

What is Psychosis-Risk?

Joseph DeLuca, Ph.D. (he/him/his)
Icahn School of Medicine at Mount Sinai

January 12, 2022, 11:00am-12:30pm ET



Central East (HHS Region 3)

MHTTC

Mental Health Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

MHTTC Network

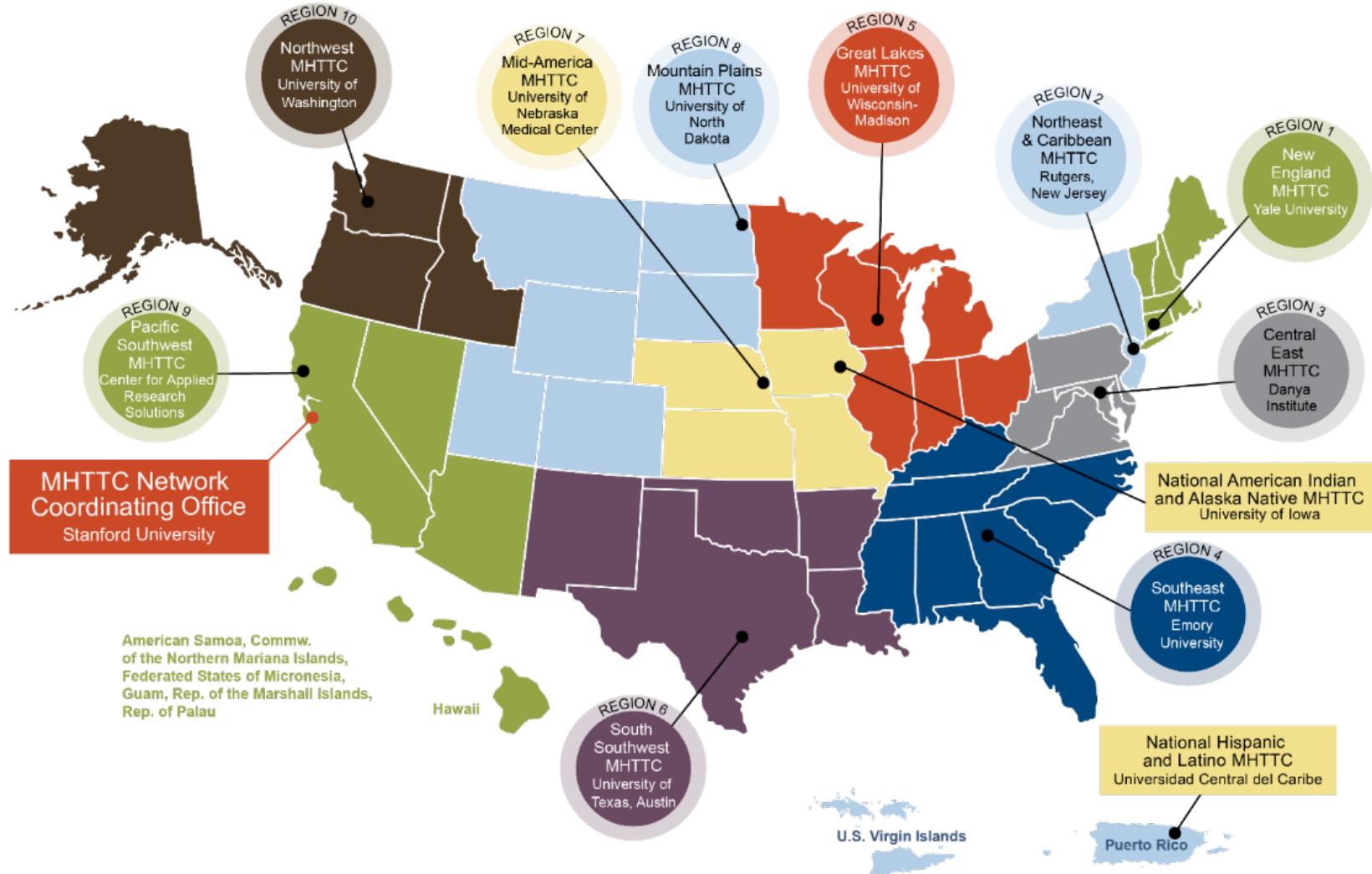


MHTTC

Mental Health Technology Transfer Center Network

Funded by Substance Abuse and Mental Health Services Administration

MHTTC Network



MHTTC Purpose

The MHTTC Network vision is to unify science, education and service to transform lives through evidence-based and promising treatment and recovery practices in a recovery-oriented system of care.

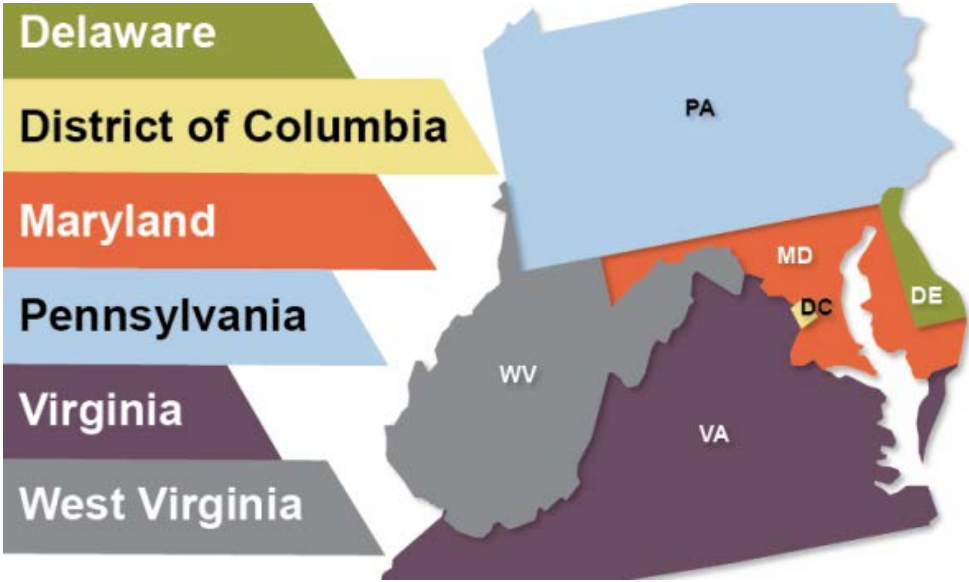


Central East MHTTC Goals

Funded by SAMHSA to:

- **Accelerate** the adoption and implementation of mental health related evidence-based practices
- **Heighten** the awareness, knowledge, and skills of the behavioral health workforce
- **Foster** alliances among culturally diverse practitioners, researchers, policy makers, family members, and consumers
- **Ensure** the availability and delivery of publicly available, free of charge, training and technical assistance

Central East Region 3



Central East (HHS Region 3)

MHTTC

Mental Health Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

DISCLAIMER

This webinar was prepared for the Central East Mental Health Technology Transfer Center under a cooperative agreement from the Substance Abuse and Mental Health Services Administration (SAMHSA). All material appearing in this presentation, except that taken directly from copyrighted sources, is in the public domain and may be reproduced or copied without permission from SAMHSA or the authors. Citation of the source is appreciated. Do not reproduce or distribute this presentation for a fee without specific, written authorization from the Central East Mental Health Technology Transfer Center. This webinar is posted on the Central East Mental Health Technology website.

At the time of this presentation, Miriam Delphin-Rittmon served as Assistant Secretary for Mental Health and Substance Use and Administrator of SAMHSA. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by SAMHSA/HHS, or the U.S. Government.

Evaluation Information

As part of receiving funding through SAMHSA to provide this training, the Central East MHTTC is required to submit data related to the quality of this event. At the end of today's presentation, please take a moment to complete a brief survey about today's training.

Background



- Clinical psychologist by training and a current NIMH-T32 Postdoctoral Fellow specializing in the early stages of psychosis.
 1. see patients at risk for psychosis for individual, group, and family therapy.
 2. conduct research on psychosis.
 3. help with training and outreach.
- I am passionate about mental health education (particularly psychosis), stigma reduction, and equitable, culturally responsive, evidence-based care.

Agenda

1. Describe the psychosis spectrum
2. Define psychosis-risk
3. List two commonly used psychosis-risk screening tools (and cultural considerations)
4. Describe psychosis-risk evidence-based treatment
5. Identify specialized psychosis-risk programs
6. Summary and Q&A

Agenda

1. Describe the psychosis spectrum

2. Define psychosis-risk

3. List two commonly used psychosis-risk screening tools (and cultural considerations)

4. Describe psychosis-risk evidence-based treatment

5. Identify specialized psychosis-risk programs

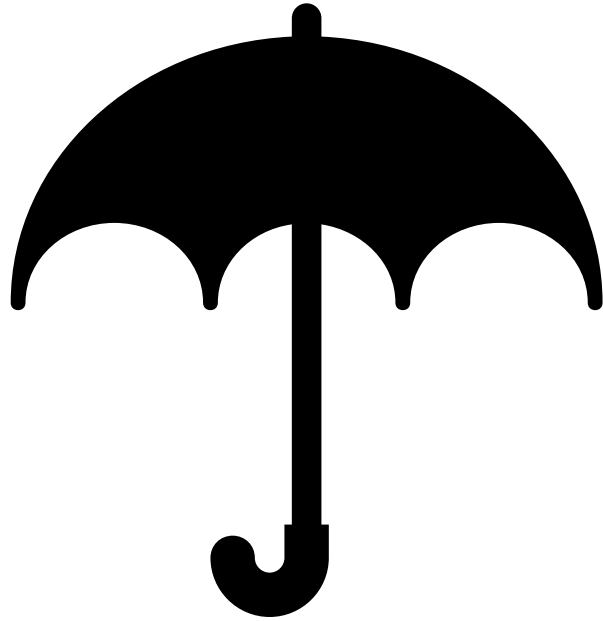
6. Summary and Q&A

Psychosis: Big picture

- Approximately 1%-3% develop a psychotic disorder in their lifetime.
- 100,000 adolescents and young adults develop a first episode of psychosis each year in the US.
- Estimated economic burden of \$156 billion in the US.
- Significant individual impact (earlier mortality, lower QoL).
- Although there are negative outcomes associated with psychosis, it is important to note that many individuals who experience psychosis can and do lead full and successful lives.
- **Early identification and intervention are essential.**



Psychosis



- Not a diagnosis
- Diverse set of experiences, including loss of touch from reality (hallucinations, delusions)
- Commonly associated with schizophrenia-spectrum disorders, but may be present in mood disorders, trauma, substance use, etc.
- ***“Psychosis-risk”*** = warning signs
- ***“First-episode psychosis”*** = first experiences of threshold symptoms

Psychotic symptoms

- Two types of psychotic symptoms (DSM-5 'Criterion A')

1

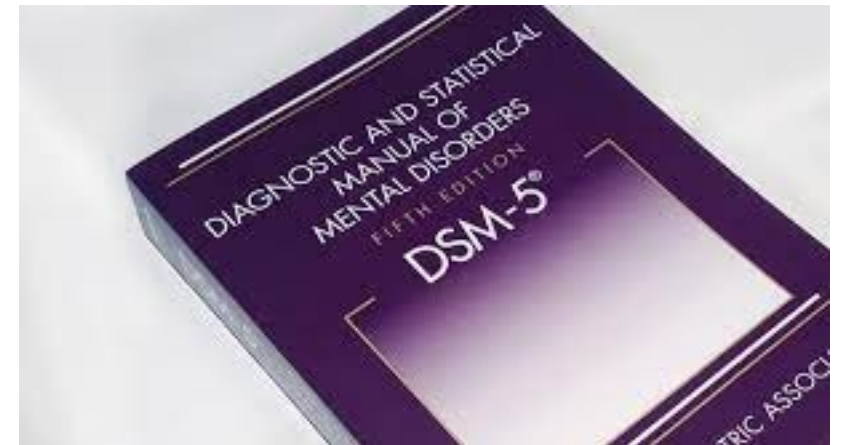
Positive symptoms
(Behavioral excess)



- Hallucinations
- Delusions
- Disorganized speech
- Disorganized/catatonic behavior

2

Negative symptoms
(Behavioral deficits)



Positive symptoms

Delusions: false and fixed beliefs

- “I think people are talking about me”
- “Someone is following me”
- “People are talking about me to plot against me”
- “Aliens are sending me messages through the TV”

Hallucinations: perception/sensory abnormalities

- Auditory, visual, or tactile
- Auditory or “hearing voices” is most common

Positive symptoms

Disorganized speech: difficult to follow

- Disjointed monologues
- Idiosyncratic use of words

Disorganized behavior: unpredictability/agitation

- Dressing in unusual manner
- Unpredictable emotional response

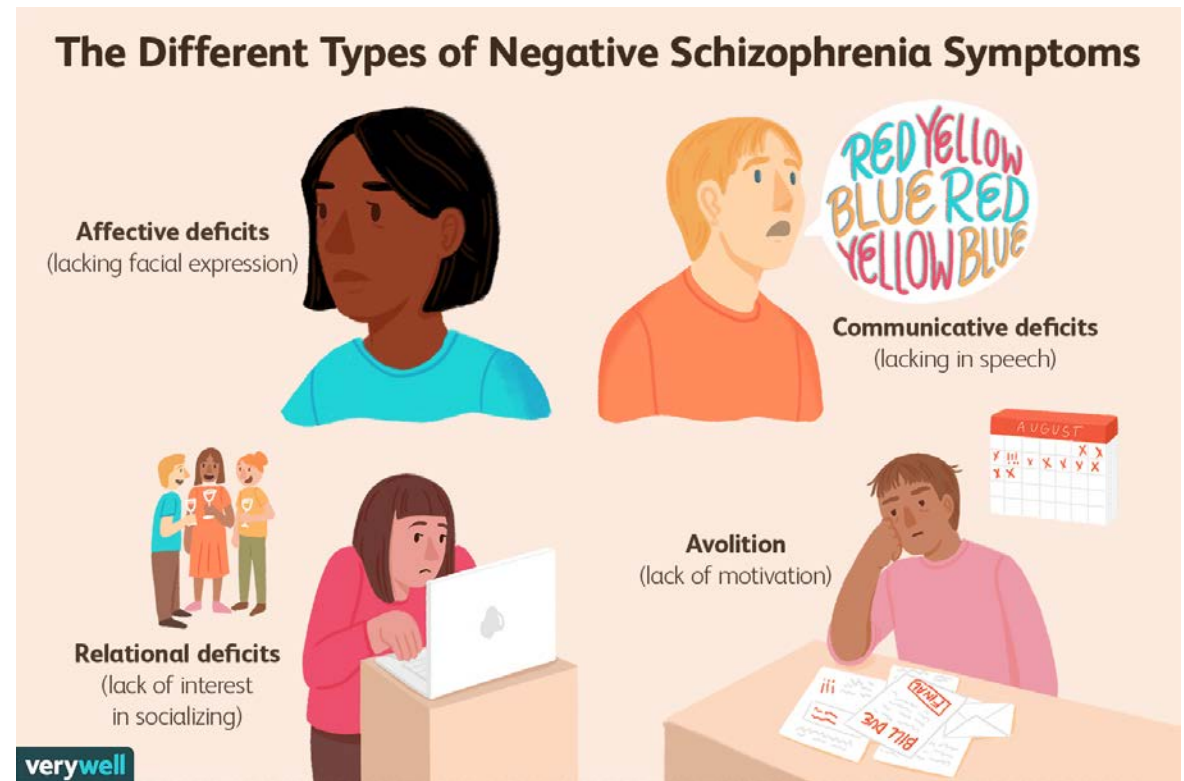
Disorganized movement: unusual movements



- **Goal-directed behavior**
- **Functioning**

Negative symptoms

- Social withdrawal
- Decreased motivation
- Decreased activity
- Limited facial expression



We view psychosis on a spectrum

Hallucinations: Perceptual/Sensory Abnormalities



e.g., seeing indistinct shadows out of the corner of your eye

e.g., seeing a person hovering on top of your house

Psychological Medicine (2018), 48, 229–244. © Cambridge University Press 2017
doi:10.1017/S0033291717001775

REVIEW ARTICLE

The slow death of the concept of schizophrenia and the painful birth of the psychosis spectrum

S. Guloksuz^{1,2} and J. van Os^{1,3,4*}

Other recent studies of psychotic experiences or “psychotic-like experiences” (PLE) in the general public:

- **6-27%** of individuals report at least one type of PLE in their lifetime (Bourgin et al., 2020; Isaksson, Vadlin, Olofsdotter, Åslund, & Nilsson, 2020; Kelleher et al., 2012a, 2012b; McGrath et al., 2015; van Os et al., 2009)
- **Most transitory and non-distressing** (van Os et al., 2009)
- **Some persist, can be distressing,** and are associated with: depression, low self-esteem, and other psychiatric disorders and service use (e.g., Dolphin et al., 2015; Rimvall et al., 2020) – particularly when influenced by environmental risk factors (van Os et al., 2009)

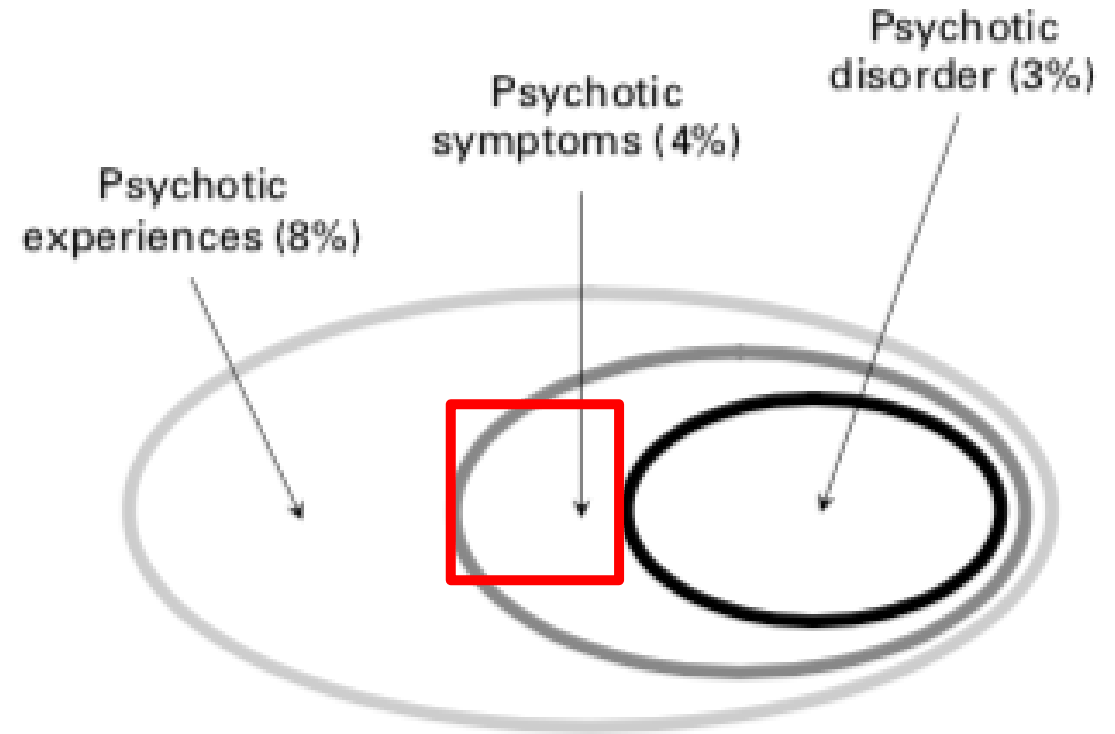


Fig. 4. Psychosis: variation along a continuum.

van Os et al., 2009

Agenda

1. Describe the psychosis spectrum
- 2. Define psychosis-risk**
3. List two commonly used psychosis-risk screening tools (and cultural considerations)
4. Describe psychosis-risk evidence-based treatment
5. Identify specialized psychosis-risk programs
6. Summary and Q&A

Psychosis-risk: history

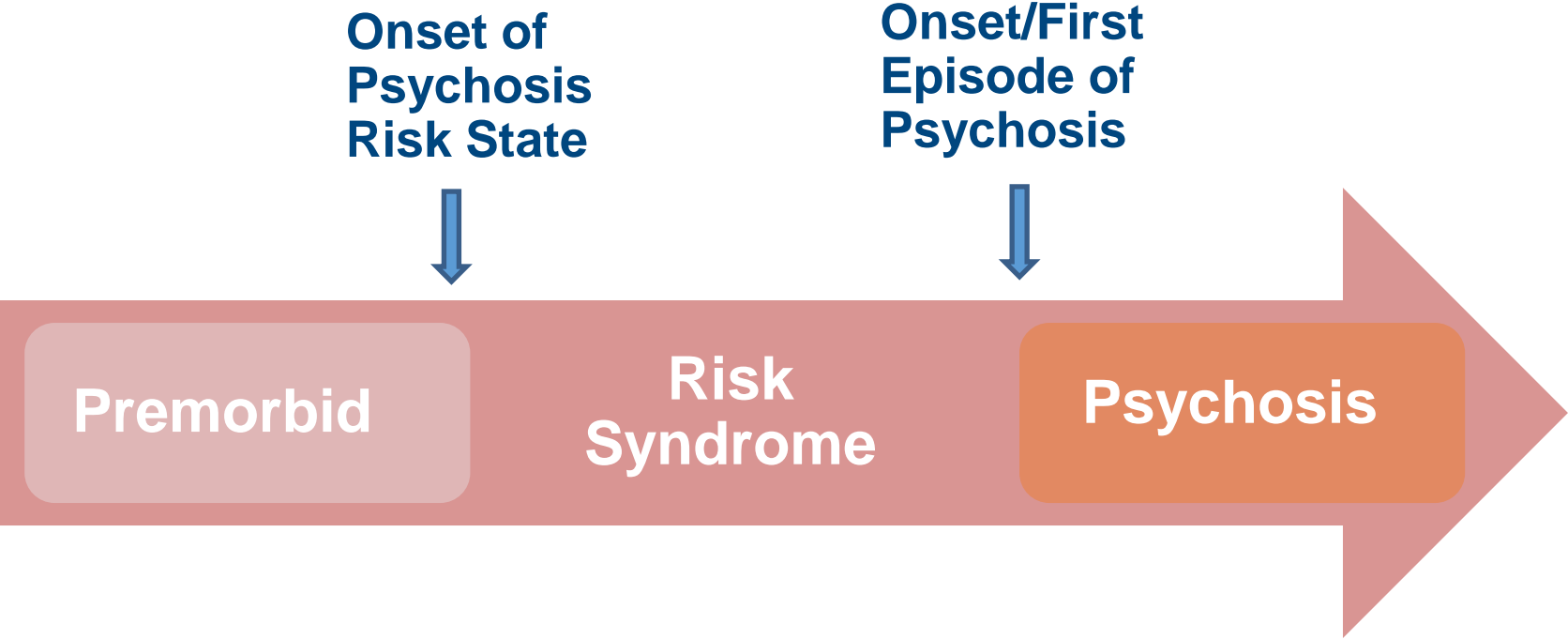
- Long history of interest in the “prodrome” (Mayer-Gross, 1932; see Fusar-Poli, 2013 for review) and preventive psychiatry
- First psychosis-risk service in the 90s in Australia (Yung et al., 1996)
- Specialized tools were then developed (CAARMS, SIPS, etc.) and specialized clinics continue to proliferate

Psychosis-risk

- **Psychosis-risk (aka Clinical High Risk [CHR] for psychosis, or... ultra-high risk... “prodrome” ... etc.)**
 - warning signs; sub-threshold
 - psychosis-like experiences that resemble psychosis, but do not rise to the same level of severity and frequency; doubt is also intact
 - E.g., a family history & functional decline in last year, or recent transient symptoms (~weekly) or worsening of symptoms in last year
 - Not seriously disorganizing or dangerous

v. First-Episode Psychosis (FEP)

- *first signs of a threshold/full psychosis (e.g., DSM-5 criteria) psychotic episode*



Psychosis-risk: onset

- Onset generally occurs between the ages of 12-25
- Onset may begin in adolescence and continue into young adulthood



Psychosis-risk: warning signs

- Many early warning signs:
 - Feeling “something’s not quite right”
 - Jumbled thoughts and confusion
 - Trouble speaking clearly
 - Unnecessary fear
 - Declining interest in people, activities, and self-care
 - Comments from others
 - Deterioration in functioning
 - Work / School / Hygiene

But these concerns are non-specific

Psychosis-risk v. First episode psychosis

Conditions are often differentiated by:

1. Intensity and severity of symptoms
2. Degree of conviction
3. Doubt, question and insight

Examples:

“I’m pretty sure the man in the black suit is following me, but that doesn’t make any sense, right?”

“I think I hear footsteps at night, but no one else does. I don’t see anything when I go and check, so I don’t know.”

Psychosis-risk: trajectory

- A substantial minority (**22-25%**) of individuals determined to be at *psychosis-risk* develop a psychotic disorder within three years, and **35%** develop a psychotic disorder within ten years (Fusar-Poli et al., 2020; Salazar de Pablo et al., 2021)
- Often comorbid psychological and behavioral challenges such as depression, anxiety, impaired social and role functioning, and a history of trauma

Prevalence of psychosis-risk

- **DSM-5 psychotic disorders = 1-3% lifetime prevalence**
- **Psychosis-risk in general population = 2-3%** (Salazar de Pablo et al., 2021; Woods et al., 2019)
- **Psychosis-risk in clinical samples = 19-20%** (Salazar de Pablo et al., 2021; Woods et al., 2019)
 - In one study, 1 in 4 non-psychotic adolescent inpatients met psychosis-risk criteria (Gerstenberg et al., 2015)

Conclusions = not rare & likely under-detected

- ***& earlier identification leads to best treatment outcomes!***

Agenda

1. Describe the psychosis spectrum
2. Define psychosis-risk
- 3. List two commonly used psychosis-risk screening tools (and cultural considerations)**
4. Describe psychosis-risk evidence-based treatment
5. Identify specialized psychosis-risk programs
6. Summary and Q&A

Psychosis-risk screening



Schizophrenia Research
Volume 158, Issues 1–3, September 2014, Pages 11-18



Psychosis risk screening: A systematic review

Emily Kline, Jason Schiffman  

Show more 

<https://doi.org/10.1016/j.schres.2014.06.036>

[Get rights and content](#)

Abstract

Despite the wealth of evidence linking duration of untreated psychosis to critical illness outcomes, most clinicians do not utilize any formal evaluation tools to identify attenuated or emerging psychotic symptoms. Given the costs associated

Psychosis-risk screeners

Screeners (two that are commonly used):

1. Prime-Revised with Distress (12 items; Miller, 2004)

- <https://m.yale.edu/cjt>

2. Prodromal Questionnaire (e.g., PQ-16; Ising et al., 2012; Loewy et al., 2005)

- <https://www.psychosisscreening.org/>

Prime-Revised with Distress (items 1-4)

Within the past year:		Definitely disagree	Somewhat disagree	Slightly disagree	Not sure	Slightly agree	Somewhat agree	Definitely agree
1. I think that I have felt that there are odd or unusual things going on that I can't explain.		0	1	2	3	4	5	6
When this happens, I feel frightened or concerned, or it causes problems for me.	N/A	0	1	2	3	4	5	6
2. I think that I might be able to predict the future.		0	1	2	3	4	5	6
When this happens, I feel frightened or concerned, or it causes problems for me.	N/A	0	1	2	3	4	5	6
3. I may have felt that there could possibly be something interrupting or controlling my thoughts, feelings, or actions.		0	1	2	3	4	5	6
When this happens, I feel frightened or concerned, or it causes problems for me.	N/A	0	1	2	3	4	5	6
4. I have had the experience of doing something differently because of my superstitions.		0	1	2	3	4	5	6
When this happens, I feel frightened or concerned, or it causes problems for me.	N/A	0	1	2	3	4	5	6

Prime-Revised with Distress: Cultural Considerations

- Race, age, and contextual factors influence responding and scoring on the Prime
- Research continues in this area

Evidence for Differential Predictive Performance of the Prime Screen Between Black and White Help-Seeking Youths

Zachary B. Millman, M.A., Pamela J. Rakhshan Rouhakhtar, M.A., Jordan E. DeVlyder, Ph.D., Melissa E. Smith, Ph.D., Peter L. Phalen, Psy.D., Scott W. Woods, M.D., Barbara C. Walsh, Ph.D., Brittany Parham, Ph.D., Gloria M. Reeves, M.D., Jason Schiffman, Ph.D.

The impact of age on the validity of psychosis-risk screening in a sample of help-seeking youth

P.J. Rakhshan Rouhakhtar^a, Steven C. Pitts^a, Zachary B. Millman^a, Nicole D. Andorko^a, Samantha Redman^a, Camille Wilson^{a,1}, Caroline Demro^{a,2}, Peter L. Phalen^b, Barbara Walsh^c, Scott Woods^c, Gloria M. Reeves^b, Jason Schiffman^{a,*}

Associations between Race, Discrimination, Community Violence, Traumatic Life Events, and Psychosis-Like Experiences in a Sample of College Students

Pamela J. Rakhshan Rouhakhtar, Steven C. Pitts and Jason Schiffman *

Community Psychosis Risk Screening: An Instrument Development Investigation

Lauren M. Ellman^{1,*}, Jason Schiffman^{2,3}, Vijay A. Mittal⁴

Prodromal Questionnaire-16 (items 1-6)

THE 16-ITEM VERSION OF THE PRODROMAL QUESTIONNAIRE (PQ-16)

		If TRUE: how much distress did you experience?			
		None	Mild	Moderate	Severe
1.	I feel uninterested in the things I used to enjoy.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
2.	I often seem to live through events exactly as they happened before (déjà vu).	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
3.	I sometimes smell or taste things that other people can't smell or taste.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
4.	I often hear unusual sounds like banging, clicking, hissing, clapping or ringing in my ears.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
5.	I have been confused at times whether something I experienced was real or imaginary.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
6.	When I look at a person, or look at myself in a mirror, I have seen the face change right before my eyes.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

Credit: psychosisscreening.org

Prodromal Questionnaire: Cultural Considerations

REVIEW ARTICLE

- "It is unclear whether different thresholds may be appropriate for different cultures given that some of the items may be indicative of cultural differences rather than positive symptomology" (Savill et al., 2018, p. 11)
- Research continues in this area, too

Psychosis risk screening in different populations using the Prodromal Questionnaire: A systematic review

Mark Savill¹  | Jennifer D'Ambrosio¹ | Tyrone D. Cannon² | Rachel L. Loewy¹

Racial discrimination is associated with distressing subthreshold positive psychotic symptoms among US urban ethnic minority young adults

Deidre M. Anglin · Quenesha Lighty ·
Michelle Greenspoon · Lauren M. Ellman

Measurement Invariance of the Prodromal Questionnaire–Brief Among White, Asian, Hispanic, and Multiracial Populations

David C. Cicero¹, Alexander Krieg¹, and Elizabeth A. Martin²

Overall: More work to be done...

- Cultural factors remain understudied in psychosis-risk screening and assessment research. Some practical suggestions include considerations of:
 - 1. Culture and context**
 - *Culturally-sensitive interview techniques (allowing time to discuss contextual factors such as discrimination, social deprivation, trauma, etc.); assessing cultural competence of clinicians*
 - 2. Comorbidity**
 - *Graduate training and continuing education; re-training; validity check-ins*
 - 3. Developmentally-informed conceptualization**
 - *Stay current on early-stage psychosis literature and youth norm literature; acknowledge dynamic nature of adolescence and young adulthood*

**Individual Differences and Psychosis-Risk
Screening: Practical Suggestions to Improve
the Scope and Quality of Early Identification**

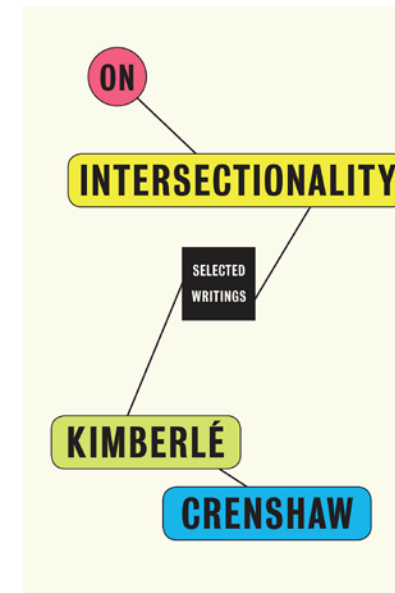
Frameworks and cornerstones

Frameworks

- Intersectionality (Crenshaw, 1990)
 - “ADDRESSING” Model (Hays, 1996)
 - Age and generational influences
 - Developmental or other
 - Disability
 - Religion (or spirituality)
 - Ethnic and racial identity
 - Socioeconomic status
 - Sexual orientation
 - Indigenous heritage
 - National origin
 - Gender identity

Addressing the Complexities of Culture and Gender in Counseling

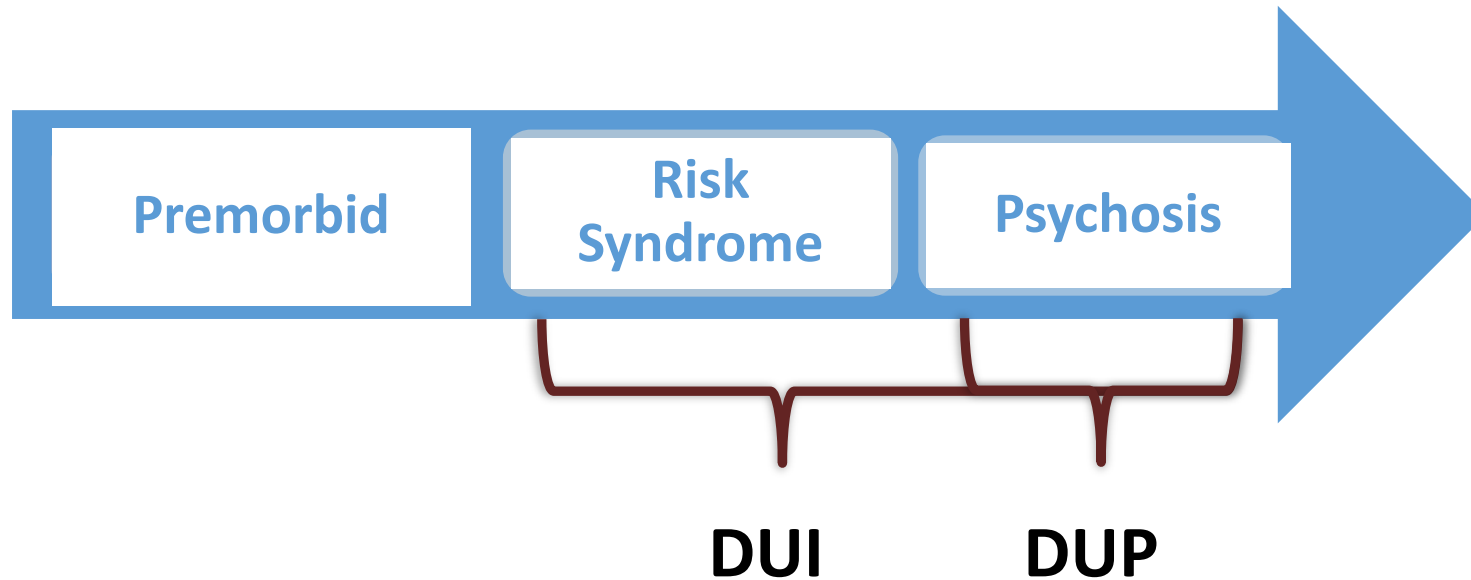
Pamela A. Hays



Agenda

1. Describe the psychosis spectrum
2. Define psychosis-risk
3. List two commonly used psychosis-risk screening tools (and cultural considerations)
- 4. Describe psychosis-risk evidence-based treatment**
5. Identify specialized psychosis-risk programs
6. Summary and Q&A

Importance: Duration of Untreated Illness (DUI) and Psychosis (DUP)



Shorter DUI/DUP is good

- ✓ Better long-term outcomes
- ✓ Less need for intensive services
- ✓ Less negative symptoms
- ✓ Less social impairment
- ✓ Less occupational impairment
- ✓ Less neuropsychological deficits
- ✓ Less psychological distress
- ✓ Less costs/burdens to the system

Psychosis-risk services

The Journal of Child
Psychology and Psychiatry



Annual Research Review |  Open Access |  

Annual Research Review: Prevention of psychosis in adolescents – systematic review and meta-analysis of advances in detection, prognosis and intervention

Ana Catalan, Gonzalo Salazar de Pablo, Julio Vaquerizo Serrano, Pierluca Mosillo, Helen Baldwin, Aranzazu Fernández-Rivas, Carmen Moreno, Celso Arango, Christoph U. Correll ... [See all authors](#) ✓

First published: 14 September 2020 | <https://doi.org/10.1111/jcpp.13322>

Psychosis-risk services (continued)

- Outreach, screening, monitoring, treatment
- Transdiagnostic, modular models (Pozza & Dèttore, 2020; Thompson et al., 2015; Weintraub et al., 2020)
- E.g., Group and Family-Based CBT (GF-CBT) (Landa et al., 2015)
 - weekly CBT skills group and individual sessions for adolescents, and a weekly CBT skills group for family members
 - Goal-setting
 - Psychoeducation
 - "ABC" model
 - Cognitive biases

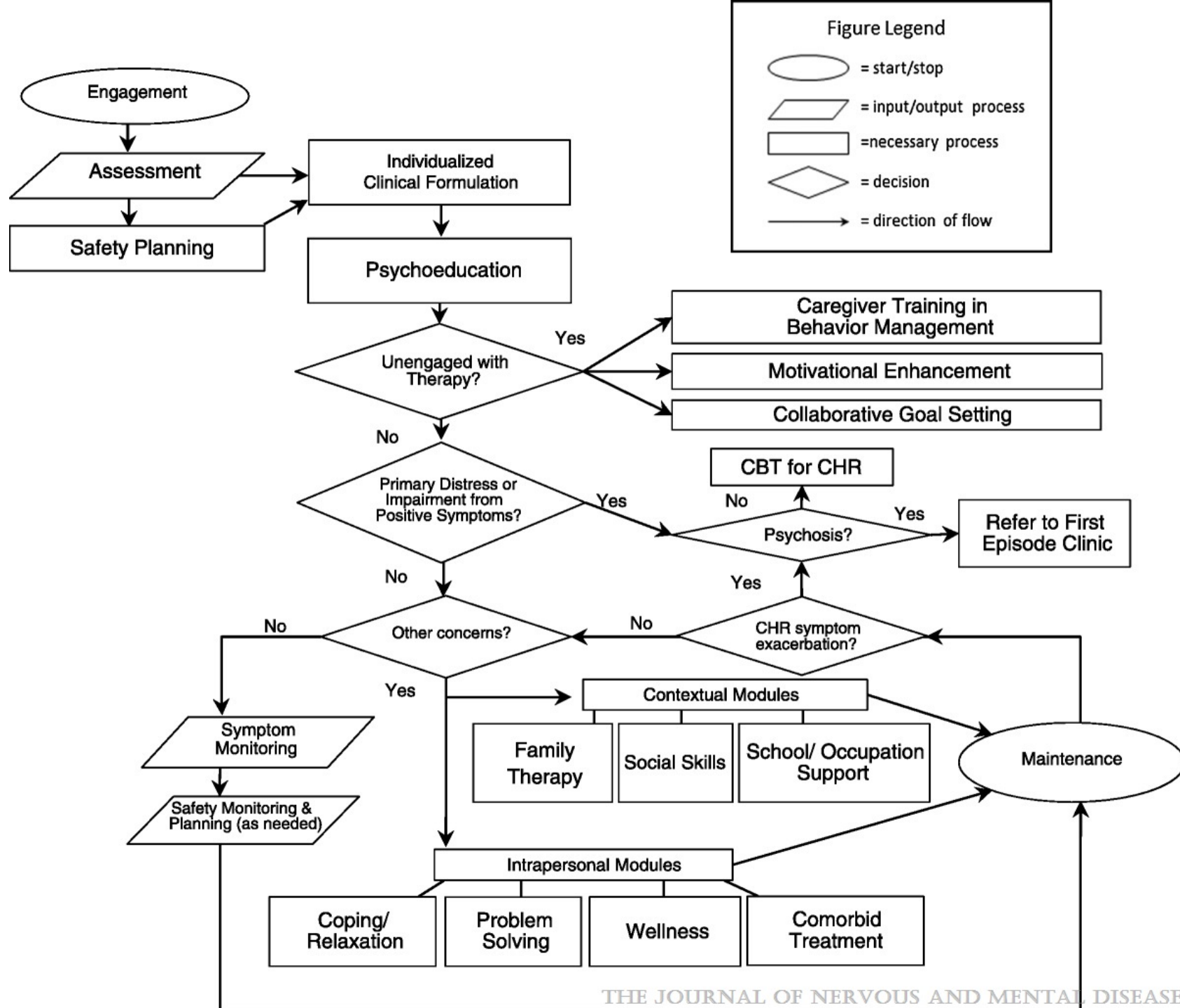


Original Article | [Full Access](#)

Development of a group and family-based cognitive behavioural therapy program for youth at risk for psychosis

Yulia Landa , Kim T. Mueser, Katarzyna E. Wyka, Erica Shreck, Rachel Jespersen, Michael A. Jacobson, Kenneth W. Griffin, Mark van der Gaag, Valerie F. Reyna, Aaron T. Beck ... [See all authors](#) 

First published: 13 January 2015 | <https://doi.org/10.1111/eip.12204> | Citations: 18



What might these services look like?

- **Multidisciplinary Treatment**
 - Comprehensive assessment
 - Psychotherapy
 - Pharmacotherapy (if needed)
 - Family education/support
 - Case management
 - Supported education/employment
- **Core Functions/Processes**
 - Individualized
 - Team based approach
 - Specialized training
 - Client and family engagement
 - Community outreach

Curr Treat Options Psych (2019) 6:1–16
DOI 10.1007/s40501-019-0164-6

Schizophrenia and Other Psychotic Disorders (J Csernansky, Section Editor)

Multidisciplinary Treatment for Individuals at Clinical High Risk of Developing Psychosis

Jean Addington, PhD^{1,2,}*

Daniel J. Devoe, BA, MSc^{1,2}

Olga Santesteban-Echarri, PhD^{1,2}

Psychosis-risk services: next steps

- Psychosis and culture are intertwined: a need to assess for and treat stigma and race-based stress within a culturally responsive framework (Anglin et al., 2021; DeLuca et al., 2021; Jones et al., 2021)
- A need to understand diverse presentations, including clinical and biological markers, to further individualize care

Reducing Stigma Among Youth at Risk for Psychosis: A Call to Action FREE

Joseph S DeLuca ✉, Lawrence H Yang, Alicia A Lucksted, Philip T Yanos, Jordan DeVyllder, Deidre M Anglin, Yulia Landa, Cheryl M Corcoran

Schizophrenia Bulletin, Volume 47, Issue 6, November 2021, Pages 1512–1514,

<https://doi.org/10.1093/schbul/sbab098>

Published: 17 August 2021

Research Highlight: NIMH Part of Collaborative Effort to Advance Early Intervention for Individuals at Risk of Developing Schizophrenia

The Accelerating Medicines Partnership aims to promote development of effective, targeted treatments for schizophrenia

Agenda

1. Describe the psychosis spectrum
2. Define psychosis-risk
3. List two commonly used psychosis-risk screening tools (and cultural considerations)
4. Describe psychosis-risk evidence-based treatment
- 5. Identify specialized psychosis-risk programs**
6. Summary and Q&A

How?

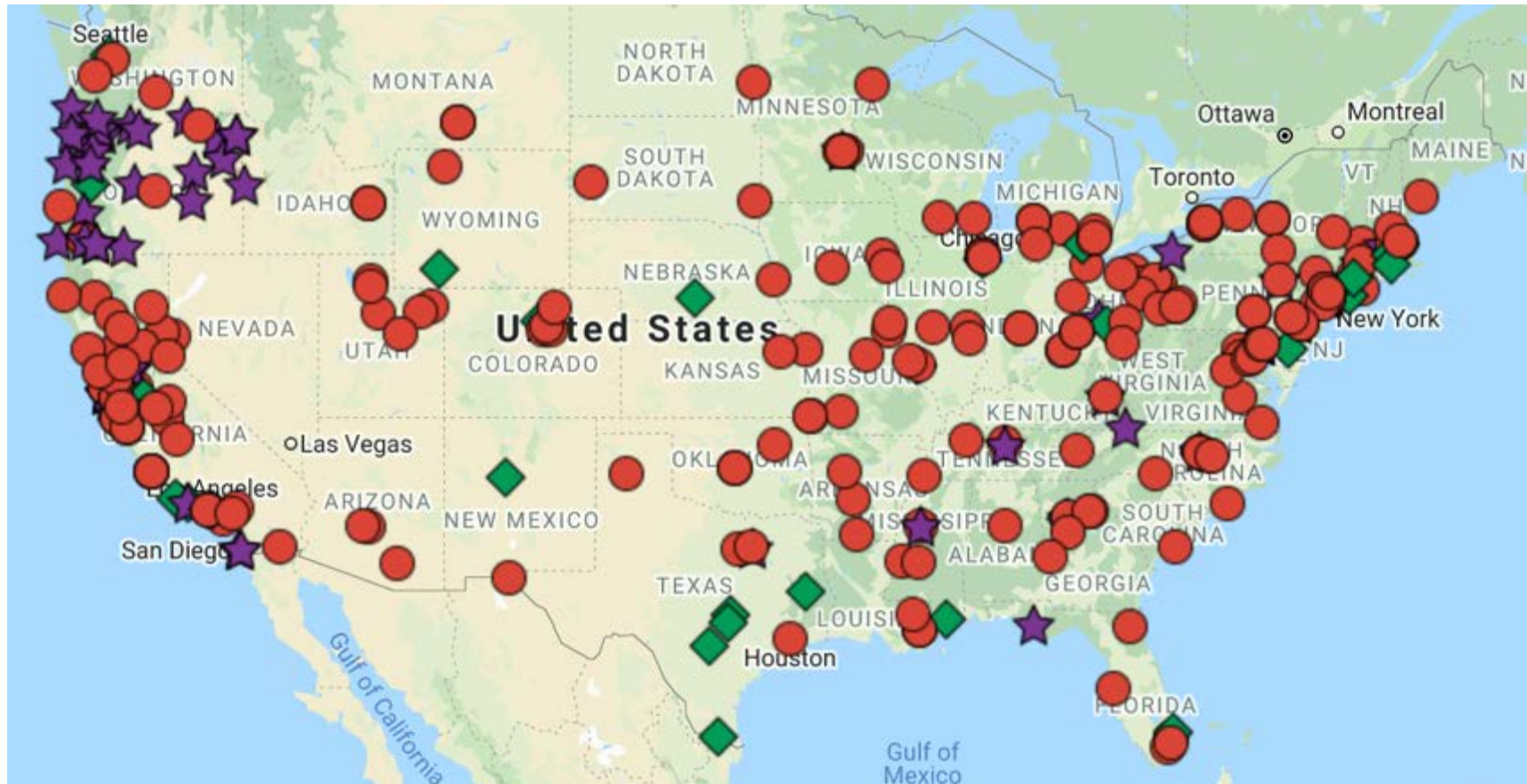
- *“Know the signs”*
 - E.g., signs and symptoms discussed; also consider family history
- *“Find the words”*
 - E.g., what is the experience like? Is it distressing? Is it impacting functioning? Is it recurring or progressing?
 - May use PQ-16 or another tool

How? (continued)

- *“Make the connection”*
 - E.g., if experiences are impacting, recurring, or progressing, then
 - refer the patient to specialized assessment of psychosis and/or psychosis risk (**when in doubt, reach out**)
 - Seek consultation/specialized treatment options, including medical work-up
 - When speaking with caregivers: listen, highlight strengths, combat stigma

Where can I refer?

- [National and international map from IEPA](#)
- Also: Early-stage psychosis detection and specialized services
 - [Early Assessment and Support Alliance \(EASA\)](#)



Agenda

1. Describe the psychosis spectrum
2. Define psychosis-risk
3. List two commonly used psychosis-risk screening tools (and cultural considerations)
4. Describe psychosis-risk evidence-based treatment
5. Identify specialized psychosis-risk programs
- 6. Summary and Q&A**

Summary

- Psychosis exists on a spectrum
- Psychosis-risk refers to subthreshold psychotic experiences
- Psychosis-risk screening can be done in your treatment setting and is necessary for early intervention
- Cultural factors must be considered
- Early treatment can save lives and recovery is possible! Check out the resources to find local resources in your community

THANK YOU!

Selected references

- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (DSM-5®). American Psychiatric Pub.
- DeLuca, J. S., Yang, L. H., Lucksted, A. A., Yanos, P. T., DeVlyder, J., Anglin, D. M., ... & Corcoran, C. M. (2021). Reducing Stigma Among Youth at Risk for Psychosis: A Call to Action. *Schizophrenia bulletin*, 47(6), 1512-1514.
- Dwyer, T. F. (1973). Telepsychiatry: psychiatric consultation by interactive television. *American Journal of Psychiatry*, 130(8), 865-869.
- Fusar-Poli, P., Borgwardt, S., Bechdolf, A., Addington, J., Riecher-Rössler, A., Schultze-Lutter, F., ... & Yung, A. (2013). The psychosis high-risk state: a comprehensive state-of-the-art review. *JAMA psychiatry*, 70(1), 107-120.
- Fusar-Poli, P., Salazar de Pablo, G., Correll, C. U., Meyer-Lindenberg, A., Millan, M. J., Borgwardt, S., Galderisi, S., Bechdolf, A., Pfennig, A., Kessing, L. V., van Amelsvoort, T., Nieman, D. H., Domschke, K., Krebs, M., Koutsouleris, N., McGuire, P., Do, K. Q., & Arango, C. (2020). Prevention of psychosis: Advances in detection, prognosis, and intervention. *JAMA Psychiatry*.
- Jones, N., Kamens, S., Oluwoye, O., Mascayano, F., Perry, C., Manseau, M., & Compton, M. T. (2021). Structural Disadvantage and Culture, Race, and Ethnicity in Early Psychosis Services: International Provider Survey. *Psychiatric Services*, appi-ps.
- Jordan, G., Malla, A., & Iyer, S. N. (2019). "It's Brought Me a Lot Closer to Who I Am": A mixed methods study of posttraumatic growth and positive change following a first episode of psychosis. *Frontiers in psychiatry*, 10, 480.
- Kane, J. M., Robinson, D. G., Schooler, N. R., Mueser, K. T., Penn, D. L., Rosenheck, R. A., ... & Heinssen, R. K. (2016). Comprehensive versus usual community care for first-episode psychosis: 2-year outcomes from the NIMH RAISE early treatment program. *American Journal of Psychiatry*, 173(4), 362-372.
- Kline, E. R., Chokran, C., Rodenhiser-Hill, J., Seidman, L. J., & Woodberry, K. A. (2019). Psychosis screening practices in schools: A survey of school-based mental health providers. *Early intervention in psychiatry*, 13(4), 818-822.
- Millman, Z. B., Rakhshan Rouhakhtar, P. J., DeVlyder, J. E., Smith, M. E., Phalen, P. L., Woods, S. W., ... & Schiffman, J. (2019). Evidence for differential predictive performance of the prime screen between black and white help-seeking youths. *Psychiatric Services*, 70(10), 907-914.
- Rouhakhtar, P. R., Pitts, S. C., Millman, Z. B., Andorko, N. D., Redman, S., Wilson, C., ... & Schiffman, J. (2019). The impact of age on the validity of psychosis-risk screening in a sample of help-seeking youth. *Psychiatry research*, 274, 30-35.
- Rakhshan Rouhakhtar, P. J., Pitts, S. C., & Schiffman, J. (2019). Associations between race, discrimination, community violence, traumatic life events, and psychosis-like experiences in a sample of college students. *Journal of clinical medicine*, 8(10), 1573.
- Schiffman, J., Ellum, L. M., & Mittal, V. A. (2019). Individual differences and psychosis-risk screening: Practical suggestions to improve the scope and quality of early identification. *Frontiers in psychiatry*, 10, 6.
- Van Os, J., Linscott, R. J., Myin-Germeys, I., Delespaul, P., & Krabbendam, L. J. P. M. (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.
- Woods, S. W., Walsh, B. C., Powers, A. R., & McGlashan, T. H. (2019). Reliability, validity, epidemiology, and cultural variation of the Structured Interview for Psychosis-risk Syndromes (SIPS) and the Scale Of Psychosis-risk Symptoms (SOPS). In *Handbook of attenuated psychosis syndrome across cultures* (pp. 85-113). Springer.

Acknowledgments

I am grateful to the youth, families, staff, and mentors in the psychosis risk clinics I have worked in, including Zucker Hillside Hospital's RAP program, the University of Maryland's Strive for Wellness and EIP programs, and Mount Sinai's CUE and ProSPECT programs.

Questions



Appreciation



Contact Us



Central East (HHS Region 3)

MHTTC

Mental Health Technology Transfer Center Network
Funded by Substance Abuse and Mental Health Services Administration

a program managed by



[Central East MHTTC website](#)
[Oscar Morgan, Project Director](#)

[Danya Institute website](#)
[Email](#)
240-645-1145