Early Psychosis Identification, Screening and Intervention

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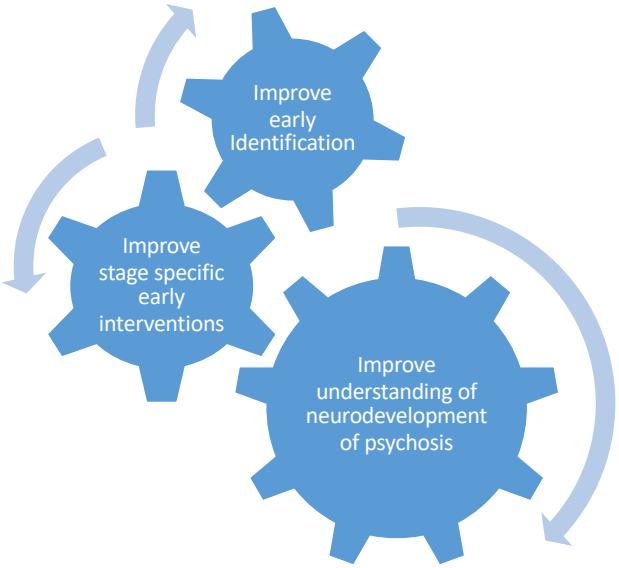
Pennsylvania Psychological Association
2026 Annual Conference Workshop
Thursday June 18, 2026, 5:30-8:30pm ET

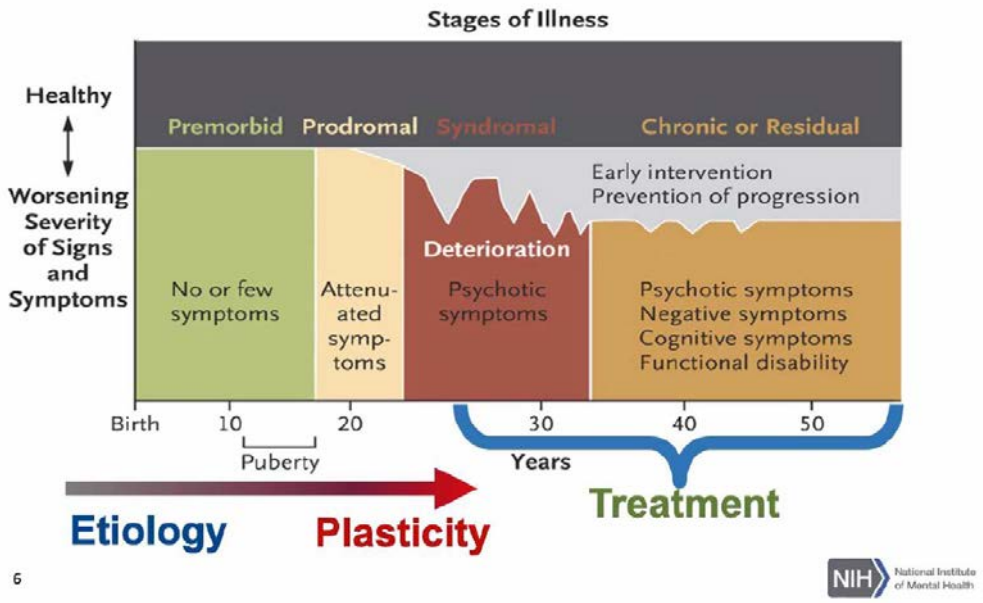
Learning Objectives

- Explain how to differentiate threshold from subthreshold psychosis symptoms
- Describe other psychopathology domains that commonly precede and/or accompany psychosis spectrum symptoms
- Utilize empirically supported tools and methods to screen for and assess early signs and symptoms of psychosis
- Consider the impact of social determinants of health on the identification, referral and care seeking behaviors of individuals experiencing early psychosis
- Discuss the components and outcomes of early psychosis coordinated specialty care programs
- Describe at least 3 ways to connect young people experiencing early psychosis with regional specialized resources and services across the commonwealth of Pennsylvania

Early Identification and Intervention

- Many individuals experience distressing psychosis symptoms before they present for clinical care (or while they are in care for other conditions).
- Early symptoms are distressing and can interfere with a young person's life goals. The longer these symptoms go untreated, the harder it may be to recover.
- Early identification can help us better understand and treat the earliest stages of psychosis.





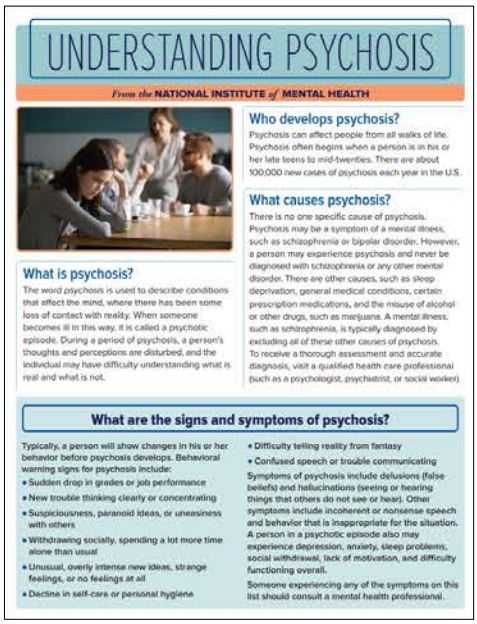
Slide courtesy Bob Heinssen, NIH

First Episode Psychosis

Approximately 100,000 adolescents and young adults in the United States experience FEP each year.

- With a peak onset occurring between 15-25 years of age, psychotic disorders such as schizophrenia can derail a young person's social, academic, and vocational development and initiate a trajectory of accumulating disability.
- Long delays between the onset of psychosis and effective treatment (the duration of untreated psychosis) are the norm.
- A 2015 study of more than 400 people with early psychosis in the US found that half were ill for nearly 18 months before beginning treatment for psychosis. This is almost six times the World Health Organization's quality standard of a maximum 12 weeks DUP.

Addington et al., 2015; Heinssen, Goldstein, & Azrin, 2014; McGrath, Saha, Chant, et al., 2008



UNDERSTANDING PSYCHOSIS

From the NATIONAL INSTITUTE of MENTAL HEALTH

Who develops psychosis?

Psychosis can affect people from all walks of life. Psychosis often begins when a person is in his or her late teens to mid-twenties. There are about 100,000 new cases of psychosis each year in the U.S.

What causes psychosis?

There is no one specific cause of psychosis. Psychosis may be a symptom of a mental illness, such as schizophrenia or bipolar disorder. However, a person may experience psychosis and never be diagnosed with schizophrenia or any other mental disorder. There are other causes, such as sleep deprivation, general medical conditions, certain prescription medications, and the misuse of alcohol or other drugs, such as marijuana. A mental illness, such as schizophrenia, is typically diagnosed by excluding all of these other causes of psychosis. To receive a thorough assessment and accurate diagnosis, visit a qualified health care professional (such as a psychologist, psychiatrist, or social worker).

What is psychosis?

The word *psychosis* is used to describe conditions that affect the mind, where there has been some loss of contact with reality. When someone becomes ill in this way, it is called a psychotic episode. During a period of psychosis, a person's thoughts and perceptions are disturbed, and the individual may have difficulty understanding what is real and what is not.

What are the signs and symptoms of psychosis?

Typically, a person will show changes in his or her behavior before psychosis develops. Behavioral warning signs for psychosis include:

- Sudden drop in grades or job performance
- New trouble thinking clearly or concentrating
- Suspiciousness, paranoid ideas, or uneasiness with others
- Withdrawing socially, spending a lot more time alone than usual
- Unusual, overly intense new ideas, strange feelings, or no feelings at all
- Decline in self-care or personal hygiene
- Difficulty telling reality from fantasy
- Confused speech or trouble communicating

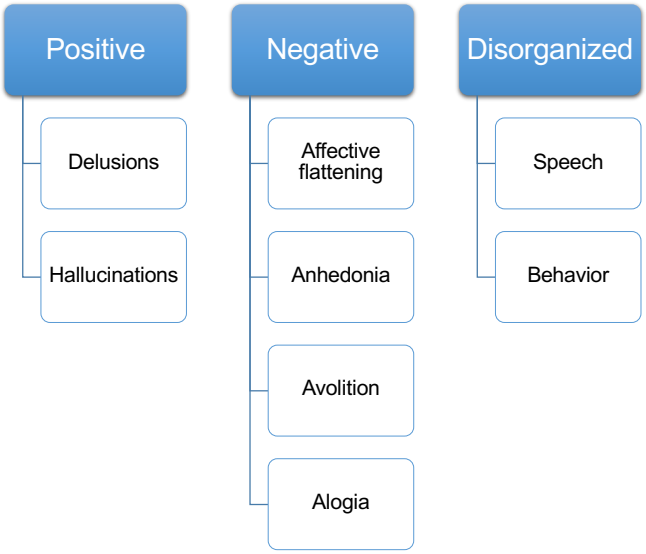
Symptoms of psychosis include delusions (false beliefs) and hallucinations (seeing or hearing things that others do not see or hear). Other symptoms include incoherent or nonsense speech and behavior that is inappropriate for the situation. A person in a psychotic episode also may experience depression, anxiety, sleep problems, social withdrawal, lack of motivation, and difficulty functioning overall.

Someone experiencing any of the symptoms on this list should consult a mental health professional.

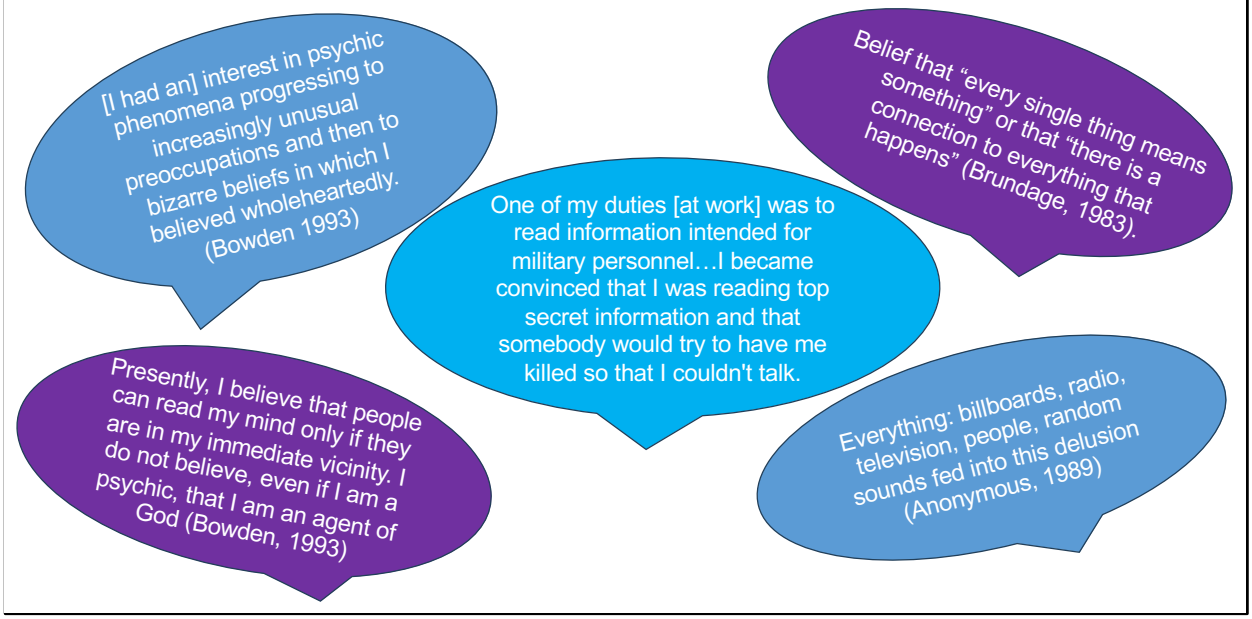
https://www.nimh.nih.gov/health/publications/understanding-psychosis

https://www.nimh.nih.gov/health/publications/understanding-psychosis

Psychosis Symptoms – Threshold



Delusions: First Person Accounts (Stanton & David, 2018)



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Hallucinations: First Person Accounts (Stanton & David, 2018)

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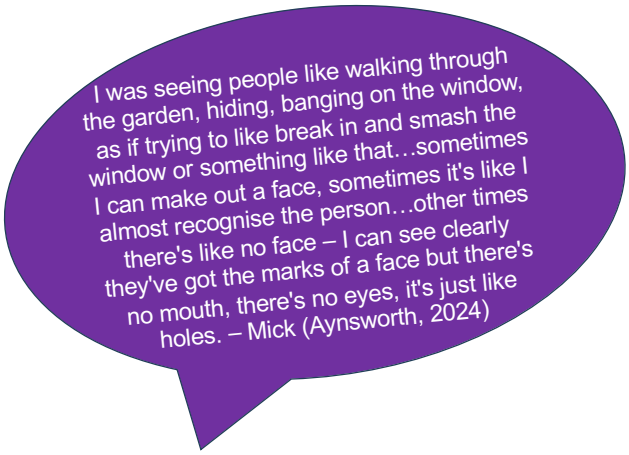

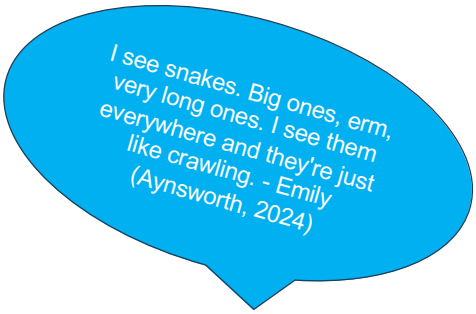

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DSM-5 Mutually Exclusive Disorders* With Psychosis Symptoms

- Schizophrenia Spectrum and Other Psychotic Disorders
  - Schizophrenia
  - Schizophreniform
  - Schizoaffective
  - Delusional Disorder
  - Brief Psychotic Disorder
  - Psychotic Disorder due to Another Medical Condition (AMC)
  - Substance/Medication Induced Psychotic Disorder
  - Other Specified Schizophrenia Spectrum and Other Psychotic Disorder
  - Unspecified Schizophrenia Spectrum and Other Psychotic Disorder
- Major Mood Disorders
  - MDD with psychotic features
  - Bipolar Disorder with psychotic features

*at a given point in time

Other *Non-Mutually* Exclusive Disorders (i.e., can be comorbid)

- Substance Related Disorders
- Obsessive Compulsive Disorder
- Post-traumatic Stress Disorder
- Autism Spectrum Disorders
- Borderline Personality Disorder
- Schizotypal Personality Disorder (or Schizoid, Paranoid)

Psychosis as a Continuum in the General Population

J. van Os et al.
Psychological Medicine (2009), 39, 179–195.

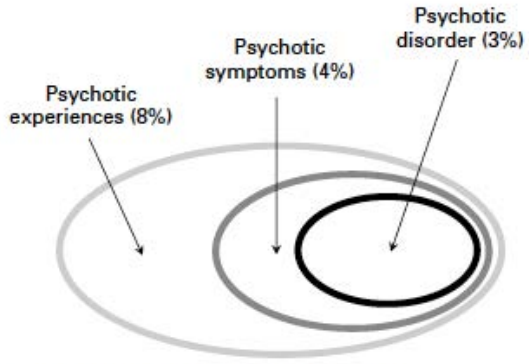


Fig. 4. Psychosis: variation along a continuum.

van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. (2009). A systematic review and meta-analysis of the psychosis continuum: evidence for a psychosis proneness-persistence-impairment model of psychotic disorder. *Psychological medicine*, *39*(2), 179–195. https://doi.org/10.1017/S0033291708003814

The neurodevelopmental path of early psychosis leads to barriers in achieving a typical developmental trajectory. Interventions must facilitate an improved trajectory.

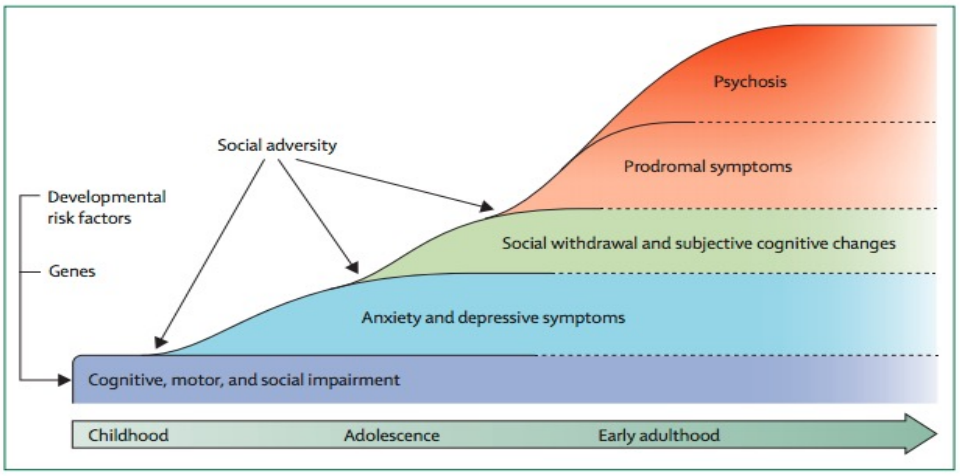
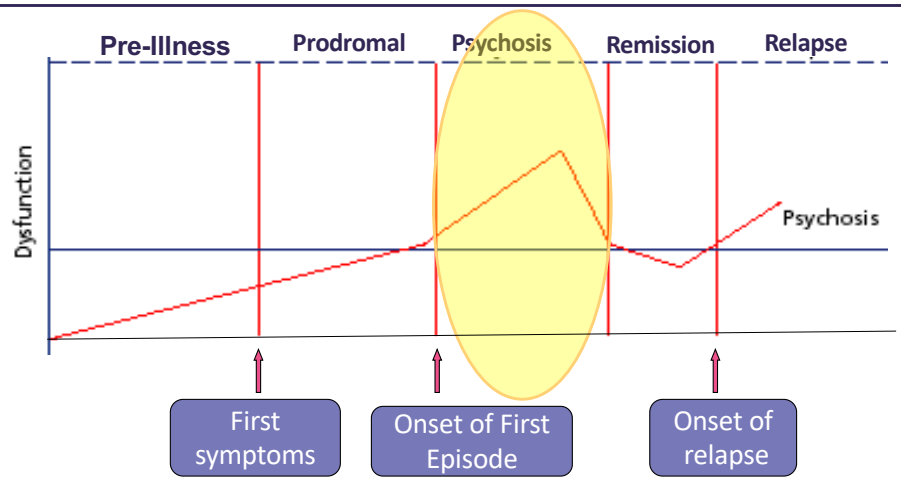


Figure 1: **The trajectory to schizophrenia showing the evolution of symptoms and the main risk factors**

Oliver D Howes, Robin M Murray
www.thelancet.com **Vol 383 May 10, 2014**

Howes, O. D., & Murray, R. M. (2014). Schizophrenia: an integrated sociodevelopmental-cognitive model. *Lancet (London, England)*, *383*(9929), 1677–1687. https://doi.org/10.1016/S0140-6736(13)62036-X

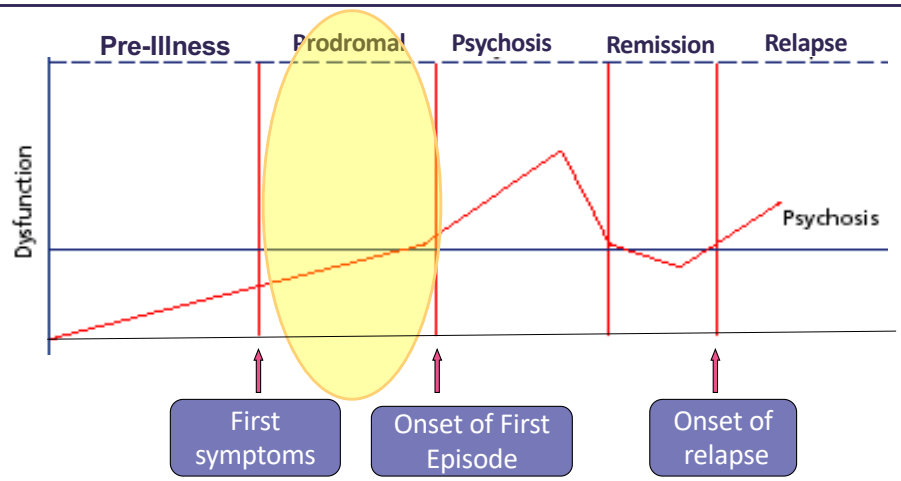
Traditional Strategy for Identifying, Studying and Treating Psychotic Disorders



Adapted from Knowles, 2004

Knowles, L., & Sharma, T. (2004). Identifying vulnerability markers in prodromal patients: a step in the right direction for schizophrenia prevention. *CNS spectrums*, *9*(8), 595–602. https://doi.org/10.1017/s1092852900002765

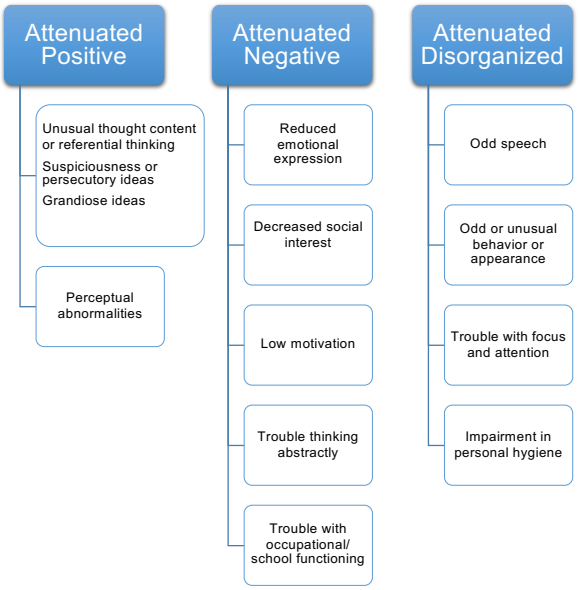
Clinical/Ultra High Risk Strategy for Identifying, Studying and Treating Psychotic Disorders



Adapted from Knowles, 2004

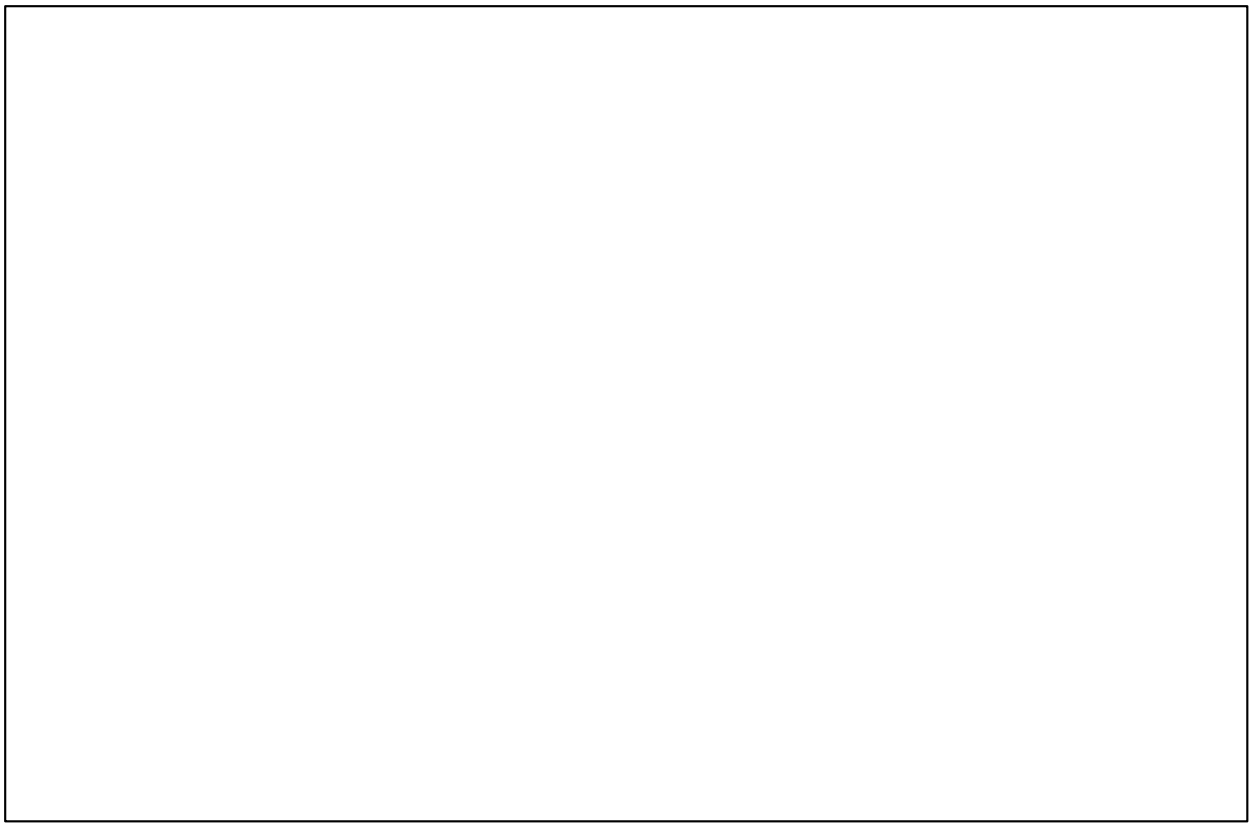
Knowles, L., & Sharma, T. (2004). Identifying vulnerability markers in prodromal patients: a step in the right direction for schizophrenia prevention. *CNS spectrums*, *9*(8), 595–602. https://doi.org/10.1017/s1092852900002765

Clinical High Risk Stage - Subthreshold (attenuated) Psychosis Symptoms



Features that Distinguish Subthreshold (attenuated) from Threshold Positive Symptoms

- Degree of conviction/meaning
- Degree of distress/bother
- Degree of interference with life (acting on, talking about, impairment from)
- Frequency, Duration, ("Amount" of) Preoccupation



Threshold v. Subthreshold Suspiciousness: Kyle

Kyle is a 14-year-old black male who endorsed "sometimes" feeling watched or singled out "anywhere". He explained, "If I'm outside…and its dark, I feel like people are just staring out the window, staring at me, people in the trees and stuff". He also reported feeling watched when he is inside his home, possibly by a ghost. He says he has never seen someone watching him, "I just feel it…it's like my heart starts racing, I get nervous and scared like somebody's about to grab me or something". He was unsure who or why somebody might want to hurt him or grab him, and isn't sure if it is real or just his imagination. When asked if this occurs mostly when he is alone or with others, he said, "It doesn't matter who I'm with" and that it happens during the day as well as at night.

He was unable to provide an age of onset, indicating that he has "always" felt this way, and feels watched every day. He indicated his bother by this experience at 8/10 and said "I think so" when asked if he feels this way moreso than others. He was not sure who might be watching him or why, and rated his conviction that it is real at 40%. When he feels watched inside his house, he reported, "Usually I like, try to go to my room and try to fall asleep or something…most of the time if I was scared and I fall asleep I have a bad dream".

Is Kyle's experience threshold suspiciousness (delusion), subthreshold suspiciousness, or not significant?

Kyle: Features that Distinguish Subthreshold (attenuated) from Threshold Positive Symptoms (Suspiciousness)

- Degree of conviction/meaning
- Degree of distress/bother
- Degree of interference with life (acting on, talking about, impairment from)
- Frequency, Duration, ("Amount" of) Preoccupation

Threshold v. Subthreshold Suspiciousness: Alana

Alana is a 22-year-old white female who endorsed feeling mistrustful or suspicious of others "a lot…all the time, every day…I just can't trust people. There's a lot of reasons". She reported that she feels that people, including people she knows and doesn't know well, are thinking about her negatively "all the time, everywhere I go." She said she isn't sure what they may be thinking, but that "for some reason when you hear mumbling or laughing you know it's about you". This experience began approximately one year ago, and bothers her "20 out of 10".

Alana also reported multiple instances, occurring several times a week beginning also about a year ago, in which she was convinced someone was following her. For example, she explained that one day, she saw the same "old lady" 5 different times in various places around the city, and explained that she was 100% sure that this woman was following her. When asked if it could have been a coincidence or a different person, Alana said, "No, it was her," further explaining believing that this woman, for whatever reason, wanted to see where she was taking her daughter. She said, "I called my mom and everything. I was scared. It was so upsetting that I saw her wherever I was going". She gave another example in which she saw an "old man" three different times in one day, and knew that he was following her.

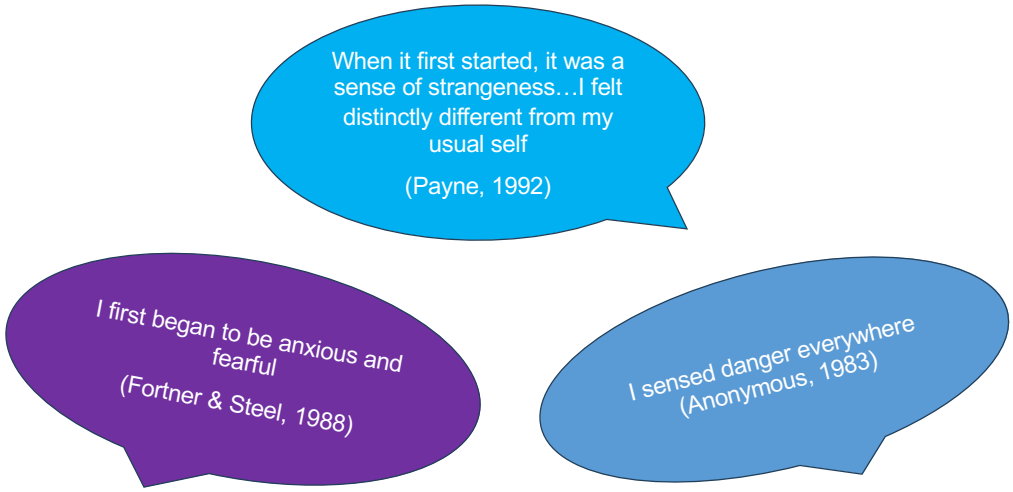
Due to these experiences, Alana has been staying at home unless she absolutely needs to go out for a medical appointment for her daughter or grocery shopping.

Is Alana experiencing threshold suspiciousness (delusion), subthreshold suspiciousness, or not significant?

Alana: Features that Distinguish Subthreshold (attenuated) from Threshold Positive Symptoms (Suspiciousness)

- Degree of conviction/meaning
- Degree of distress/bother
- Degree of interference with life (acting on, talking about, impairment from)
- Frequency, Duration, ("Amount" of) Preoccupation

Subthreshold/Attenuated Delusions: First Person Accounts of Symptom Onset (Stanton & David, 2018)



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Threshold v. Subthreshold Perceptual Experiences: Jenaya

Jenaya is a 17-year-old white female who experiences daily auditory hallucinations of voices conversing with each other for several hours. She described the voices, which she hears both "inside her head" and through her ears as being of people she did not know - they are "males and females, young and old", and were mostly critical, saying things like "Jenaya is stupid and won't ever amount to anything", "I know right, why does she even bother?" Every once in a while, a voice says something positive like "You can do it Jenaya!" Though occasionally muffled or unclear, typically she can hear them as clearly as she could hear the assessor.

At their first onset approximately 6 months ago, despite that the voices bothered Jenaya quite a bit, she was able to keep up with her schoolwork and socialize with her friends. However, within the past two months, the voices have been more frequent (most of her waking hours). She has had days where she says she is unable to get out of bed to go to school due to the constant clamoring around her, and she has been spending less and less time with her friends.

Is Jenaya's perceptual experience a threshold hallucination, subthreshold perceptual experience, or not significant?

Jenaya: Features that Distinguish Subthreshold (attenuated) from Threshold Positive Symptoms (Perceptual Experiences)

- Degree of conviction/meaning
- Degree of distress/bother
- Degree of interference with life (acting on, talking about, impairment from)
- Frequency, Duration, ("Amount" of) Preoccupation

Threshold v. Subthreshold Perceptual Experiences: Zuri

Zuri is a 25-year-old, black female who works full-time as a librarian. She has been under a lot of stress at work due to understaffing and she was pulling a lot of overtime. Zuri called the clinic because she was concerned about a “vision” she had been seeing of a “translucent woman, dressed in a gauzy blue dress, wearing a tiara”, when there was nothing there. Zuri explained that she knew the woman was not real because it did not appear “quite as solid” as a real person. This started about 6 months ago, at first only momentarily once or twice a week, but had recently begun happening 3-4 times a week, lasting for several minutes at a time. Zuri said that it could happen anywhere, in her house, at work, on the train, and at any time of the day or night. Per Zuri, she did not know the identity of the woman, who ”kind of just floats there” and “doesn’t really move or talk.” Zuri was very frightened by this experience, because “it looks almost real” and up until now was afraid to tell anyone about this experience. She was so afraid it might happen when with friends that over the past two weeks, she had been avoiding them. Other than that, she has had no change in functioning.

Is Zuri's perceptual experience a threshold hallucination, subthreshold perceptual experience, or not significant?

Zuri: Features that Distinguish Subthreshold (attenuated) from Threshold Positive Symptoms (Perceptual Experiences)

- Degree of conviction/meaning
- Degree of distress/bother
- Degree of interference with life (acting on, talking about, impairment from)
- Frequency, Duration, ("Amount" of) Preoccupation

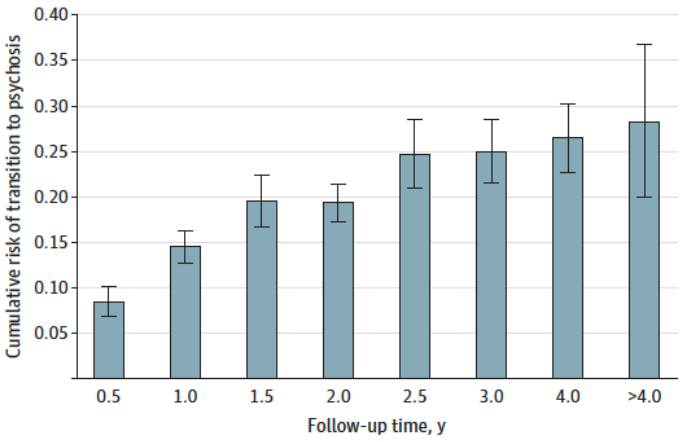
Probability of Transition to Psychosis in Individuals at Clinical High Risk
An Updated Meta-analysis

Gonzalo Salazar de Pablo, MD; Joaquim Radua, MD, PhD; Joana Pereira, MD; Ilaria Bonoldi, MD, PhD; Vincenzo Arienti, MD; Filippo Besana, MD; Livia Soardo, MD; Anna Cabras, MD; Lydia Fortea, MSc; Ana Catalan, MD, PhD; Julio Vaquerizo-Serrano, MD; Francesco Coronelli, MD; Simi Kaur, MSc; Josette Da Silva, MSc; Jae Il Shin, MD, PhD; Marco Solmi, MD, PhD; Natascia Brondino, MD, PhD; Pierluigi Politi, MD, PhD; Philip McGuire, MB ChB, MD, PhD; Paolo Fusar-Poli, MD, PhD

JAMA Psychiatry. 2021;78(9):970-978.

k=130 (n=9,222)

Figure 2. Meta-analytic Cumulative Risk of Transition to Psychosis in Individuals at Clinical High Risk for Psychosis



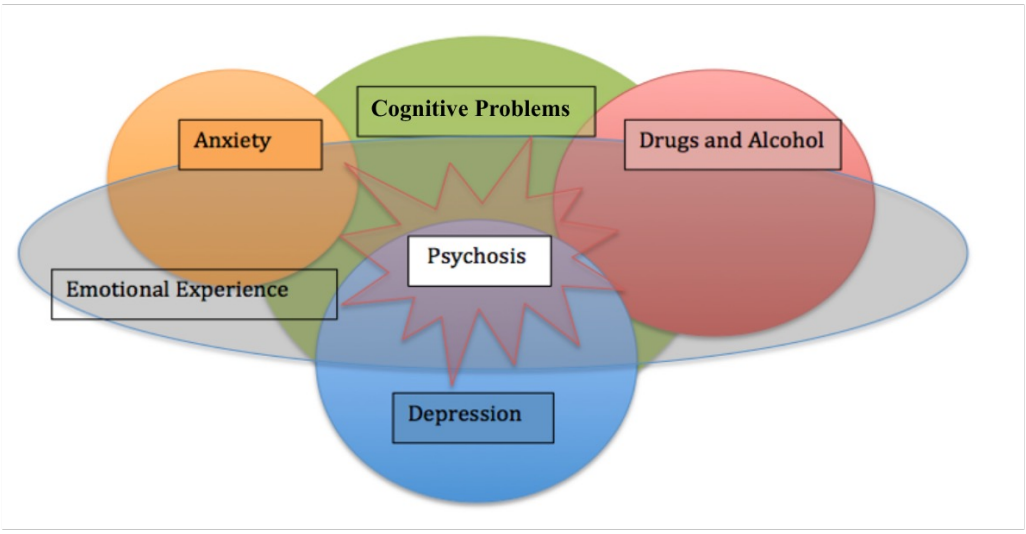
Error bars indicate 95% CIs.

Salazar de Pablo, G., Radua, J., Pereira, J., Bonoldi, I., Arienti, V., Besana, F., Soardo, L., Cabras, A., Fortea, L., Catalan, A., Vaquerizo-Serrano, J., Coronelli, F., Kaur, S., Da Silva, J., Shin, J. I., Solmi, M., Brondino, N., Politi, P., McGuire, P., & Fusar-Poli, P. (2021). Probability of Transition to Psychosis in Individuals at Clinical High Risk: An Updated Meta-analysis. *JAMA psychiatry*, *78*(9), 970–978. https://doi.org/10.1001/jamapsychiatry.2021.0830

Psychosis Spectrum Symptoms in Adolescents

- Population based studies of children and adolescents
  - Rates of psychotic-like experiences (Kelleher et al. 2012 meta-analysis)
    - 17% of children age 9-12 years
    - 5-7% of adolescents age 13-18
  - Symptoms may be transient in most children
  - Evolution into persistent or worsening symptoms appear influenced or moderated by:
    - Severity of symptoms
    - Comorbid depression, anxiety, substance use
    - Traumatic or stressful experiences
    - Socio-economic disadvantages
    - Race
    - Genetic family history of psychotic disorders
- Emphasizes importance of early screening and intervention

Common Challenges Associated With Early Psychosis



Cannabis Use and Psychosis

Growing legalization of cannabis across the U.S., in addition to frequent use by individuals with psychosis, has led to many questions and concerns about the impacts:

- THC in cannabis can cause brief psychosis
- Individuals exposed to cannabis in adolescence are 2-4 X more likely to develop PS disorder than non-exposed
  - OFC not everyone exposed develops psychosis and not everyone with psychosis was exposed
- RECOMMENDATION – consider avoiding or delaying cannabis use until after age of typical psychosis expression/onset (at least 25 y.o.)
- Greater frequency and duration, earlier first use, higher potency THC = increased psychosis risk
- Risk for scz spectrum disorders greatest with cannabis, though other substances (amphetamines, hallucinogens, opioids, sedatives) also increase risk

STEP

Fact Sheet: Cannabis and Psychosis

What is Your Marijuana IQ?

How much do you really want to know about the risks of marijuana? You might be surprised.

Take the Quiz

www.samhsa.gov/marijuana

Cannabis use after the onset of psychosis is associated with:

- More non-adherence to treatment
- More relapses
- More hospitalizations
- More legal problems
- More ER visits
- More homelessness

- In regard to the self-medication hypothesis, cannabis use may result in a very temporary reduction in distress associated with psychotic symptoms, however, cannabis use makes symptoms of psychosis worse in the moment and over the long-term

- www.samhsa.gov/marijuana

Attention Deficit Hyperactivity Disorder

- Typical age of onset of ADHD is 12, with behavioral symptoms occurring in early childhood, often extending into adolescence and sometimes into adulthood.
- Attentional deficits are very common in psychotic illness and often appear prior to syndromal onset.
  - They appear to be part of the earliest manifestation of the prodrome, and so individuals who later develop psychosis may have been earlier diagnosed with ADHD (based on the symptom presentation in childhood).
  - Individuals with schizophrenia show higher rates of prior ADHD diagnosis retrospectively.
- Individuals with ADHD carry an elevated rate of developing psychiatric comorbidities, including psychosis, through the lifespan.

Comorbidity of Anxiety and Psychosis

- Anxiety disorder are prevalent in youth with clinical high risk symptoms, ranging from 24-53%
- One of the most common comorbidities to present with for youth with CHR and can initially be as distressing as PS symptoms
- Psychotic symptoms for youth with FEP can be quite anxiety producing

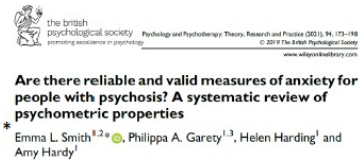
Comorbidity of Mood Disorders and Psychosis

- Mood disorders are highly comorbid with CHR (range 40-60% lifetime prevalence of depressive disorders; approximately 7% lifetime prevalence of bipolar disorders)
- Differential diagnosis of mood disorders and CHR symptoms can be complex, as some symptoms are present in both or can be easily confused for each other.
- Attenuated negative symptoms are phenomenologically similar to symptoms of depression. Can be helpful to inquire about whether the individual feels "sad or down", which is more consistent with depression, or conversely "dull", "flat", or "no emotions at all" commensurate with a restricted range of emotional experience, and potentially other negative symptoms.
- Calgary Depression Scale for Schizophrenia (CDSS) - designed to address construct overlap of negative symptoms and depression in individuals with schizophrenia, appears to be a reliable instrument for assessing depression in youth with CHR (Addington, Shah, et al., 2014).

Addington J, Shah H, Liu L, Addington D. Reliability and validity of the Calgary Depression Scale for Schizophrenia (CDSS) in youth at clinical high risk for psychosis. Schizophr Res. 2014 Mar;153(1-3):64-7. doi: 10.1016/j.schres.2013.12.014. Epub 2014 Jan 16. PMID: 24439270; PMCID: PMC3982913.

Comorbidity of Obsessive Compulsive Disorder and Psychosis

- The obsessional spectrum can overlap phenomenologically with psychosis (especially poor insight OCD)
- But, OCD and psychosis/CHR can also be comorbid
  - Prevalence of comorbid OCD and psychotic disorder = 12%
  - OCS are frequently present in psychosis spectrum disorders (5-30%)
  - OCS may occur during the CHR state preceding a first episode of psychosis and anytime during the course of schizophrenia
  - Co-occurrence associated with more severe symptoms and poorer outcomes
- To assess
  - Assessment tools may help elaborate
  - Questions about content of thoughts/beliefs, emotional reactions (fear/distress) and subjective appraisal of controllability *may not be* fruitful
  - Degree of conviction (e.g., doubt in generally feared outcome, or about consequences if does not perform ritual; recognition of irrationality) *may help* (but not foolproof)
  - Repetitive intrusive thoughts that could be a "voice" - Ask: whose voice? can you hear it as clearly as you hear me?
  - Obsessional/delusional content – is there a link to any compulsive behavior/thinking? (again, not foolproof)
  - Work around - assess for psychosis spectrum symptoms that have less overlap with OCD (e.g., visual/olfactory/tactile hallucinations; grandiose delusions; bizarre delusions)
  - Again, time will tell…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Psychology and Psychotherapy: Theory, Research and Practice (2021), 94, 173–198
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Are there reliable and valid measures of anxiety for people with psychosis? A systematic review of psychometric properties

Emma L. Smith[1,2*], Philippa A. Garety[1,3], Helen Harding[1] and Amy Hardy[1]

- Smith, E. L., Garety, P. A., Harding, H., & Hardy, A. (2021). Are there reliable and valid measures of anxiety for people with psychosis? A systematic review of psychometric properties. *Psychology and psychotherapy*, *94*(1), 173–198. https://doi.org/10.1111/papt.12265

Traumatic Stress Exposure, Post-Traumatic Stress Disorder, and Psychosis

- Traumatic experiences are highly common in individuals with psychosis and those at-risk
- Traumatic experiences can predate onset of clinical high risk symptoms
- Experiencing trauma especially in childhood is associated with numerous negative outcomes, including greater severity of PS symptoms, lower global functioning, higher levels of other symptoms including depression and general/affective symptoms
- There can be substantial confusion between independent psychotic disorders and PTSD, with underidentification of psychotic disorders, which can also be precipitated by trauma.

Autism spectrum disorder and schizophrenia: An updated conceptual review Amandeep Jutla[1,2] | Jennifer Foss-Feig[3] | Jeremy Veenstra-VanderWeele[1,2,4] *Autism Research.* 2022;15:384–412.

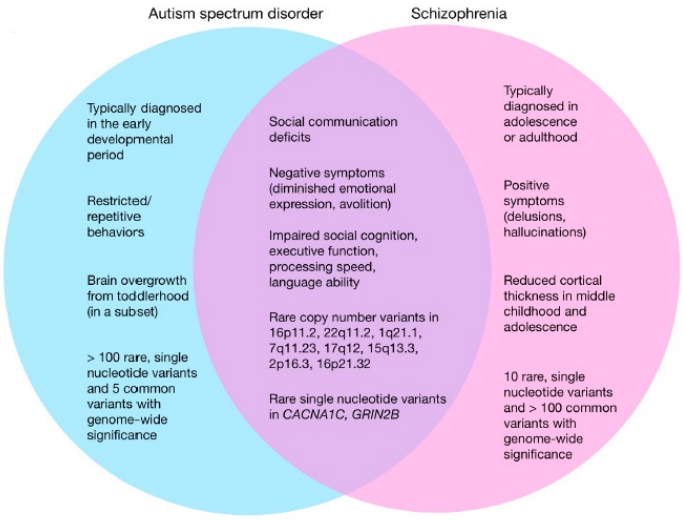


FIGURE 2 Convergent and divergent features across autism spectrum disorder and schizophrenia

- ASD and Psychosis can be comorbid: ~30% of people with ASD experience psychosis
- Developmental history is KEY
- Recommend that individuals with a history of ASD and recent onset psychosis spectrum symptoms have specialty psychosis evaluation

Jutla, A., Foss-Feig, J., & Veenstra-VanderWeele, J. (2022). Autism spectrum disorder and schizophrenia: An updated conceptual review. *Autism research : official journal of the International Society for Autism Research*, *15*(3), 384–412. https://doi.org/10.1002/aur.2659

Pluripotential Risk and Clinical Staging: Theoretical Considerations and Preliminary Data From a Transdiagnostic Risk Identification Approach

frontiers in Psychiatry
January 2021 | Volume 11 | Article 553578

Jessica A. Hartmann[1,2], Patrick D. McGorry[1,2], Louise Destree[3], G. Paul Amminger[1,2], Andrew M. Chanen[1,2], Christopher G. Davey[1,2,4], Rachid Ghieh[1,2], Andrea Polari[1,2], Aswin Ratheesh[1,2], Hok Pan Yuen[1,2] and Barnaby Nelson[1,2]*

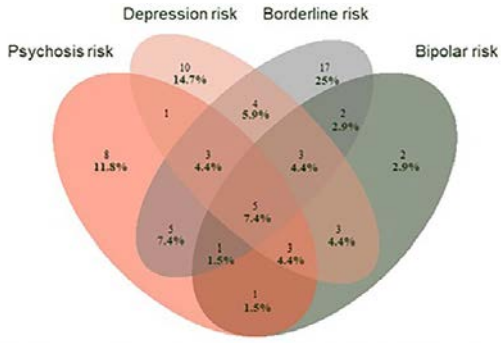


FIGURE 1 | Venn Diagram showing the extent of overlap of the four at-risk groups at baseline for those that meet CHARMS criteria (N = 68) at baseline.

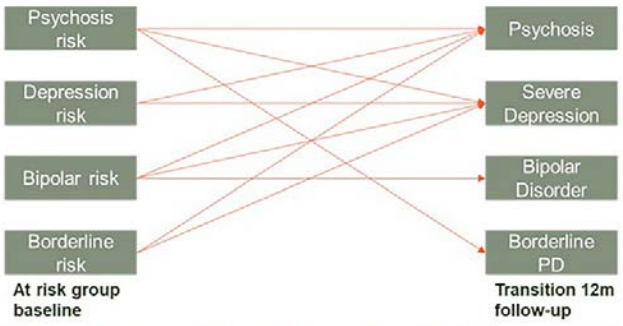


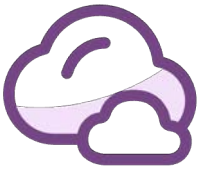
FIGURE 2 | Observed homotypic and heterotypic continuity from baseline to 12-months follow-up in those meeting CHARMS criteria. Young people can meet for multiple at risk groups.

- Broadens identification of risk beyond psychosis
- Pluripotent = several possible inputs and outputs
- Dynamic, developmental process

- Allows for overlapping (i.e., not separating into diagnostic silos) and heterotypic trajectories (i.e., encompasses multiple "exit" syndromes)

Hartmann, J. A., McGorry, P. D., Destree, L., Amminger, G. P., Chanen, A. M., Davey, C. G., Ghieh, R., Polari, A., Ratheesh, A., Yuen, H. P., & Nelson, B. (2021). Pluripotential Risk and Clinical Staging: Theoretical Considerations and Preliminary Data From a Transdiagnostic Risk Identification Approach. *Frontiers in psychiatry*, *11*, 553578. https://doi.org/10.3389/fpsyt.2020.553578

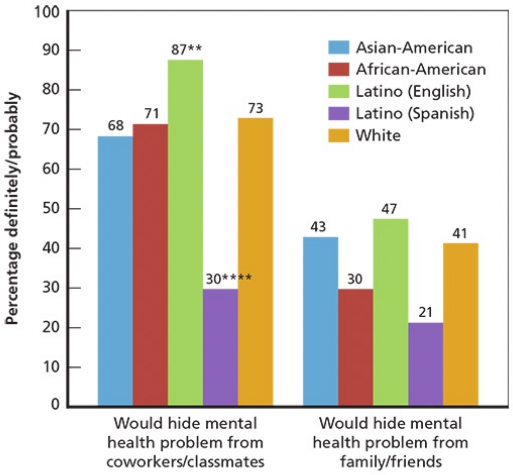

What are some barriers young people experience in seeking mental health care for early psychosis?



What are some barriers young people experience in seeking mental health care for early psychosis?

Some Barriers to Help Seeking

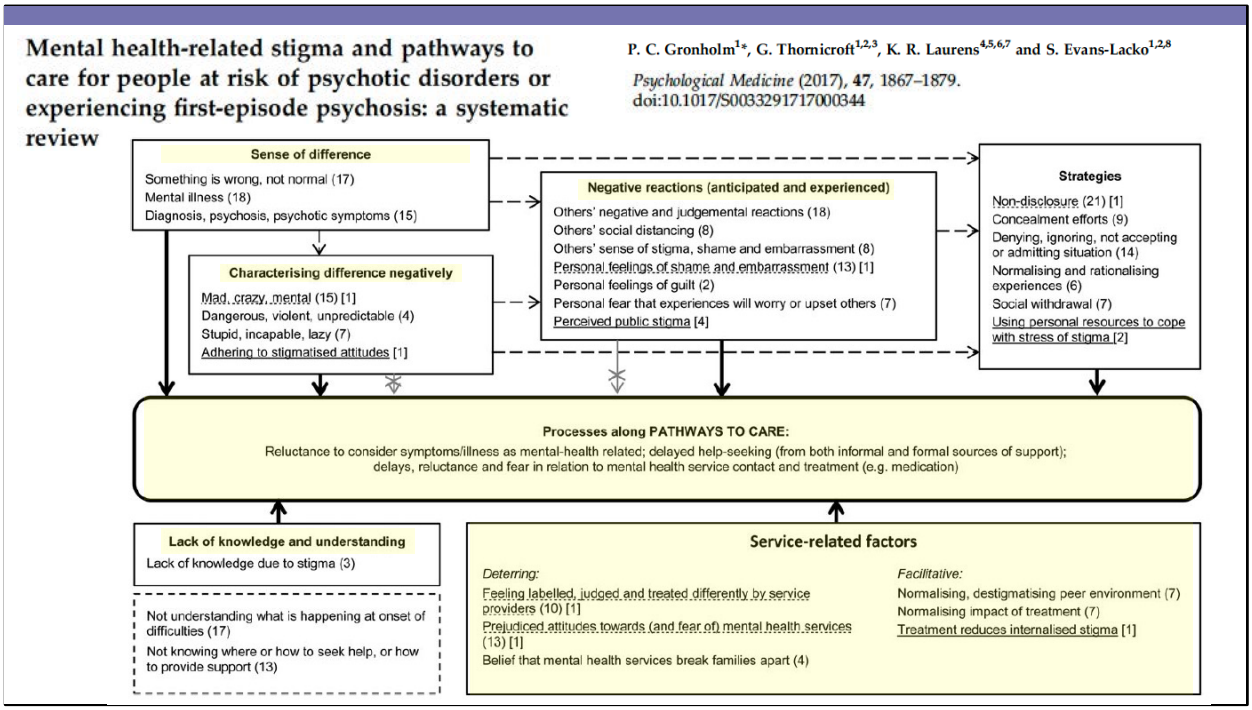
- Access to accurate information - about psychosis symptoms and treatment
- Stigma and cultural factors=> Fear/shame
  - Parents/Family
  - Peers
- Financial factors
- Lack of universal screening…



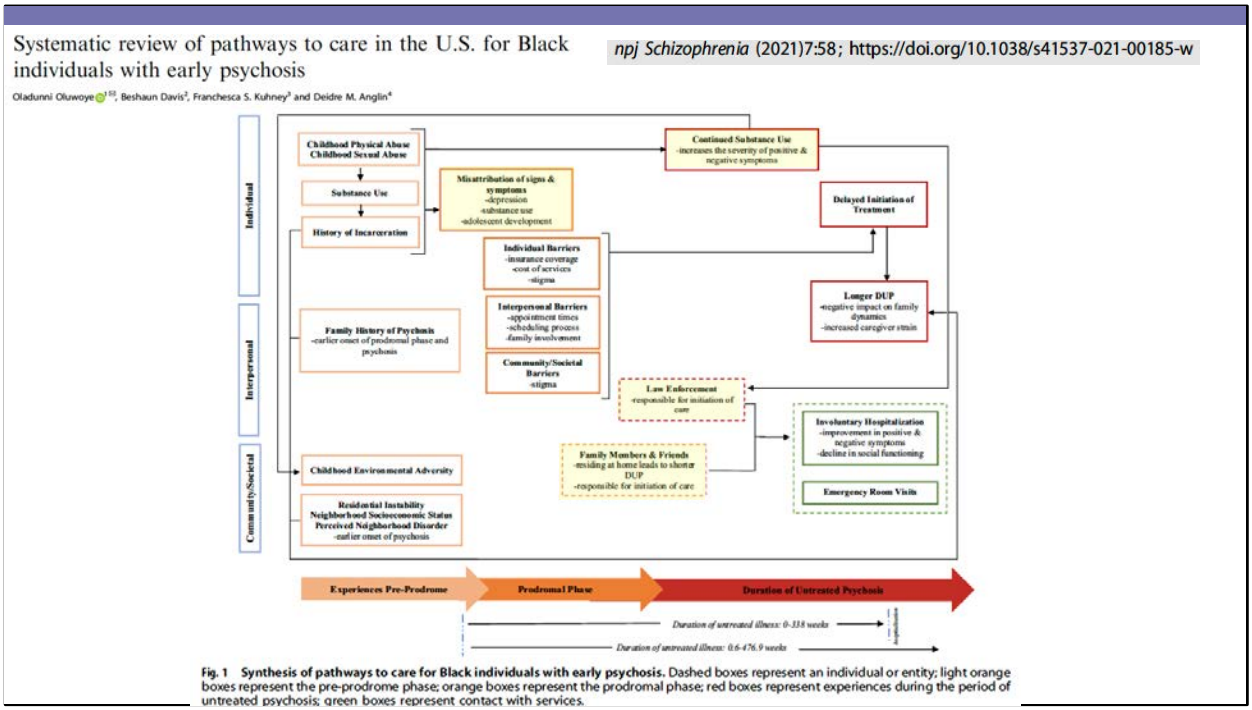
NOTE: Significant differences relative to whites are indicated by ** $p < 0.01$; **** $p < 0.0001$.

RAND Health Quarterly, 2016; 6(2):6

https://www.rand.org/pubs/periodicals/health-quarterly/issues/v6/n2/06.html



Gronholm, P., Thornicroft, G., Laurens, K., & Evans-Lacko, S. (2017). Mental health-related stigma and pathways to care for people at risk of psychotic disorders or experiencing first-episode psychosis: A systematic review. *Psychological Medicine, 47*(11), 1867-1879. doi:10.1017/S0033291717000344



Oluwoye, O., Davis, B., Kuhney, F.S. *et al.* Systematic review of pathways to care in the U.S. for Black individuals with early psychosis. *npj Schizophr* **7**, 58 (2021). https://doi.org/10.1038/s41537-021-00185-w

The Horror of Stigma: Psychosis and Mental Health Care Environments in Twenty-First-Century Horror Film (Part II)

John Goodwin, MA, BA, ALCM, BSc (Hons), RPN

Perspectives in Psychiatric Care **50** (2014) 224–234

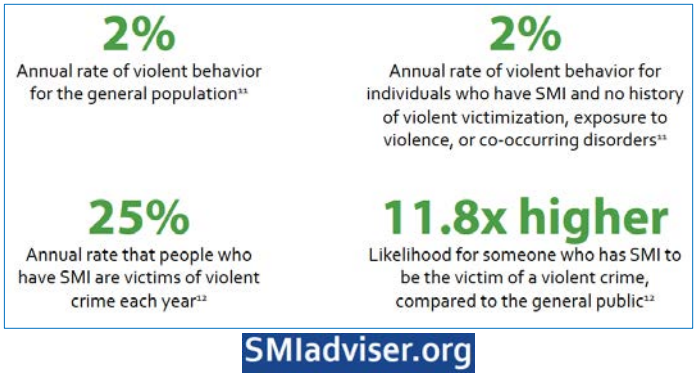
Analysis of Films (from 2000 to 2012) Featuring Psychosis (n=33):
79% portrayed as "homicidal maniac"

- Not only reinforce/perpetuate stereotypes about violence but also induce fear (prejudice)
- Other stereotypes:
  - Treatment/mental health facilities
  - Secret/mystery
  - Conflation of DID/Schizophrenia

Goodwin J. (2014). The horror of stigma: psychosis and mental health care environments in twenty-first-century horror film (part I). *Perspectives in psychiatric care*, *50*(3), 201–209. https://doi.org/10.1111/ppc.12045

FACTS to Dispel Stigma and Fear: Relationship Between Mental Disorders and Violence

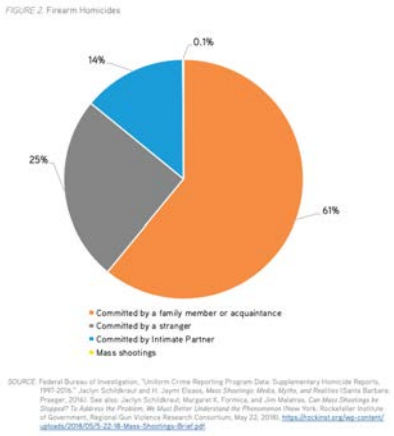
- The contribution of people with mental illnesses to overall rates of violence is small (~2%)
- Little evidence that individuals with mental illness have more access to carry or unsafely store guns than individuals without mental illness



https://smicaladviser.org/wp-content/uploads/2024/01/SMI-Adviser-Myth-vs-Fact-Infographic-CHARACTER.pdf

FACTS: Mass shootings

- Mass shootings are relatively rare (but disproportionately depicted in the media), gun violence of other types is much more common
- 95% of mass shootings are committed by people WITHOUT serious mental disorders

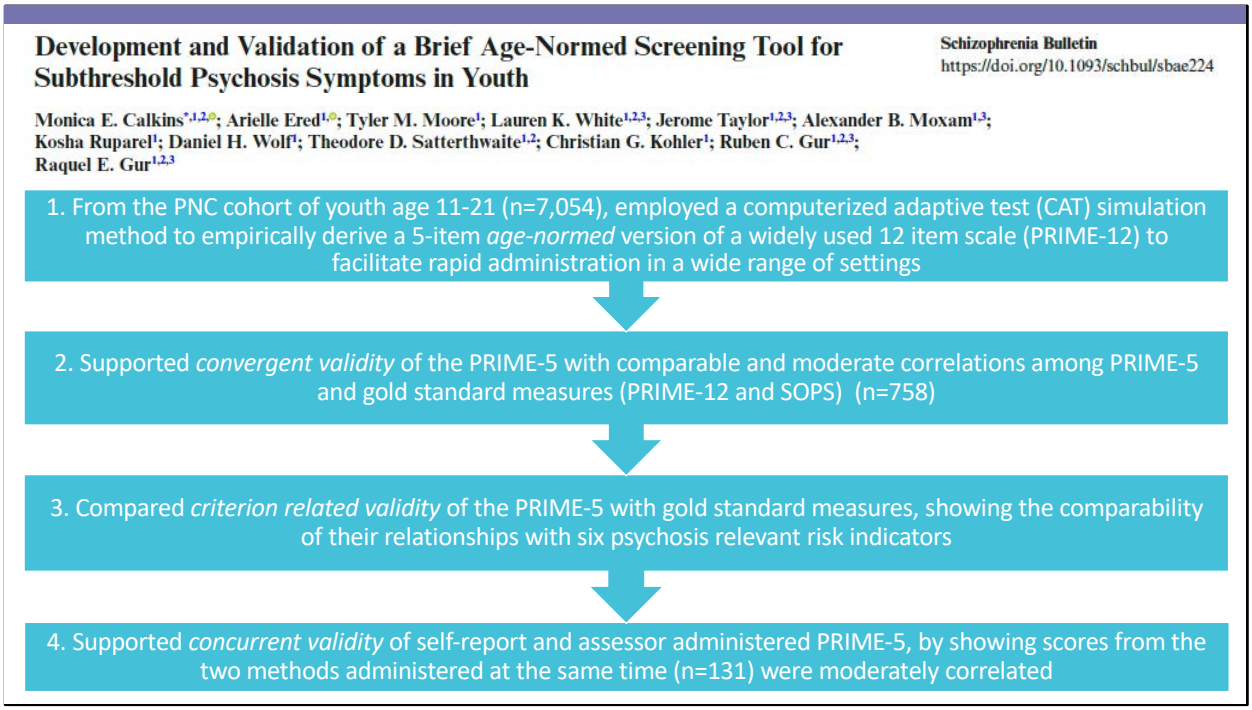


Michael Siegel
Claire Boine
March 29, 2019

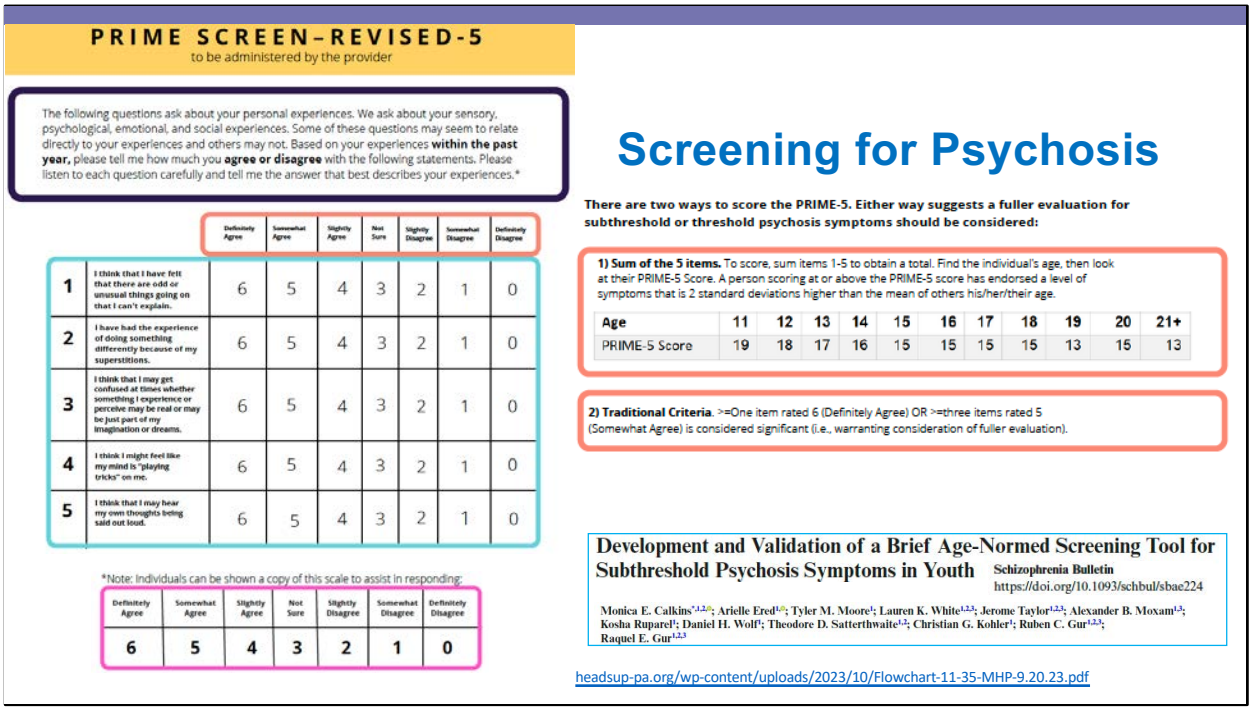
https://rockinst.org/wp-content/uploads/2019/03/3-28-19-Firearm-Laws-Homicide-Deaths-Brief.pdf

Psychosis Spectrum (PS) Screening: Challenges

- Mental health professionals perceive barriers in screening/identifying PS symptoms in adolescents/young adults:
  - Little normative/base rate data – Is this just a "normal" experience? Is this just an "adaptive" response to circumstances?
  - Comorbidities - Is this just "due to/manifestation" of [other thing]? (esp. substances)
  - Limited collateral informant (parent) knowledge of subthreshold positive symptoms
  - Stigma and fear
- More than 65% of youth experiencing persistent PS symptoms report previously talking to a medical professional or some other professional about their thoughts, feelings or behaviors…. *But not necessarily about these symptoms.*
- Mental health professionals have access to a *critical window of opportunity* to screen for psychosis spectrum symptoms and connect a young person with appropriate clinical care.
  - Especially important for individuals who have historically been underserved in traditional community care for psychosis: Black and indigenous people of color, Asian and Latinx populations, LGBTQ+



Monica E Calkins, Arielle Ered, Tyler M Moore, Lauren K White, Jerome Taylor, Alexander B Moxam, Kosha Ruparel, Daniel H Wolf, Theodore D Satterthwaite, Christian G Kohler, Ruben C Gur, Raquel E Gur, Development and Validation of a Brief Age-Normed Screening Tool for Subthreshold Psychosis Symptoms in Youth, *Schizophrenia Bulletin*, Volume 51, Issue 5, September 2025, Pages 1242–1253, https://doi.org/10.1093/schbul/sbae224



PRIME SCREEN-REVISED-5

to be administered by the provider

The following questions ask about your personal experiences. We ask about your sensory, psychological, emotional, and social experiences. Some of these questions may seem to relate directly to your experiences and others may not. Based on your experiences **within the past year,** please tell me how much you **agree or disagree** with the following statements. Please listen to each question carefully and tell me the answer that best describes your experiences.*

		Definitely Agree	Somewhat Agree	Slightly Agree	Not Sure	Slightly Disagree	Somewhat Disagree	Definitely Disagree
1	I think that I have felt that there are odd or unusual things going on that I can't explain.	6	5	4	3	2	1	0
2	I have had the experience of doing something differently because of my superstitions.	6	5	4	3	2	1	0
3	I think that I may get confused at times whether something I experience or perceive may be real or may be just part of my imagination or dreams.	6	5	4	3	2	1	0
4	I think I might feel like my mind is "playing tricks" on me.	6	5	4	3	2	1	0
5	I think that I may hear my own thoughts being said out loud.	6	5	4	3	2	1	0

*Note: Individuals can be shown a copy of this scale to assist in responding:

Definitely Agree	Somewhat Agree	Slightly Agree	Not Sure	Slightly Disagree	Somewhat Disagree	Definitely Disagree
6	5	4	3	2	1	0

Screening for Psychosis

There are two ways to score the PRIME-5. Either way suggests a fuller evaluation for subthreshold or threshold psychosis symptoms should be considered:

1) Sum of the 5 items. To score, sum items 1-5 to obtain a total. Find the individual's age, then look at their PRIME-5 Score. A person scoring at or above the PRIME-5 score has endorsed a level of symptoms that is 2 standard deviations higher than the mean of others his/her/their age.

Age	11	12	13	14	15	16	17	18	19	20	21+
PRIME-5 Score	19	18	17	16	15	15	15	15	13	15	13

2) Traditional Criteria. >=One item rated 6 (Definitely Agree) OR >=three items rated 5 (Somewhat Agree) is considered significant (i.e., warranting consideration of fuller evaluation).

Development and Validation of a Brief Age-Normed Screening Tool for Subthreshold Psychosis Symptoms in Youth

Schizophrenia Bulletin
https://doi.org/10.1093/schbul/sbae224

Monica E. Calkins[*,1,2,6]; Arielle Ered[1,6]; Tyler M. Moore[1]; Lauren K. White[1,2,3]; Jerome Taylor[1,2,3]; Alexander B. Moxam[1,3]; Kosha Ruparel[1]; Daniel H. Wolf[1]; Theodore D. Satterthwaite[1,3]; Christian G. Kohler[1]; Ruben C. Gur[1,2,3]; Raquel E. Gur[1,2,3]

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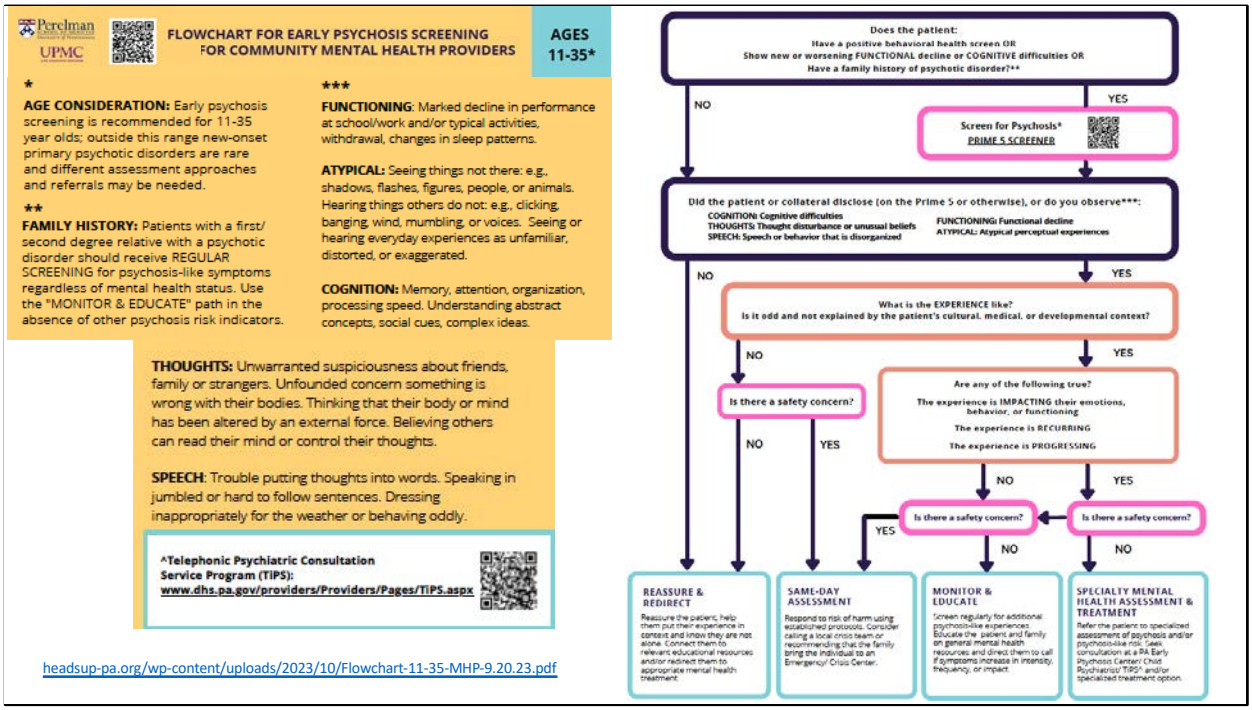

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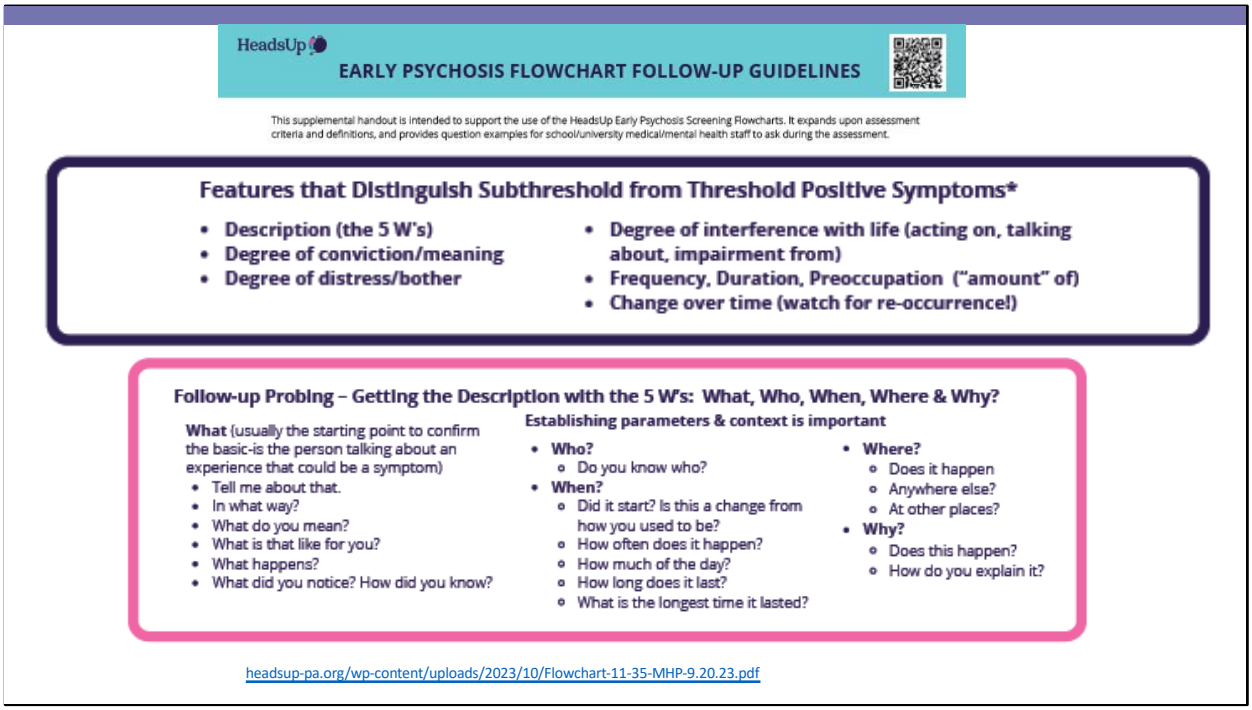

HeadsUp

EARLY PSYCHOSIS FLOWCHART FOLLOW-UP GUIDELINES

This supplemental handout is intended to support the use of the HeadsUp Early Psychosis Screening Flowcharts. It expands upon assessment criteria and definitions, and provides question examples for school/university medical/mental health staff to ask during the assessment.

Features that Distinguish Subthreshold from Threshold Positive Symptoms*

- **Description (the 5 W's)**
- **Degree of conviction/meaning**
- **Degree of distress/bother**
- **Degree of interference with life (acting on, talking about, impairment from)**
- **Frequency, Duration, Preoccupation ("amount" of)**
- **Change over time (watch for re-occurrence!)**

Follow-up Probing – Getting the Description with the 5 W's: What, Who, When, Where & Why?

What (usually the starting point to confirm the basic-is the person talking about an experience that could be a symptom)

- Tell me about that.
- In what way?
- What do you mean?
- What is that like for you?
- What happens?
- What did you notice? How did you know?

Establishing parameters & context is important

- **Who?**
  - Do you know who?
- **When?**
  - Did it start? Is this a change from how you used to be?
  - How often does it happen?
  - How much of the day?
  - How long does it last?
  - What is the longest time it lasted?
- **Where?**
  - Does it happen
  - Anywhere else?
  - At other places?
- **Why?**
  - Does this happen?
  - How do you explain it?

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Added from slides used for CAPS presentation

Follow-Up Probing to Positive Responses

Interviewing for Psychosis – Establishing the Threshold

Degree of conviction/meaning (delusions and hallucinations have compelling sense of reality)

- Do you think this is real? How convinced are you/how real does it seem on a scale of 0-100, where 100 is 100% convinced it is real, 0 is not at all convinced?
- How do you explain it?
- Do you ever think it could just be your imagination?
- For perceptual experiences: Can you hear/see it as clearly as you can hear/see me? Can you make out what it is? Are you awake at the time?

Degree of interference with life (acting on, talking about, impairment from)

- Do you ever act on this thought/experience?
- Does having this thought/experience ever cause you to do anything differently?
- Does this bother you?
- How much does it bother you, on a scale of 0-10 where 0 is 'no bother', and 10 is 'extremely serious bother'?

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Follow-Up Probing to Positive Responses

Interviewing for Psychosis: "Reality" Checks

External corroboration – from a collateral, but also through probing:

Delusions

- **General:** Have you talked to anyone about this? What did they say? Do other people notice this?
- **Somatic:** Have you talked to a doctor about this? What did they say?
- **Persecutory:** "bullying" at school: Did you talk to a teacher/principal about this? What did they say? Did the person get in any kind of trouble for it?
- **Persecutory:** wary of surroundings/safety: Do you think you need to be more alert/aware than others of your (age/sex/race)? Do you know other kids your age?
- **Religious:** Were you raised with these beliefs? Do you believe them more strongly than others (family/members of religious org) of your faith? (or Are others as devout as you?)
- **Grandiose:** Have you received any awards or special recognition for this? Are there other people out there as good as you in this?

Hallucinations

- Is anyone else around when you hear (see, etc) it?
- If so, do they hear it too? If not, have you told others about it? Who did you tell? What did they say?
- Do you hear/see it now?
- Auditory visual – (e.g., ringing in ears, "floaters" in vision) – did you talk to a doctor?

No one question/answer will nail it - looking for indicators of significance. Note that if current/past substance use – relationship of symptom to use should also be asked – Did this happen when you were not (high/drunk)?

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Psychosis Screening: Shawna (age 17)

- Shawna is a 17-year-old Black Hispanic female high school student, referred to her current therapist about a year ago for depressed mood and anxiety.
- Over the past 6 months, Shawna has reported trouble "thinking clearly" and "not feeling in control of my thoughts", and her grades have been dropping. Previously very social, she has not been reaching out to friends, instead waiting for them to reach out to her, and sometimes does not answer their texts for days. When asked why, she usually says "I don't know, I just don't feel like it."
- Shawna has no known medical challenges, and denies use of substances.
- Noting Shawna's functional decline, her therapist asks her to complete a PRIME-5.

Psychosis Screening: Shawna (age 17)

		Definitely Agree	Somewhat Agree	Slightly Agree	Not Sure	Slightly Disagree	Somewhat Disagree	Definitely Disagree
1	I think that I have felt that there are odd or unusual things going on that I can't explain.	(6)	5	4	3	2	1	0
2	I have had the experience of doing something differently because of my superstitions.	6	5	4	3	2	1	(0)
3	I think that I may get confused at times whether something I experience or perceive may be real or may be just part of my imagination or dreams.	6	(5)	4	3	2	1	0
4	I think I might feel like my mind is "playing tricks" on me.	6	(5)	4	3	2	1	0
5	I think that I may hear my own thoughts being said out loud.	6	5	4	3	2	(1)	0

There are **2 ways** to score the PRIME-5. Either way suggests a fuller evaluation for subthreshold or threshold psychosis symptoms should be considered:

1) Sum of the 5 items. To score, sum items 1-5 to obtain a total. Find the individual's age, then look at their PRIME-5 Score. A person scoring at or above the PRIME-5 score has endorsed a level of symptoms that is 2 standard deviations higher than the mean of others his/her/their age.

Age	11	12	13	14	15	16	17	18	19	20	21+
PRIME-5 Score	19	18	17	16	15	15	15	15	13	15	13

OR

2) Traditional Criteria. >=One item rated 6 (Definitely Agree) OR >=three items rated 5 (Somewhat Agree) is considered significant (i.e., warranting consideration of fuller evaluation).

Is this a significant result on the PRIME-5?

Is Shawna's score a significant result on the PRIME-5?

Psychosis Screening: Shawna (age 17)

		Definitely Agree	Somewhat Agree	Slightly Agree	Not Sure	Slightly Disagree	Somewhat Disagree	Definitely Disagree
1	I think that I have felt that there are odd or unusual things going on that I can't explain.	(6)	5	4	3	2	1	0
2	I have had the experience of doing something differently because of my superstitions.	6	5	4	3	2	1	(0)
3	I think that I may get confused at times whether something I experience or perceive may be real or may be just part of my imagination or dreams.	6	(5)	4	3	2	1	0
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1) Sum of the 5 items. To score, sum items 1-5 to obtain a total. Find the individual's age, then look at their PRIME-5 Score. A person scoring at or above the PRIME-5 score has endorsed a level of symptoms that is 2 standard deviations higher than the mean of others his/her/their age.

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PRIME-5 Score	19	18	17	16	15	15	15	15	13	15	13

OR

2) Traditional Criteria. >=One item rated 6 (Definitely Agree) OR >=three items rated 5 (Somewhat Agree) is considered significant (i.e., warranting consideration of fuller evaluation).

- **Shawna's total Score = 17, which is greater than 15 (the significant PRIME-5 score for her age of 17)**
- **One item rated 6 (Definitely Agree)**

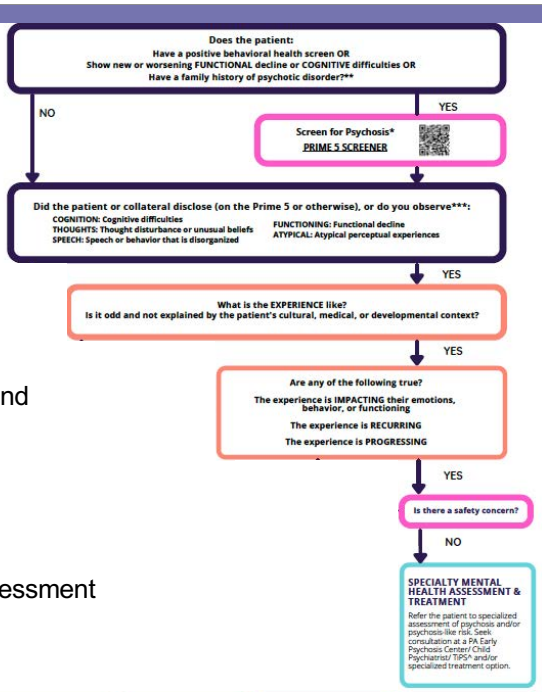
Significant

Psychosis Screening: Shawna (age 17)

Brief follow-up probing about Shawna's experiences revealed that beginning about 6 months ago, she has felt that she is not in control of her own ideas or thoughts (with "99%" conviction). She likened the experience to the SIMS computer game, in which the player manipulates the actions of characters. She explained that in the game, you can assign and "cancel" a character's actions, and she related this to ongoing circumstances in her own life. For example, when she is going up the stairs and then suddenly forgets why she was going up the stairs, it seems that someone or something has "cancelled" her thoughts and is controlling her mind and body. She wasn't sure WHO or WHY or HOW, but has "wondered" if it was aliens, who may also be watching her. Things like this, where she is feeling controlled or "cancelled", are happening nearly every day, and can happen anyWHERE. It is very frightening for her, and she has been spending several hours a day trying to figure out how to keep "them" from cancelling her thoughts, leading her to spend little time on her schoolwork and with friends. She says she has been afraid to talk to anyone about this, including her parents, because she thought they would think she is "crazy", and expressed relief about talking about it now. Shawna denies thoughts of hurting herself or others.

Psychosis Screening: Shawna (age 17)

- PRIME-5 screen significant plus functional decline
- Not explained by these factors.
- Impacts her emotions, behavior and functioning. Is progressing.
- No safety concern.
- Consider referral to specialty assessment and treatment.



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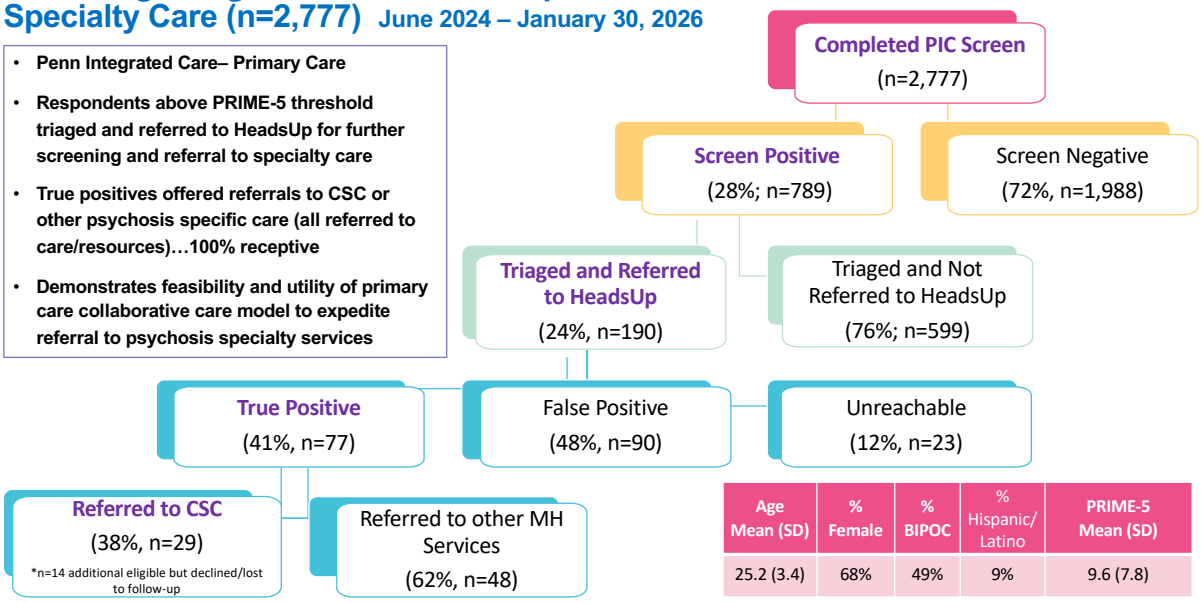
Screening for Psychosis: Other Screening Tools

Measure	Acronym	Authors	Year	N Items
PROD-Screen	PROD-Screen	Heidmann et al.	2003	21
PRIME Screen-Revised	PS-R	Miller et al.	2004	12
Early Recognition Inventory	ERIraos	Hafner et al.	2004	17
Youth Psychosis At-Risk Questionnaire-Brief	YPARQ-B	Ord etl.	2004	28
Prodromal Questionnaire	PQ	Loewy et al.	2005	92
Eppendorf Schizophrenia Inventory	ESI	Niessen et al.	2010	40
Prodromal Questionnaire - Brief	PQ-B	Loewy et al.	2011	21
Early Detection Primary Care Checklist	PCCL	French et al.	2012	20, 6
Community Assessment of Psychic Experiences	CAPE	Mossaheb et al.	2012	42
Prodromal Questionnaire – Brief - Child	PQ-B-C	Karcher et al.	2018	21
Early Psychosis Screener for Internet - SR	EPSI-SR	Brodey et al.	2019	124
PRIME-5	PRIME-5	Calkins et al.	2025	5

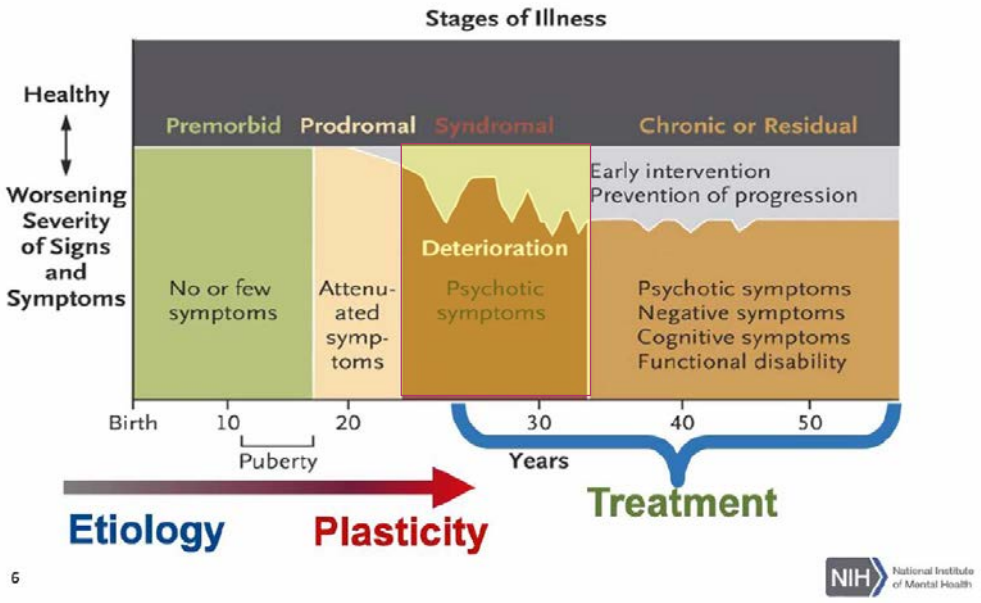
A Collaborative Care Model Integrated Within Primary Care for Early Psychosis Screening, Triage, and Referral to Improve Patient Access to Resources and Specialty Care (n=2,777) June 2024 – January 30, 2026

- **Penn Integrated Care– Primary Care**
- **Respondents above PRIME-5 threshold triaged and referred to HeadsUp for further screening and referral to specialty care**
- **True positives offered referrals to CSC or other psychosis specific care (all referred to care/resources)…100% receptive**
- **Demonstrates feasibility and utility of primary care collaborative care model to expedite referral to psychosis specialty services**



Age Mean (SD)	% Female	% BIPOC	% Hispanic/ Latino	PRIME-5 Mean (SD)
25.2 (3.4)	68%	49%	9%	9.6 (7.8)

Earliest identification possible a primary goal, but we also must continue to improve access and success of early interventions for the first-episode psychosis stage.



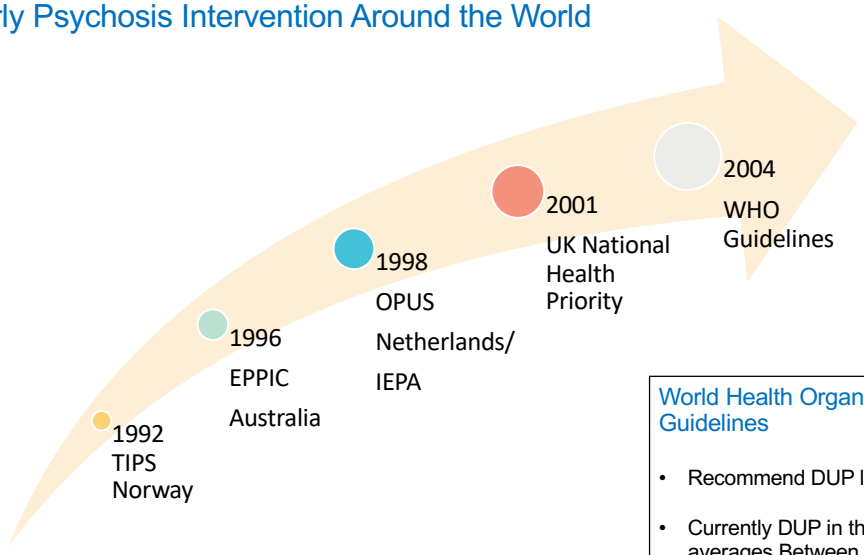
Slide courtesy Bob Heinssen, NIH

The Rise of Early Psychosis Intervention

- The early years following a first episode of psychosis (FEP) present unique opportunities to prevent declines in clinical and social function

- Early intervention programs target factors known to be associated with poor long-term outcomes including:
  - longer duration of untreated psychosis
  - treatment non-adherence
  - affective symptoms
  - cognitive dysfunction

Early Psychosis Intervention Around the World



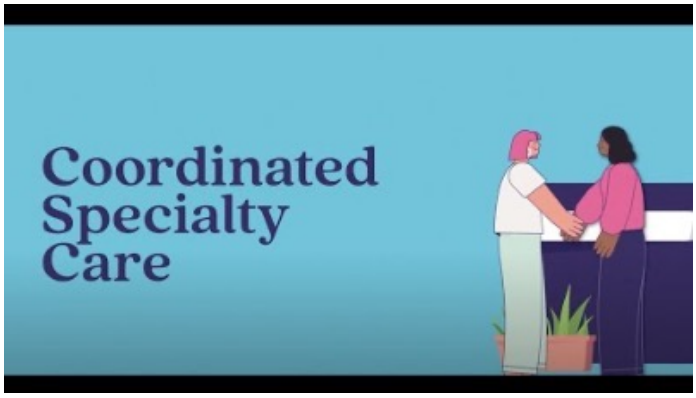
World Health Organization (WHO) Guidelines

- Recommend DUP less than 3 months
- Currently DUP in the United States averages Between 1 and 3 years

Coordinated Specialty Care (CSC) Services for First-Episode Psychosis

What is CSC?

"Recovery oriented treatment which uses a team of health professionals and specialists who work with the client to create a personal treatment plan based on the client's life goals and preferences. This may include a variety of services" (NIMH)



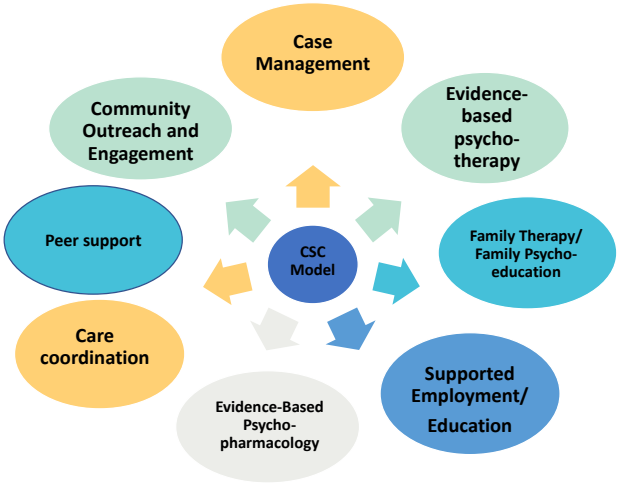
https://www.youtube.com/watch?v=391SiwtRbeo

https://www.youtube.com/watch?v=391SiwtRbeo

Coordinated Specialty Care (CSC) Services for First-Episode Psychosis

"Recovery oriented treatment which uses a team of health professionals and specialists who work with the client to create a personal treatment plan based on the client's life goals and preferences. This may include a variety of services" (NIMH)

- Multi-component team based services
- Shared decision making
- Team approach
- Person-centered services
- Recovery/hope



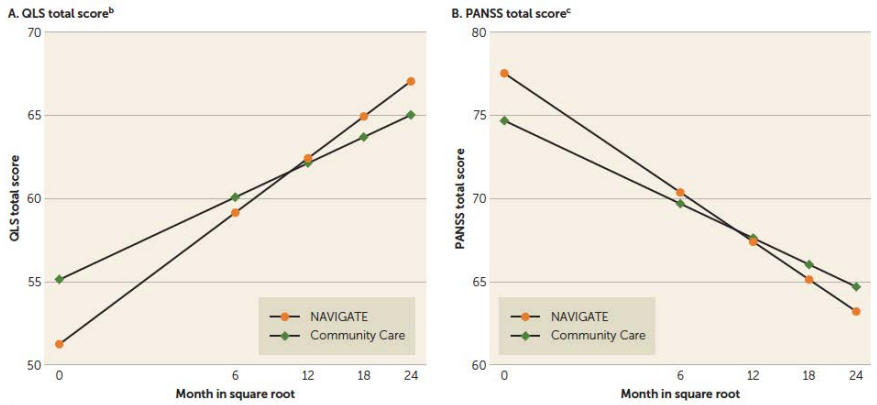
- Programs differ in exact services and inclusion criteria
- Typically outpatient services for 2+ years

Benefits of CSC Services for Individuals and Stakeholders

Comprehensive Versus Usual Community Care for First-Episode Psychosis: 2-Year Outcomes From the NIMH RAISE Early Treatment Program

John M. Kane, M.D., Delbert G. Robinson, M.D., Nina R. Schooler, Ph.D., Kim T. Mueser, Ph.D., David L. Penn, Ph.D.,

FIGURE 2. Model-Based Estimates of Heinrichs-Carpenter Quality of Life (QLS) Total Score and PANSS Total Score[a]



[a] PANSS=Positive and Negative Syndrome Scale.
[b] Treatment by square root of time interaction, p=0.015.
[c] Treatment by square root of time interaction, p=0.016.

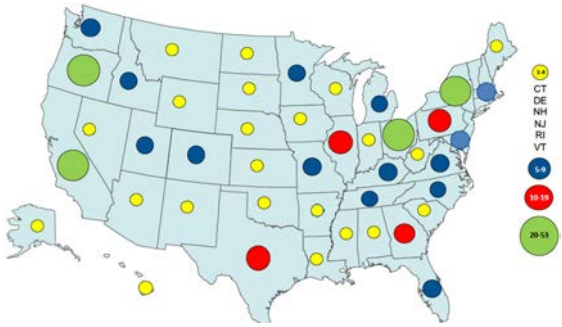
Am J Psychiatry, 2015

Kane JM, Schooler NR, Marcy P, Correll CU, Brunette MF, Mueser KT, Rosenheck RA, Addington J, Estroff SE, Robinson J, Penn DL, Robinson DG. The RAISE early treatment program for first-episode psychosis: background, rationale, and study design. J Clin Psychiatry. 2015 Mar;76(3):240-6. https://doi:10.4088/JCP.14m09289. PMID: 25830446; PMCID: PMC7477907

National Implementation of Coordinated Specialty Care for First-Episode Psychosis

- **2008 - Successful research study (RAISE Trial) launched, showed that CSC programs were beneficial**
- **2014 - Congress allocated funds to be distributed through SAMHSA at the state level for "Evidence-Based Treatments for First Episode Psychosis: Components of Coordinated Specialty Care"**

2008, 12 Clinics



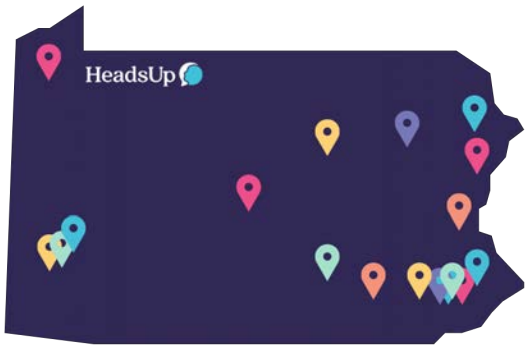
2020

Slide courtesy Bob Heinssen, NIMH

HeadsUp Website: https://www.headsup-pa.org/
Instagram: https://www.instagram.com/headsuppa/ ; @HeadsUpPA
X (formerly Twitter): https://twitter.com/HeadsUpPAorg ; @HeadsUpPAorg
YouTube: https://www.youtube.com/channel/UCxqqq5NWJRbXiy6dH4aZ8mg ; @HeadsUp PA
LinkedIn: https://www.linkedin.com/company/headsup-pa/
Main Contact: conroycg@pennmedicine.upenn.edu; headsuppaorg@gmail.com

Pause for brief introductions

PA FEP CSC Programs: 18 total



www.headsup-pa.org/find-a-center/

https://headsup-pa.org/find-a-center/

PERC
Psychosis Evaluation & Recovery Center

We offer CSC care to about 55 persons with

- FEP onset within past 24 months
- CHR persons ages 16-25 years

Christian Kohler, M.D.
Monica Calkins, Ph.D.
Elisa Nelson, Ph.D.
Arielle Ered, Ph.D.
Aaron Alexander-Bloch, M.D. Ph.D.
Philip Campbell, M.D. Ph. D.
Smrithi Prem, M.D.
Adam Rossano, M.D. Ph.D.
Amenia Coleman, M.A.
Rachel Milberg, M.A.
Sekine Ozturk-Yucer, M.A.
Hailey Fasone, M.A.
Debbie Amoako-Atta, M.A.
Zeeshan Huque, M.A.

PERC COORDINATED SPECIALTY CARE SERVICES

- **Recovery Planning & Case Management**: The individual and the treatment team work collaboratively to develop a recovery plan that identifies goals and plans for services, and methods based on the individual's needs and preferences.
- **Recovery-Oriented Cognitive Therapy (CT-R)**: A Master's Level Specialist provides a form of CBT developed to treat psychosis by Aaron Beck and colleagues.
- **Psychopharmacology**: The program provides ongoing evidence-based psychopharmacology for early-episode psychosis, with emphasis on minimizing medication exposure and side effects.
- **Multi-family Group Psychoeducation**: Ongoing monthly meetings provided by an experienced clinician provide education, support and coping strategies for families.
- **Recovery-Oriented Cognitive Therapy for Families**: A closed, 12-week group for families aimed at improving families understanding, coping, and communication skills with their family member in the early stages of psychosis.
- **Supported Employment and Educational Services**: A dedicated support person establishes plans for functional goals and recovery with the participant. The support person assists possible return to school, access to jobs and training programs.
- **Peer Support Services**: Individuals in recovery offer peer support and education services in the community to young persons currently experiencing psychosis in an effort to help maintain functioning.
- **Additional Treatment**: We coordinate with IOPS, PHP's, and local substance use treatment programs when participants are enrolled in multiple programs.
- **Participant Process Group**: Our program offers a monthly process group to support psychosocial skill development & functioning.
- **Stigma Group**: This is an 8-week group focused on providing CBT skills and social support around issues related to mental health stigma. Participants will be required to complete an approximately 1-hour assessment pre- and post-treatment.

Penn Behavioral Health
Psychosis Evaluation & Recovery Center

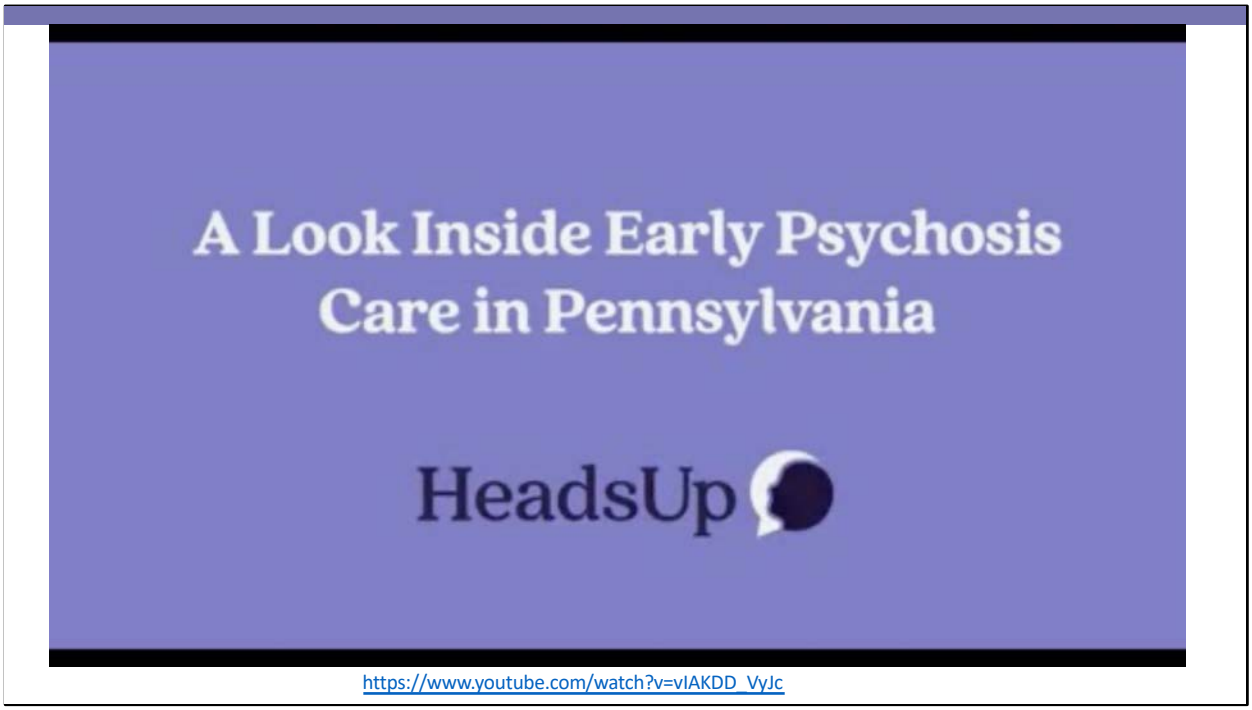
Penn Medicine
Hospital of the University of Pennsylvania
Department of Psychiatry, Neuropsychiatry Section
10th Floor Gates Pavilion
3400 Spruce Street
Philadelphia, PA 19104

PHONE: 215-662-2826
FAX: 215-662-7903

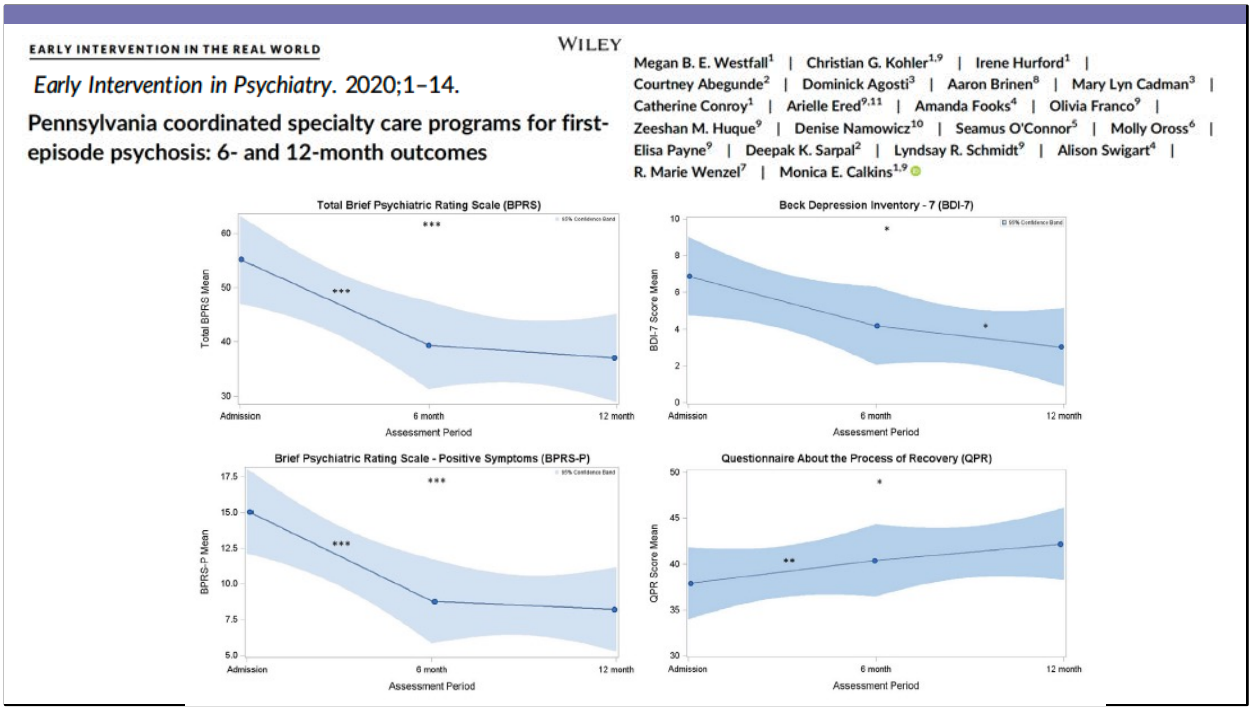
EMAIL: PERCINFO@LISTS.UPENN.EDU

www.med.upenn.edu/perc

https://www.med.upenn.edu/bbl/penn-perc.html



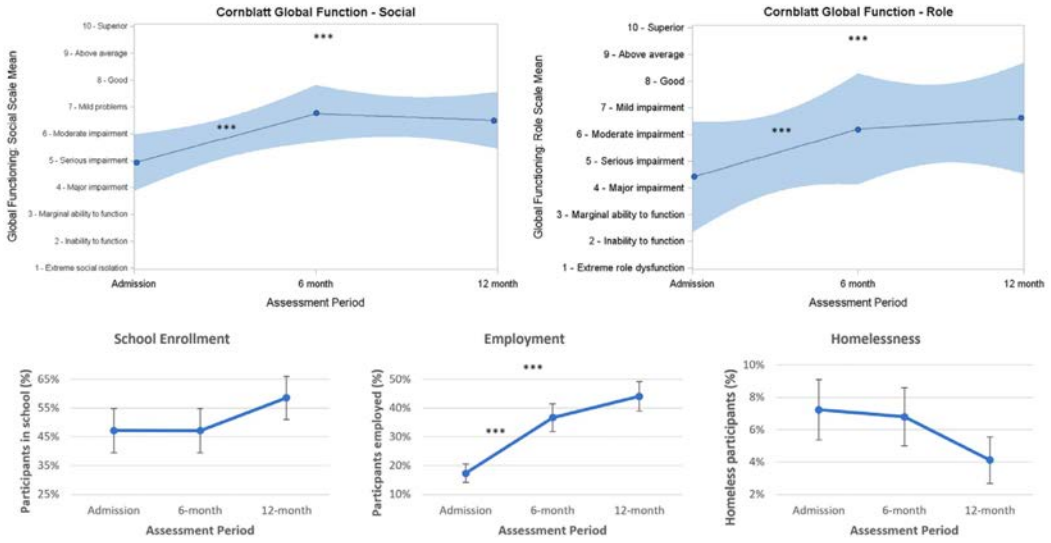
https://www.youtube.com/watch?v=vIAKDD_VyJc



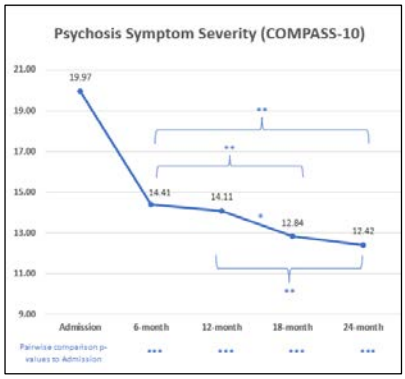
Westfall, M. B. E., Kohler, C. G., Hurford, I., Abegunde, C., Agosti, D., Brinen, A., Cadman, M. L., Conroy, C., Ered, A., Fooks, A., Franco, O., Huque, Z. M., Namowicz, D., O'Connor, S., Oross, M., Payne, E., Sarpal, D. K., Schmidt, L. R., Swigart, A., Wenzel, R. M., … Calkins, M. E. (2021). Pennsylvania coordinated specialty care programs for first-episode psychosis: 6- and 12-month outcomes. *Early intervention in psychiatry*, *15*(5), 1395–1408. https://doi.org/10.1111/eip.13084

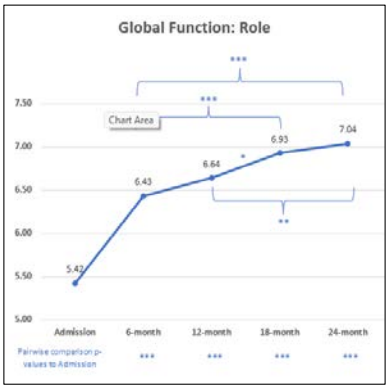
PA-FEP-PE: Role and Social Function

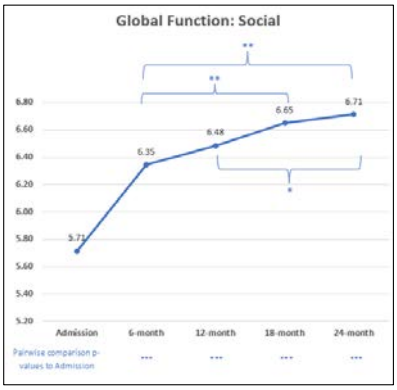
Early Intervention in Psychiatry. 2020;1–14.



Two-Year Longitudinal Treatment Outcomes for Coordinated Specialty Care Program Participants (n=683) in the Connection Learning Healthcare System







https://strong365.org/find-support/professional-support/psychosis-support-provider-directory

SAMHSA
Substance Abuse and Mental Health Services Administration

EARLY SERIOUS MENTAL ILLNESS TREATMENT LOCATOR

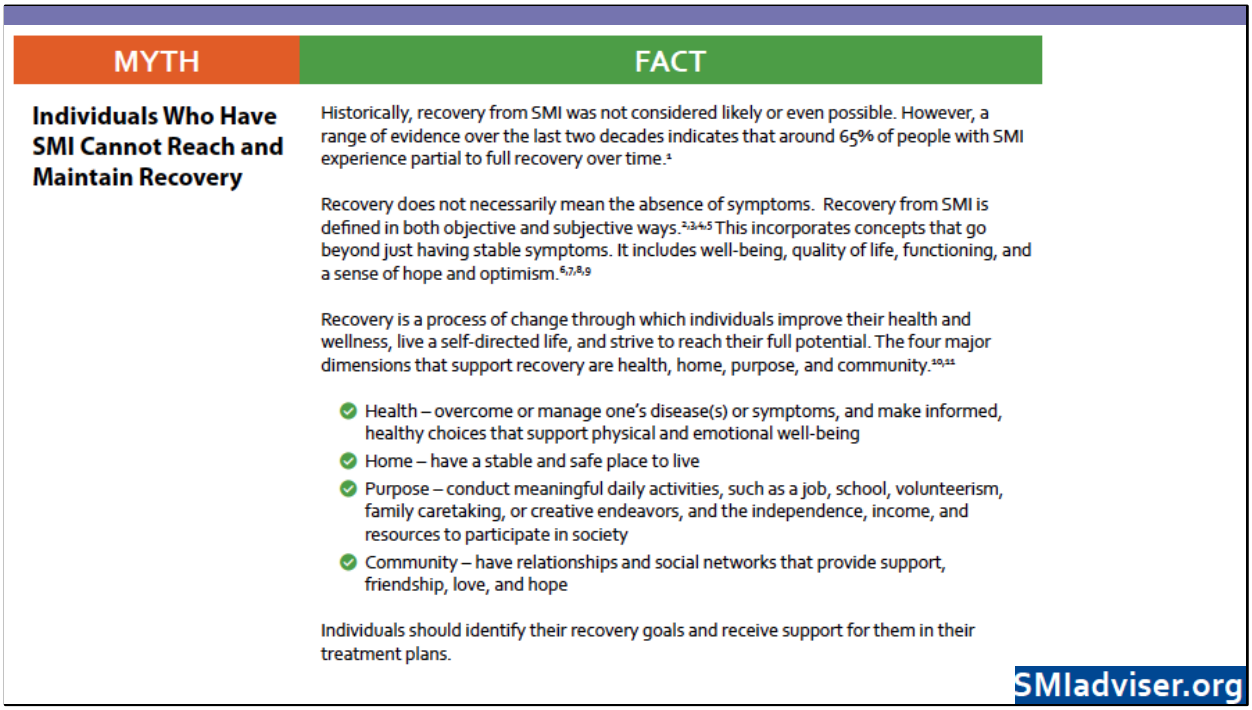
https://www.samhsa.gov/esmi-treatment-locator

HOPE TEAM

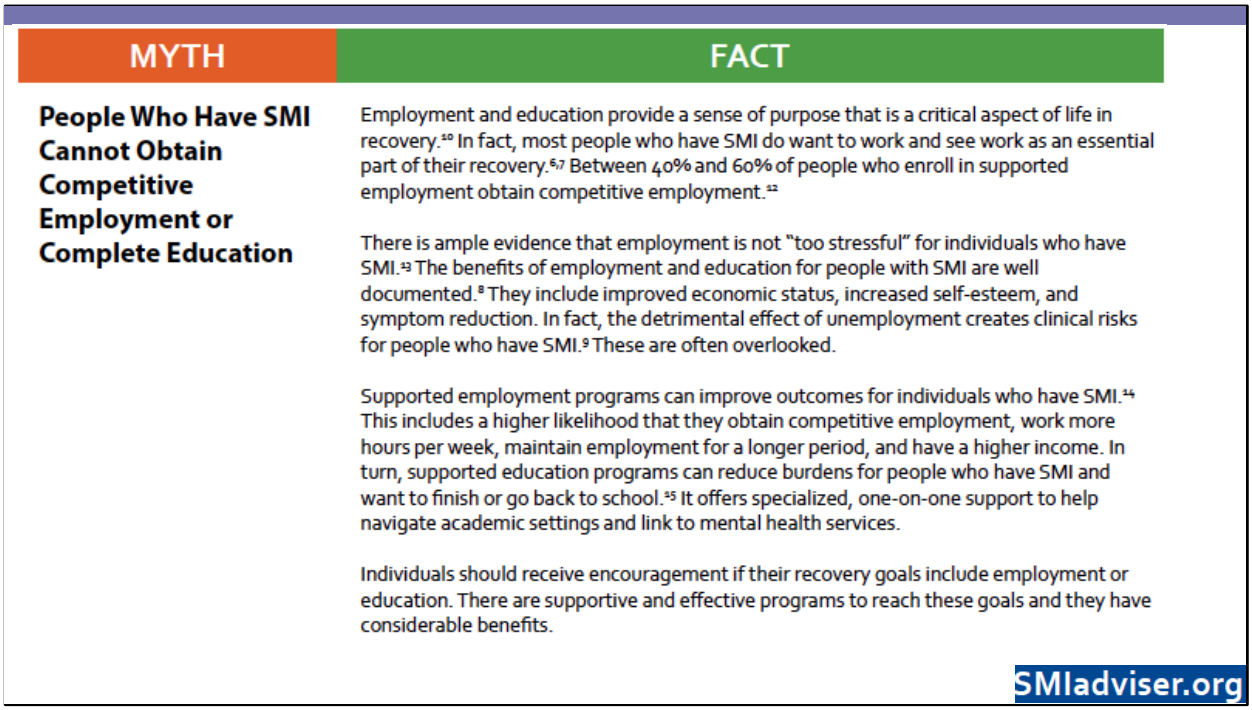
https://www.hopeteam.pitt.edu/

Find Resources for Early Psychosis Care

- HeadsUp Find a Center page (Pennsylvania) – https://headsup-pa.org/find-a-center/
- PA and other states
  - https://strong365.org/find-support/professional-support/psychosis-support-provider-directory
  - https://www.samhsa.gov/esmi-treatment-locator
  - https://www.hopeteam.pitt.edu/ (clinical high-risk for psychosis)
  - https://www.med.upenn.edu/bbl/penn-perc.html (first episode psychosis and clinical high-risk for psychosis)



https://smicaladviser.org/wp-content/uploads/2024/01/SMI-Adviser-Myth-vs-Fact-Infographic-RECOVERY.pdf



https://smicaladviser.org/wp-content/uploads/2024/01/SMI-Adviser-Myth-vs-Fact-Infographic-RECOVERY.pdf

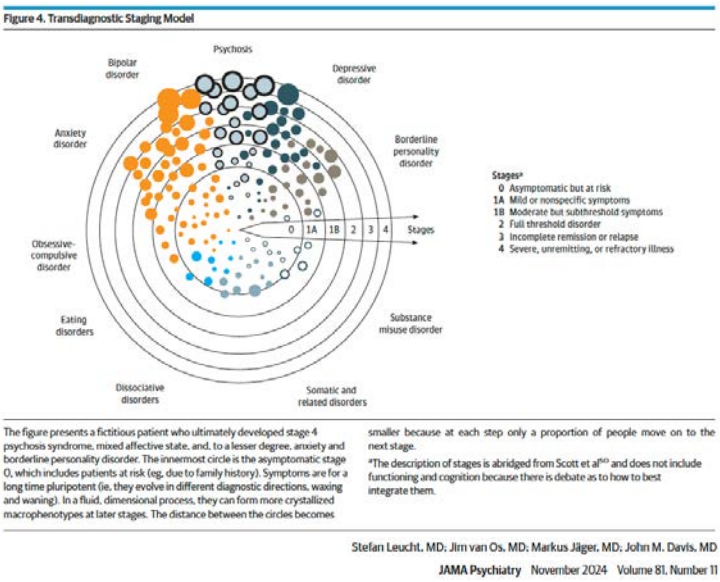
Making a Referral

- Discussing referrals for specialty care with an individual
  - Approach as would any other specialty care referral but assume that the person has been exposed to societal stigma about psychosis and schizophrenia
  - Collaborate: provide psychoeducation and supportive dialogue to address stigma/myths:
    - Symptoms/associated features- their significance and meaning for the individual, their life, their family (e.g., “crazy”, ”doomed”, will become homeless/violent, unable to achieve)
    - Treatment
      - Debunk myths/stereotype
      - Emphasize recovery orientation/approach – team of specialists who can evaluate what is going on and assist the person to achieve their goals in life
  - Find out whether there is a support person (parent, grandparent, other adult family members/friends) whom you can engage
  - Offer to make the call/email together
  - May be an ongoing conversation

Making a Referral

Acknowledge the varying individual trajectories, which are countless – no "crystal ball"

- Young people and families can be understandably frustrated that we cannot foretell the the future, so important to keep the discussions grounded in the **"here and now"** – what is known and unknown at this point in time
- Keep the focus on relieving distress of current experiences and maintaining (or regaining) functional capacity



Leucht, S., van Os, J., Jäger, M., & Davis, J. M. (2024). Prioritization of Psychopathological Symptoms and Clinical Characterization in Psychiatric Diagnoses: A Narrative Review. *JAMA psychiatry*, *81*(11), 1149–1158. https://doi.org/10.1001/jamapsychiatry.2024.2652

Making a Referral and/or Asking A Question

- Referring organizations can (but are not required to) do a pre-screen using structured screening tools
  - PA CSC clinics have an intake screen in place according to agency needs/preferences
- HeadsUp can help guide triage and referral to the appropriate program (or alternate referrals as indicated).

HeadsUp Early Psychosis Mentor

headsup-pa.org/headsup-mentor/

1-833-933-2816

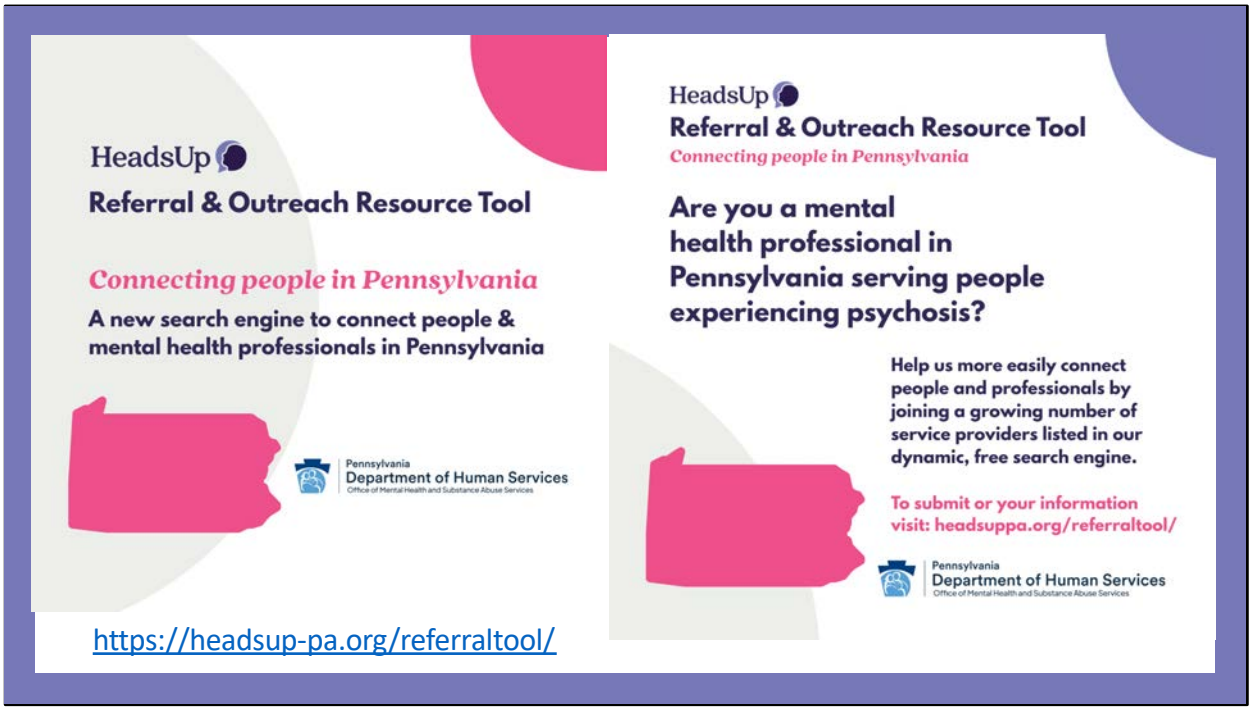
https://www.youtube.com/watch?v=naeSeMUrGTc

Connect with the HeadsUp Early Psychosis Mentor program – an educational consultation service for Pennsylvania providers

headsup-pa.org/headsup-mentor/

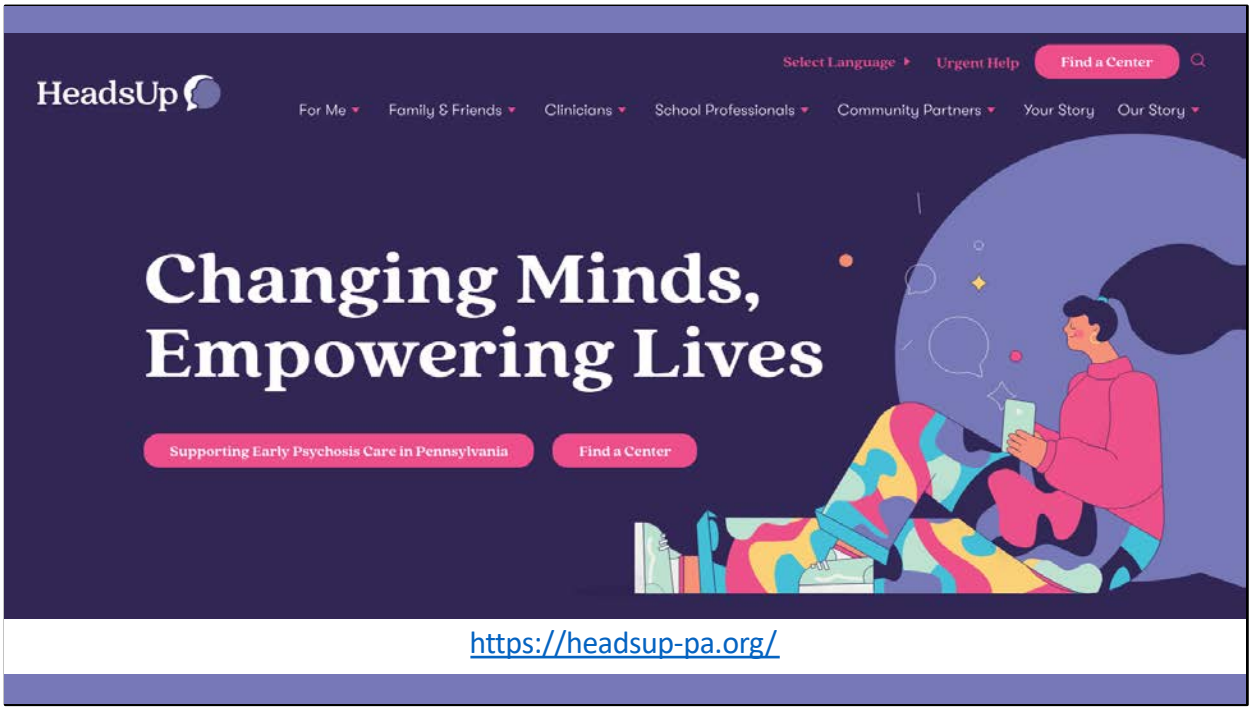
1-833-933-2816

https://www.youtube.com/watch?v=naeSeMUrGTc



HeadsUp Referral and Outreach Resource Tool – for resources within Pennsylvania

Always accepting new resource information!
https://headsup-pa.org/referraltool/



https://headsup-pa.org/

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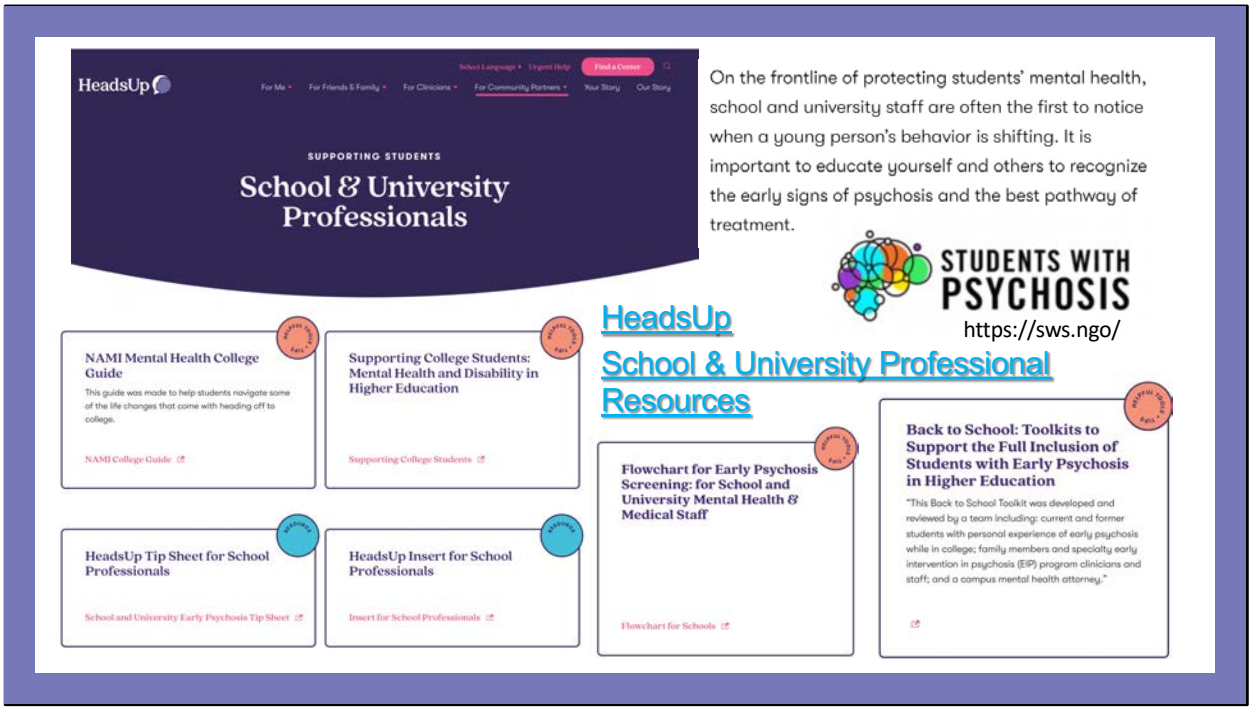
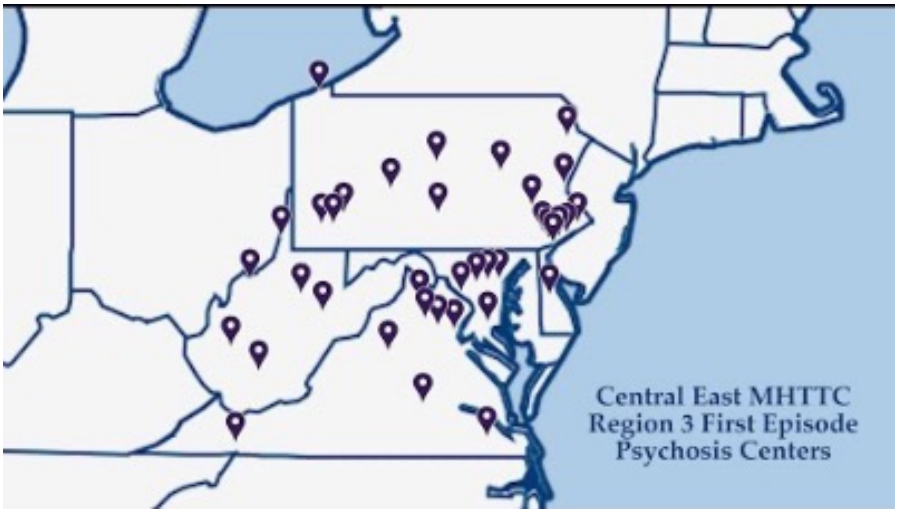


https://www.headsup-pa.org/for-community-partners/school-university-professionals/

Availability and Accessibility of CSC: For Secondary School Professionals



https://www.youtube.com/watch?v=EHgMcYye5NA&t=416s

https://www.youtube.com/watch?v=EHgMcYye5NA&t=416s

Supporting Students in School while Engaged in Mental Health Care

Back to School: Toolkits to Support the Full Inclusion of Students with Early Psychosis in Higher Education

CAMPUS STAFF & ADMINISTRATOR VERSION

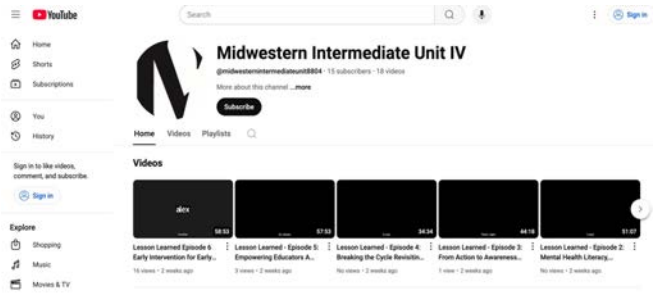
Authors: Nev Jones PhD, Felton Institute, Karen Bower JD, Law Office of Karen Bower, Adriana Furuzawa MFTI CPRP, Felton Institute

https://headsup-pa.org/wp-content/uploads/2025/06/Back-to-School-Toolkit-resource.pdf

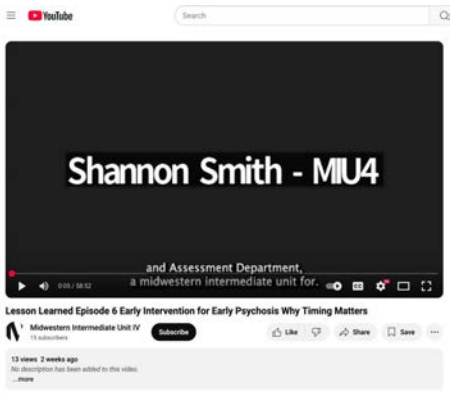
- Any given student may experience all, or only a few of the symptoms discussed today. The intensity and impact of particular symptoms can vary tremendously from student to student.
- This means that ”no one shoe fits all sizes” when it comes to student support – engaging with the student’s mental health providers when possible, reviewing any written reports or recommendations are critical steps school professionals can take to understand the best supports for a given student.
- Coordinated specialty care programs often include explicit supported education components who can help develop specific school supports, and work with the student to engage in these supports
- The handbook includes a great section for school disability services staff on accommodations for students with psychosis (not just applicable to higher ed)

https://headsup-pa.org/wp-content/uploads/2025/06/Back-to-School-Toolkit-resource.pdf

School Climate – Lessons Learned – Episode 6: Early Intervention for Early Psychosis – Why Timing Matters



https://www.youtube.com/@midwesternintermediateunit8804

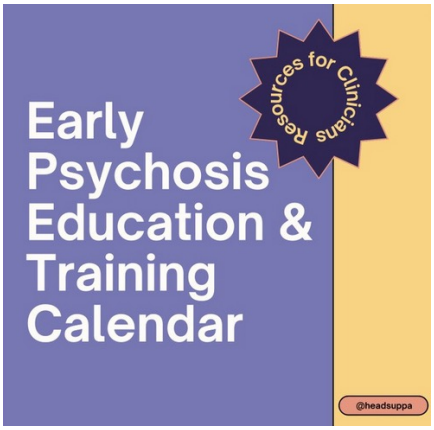


https://www.youtube.com/watch?v=fGfowToSulw

https://www.youtube.com/@midwesternintermediateunit8804

https://www.youtube.com/watch?v=fGfowToSulw

Training and Employment Opportunities



https://headsup-pa.org/for-clinicians/education-and-training/

https://headsup-pa.org/for-clinicians/education-and-training/

Early Psychosis Intervention Network:
A National Learning Health Care System for Early Psychosis

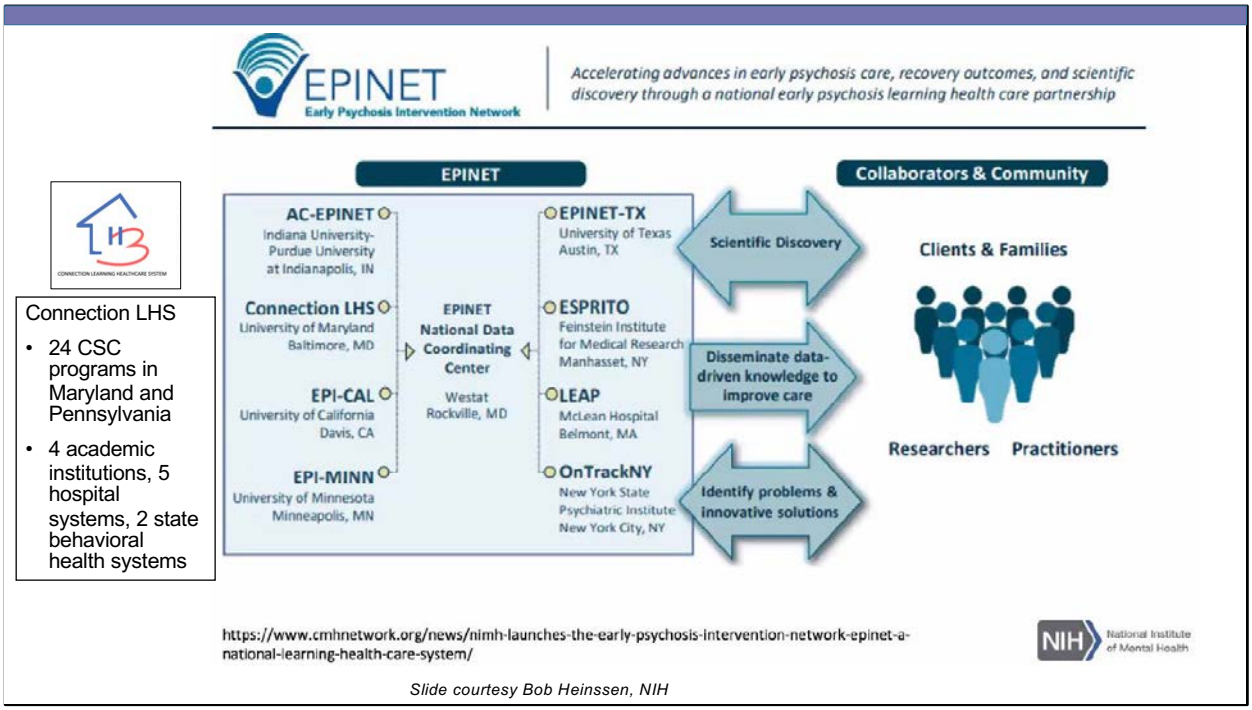
EPINET
Early Psychosis Intervention Network

- https://nationalepinet.org/
- EPINET links early psychosis clinics through standard clinical measures, uniform data collection and integration methods.
- Clients and families, clinicians, health care administrators, and researchers collaborate to improve early psychosis care and conduct practice-based research.

- Initiated in 2019
- Sponsored by the NIMH
- 8 Regional Hubs
- 101 early psychosis clinics across 16 states
- EPINET National Data Coordinating Center

Slide courtesy Melanie Bennett, Ph.D., University of Maryland

https://nationalepinet.org/

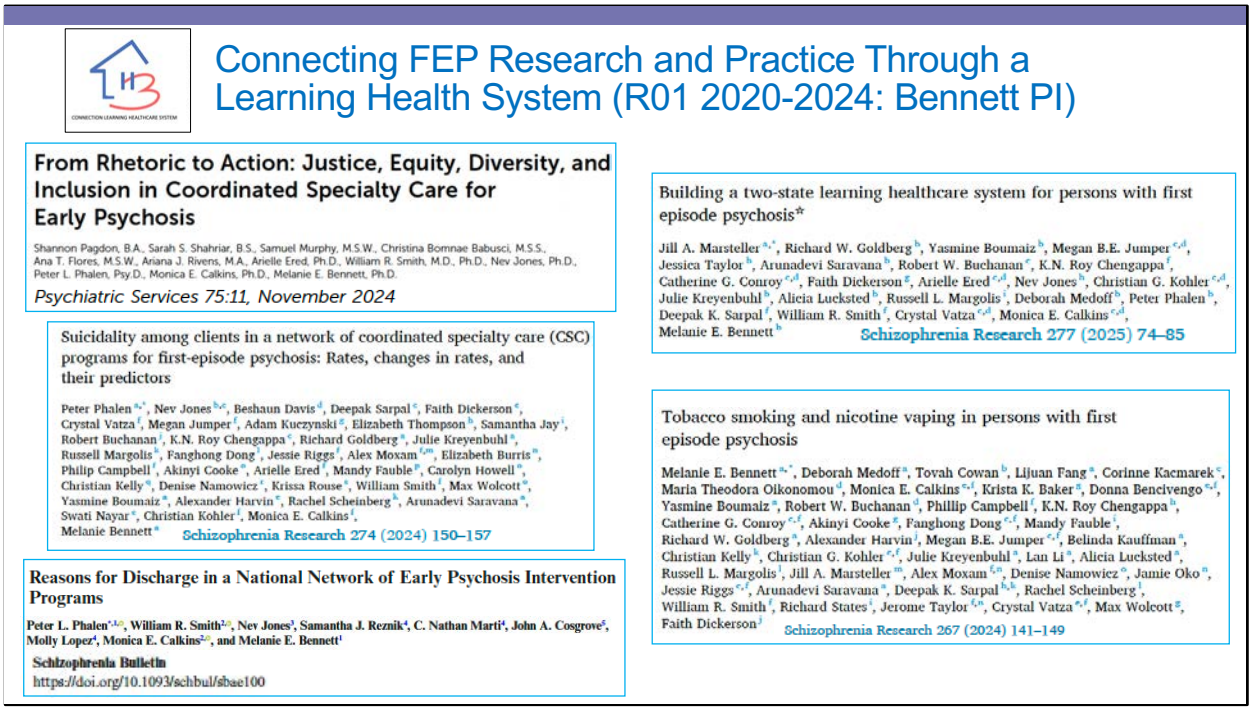


Connection LHS

- 24 CSC programs in Maryland and Pennsylvania
- 4 academic institutions, 5 hospital systems, 2 state behavioral health systems

Slide courtesy Bob Heinssen, NIH

https://nationalepinet.org/
https://nationalepinet.org/cohort-2/lhs/



https://www.medschool.umaryland.edu/clhs/

Harnessing a Two-State FEP LHS to Optimize Engagement and Prevent Disengagement in CSC (P01 funded 9/2024: Bennett/Calkins MPI's)

- The P01 Center expands the CLHS research-to-practice infrastructure and focuses on research related to preventing CSC disengagement.
  - CSC disengagement or premature discharge is common and compromises the vision of CSC to support recovery in FEP.
  - Researchers are piloting interventions to improve access to and outcomes from CSC; few efforts focus on preventing disengagement of those enrolled in CSC.
- Projects
  - Clinical Practice Data Research Project: *Developing and Validating Models to Predict Risk of CSC Disengagement.*
  - Prospective Practice-Oriented Research Project: *Developing and Evaluating a Hub-Based Engagement Navigator Service to Reduce CSC Disengagement*

https://www.medschool.umaryland.edu/clhs/

Accelerating Medicines Partnership®
SCHIZOPHRENIA

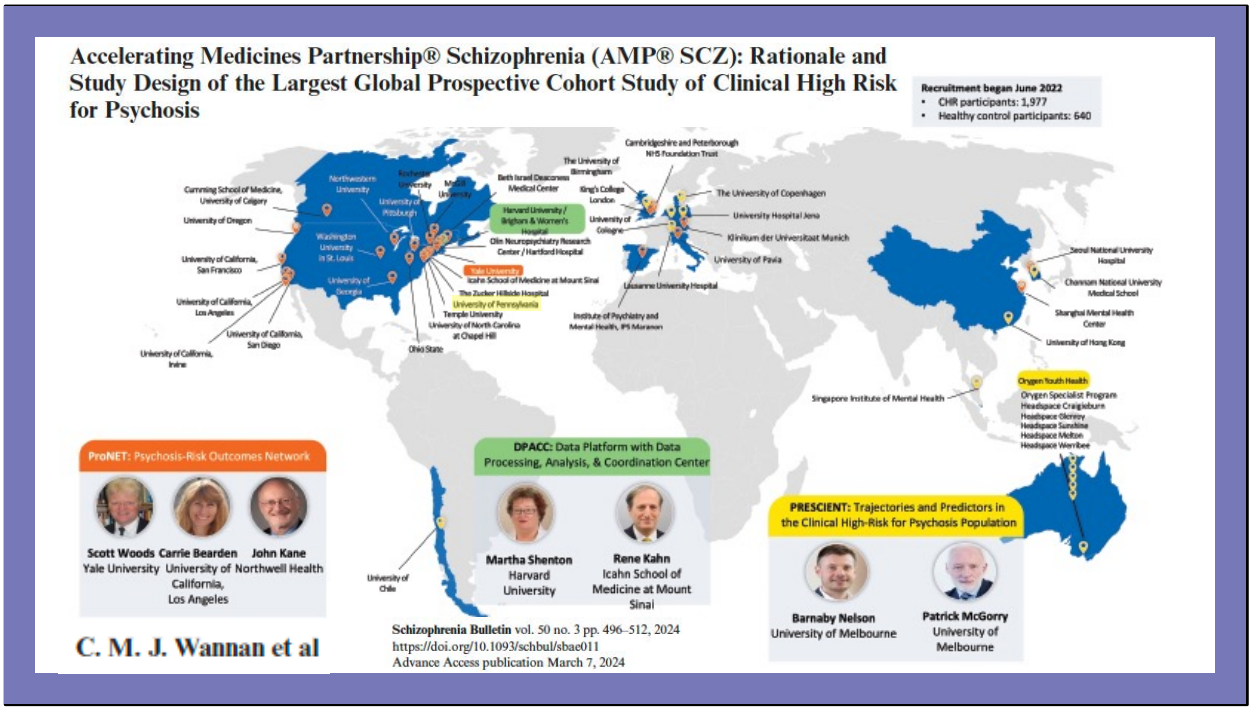
Overall goal: Provide tools to improve our ability to identify and develop treatments (medications) for youth experiencing clinical high risk symptoms

Research strategy and planning involved 58 scientists from NIMH, FDA, 16 private-sector partners, and leading academic research institutions

Images courtesy FNIH

https://www.ampscz.org/

https://www.ampscz.org/

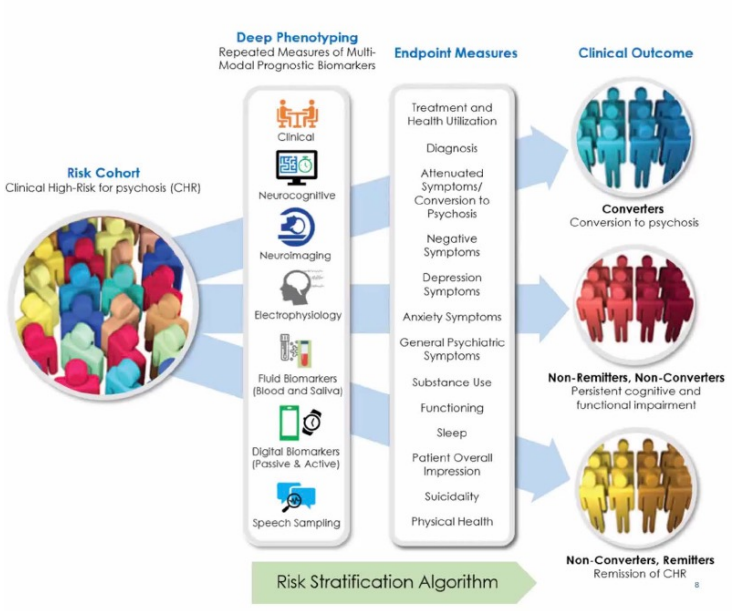


https://www.ampscz.org/

Aim 1. Provide tools to improve our identification and treatment of youth at risk for psychosis

Aim 2. Develop and validate biomarkers and outcome measures that will eventually help us know if medicines are working

Method. 2000 at-risk participants, multiple visits over two years



https://www.ampscz.org/

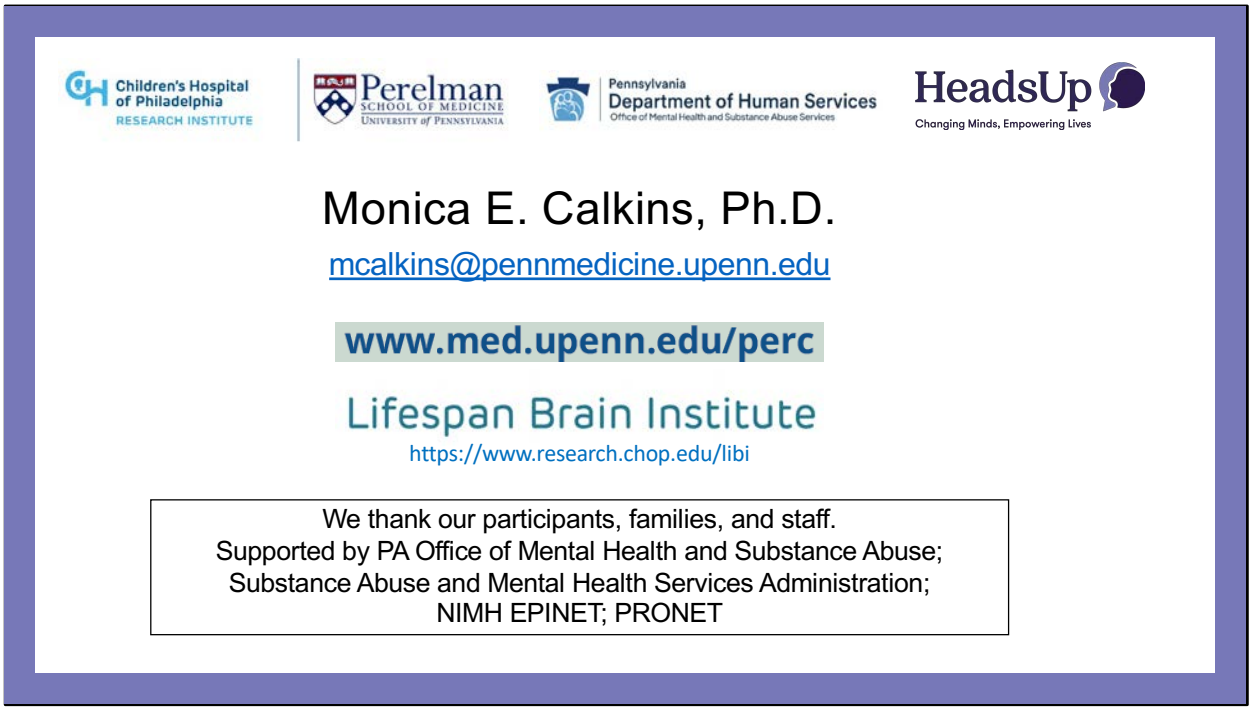
Images courtesy FNIH

https://www.ampscz.org/

Conclusions

- Identification and intervention in early psychosis are important, and achievable, goals.
- Large scale, global collaborations are underway to continue to refine approaches to risk assessment, risk staging, and neurodevelopmentally informed clinical interventions.
- This work should provide information that will help us better identify, treat, and improve the lives of individuals experiencing early stages of psychosis.
- At the same time, mental health organizations and individual providers play a critical role in reducing barriers to early identification and referral, especially for historically underserved communities.

https://reporter.nih.gov/project-details/10093852



Reach out to Dr. Calkins!

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HeadsUp Website: https://www.headsup-pa.org/
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X (formerly Twitter): https://twitter.com/HeadsUpPAorg ; @HeadsUpPAorg
YouTube: https://www.youtube.com/channel/UCxqqq5NWJRbXiy6dH4aZ8mg ; @HeadsUp PA
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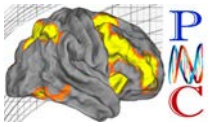
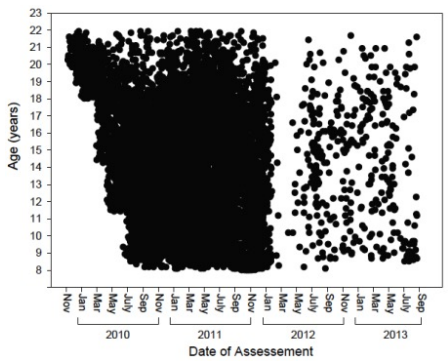
Main Contact: headsuppaorg@gmail.com

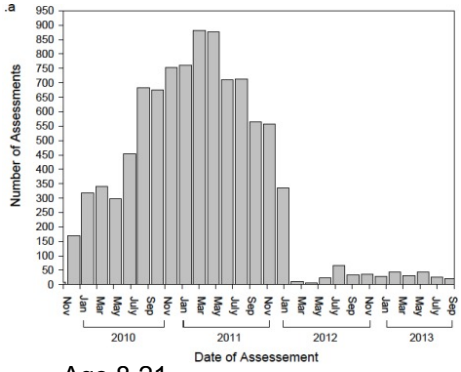
The Philadelphia Neurodevelopmental Cohort: constructing a deep phenotyping collaborative



Journal of Child Psychology and Psychiatry 56:12 (2015), pp 1356–1369

Monica E. Calkins,[1] Kathleen R. Merikangas,[2] Tyler M. Moore,[1] Marcy Burstein,[2] Meckenzie A. Behr,[3] Theodore D. Satterthwaite,[1] Kosha Ruparel,[1] Daniel H. Wolf,[1] David R. Roalf,[1] Frank D. Mentch,[3] Haijun Qiu,[3] Rosetta Chiavacci,[3] John J. Connolly,[3] Patrick M.A. Sleiman,[4] Ruben C. Gur,[1] Hakon Hakonarson,[3,*] and Raquel E. Gur[1,*]





- N=9,498
- Time 1 recruitment = 2009-2011
- In-home = 66%

- Age 8-21
- Mean age = 14.2 (s.d.=3.7)
- Female = 52 %; AA/Other = 44%

Calkins, M. E., Merikangas, K. R., Moore, T. M., Burstein, M., Behr, M. A., Satterthwaite, T. D., Ruparel, K., Wolf, D. H., Roalf, D. R., Mentch, F. D., Qiu, H., Chiavacci, R., Connolly, J. J., Sleiman, P. M. A., Gur, R. C., Hakonarson, H., & Gur, R. E. (2015). The Philadelphia Neurodevelopmental Cohort: constructing a deep phenotyping collaborative. *Journal of child psychology and psychiatry, and allied disciplines*, *56*(12), 1356–1369. https://doi.org/10.1111/jcpp.12416

The psychosis spectrum in a young U.S. community sample: findings from the Philadelphia Neurodevelopmental Cohort

Monica E. Calkins[1], Tyler M. Moore[1], Kathleen R. Merikangas[2], Marcy Burstein[2], Theodore D. Satterthwaite[1], Warren B. Bilker[1], Kosha Ruparel[1], Rosetta Chiavacci[3], Daniel H. Wolf[1], Frank Mentch[3], Haijun Qiu[3], John J. Connolly[3], Patrick A. Sleiman[3,4], Hakon Hakonarson[3,4], Ruben C. Gur[1], Raquel E. Gur[1]

(World Psychiatry 2014;13:296-305)

	Psychosis spectrum	Non-spectrum	Test	df	Result	p	Cohen's d
N (%)	954 (20.0)	3894 (80.0)	-	-	-	-	-
Gender (% male)	47.9	45.0	Chi-square	1	χ^2=2.5	n.s.	-
Age (mean±SD)	15.2±2.7	15.8±2.7	ANOVA	1,4846	F=31.9	0.001	−0.22
Ethnicity (% European American)	37.7	58.1	Chi-square	1	χ^2=127.5	0.001	-
WRAT-4 Reading standard score (mean±SD)	97.9±17.2	103.6±16.9	ANOVA	1,4832	F=86.1	0.001	−0.32

- Among medically healthy youth, age 11-21 (mean 15 y.o.):
  - Threshold psychosis symptoms: 3.7%
  - Subthreshold-psychosis symptoms: 12.3%
  - Only subthreshold negative symptoms: 2.3%
- PS symptoms predicted by male sex, younger age, Black/Asian
- Psychosis spectrum symptoms associated with
  - Reduced neurocognitive accuracy and global functioning
  - Increased odds of depression, anxiety, behavioral disorders, substance use, suicidal ideation

Calkins, M. E., Moore, T. M., Merikangas, K. R., Burstein, M., Satterthwaite, T. D., Bilker, W. B., Ruparel, K., Chiavacci, R., Wolf, D. H., Mentch, F., Qiu, H., Connolly, J. J., Sleiman, P. A., Hakonarson, H., Gur, R. C., & Gur, R. E. (2014). The psychosis spectrum in a young U.S. community sample: findings from the Philadelphia Neurodevelopmental Cohort. *World psychiatry : official journal of the World Psychiatric Association (WPA)*, *13*(3), 296–305. https://doi.org/10.1002/wps.20152

At 2-year follow-up (mean 17 y.o.), PS symptoms persisted or worsened in 51% of baseline PS, with remaining classified as ”resilient”. PS symptoms emerged in 16% of baseline Non-PS.

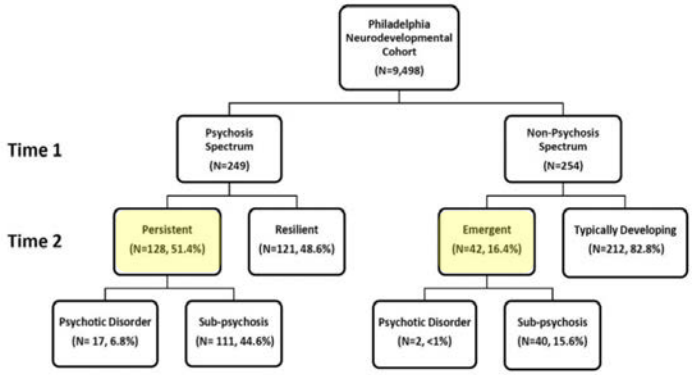


Figure 2 Assessment results at Time 2 in relation to psychosis spectrum classification at Time 1

World Psychiatry 2017;16:62–76)

- Youth with persisting PS symptoms had
  - increased concurrent comorbid psychopathology in most domains
  - higher rate of psychosis family history.
- Symptom persistence predicted by baseline
  - higher severity of subthreshold psychosis
  - lower global functioning
  - prior psychiatric medication.

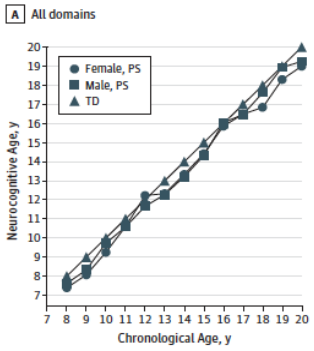
"Validation" of the Psychosis Spectrum Construct

Original Investigation

Neurocognitive Growth Charting in Psychosis Spectrum Youths

Ruben C. Gur, PhD; Monica E. Calkins, PhD; Theodore D. Satterthwaite, MD, MA; Kosha Ruparel, MSE; Warren B. Bilker, PhD; Tyler M. Moore, PhD; Adam P. Savitt, BA; Hakon Hakonarson, MD, PhD; Raquel E. Gur, MD, PhD

JAMA Psychiatry. 2014;71(4):366-374. doi:10.1001/jamapsychiatry.2013.4190
Published online February 5, 2014.



Development of a probability calculator for psychosis risk in children, adolescents, and young adults

Psychological Medicine

Tyler M. Moore[1,2,*], Monica E. Calkins[1,2,*], Adon F. G. Rosen[1], Ellyn R. Butler[1], Kosha Ruparel[1,2], Paolo Fusar-Poli[3,4,5], Nikolaos Koutsouleris[6], Philip McGuire[3], Tyrone D. Cannon[7], Ruben C. Gur[1,2] and Raquel E. Gur[1,2]

An Evaluation of the Specificity of Executive Function Impairment in Developmental Psychopathology

Lauren K. White, PhD, Tyler M. Moore, PhD, Monica E. Calkins, PhD, Daniel H. Wolf, MD, Theodore D. Satterthwaite, MD, Ellen Leibenluft, MD, Daniel S. Pine, MD, Ruben C. Gur, PhD, Raquel E. Gur, MD, PhD

J Am Acad Child Adolesc Psychiatry 2017;56(11):975–982.

Cannabis Use, Polysubstance Use, and Psychosis Spectrum Symptoms in a Community-Based Sample of U.S. Youth

Jason D. Jones, Ph.D.[a,*], Monica E. Calkins, Ph.D.[a], J. Cobb Scott, Ph.D.[a,b], Emily C. Bach[a], and Raquel E. Gur, M.D., Ph.D.[a,*]

Journal of Adolescent Health 60 (2017) 653–659

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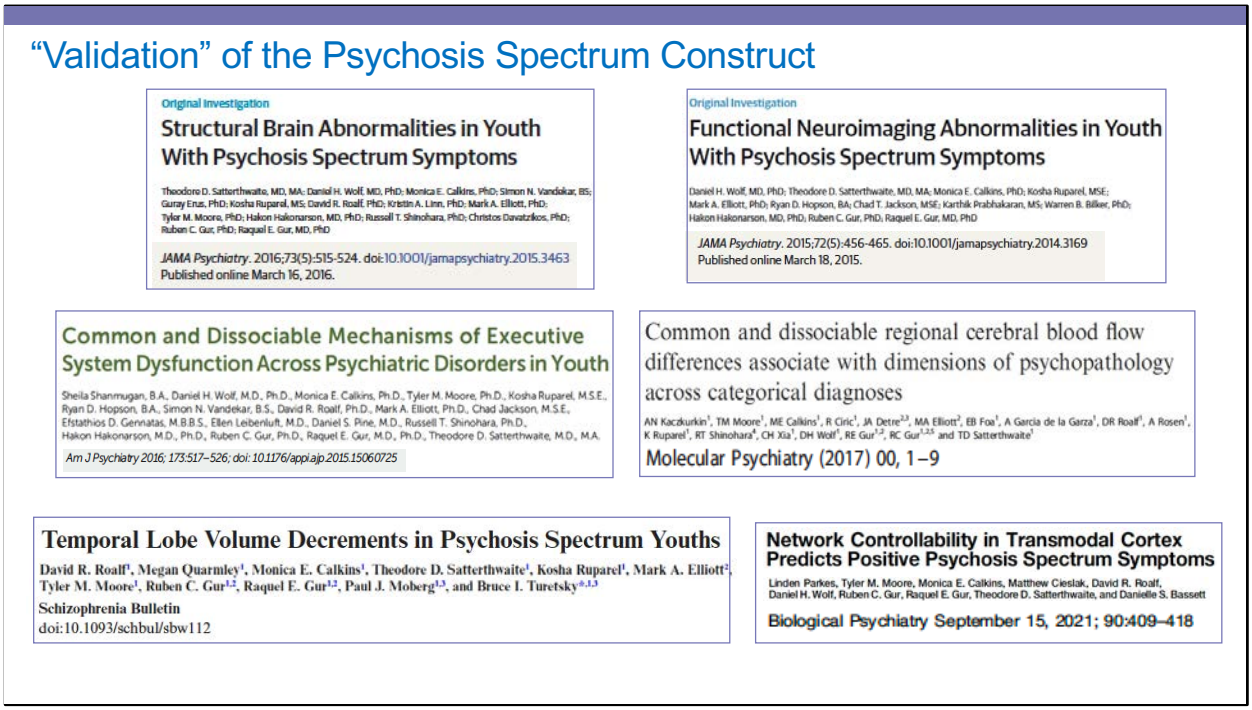

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