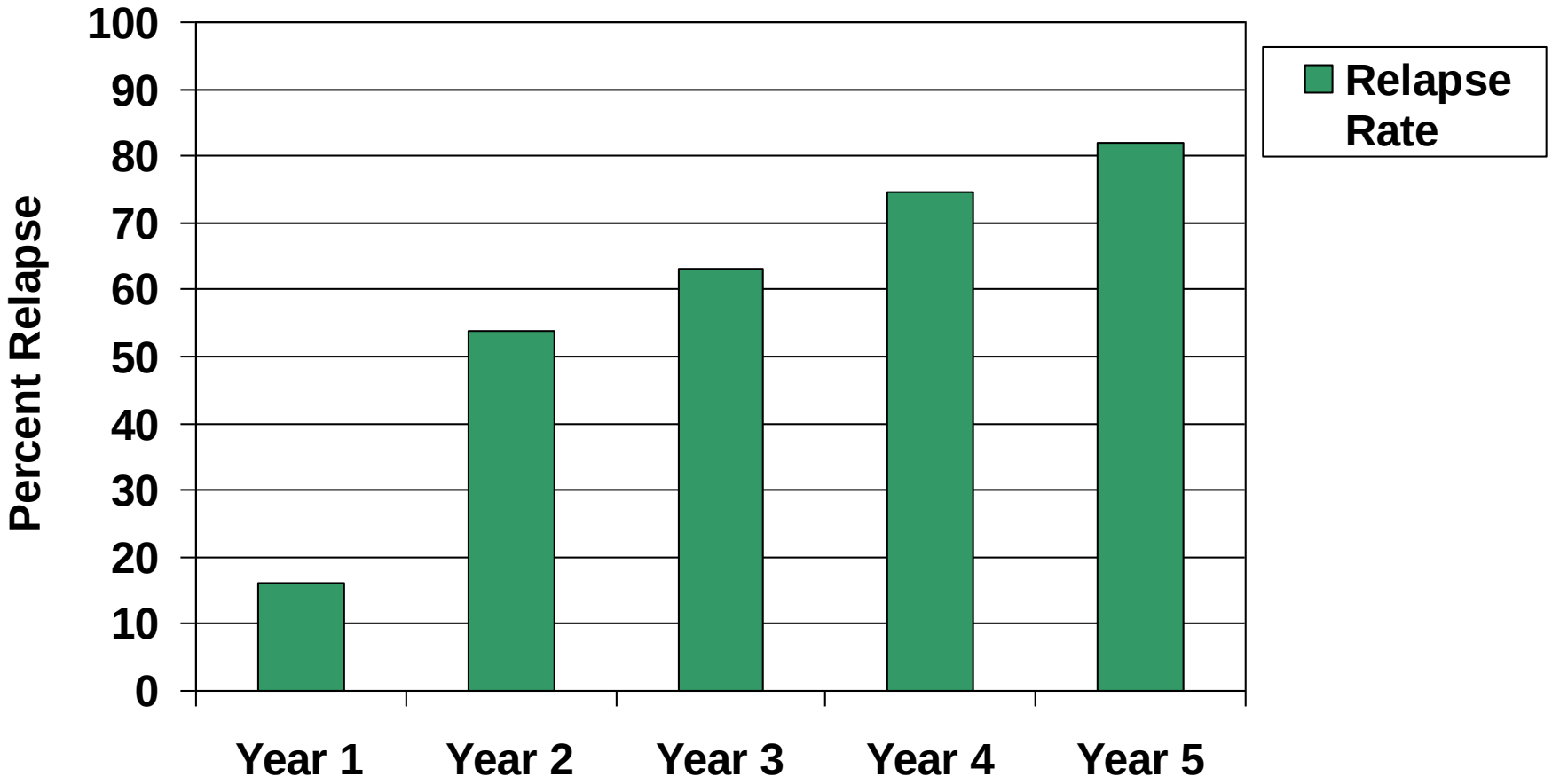
NAVIGATE

# Medication Management

- Medication strategies available to assist the prescriber in treating early phase clients
- Striving for lowest possible effective dose
- Use of a questionnaire to monitor client adherence, symptoms, and side effects
- Assessment of physical factors such as weight and BMI is an important component
- Use of shared decision-making

NAVIGATE

# Nonadherence in FEP: the Risk for Psychotic Relapse is High




Stopping antipsychotic treatment increases relapse risk by 5 times

NIMH funded: MH41646 and MH00537

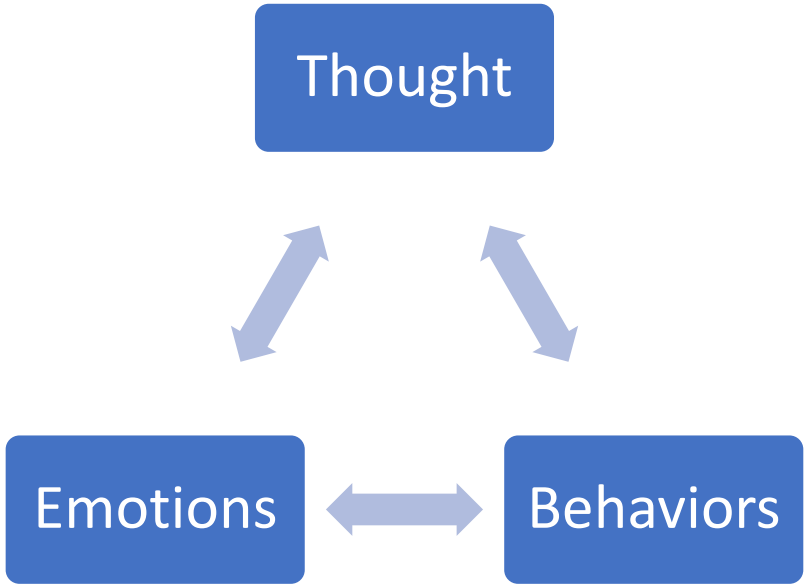
Robinson, et al. *Arch Gen Psychiatry,* 1999

# IRT
# (Individual Resiliency Training)

| Standard | Individualized |
|---|---|
| Orientation | Dealing with Negative Feelings |
| Assessment & Goal Setting | Coping with Symptoms |
| Education About Psychosis | Substance Use |
| Relapse Prevention | Having Fund & Developing Relationships |
| Processing the Episode | Making Choices About Smoking |
| Developing Resiliency - Standard | Nutrition and Exercise |
| Building a Bridge to Your Goals | Developing Resiliency - Individualized |

# An Expansion on Individualized Modules: CBTp

- Collaboratively develop a **formulation** to facilitate understanding of:
  - the experience (longitudinal formulation)
  - what maintains the distress (maintenance formulation)
- Encourages **cognitive strategies** to:
  - create flexibility in thought
- Encourages **behavioral strategies** to:
  - disrupt the maintenance cycle
  - improve quality of life (movement toward life goals)



# Family Program

- Provides family (including client) with education about psychosis, coping strategies, skills for communicating and solving problems
- Goals of the program:
  - Shore up family relationships for the long haul.
  - Change the trajectory of the illness by supporting resumption of role functioning and social pursuits.
  - Reduce stress and burden in family members.

# Supported Employment and Education (SEE)

- The goal of SEE is to help FEP participants develop and achieve personally meaningful goals related to their careers, their education, and their employment.
- SEE services are individualized for each person based on their preferences, goals, and values.
- SEE services are provided based on the person's choice to pursue employment, or education, or both.
- Different from vocational counseling.
- Vast majority of services takes place OUTSIDE THE OFFICE.

# Peers

- Can assist participants by:
  - sharing their experiences (as indicated) to decrease client's sense of aloneness
  - providing examples that increase clients sense of hope and optimism
  - helping clients take active steps towards achieving their personal goals (e.g., help set up area in apartment for doing homework)
  - Facilitating opportunities to increase social confidence and access

# Case Management

- Assists clients in accessing resources such as housing, medical care, transportation, parenting classes, insurance
- Case management needs can be high for early treatment clients as they begin treatment
- Can be provided by team members or by a separate case manager

# Program Eligibility

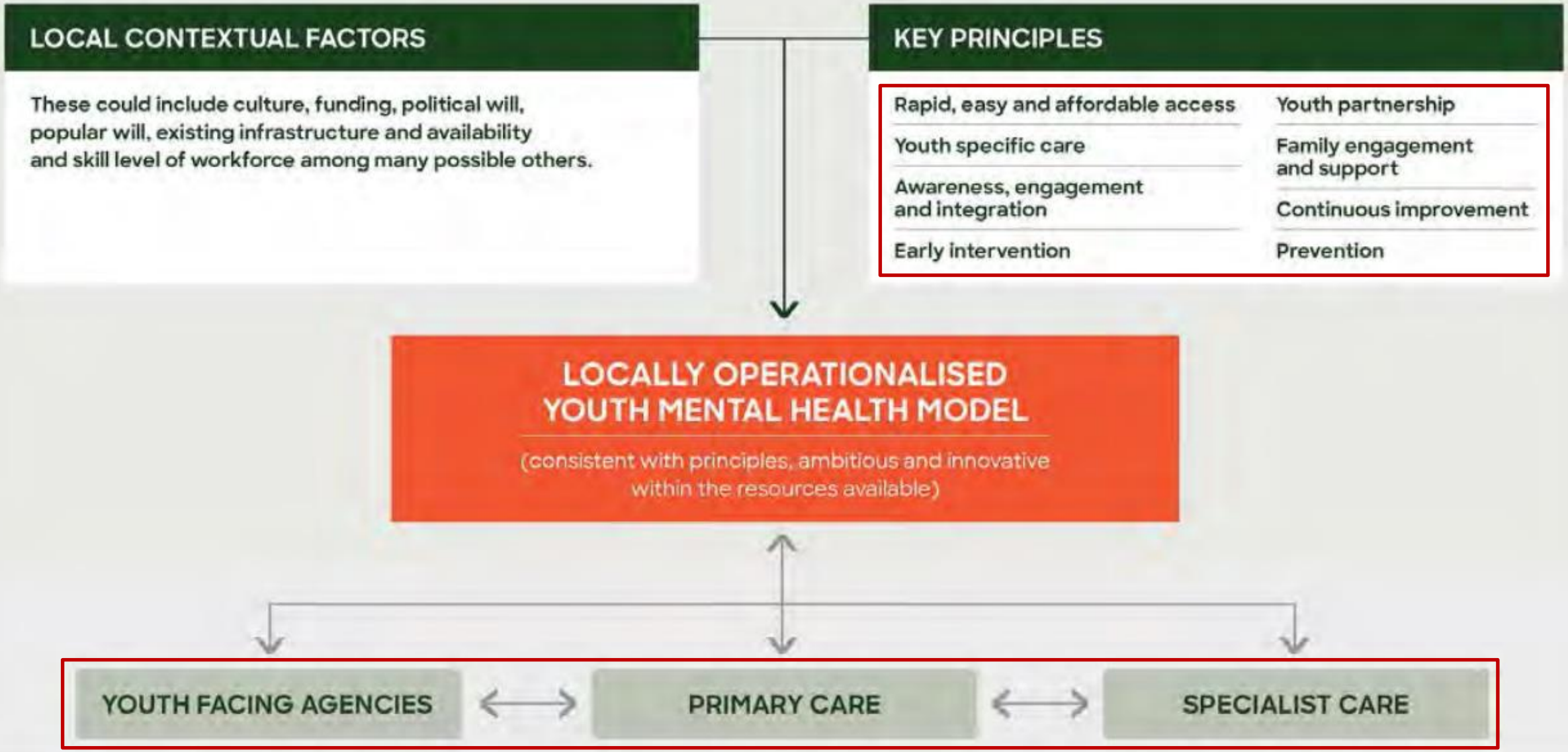
- 15-30 years of age
- Schizophrenia Spectrum Disorder Diagnosis:
  - Unspecified Schizophrenia Spectrum
  - Schizophreniform
  - Schizophrenia
  - Schizoaffective

  (rule out substance induced psychosis)
- 18 months or less of illness

# Resources

- RAISE Study Overview: http://www.nimh.nih.gov/health/topics/schizophrenia/raise/coordinated-specialty-care-for-first-episode-psychosis-resources.shtml
- https://raiseetp.org/StudyManuals/index.cfm
- www.michiganminds.org
- NAVIGATE Consultants: http:/navigateconsultants.org/
- www.strong365.org

Such an environment is likely to be consistent with the principles and goals of the following:
**The Universal Declaration of Human Rights, The Convention on the Rights of Persons with Disabilities, The Convention on the Rights of the Child, and the Sustainable Development Goals.**



# Youth Mental Health Programs

## Jigsaw - Ireland

# Michigan Sites

**Navigate Programs**

- **ETCH/CEI**
  - East Lansing, MI
  - 517-481-4800
- **Network 180**
  - Grand Rapids, MI
  - 616-323-1132
- **Easter Seals Michigan**
  - Southfield, MI
  - 248-372-6882
- **Integrated Services of Kalamazoo**
  - Kalamazoo, MI
  - 269-553-8000

**ACT Early Programs**

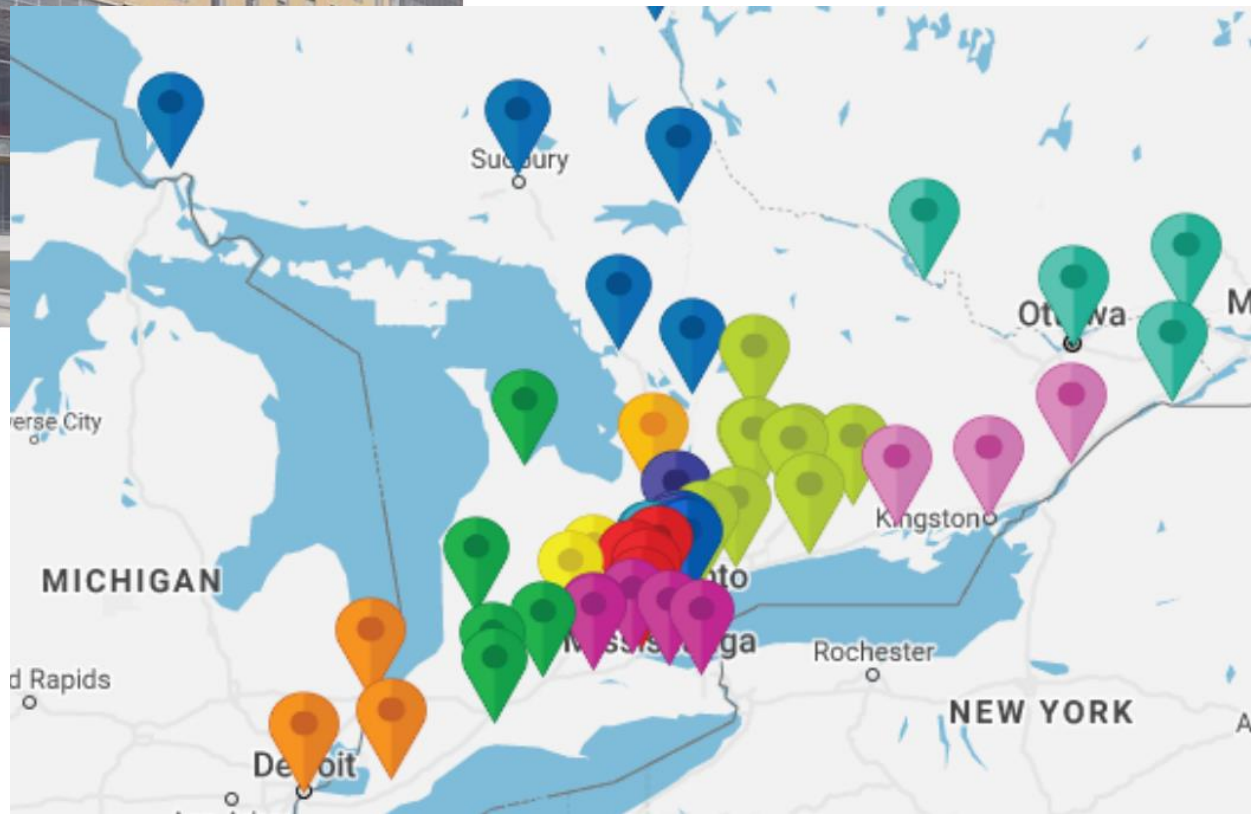
- **Marquette**
  - Pathways Community Mental Health
  - 905-225-7266
- **Midland**
  - Community Mental Health for Central Michigan
  - 989-631-5140

# The EPI-SET Project: An Overview of the Canadian NAVIGATE Experience

Sarah Bromley, OT (Ont), Manager, Slaight Centre Early Intervention Service
George Foussias MD PhD FRCPC, Director, Slaight Centre

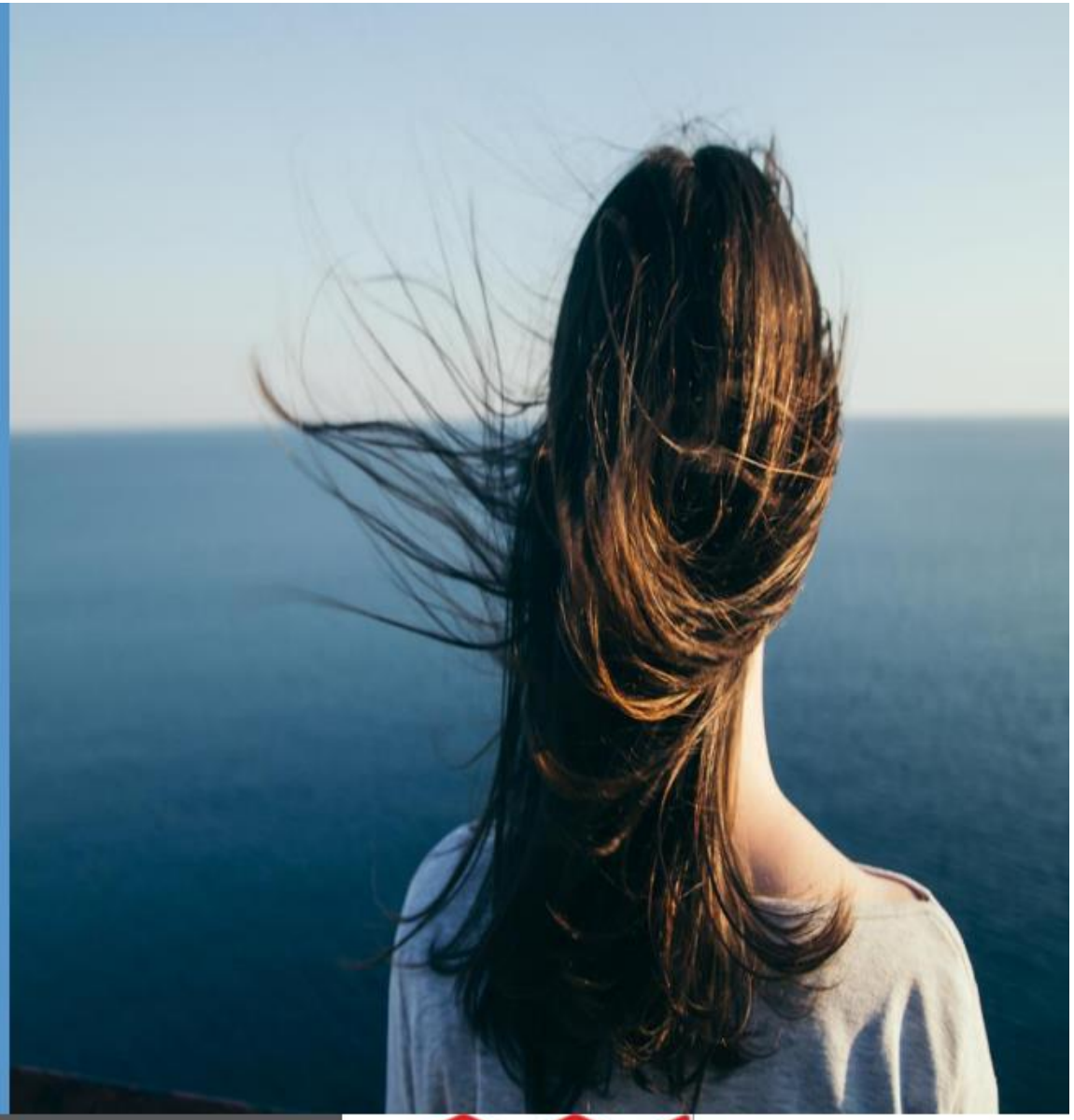
camh

camh Slaight Family Centre for Youth in Transition

# NAVIGATE ISRAEL

7 years of implementation



עמותה ע"ש משה הס (ע"ר)
The Moshe Hess Amuta

The Laszlo N. Tauber Family Foundation
קרן לזלו נ. טאובר

אוניברסיטת חיפה
University of Haifa
جامعة حيفا

קרנות
הביטוח הלאומי

# How we implement NAVIGATE in China and work on adapting it to the Chinese setting

Dr. Liping Cao coolliping@163.com
Xiaoyu Hao cindy842@163.com

Affiliated Brain Hospital of Guangzhou Medical University
Guangzhou, China

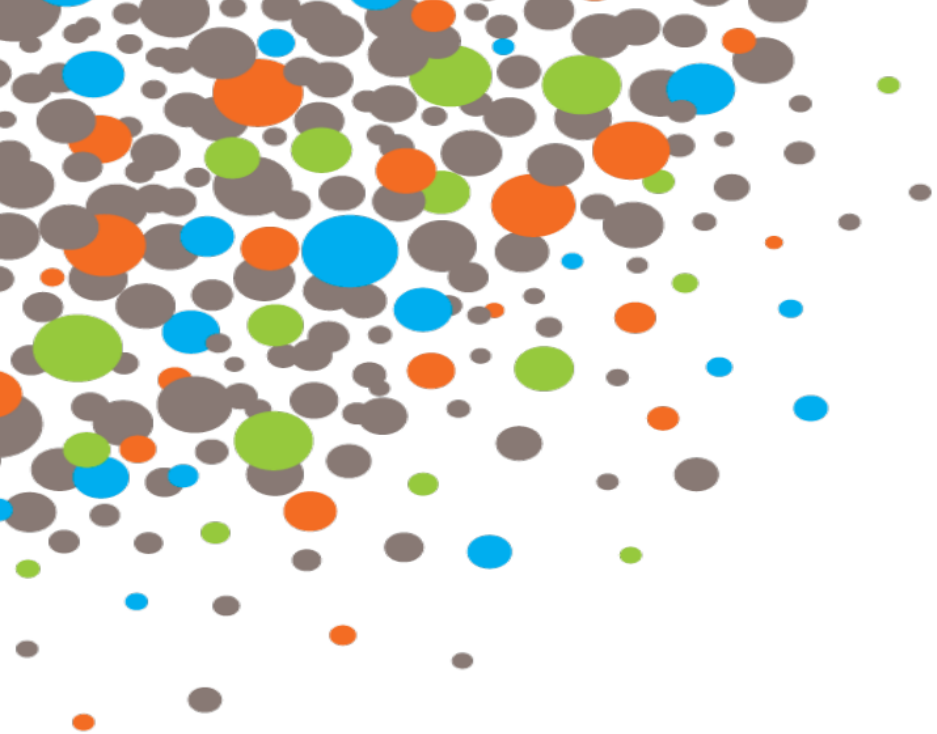
# Next Steps in NAVIGATE Step Down: NAV2GO

May 17th, 2022
Catherine Adams, LMSW, ACSW, CAADC
adams@etchwellness.org
Clinical Director, Michigan Trainer and Consultant
ETCH:  Early Treatment and Cognitive Health

- Values driven
- Shift away from "treatment" and toward autonomy and a meaningful life
- Brief and solution focused
- Seamless escalation of support as needed
- One clinician…many hats (plus Prescriber and Peer)
- Focus on creating community…belonging
- Real world practice, practice, practice

# GOOD TO GREAT

- Widen the UHR/ARMS channel: delay onset & ameliorate impact
- Reduce DUP to a matter of weeks: CE and DTs
- Identify Early TR CLOZAPINE
- Stage specific care not just increased dose
- Holistic care – physical health, sexual health, substance use, family, vocational interventions
- Mobile home and assertive community treatment
- Extended tenure
- Online augmentation of care MOST
- Adherence vs dose reduction?



EIP SAVES A LOT OF MONEY

EIP CREATES “MENTAL WEALTH”

EIP SAVES LIVES

# 2020 APA Practice Guidelines for the Treatment of Patients with Schizophrenia

This guideline is undergoing copyediting and the final version is expected to be released summer 2020.

## The American Psychiatric Association Practice Guideline for the Treatment of Patients with Schizophrenia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**Psychosocial Interventions**

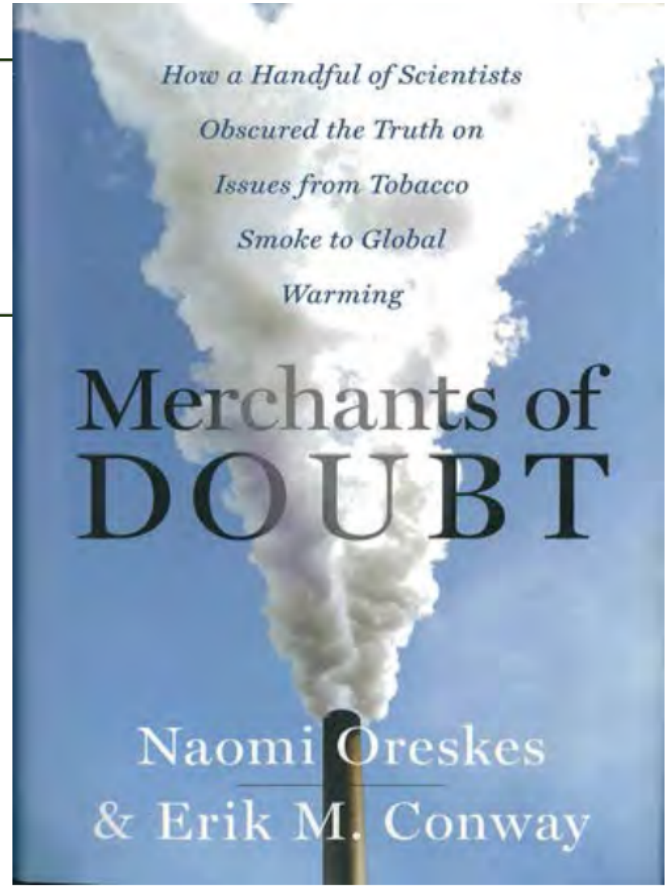
Statement 15: Coordinated Specialty Care Programs

"APA recommends (1B) that patients with schizophrenia who are experiencing a first episode of psychosis be treated in a coordinated specialty care program."

"…CSC programs, which are sometimes referred to as team-based, multicomponent interventions, have also been used in other countries for treatment of early psychosis (Anderson et al. 2018; Craig et al. 2004; Secher et al. 2015). These treatment programs often include individuals with diagnoses other than schizophrenia but have been associated with a number of benefits including lower mortality (Anderson et al. 2018), lower rates of relapse, better quality of life, better global function, and greater likelihood of working or being in school after receiving up to two years of treatment (McDonagh et al. 2017)."

"More patients may benefit from CSC programs in the U.S. than currently receive it. Consequently, state mental health agencies, health plans, and health organizations may wish to implement initiatives to increase the use of a CSC program among individuals with a first episode of psychosis."

# IMPLEMENTATION FATIGUE SLUDGE FACTORS




The “Treatment Gap”

Merchants of Doubt

Devolved commissioning

Poor model fidelity

Weak and patchy financial models

Pressure to diffuse model across lifespan

and diagnostic spectrum

Professional resistance to key evidence based elements, especially community education, mobile detection and round the clock home based care

Challenges in designing and locating streamed and optimistic cultures of care

Challenge in mobilising political will

Psychiatric Services

AUSTRALASIAN PSYCHIATRY

# Why do psychiatrists doubt the value of early intervention? The power of illusion

Australasian Psychiatry
2020, Vol 28(3) 331–334

DOI: 10.1177/1039856220924323
journals.sagepub.com/home/apy
SAGE

**Patrick D McGorry** Orygen, Australia; and Center for Youth Mental Health, The University of Melbourne, Australia
**Cristina Mei** Orygen, Australia; and Center for Youth Mental Health, The University of Melbourne, Australia

**Abstract**

**Objective:** Face validity and the best available evidence strongly support the value of early intervention (EI) for psychotic disorders, and increasingly for other mental illnesses. Yet its value continues to be intensely criticised by some academics and doubted by many psychiatrists. This disconnect is examined through the lens of the 'clinician's illusion'.

**Conclusions:** A number of sources fuel resistance to EI; however, the cumulative exposure to persistent and disabling illness that dominates the day-to-day experience of psychiatrists may be a key influence. This experience forms the basis of the clinician's illusion, a hidden bias health professionals develop as a natural consequence of their clinical experiences, which shapes belief and perception of prognosis, and breeds therapeutic nihilism. This bias has been reinforced by grossly under-resourced systems of mental health care, undermining morale and adding a sense of learned helplessness to our mindset.

# NIMH Future Plans for FEP

## Harmonizing Clinical Data Collection in Community-Based Treatment Programs for First Episode Psychosis

National Institute of Mental Health
September 7-8, 2017

*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?*

Slide courtesy of Dr. Vinod Srihari, Yale University

# NIMH Goal: EPINET

## Early Psychosis Intervention Network (EPINET)

- 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

Slide adapted from Dr. Robert Heinssen, NIMH

# Epinet: Grants Funded

## EPINET Regional Scientific Hubs

- California Collaborative Network to Promote Data Driven Care and Improve Outcomes in Early Psychosis (EPI-CAL), University of California, Davis, Dr. Tara Ann Niendam
- Early-phase Schizophrenia: Practice-based Research to Improve Treatment Outcomes (ESPRITO), Feinstein Institute for Medical Research, New York City, Drs. John Kane and Delbert Robinson
- Laboratory for Early Psychosis Research (LEAP)-Supplement, McLean Hospital, Belmont, Massachusetts, Drs. Dost Ongur, Miguel Hernan, and John Hsu
- OnTrackNY's Learning Healthcare System, New York State Psychiatric Institute, New York City, Drs. Lisa Dixon and Jennifer Humensky
- Targeting Cognition and Motivation in Coordinated Specialty Care for Early Psychosis, University of Minnesota, Minneapolis, Drs. Sophia Vinogradov and Piper Meyer-Kalos

## EPINET National Data Coordinating Center

- Westat, Rockville, Maryland, Dr. Abram Rosenblatt

RFP released: https://grants.nih.gov/grants/guide/rfa-files/RFA-MH-20-205.html

# PRELAPSE Study

Original Research



## Patients With Early-Phase Schizophrenia Will Accept Treatment With Sustained-Release Medication (Long-Acting Injectable Antipsychotics): Results From the Recruitment Phase of the PRELAPSE Trial

John M. Kane, MD[a,b,c,*]; Nina R. Schooler, PhD[d]; Patricia Marcy, BSN[e]; Eric D. Achtyes, MD[f,g]; Christoph U. Correll, MD[a,b,c,h]; and Delbert G. Robinson, MD[a,b,c]

Research

JAMA Psychiatry | Original Investigation

## Effect of Long-Acting Injectable Antipsychotics vs Usual Care on Time to First Hospitalization in Early-Phase Schizophrenia A Randomized Clinical Trial

John M. Kane, MD; Nina R. Schooler, PhD; Patricia Marcy, BSN; Christoph U. Correll, MD; Eric D. Achtyes, MD; Robert D. Gibbons, PhD; Delbert G. Robinson, MD

# DREaM Study

- Sponsor: Janssen
- Site PI – Eric Achtyes

**Evaluation of Treatment Failure in a 20-Month, Randomized, Open-Label Study of Paliperidone Palmitate Versus Oral Antipsychotics for Recent-Onset Schizophrenia or Schizophreniform Disorder**

Brianne Brown,[1] Pamela Baker,[1] Amy O'Donnell,[1] Ibrahim Turkoz,[2] Larry Alphs[1,a]
[1]Janssen Scientific Affairs, LLC, Titusville, NJ, USA; [2]Janssen Research and Development, LLC, Titusville, NJ, USA
[a]Current affiliation: Newron Pharmaceuticals, LLC, Morristown, NJ, USA

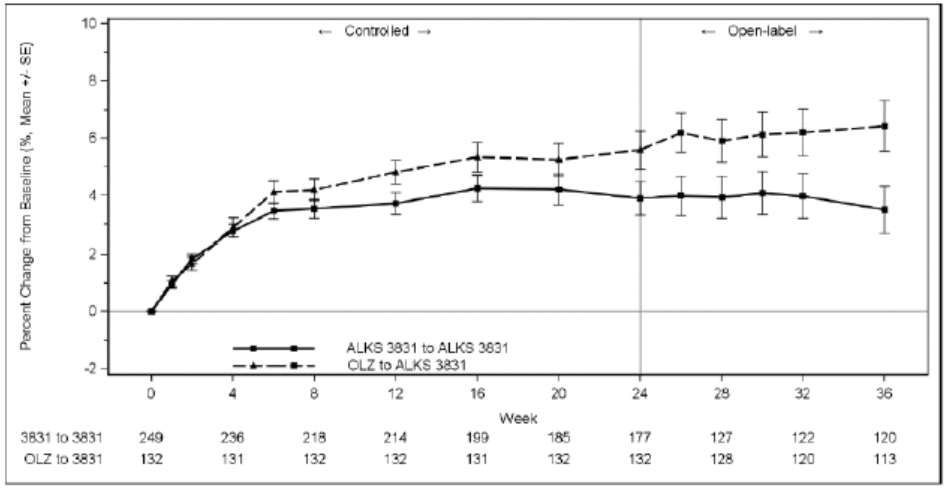
**Evaluation of Major Treatment Failures in Patients With Recent-Onset Schizophrenia: a Post Hoc Analysis From the Disease Recovery Evaluation and Modification (DREaM) Study**

Pamela Baker,[1] Brianne Brown,[1] Amy O'Donnell,[1] Ibrahim Turkoz,[2] Larry Alphs[1,a]
[1]Janssen Scientific Affairs, LLC, Titusville, NJ, USA; [2]Janssen Research and Development, LLC, Titusville, NJ, USA
[a]Current affiliation: Newron Pharmaceuticals, LLC, Morristown, NJ, USA

# New medications: part II

## Study A304: Weight Over Time

**Group 2**




Abbreviations: ISE=Integrated Summary of Efficacy; OLZ=olanzapine; PBO=placebo; SE=standard error.
Note: Baseline is defined as the last nonmissing value on or before the first dose of study drug in Study A305 for the Group 1 figure and in Study A303 for the Group 2 figure. The numbers in the bottom rows indicate the numbers of subjects with assessment at each week.

www.fda.gov

[Source: Applicant's ISE, Figure 38, page 141]



- Alkermes Announces FDA Approval of LYBALVI™ for the Treatment of Schizophrenia and Bipolar I Disorder
- New Oral Medication Offers Established Antipsychotic Efficacy of Olanzapine With Less Weight Gain
- Launch Planned for Fourth Quarter 2021
- DUBLIN, June 1, 2021 /PRNewswire/ Alkermes plc (Nasdaq: ALKS) today announced that the U.S. Food and Drug Administration (FDA) has approved LYBALVI™ (olanzapine and samidorphan) for the treatment of adults with schizophrenia and for the treatment of adults with bipolar I disorder, as a maintenance monotherapy or for the acute treatment of manic or mixed episodes, as monotherapy or an adjunct to lithium or valproate. LYBALVI is a once-daily, oral atypical antipsychotic composed of olanzapine, an established antipsychotic agent, and samidorphan, a new chemical entity.
- See: Correll, et al. *Am J Psychiatry* 2020.

Thrive Study

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ARTICLE OPEN

# Detecting relapse in youth with psychotic disorders utilizing patient-generated and patient-contributed digital data from Facebook

M. L. Birnbaum[1,2,3,5*], S. K. Ernala[4,5], A. F. Rizvi[1,2,3], E. Arenare[1,2,3], A. R. Van Meter[1,2,3], M. De Choudhury[4,6] and J. M. Kane[1,2,3,6]

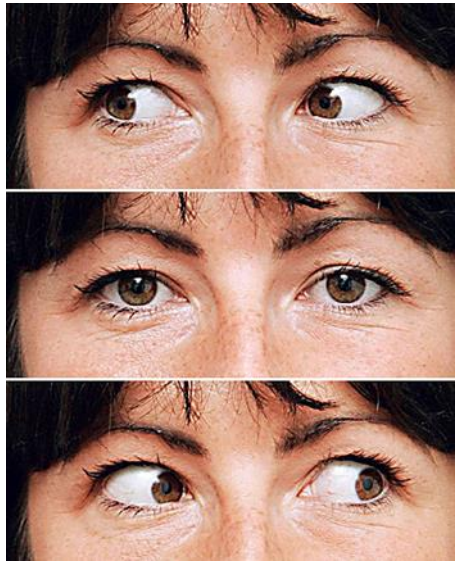
built a one-class classification model that makes patient-specific personalized predictions on risk to relapse. Significant differences were identified in the words posted to Facebook in the month preceding a relapse hospitalization compared to periods of relative health, including increased usage of words belonging to the swear ($p < 0.0001$, Wilcoxon signed rank test), anger ($p < 0.001$), and death ($p < 0.0001$) categories, decreased usage of words belonging to work ($p = 0.00579$), friends ($p < 0.0001$), and health ($p < 0.0001$) categories, as well as a significantly increased use of first ($p < 0.0001$) and second-person ($p < 0.001$) pronouns. We additionally observed a significant increase in co-tagging ($p < 0.001$) and friending ($p < 0.0001$) behaviors in the month before a relapse hospitalization. Our classifier achieved a specificity of 0.71 in predicting relapse. Results indicate that social media activity captures objective linguistic and behavioral markers of psychotic relapse in young individuals with recent onset psychosis. Machine-learning models were capable of making personalized predictions of imminent relapse hospitalizations at the patient-specific level.

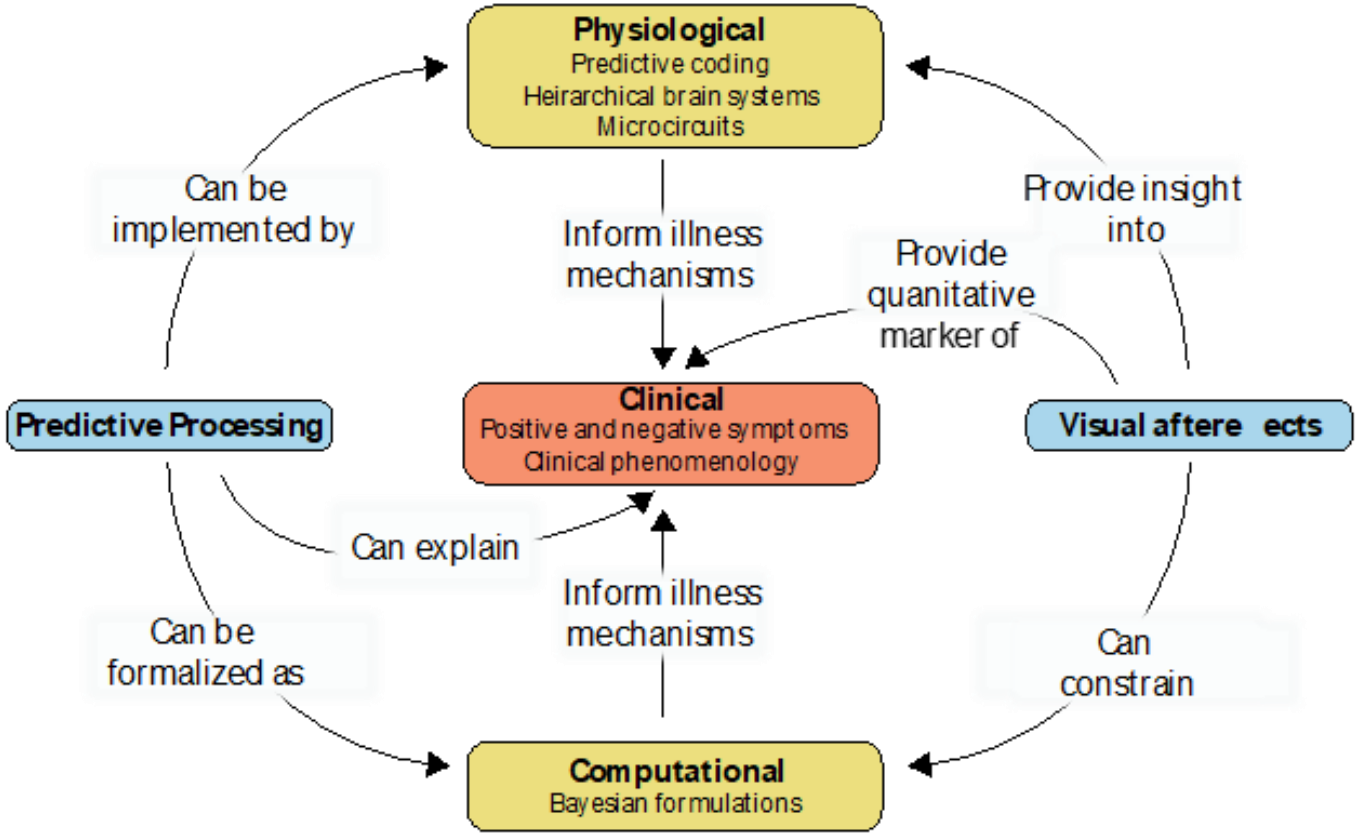
*npj Schizophrenia* (2019)5:17 ; https://doi.org/10.1038/s41537-019-0085-9

# Probing the Visual System to Understand Early Psychosis

## "Visual perception as a window onto prediction anomalies in schizophrenia"

NIMH R01MH121417 – PI Thakkar, MSU; Co-I Achtyes, MSU/Network180; Co-I Tso, Univ of Michigan





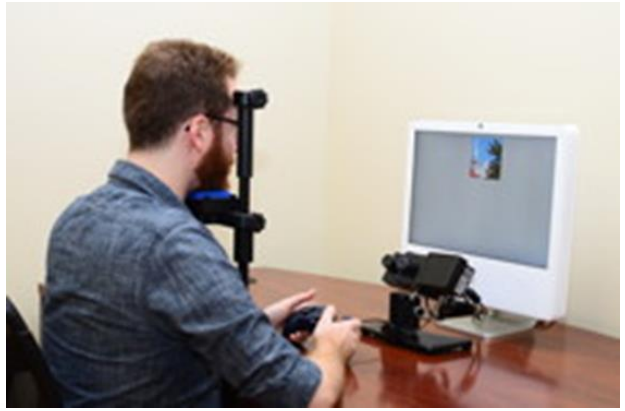



**Figure 1**. Schematic illustrating how predictive processing theories can provide a mechanistic account of schizophrenia at multiple levels of analysis (left), and how visual aftereffect paradigms are well-suited to provide data that speaks to predictive processing theories at these multiple levels (right).

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# Questions?