

Early Intervention in the Treatment of Psychosis



Ashley Weiss, DO, MPH^{a,b,*}, Serena Chaudhry, DSW, LCSW, MPH^{a,c},
Alicia Marhefka, MD^d, Vininder Khunkhun, MD^b

KEYWORDS

- Coordinated specialty care
- Duration of untreated psychosis
- First episode of psychosis

KEY POINTS

- The evaluation of the first presentation of psychosis is extensive and can take place over time; it necessitates a rule out of any non-psychiatric medical conditions.
- The shorter the duration of untreated psychosis, the better the prognostic outcomes for young people, emphasizing the need for early intervention.
- Coordinated specialty care is an evidence-based, person- and family-centered, approach that helps young people navigate their first episode of psychosis.

BACKGROUND

As we know, there is current pediatric mental health crisis occurring in this country. While this current conversation is timely and critical, those with the most severe mental illnesses have historically been in crisis, without adequate treatment, being marginalized from the health care system and society at large. Data from the Nationwide Emergency Department Sample database show that emergency department visits for mental health issues rose by 60% and self-harm visits rose by 329%. Young people with psychosis are presenting in crisis states as well. A 2023 article in JAMA Pediatrics reported that young patients with psychotic disorders were 42% more likely to revisit the emergency room (ER) than their peers with suicidal ideation. However, psychosis still remains a highly stigmatized and misunderstood condition.

^a Early Psychosis Intervention Clinic New Orleans (EPIC-NOLA); ^b Department of Psychiatry, Section of Child and Adolescent Psychiatry, Tulane University School of Medicine, 1440 Canal Street, Suite 1000, New Orleans, LA 70112, USA; ^c Department of Psychiatry, Tulane University School of Medicine, 1440 Canal Street, Suite 1000, New Orleans, LA 70112, USA; ^d Department of Psychiatry, University of Maryland School of Medicine, 655 West Baltimore Street, Baltimore, MD 21201, USA

* Corresponding author. Department of Psychiatry, Section of Child Adolescent Psychiatry, Tulane University School of Medicine, 1440 Canal Street, Suite 1000, New Orleans, LA 70112.

E-mail address: aweiss3@tulane.edu

Psychosis is a psychiatric symptom, broadly defined as loss of touch with reality and can include changes in perception, misinterpretation of the environment, and cognitive processing difficulties.¹ Three in 100 will experience psychosis in their lifetimes, often first in adolescence and young adulthood, and can be the onset of serious mental illnesses like the schizophrenia-spectrum disorders.² Over the last 3 decades, we have seen a dramatic shift toward comprehensive treatment of the *first* episode of psychosis (FEP) in efforts to change the trajectory for those suffering with historically what have been the most devastating of mental illnesses. Furthermore, research has shown that the longer duration of untreated psychosis (DUP), the worse the functional and clinical outcomes, contributing further to a shift in the landscape of care for FEP.³

Schizophrenia-spectrum disorders are burdensome and costly for individuals and health care systems globally. The World Health Organization estimates direct costs including medical, non-medical, hospitalization, prescriptions, and outpatient care associated specifically with schizophrenia in Western countries, ranges from 1.6% to 2.6% of total health care expenditures, accounting for 7% to 12% of the gross national product.⁴ Indirect costs including productivity losses related to morbidity and premature mortality, caregiver burden, incarceration, contribute to 50% to 85% of the overall costs associated with schizophrenia spectrum disorders.⁴

This article aims to: (1) describe the evolution of FEP approaches; (2) define a model of multidisciplinary care; (3) identify challenges and limitations; (4) discuss the unique challenges for those first experiencing psychosis; (5) identify strategies to expand early psychosis interventions.

From the medical standpoint, the differential diagnosis and initial medical work-up for the first presentation of psychosis is extensive and takes place over time, as outlined by Skikic in an article outlining the full medical work-up.⁵ It is critical to ensure that psychosis is not related to a non-psychiatric medical condition. Becoming familiar with this protocol is critical. The remainder of the article will be focused on treatment of FEP in those with schizophrenia-spectrum disorders.

EVIDENCE FOR EARLY PSYCHOSIS INTERVENTION

Landmark research out of Dr Patrick McGorry's Australia Early Psychosis Prevention and Intervention Center Study showed that engaging FEP patients in robust, multidisciplinary clinics could reduce the critically important DUP and improve symptomatic and functional outcomes.⁶ McGorry's success inspired a specialization in FEP globally. Denmark launched the OPUS trial, Norway launched TIPS, and the United Kingdom Department of Health committed to early psychosis not only from the clinical standpoint, but from the policy approach, making early psychosis a priority.

The United States (US) followed suit in the exploration of early psychosis intervention. The first FEP clinics in the US began in Oregon and Maine, starting in 2000 and 2001, respectively, and North Carolina, Connecticut, and California quickly followed suit.³ In 2013, with funding from the National Institute of Mental Health (NIMH), the Program for Specialized Treatment Early in Psychosis (STEP) at Yale University conducted the first US randomized trial of a team-based model of care, including medication management, individual therapy, family psychoeducation, and psychosocial skill building. This trial demonstrated effectiveness of a team-based model of care in a public-sector setting.⁷

Following the STEP trial, the Recovery After an Initial Schizophrenia Episode initiative, (RAISE), a large cluster randomized NIMH-funded study, was implemented across 21 states with variable funding models. RAISE demonstrated feasibility of the specialized approach, better outcomes than treatment as usual, best outcomes

in those with shorter DUP, and cost-effectiveness.⁸ This multi-disciplinary approach, referred to as coordinated specialty care (CSC) here in the US, has now shown for over a decade that outcomes are improved when compared to care as usual.³ These outcomes include improving psychotic symptoms, reducing hospitalizations, reducing depressive symptoms, and increasing engagement in school and work.^{7,9} Meta-analysis shows comprehensive care is superior to treatment as usual¹⁰

EXPANSION OF EARLY INTERVENTION SERVICES

As the evidence for this approach grew, policy changes followed, helping to support, both programmatically and financially, the shift in management of FEP from predominantly routine outpatient care to the CSC model. In 2014, policy changes were made on the national level, with 5% of community mental health services block grants earmarked to fund early intervention programs. This was later increased by 10% in 2016. As a result, over 15 years, the number of clinics has grown from 12 in 2008 to an estimated 381 clinics in 2022 with CSCs now existing in 51 states and all US territories.¹¹

CSCs are team-based programs that rely on evidence-based treatments demonstrated in the STEP and RAISE trials, to reduce symptom burden, improve overall functioning, increase engagement in treatment, school, and/or work and provide support and education to the first episode patient and family. How this is accomplished varies from program to program. State-wide programs have been developed, such as in New York, Oregon, and Washington, while in other areas, programs can vary from county to county.¹¹ CSCs typically serve teens and young adults who are experiencing their first psychotic episode, with DUP typically of less than 2 years. The multi-disciplinary team consists of psychiatrists, therapists, nurses, case managers, and often peer support specialists and addictions counselors. While programming can vary, the NIMH has 5 recommended core activities for CSC's: psychotherapy (cognitive or behavioral), medication management, family education and support, service coordination and case management, and supported employment and education and approximately 90% of FEP programs include these 5 components.¹²

COMPONENTS OF EARLY PSYCHOSIS INTERVENTION TEAMS

The core components of CSC care are not unique to the field of mental health; however, they are strategically brought together in a team-based approach, with the common goal of appreciating and supporting the enormity of what a young person and their family are facing when first experiencing psychosis. Given the importance of initial engagement in treatment to reduce DUP and get best outcomes, this person and family-centered approach is critical and relies heavily on rapport building. Each component of care is developmentally informed, oriented to promote recovery, and instill hope. An example of the components of care in a CSC service in New Orleans, Louisiana is provided as follows in [Fig. 1](#). A case example is outlined in [Box 1](#).

Medication Management

Shared decision-making principles in medication management are essential. Young people entering FEP care are often antipsychotic-naïve. This may be their first experience with medications therefore increasing the chance of a positive experience can impact their long-term attitudes toward medication. The FEP population is more sensitive to side effects of antipsychotic medications. Lowering side-effect risk is important because experiencing side effects increases the risk for non-adherence. Non-adherence then increases the risk of relapse. Atypical antipsychotics are frequently used in this population but often require very low doses, typically half of

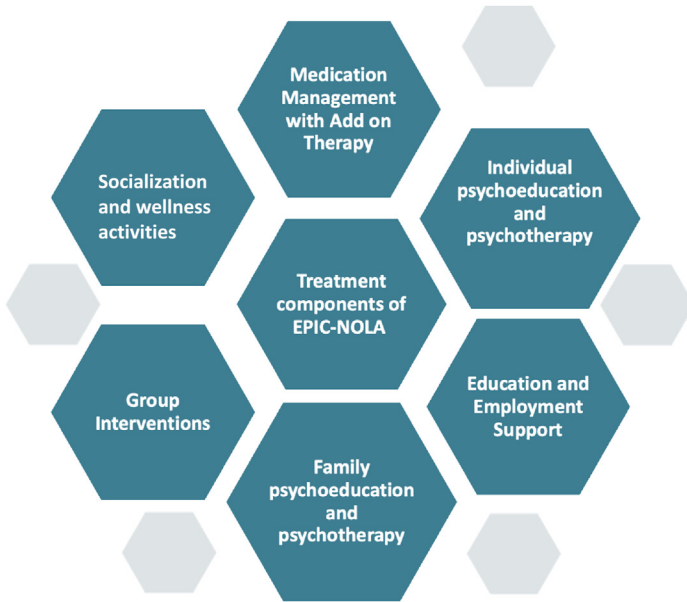


Fig. 1. Components of care in a CSC service in New Orleans, Louisiana.

doses recommended for those with multiple psychosis episodes. Several expert organizations (Navigate, National Institute for Health and Care Excellence [NICE]) have made recommendations and guidelines for prescribing antipsychotics. All agree that monotherapy is the goal, with a tolerable side effect profile, with the lowest dose needed for remission. It is also of note that symptom reduction takes time, with 4 to 6 weeks considered an adequate trial; however, improvements in symptoms being seen as far out as 16 weeks with no dose change. Medications such as olanzapine with high risk of weight gain and metabolic syndrome are discouraged for the FEP population. Clozapine is recommended after failing 2 trials of atypical antipsychotics. Long-acting injectable antipsychotics are encouraged early in treatment due to convenience and reducing risk of relapse.

The goal of medication management is sustained remission of symptoms for at least 1 year. Some studies have described a 'controlled wean' of medication being successful in certain patients after 1 to 2 years of antipsychotics¹³; however, there is also evidence that longer periods of medication management after the initial episode before discontinuation can be protective against poor long-term outcomes and that medication discontinuation can increase risk of relapse regardless of time of treatment.¹⁴ There is no expert consensus on the relationship between the timeframe for antipsychotic treatment and the risk of relapse. Multiple factors should influence the prescription of antipsychotics and when combined with psychosocial supports, patients are often able to sustain recovery. For example, those who do not meet criteria for schizophrenia, that have early functional recovery, and that have strong social supports, may be ideal candidates for discontinuation.¹³

Individual Psychotherapy

Psychotherapy approaches within the FEP clinic are variable given the level of experience and expertise amongst therapists, therapeutic preferences, and the dynamic

Box 1**The intersection of first episode psychosis and systemic racism**

The Early Psychosis Intervention Clinic New Orleans (EPIC-NOLA) is a CSC clinic that provides treatment to young people, typically between the ages of 16 to 25 year old, experiencing their FEP. In this case study, we will learn about Thomas, a 24-year-old African American male, who presented to our clinic after hospitalization for his FEP which occurred during his third year of college and was preceded by chronic cannabis use, several depressive episodes, micro- and macro-level trauma, and a family history of psychotic disorders.

Thomas was raised in an intergenerational household by a single mother and his grandmother; he lived with grandma, siblings, and niece in a working class, primarily African American neighborhood, in New Orleans. Thomas communicated and was engaged with his father whom he visited during the summer when he was young. Thomas loved sports, played basketball, and had friends.

Thomas started getting into trouble in middle school when his mom was diagnosed with schizophrenia. He started smoking weed and hanging out with people who were doing drugs. Thomas was in high school for only 2 weeks when Hurricane Katrina decimated New Orleans and he and his family were forced to evacuate to and live in Mississippi temporarily. In Mississippi, Thomas sold drugs to buy back what he lost during Katrina. He felt out of place, alienated, and discriminated against. He attended 5 different high schools in Mississippi and then landed at the 2nd worst school in New Orleans upon returning home. Without anyone to guide or advocate for him, he paid out of pocket and scored a 24 on the ACT, graduated high school and enrolled in Southeastern University where he thrived initially. He began spiraling in his third year, with increasing substance use, increase in irritability, loss of focus, and increasing paranoia. He was hospitalized in New Orleans for severe psychosis and was discharged to EPIC-NOLA for outpatient care.

Thomas has remained engaged with EPIC-NOLA for more almost 7 years and his recovery has included peaks and valleys; graduations and hospitalizations; and intimacy and debilitating drug use. At present, Thomas is sober, mood stable, and medication complaint; he starts law school this fall.

Thomas' story is not unique. Poverty, trauma, genetic history, and the environment contribute to one's risk for developing psychosis. Thomas meets all the risk factors for psychosis. These risk factors are embedded in systemic racism that persists in the US and is perpetuated in the South. In the context of psychotherapy for psychosis, Thomas has been able to identify the ways in which systemic racism, stigma, and low expectations of him as a Black man from a poor community, have perpetuated self-sabotage and created barriers to his success.

This case study also underscores the need for better monitoring of young people who are at CHR for developing psychosis and systems such as education and pediatric medicine that speak to each other when they detect a change in functioning in young people who are CHRs.

We must reduce the DUP and get young people into specialized care sooner. The average DUP in the US is 72 weeks. This is unacceptable. Once young people engage in treatment and gain traction in their recovery, we must continue to care for them and not discharge them from care. Decades of data show that discharge from specialty care is a disservice to patients. When cultural responsiveness is a part of continuous care, young people such as Thomas can recovery and pursue their dreams.

nature of psychosis and recovery. Cognitive Behavioral Therapy for Psychosis (CBTp) is the cornerstone of many programs and is an evidence-based talk therapy that makes connections between thoughts, behaviors, and emotions to reduce the distress associated with the symptoms of psychosis and ultimately, to improve functioning.¹⁵ CBTp can be offered in various forms; full CBTp includes 16 or more one-to-one sessions over at least 6 months by a CBT therapist trained in formulation driven CBTp; CBTp-informed interventions provided by a provider who is not fully trained in CBTp; and targeted CBT interventions focused on specific mechanisms.¹⁵

Individual Resiliency Training (IRT) is a modular-based, psychosocial treatment for individuals recovering from a first episode of non-affective psychosis. IRT is designed to treat individuals diagnosed with schizophrenia, schizoaffective disorder, and schizophreniform. This psychosocial treatment aims to promote recovery by identifying individual strengths and resiliency factors, enhancing illness management, and teaching skills to facilitate functional recovery.¹⁶

Emotional distress plays a significant role in the development and experience of psychosis. The exploration of emotion and its connection to the psychotic experience is crucial to understand and emotion regulation is an important part of the therapeutic process and recovery from psychosis. Skills to mitigate emotion dysregulation can be effectively built in the context of group work such as the Managing Emotions Group, a dialectical behavior therapy-inspired group for people experiencing psychosis. Theory-building and narrative approaches can also be effectively used to support the role of emotion in psychosis.¹⁷ Attachment theory has established links between a positive staff-patient rapport and enhanced emotion regulation.

Psychotherapy for psychosis, an approach evolved by Dr Michael Garrett, integrates CBT and psychodynamic psychotherapy to support individuals in their recovery from psychosis. The CBT part of the approach helps people to identify “cracks” in their delusional thoughts while psychodynamic psychotherapy works in the direction of meaning making.¹⁸ Meaning can be gleaned when there is a better understanding of the emotional context of dynamic conflict and how the emotional distress or trauma related to that dynamic conflict has contributed to an episode of psychosis. The psychotherapy for psychosis approach is trauma-informed, which is essential as the relationship between psychosis and trauma is complex. Research suggests that people with co-occurring trauma history experience more intense symptoms and have worse outcomes than those without a trauma history. The research simultaneously supports that trauma can be a consequence of the FEP.¹⁹

Family Psychoeducation

Including the patient’s identified family is a key to the comprehensive approach to FEP and the primary goal is providing reliable psychoeducation. The main topics covered include education about psychosis, processing the psychotic episode, developing a wellness plan, psychosocial interventions aimed at reducing stress, effective communication, dealing with negative feelings, and coping with symptoms.^{16,20} Family psychoeducation around stress reduction and effective communication are specifically important given that high expressed emotion in patient’s families is a known risk factor of relapse in schizophrenia.²¹

Research has demonstrated that family psychoeducation is essential to an individual’s recovery; however, the rates of family participation in FEP programs are low.²² Different modalities for providing family interventions have been explored to increase participation and engagement, ranging from individual family sessions to multi-family groups. Innovative programs expand the role of peer support to include family members with lived experience are promising. Including significant others, friends, and other patient-identified supports are the keys, given that everyone’s support system is unique and often deviates from the ‘typical’ western family unit.

Supported Education and Employment

Returning to work or school is crucial to an individual’s recovery. In the evaluation process for FEP, one is assessing where the individual fell ‘off track’ in their school or work trajectory in relation to psychosis onset. This is an important point to identify because in the treatment planning, helping the individual get back ‘on track’ is a main goal.

Supported education and employment was a core component of the initial RAISE trial in the US; it remains a core component of CSC for FEP. A supported employment and education (SEE) specialist helps clients identify or develop and pursue personally meaningful goals related to education and competitive employment.^{16,20} SEE specialists often help with a range of support from resume building to helping with financial aid applications to securing volunteer opportunities. Additionally, assisting with educational pursuits is part of this role. This can include facilitating meetings with teachers, assisting with getting academic accommodation in place to support learning, and even managing when there is need for medical withdrawals due to illness relapse.

Peer Support Specialists

Peer Support Specialists are individuals with lived experience of recovery from a mental illness, often psychosis, that are CSC team members who in many cases are age peers of clinic patients.²³ Peer Support Specialists utilize their own stories of recovery to help individuals with FEP navigate the challenges experienced. They can also support individuals with reintegration into community settings, social cognition in social settings, and with some of the employment and education tasks that SEES specialists work on.²⁴ Some CSC teams have both a SEES specialist and a Peer Support Specialist while other teams have Peers filling both roles. Additionally, Peer Support Specialists can provide case management services.

The clinical treatment team truly represents the ‘coordination’ of specialty care for FEP, with each discipline relying on the other to support the goals of a treatment plan. For instance, if a patient is experiencing side effects from a medication and feels uncomfortable telling their psychiatrist, their peer support specialist may share their lived experience of medications and attend the psychiatry visit with the patient to provide support. Communication between team members is critical and includes not only treatment team meetings, but each team member being easily accessible to the rest of the team for issues that arise over time. Each team member brings a unique ‘lens’ to the team, which contributes to a diverse and evolving formulation and treatment plan. Ultimately, the treatment team leader is the patient with their unique needs serving as the guide of treatment over time.

CLINICAL HIGH-RISK FOR PSYCHOSIS

In addition to early identification and treatment of psychosis, efforts have been made to capture patients during the ‘at-risk’ for psychosis period with hopes of delaying or preventing symptom onset. These patients will often present with subtle changes in thinking, perceptual experiences or affect. The symptoms can appear psychotic, but due to a reduced frequency, duration, intensity, or intact insight, do not cross the level of psychosis and have been called attenuated symptoms.²⁵ These patients have also been defined as “clinically high risk” (CHR) or as having an “at-risk mental state.” Not all patients who present as CHR will convert to a primary psychotic disorder. Research has varied, but a metanalysis from Salazar de Pablo and colleagues, estimated the risk of CHR individuals developing psychosis to be 25% at 3 years and up to 35% at 10 years.²⁶ Unfortunately, exact prevalence rates are not known as these individuals are not often identified at an early enough stage by family or medical providers. For those that are identified their first point of contact is most often the primary care physician.²⁷

To help aid in the identification of CHR or several screening and diagnostic tools have been developed. The Structured Interview for Prodromal Syndromes (SIPS) is

one such instrument, developed by the Prevention through Risk Identification, Management, and Education (PRIME) prodromal research team at Yale University²⁸ The SIPS is a structured diagnostic interview used to diagnose prodromal syndromes. It is multi-layered and utilizes a combination of interviews, checklists, and questionnaires that examine prodromal symptoms, family history, and overall functioning.²⁸ While the SIPS remains a vital tool, there are barriers to its use including training/certification required to administer the SIPS and the time needed to complete it. There are several less intensive screening tools, including the Prime Screen, which was developed by the creators of the SIPS. It is a 12-item questionnaire that assesses positive symptoms and can be completed by the patient in minutes. Utilization of a brief screening questionnaire with follow-up for positive individuals with the SIPS has been shown to be an effective and efficient way to screen for prodromal illness^{29,30} The MiniSIPS has also been developed to capture Attenuated Psychosis Risk Syndrome. While this tool is easier and faster to use, limitations include a lack of granular detail surrounding the onset and evolution of perceptual disturbances, both of which are clinically helpful for supporting young people at risk for developing psychosis.

A DEVELOPMENTAL LENS TO UNDERSTANDING PSYCHOSIS AND CLINICAL HIGH-RISK STATES

In order to accurately diagnose CHR-states and FEP, we must understand the individual's life trajectory *prior* to onset of symptoms from a biopsychosocial standpoint and how experiences throughout life could impact and influence psychosis onset. Population-based data demonstrate that childhood psychosocial adversity is linked to trauma³¹ and in turn, there is increasing evidence to support trauma as a risk factor for psychosis development but also that psychosis can be traumatic itself.^{19,32} Specifically, exposure to multiple adverse childhood experiences (ACES) increase the risk of developing chronic and severe mental illnesses such as schizophrenia spectrum disorder²⁹; exposure to any ACES can increase psychotic like experiences (PLEs) in childhood and adolescence.³³

IMPACT OF ADVERSE CHILDHOOD EXPERIENCES ON PSYCHOSIS ONSET

A study by Karcher and colleagues³⁴ underscored that specific ACEs are more strongly associated with PLEs; these include bullying, financial adversity, and witnessing domestic and traumatic grief. Conversely, PLEs such as suspiciousness, grandiosity, and perceptual abnormalities may be more strongly associated with ACEs. Karcher and colleagues emphasize the need for clinicians to use evidence-based assessments to determine the presence of trauma and, in the presence of trauma to use trauma-informed interventions that address PLEs with the goals of reducing internalizing symptoms.³⁵

THOSE WITH TRAUMA HISTORY AND PSYCHOSIS AS A TRAUMA

In addition to trauma history, there is recognition of the traumatic nature of the FEP and the long-term impact that trauma has on one's sense of the self and the world.³⁶ A systematic review and metaanalysis conducted by Rodriguez and Anderson³⁷ demonstrated that on average, 1 in 2 people experiences post-traumatic stress disorder (PTSD) symptoms and 1 in 3 experiences full PTSD following the first psychotic episode. Further studies have found depression to be consistently associated with psychosis-related PTSD and that despite ambitious efforts in the field to use trauma-informed care when working with people in recovery from FEP, there has

been minimal reduction in psychosis-related PTSD necessitating further research.³⁸ While there are no epidemiologic studies of prevalence of PTSD amongst Black, Indigenous and people of color (BIPOC) children, the literature implies that the prevalence of traumatization and trauma-related disorders among minority youth is higher than in white populations³⁹ making BIPOC and minority youth more vulnerable to psychosis.

UNIQUE ISSUES FACED BY BLACK, INDIGENOUS AND PEOPLE OF COLOR COMMUNITIES

Adverse childhood experiences and trauma are relevant to the history of schizophrenia diagnosis amongst African Americans in the US. African American men were transferred from Civil Rights protests, as well as from the military and prison systems during the Civil Rights Era. Metzl chronicles the singular diagnosis of schizophrenia given to these new patients at a Michigan state psychiatric hospital. He ties their presenting symptoms to political trends and racial tensions around the US in the 1960's and 1970's. Metzl's book, *The Psychosis Protests*, underscores the reality that mental stress and provider patient relationships are impacted by macro level issues, influence diagnosis and perpetuate health disparities.

The historic roots of biased diagnosis are perpetual in the current context of psychosis. BIPOC youth are at higher risk of being diagnosed with a psychotic disorder. A recent study conducted by Michael's and colleagues⁴⁰ explored racial disparities amongst CHR and first episode youth. Black participants (43%) made up the largest ethnoracial group and were overrepresented as compared to their representation in the US population. This finding has been replicated in multiple settings, including in a retrospective chart review of ER visits by Muroff and colleagues,^{41,42} which showed that Black and Latino youth were more likely to be discharged with a psychotic or behavioral (ie, attention deficit hyperactivity disorder, oppositional defiant disorder) disorder and less likely to be diagnosed with a mood or substance use disorder. Research on adult patients has further established this trend with Black patients more likely to be diagnosed with schizophrenia in ambulatory and state hospital settings.^{43,44} A recent review completed by Schwartz and Blankenship⁴⁵ found that African American/Black patients and Latino American/Hispanic patients were more likely to be diagnosed with a psychotic disorder when compared to Euro-American/White patients at the rates of 3 to 4 times and 3 times more likely, respectively. The increased diagnoses of schizophrenia among BIPOC individuals represents bias amongst providers, misunderstanding of an adaptive and protective mistrust toward the health care system, and the likely underdiagnosis of mood and substance use disorders.

Research has also demonstrated that even after diagnosis, Black patients are more likely to be referred to other providers, less likely to receive medication and less likely to receive treatment with Clozapine, the only medication approved for refractory schizophrenia.^{12,46} While addressing these inequities will require change on a systemic, institutional, and individual level, there are several steps physicians can take to improve, including acknowledging racism within the health care system and its impact on patients, raising awareness of culturally relevant factors, following practice guidelines and protocol for all patients, and advocating for antiracist practices.⁴⁷

CURRENT LIMITATIONS TO EARLY PSYCHOSIS INTERVENTION

Estimates from 2021 report that only 24,000 individuals were admitted to CSC programs in the US despite the, on average, 100,000 new cases of first episode psychosis per year.¹¹ Many programs have strict criteria, so individuals who have very early onset psychosis, age less than 13, would be ineligible as 71% of CSC programs

have a minimum age of 15 or 16,¹² despite being at higher risk for poor outcomes. Some programs do not accept those with psychosis associated with affective disorders. Finally, individuals with autism and intellectual disability, who are often at higher risk for psychotic symptoms, are often excluded due to difficulties participating in therapy programming.

While there is robust evidence for CSC and an exponential increase in CSCs, overall, access to CSC care remains challenging. Several states have launched hub-and-spoke models for FEP care those aim to bring services into under-resourced and rural communities. ON TRACK New York, EASA in Oregon and the PIER Program in Maine have successfully expanded home and community-based services for FEP across their states to serve hard to reach populations. Not all states have the capacity for a hub-and-spoke model or funding to support home and community-based care.

Funding is also a limitation when considering up-front costs to establishing an FEP clinic. Fee-for-service billing does not cover all core elements of CSC for FEP and reimbursement for services is inconsistent across states and insurers; this hinders development of a sustainable model-of-care. In 2023, The Center for Financing Reform and Innovation estimated the costs of CSC in the US to range from \$1054 to \$1653 per person per month. International studies support early psychosis interventions and reveal cost-effectiveness in more than 90% of clinical cases. A reduction in utilization of expensive services such as inpatient hospitalizations is the biggest cost savings measure.

Clinically, young people are recovering from their FEP while receiving CSC care but are losing those clinical gains once discharged. The majority of CSC programs in the US sees patients for 2 to 3 years and then discharge them. Time-limited services are a limitation to recovery. The OPUS 20-year follow-up study, the longest follow-up study of young people receiving early interventions for first episode psychosis, demonstrated no differences between 2 years of CSC versus treatment as usual at 20 years. We must find a way for young people to sustain the gain associated with CSC over the course of their lives. Continuity of care at FEP clinics is one way to sustain gains but the same funding challenges remain an issue. In October 2023, the Centers for Medicare and Medicaid Services issued billing codes for CSC; these codes have the potential to provide better reimbursement and for clinics to see patients longer. How these codes will be disseminated and implemented by individual states remains to be seen.

STRATEGIES TO IMPROVE EARLY DETECTION OF PSYCHOSIS

Although there has been considerable attention to early psychosis *intervention* in the mental health profession, the integration of early detection of psychosis in primary care fields is lacking. Considering a biopsychosocial framework, we can consider implementation of strategies to detect psychosis earlier within each domain to enhance early detection. A first significant step toward early detection is documentation of familial psychiatric history in an intentional way. Genetic risk for schizophrenia is complex and not well-understood. However, we know there is a polygenetic risk, complex epigenetic interactions, and estimates of heritability of schizophrenia are as high as 80%.⁴⁷

Documenting family history goes beyond a simple yes/no question. Many families are reluctant to answer due to stigma, or uncertainty of the actual diagnosis. Primary care inquiring about and documenting family history of severe mental illness is critical. Those identified as having family history could be monitored more closely for early warning signs, families provided psychoeducation on risk and identifying early warning signs and minimizing avoiding or minimizing that child's exposure to risks for psychosis (ie, enhanced education about risk of cannabis and psychosis).

Implementation of screening tools described earlier (Mini-Sips, PRIME Screen) in the at-risk populations would be a significant step toward early detection.

Screening for psychosis in a variety of settings, not only the health care space, but also would increase reach, for instance, in high school and university settings.

SUMMARY

Given the robust responses and positive outcomes of quality early psychosis intervention, we can change the trajectory for those with the most serious mental illnesses. Most FEP program referrals are from inpatient psychiatric hospital referrals, reflecting the reality that early psychosis symptoms are potentially being missed leading to acute escalation of symptoms. To put this into context, the average DUP in the US is 72 weeks, therefore health care practitioners and others involved in the lives of youth and young adults have well over a year to identify signs concerning psychosis. We are obligated to see psychosis as a critical symptom to identify, as early as possible, in order to ensure young people have the best chances for quality lives. This is the same approach that would be taken in other medical illnesses.

CLINICS CARE POINTS

- Screening for early warning signs of psychosis during childhood and adolescence is essential especially in those with family history of serious mental illness.
- Urgent referral to a specialized early psychosis intervention program is important.
- Early identification of psychosis is protective for patient outcomes.
- Antipsychotics should be utilized in a conservative fashion.
- There are many evidenced-based psychotherapy options for those with first episode psychosis.
- A biopsychosocial approach to assessment of psychosis is essential.
- BIPOC communities face unique challenges in their pathway to care for first episode psychosis that must be addressed by clinician.
- Trauma and adverse child experiences can influence onset and course of psychosis.

DISCLOSURE

EPIC-NOLA receives support from the Substance Abuse and Mental Health Services Administration (SAMHSA) Mental Health Block Grant set-aside for provide treatment for those with early serious mental illness (SMI) and a first episode psychosis (FEP) by way of Louisiana Office of Behavioral Health. The authors have nothing to disclose.

REFERENCES

1. Alvarez-Jimenez M, O'Donoghue B, Thompson A, et al. Beyond clinical remission in first episode psychosis: thoughts on antipsychotic maintenance vs. Guided discontinuation in the functional recovery era. *CNS Drugs* 2016;30(5): 357–68.
2. Perälä J, Suvisaari J, Saarni SI, et al. Lifetime prevalence of psychotic and bipolar I disorders in a general population. *Arch Gen Psychiatry* 2007;64(1):19–28.

3. Read H, Kohrt B. The history of coordinated specialty care for early intervention in psychosis in the United States: a review of effectiveness, implementation, and fidelity. *Community Ment Health J* 2022;58(5):835–46.
4. Chong HY, Teoh SL, Wu DB, et al. Global economic burden of schizophrenia: a systematic review. *Neuropsychiatric Dis Treat* 2016;12:357–73.
5. Skikic M, Arriola JA. First episode psychosis medical Workup: evidence-informed recommendations and introduction to a clinically guided approach. *Child Adolesc Psychiatr Clin N Am* 2020;29(1):15–28.
6. McGorry PD, Edwards J, Mihalopoulos C, et al. EPPIC: an evolving system of early detection and optimal management. *Schizophr Bull* 1996;22(2):305–26.
7. Srihari VH, Tek C, Kucukgoncu S, et al. First-episode services for psychotic disorders in the U.S. public sector: a pragmatic randomized controlled trial. *Psychiatr Serv* 2015;66(7):705–12.
8. Kane JM, Robinson DG, Schooler NR, et al. Comprehensive versus usual community care for first-episode psychosis: 2-year outcomes from the NIMH RAISE early treatment program. *Am J Psychiatry* 2016;173(4):362–72.
9. Uzenoff S, Penn D, Graham K, et al. Evaluation of a multi-element treatment center for early psychosis in the United States. *Soc Psychiatr Psychiatr Epidemiol* 2012;47(10):1607–15.
10. Correll CU, Galling B, Pawar A, et al. Comparison of early intervention services vs treatment as usual for early-Phase psychosis: a systematic review, meta-analysis, and meta-regression. *JAMA Psychiatr* 2018;75(6):555–65.
11. Substance Abuse and Mental Health Services Administration. Coordinated specialty care for first episode psychosis: costs and financing strategies. HHS Publication; 2023. Available at: <https://store.samhsa.gov/sites/default/files/pep23-01-00-003.pdf>.
12. Kazandjian M, Neylon K, Ghose S, et al. State Snapshot 2021-2022: early psychosis programming across the United States. National Institute of Mental Health, Early Psychosis Intervention Network; 2022. Available at: https://nationalepinet.org/wp-content/uploads/2022/12/EPINET_State_Snapshot_FINAL_508_COMPLIANT.pdf.
13. Weller A, Gleeson J, Alvarez-Jimenez M, McGorry P, Nelson B, Allott K, Killackey E. Can antipsychotic dose reduction lead to better functional recovery in first-episode psychosis? A randomized controlled-trial of antipsychotic dose reduction. The reduce trial: Study protocol. *Early Interv in Psychiatry* 2019; 13(6):1345–56. <https://doi.org/10.1111/eip.12769>.
14. Hui CLM, Honer WG, Lee EHM, et al. Long-term effects of discontinuation from antipsychotic maintenance following first-episode schizophrenia and related disorders: a 10 year follow-up of a randomised, double-blind trial. *Lancet Psychiatr* 2018;5(5):432–42.
15. Hary, K; National Association of State Mental Health Program Directors; Cognitive Behavioral Therapy for Psychosis; Date Published: 2015
16. Available at: <http://www.navigateconsultants.org/wp-content/uploads/2017/05/IRT-Manual.pdf>. (Accessed August 12 2024).
17. Andrew I, Gumley Alf Gilham, Taylor Kathy, et al. Psychosis and emotion-the role of understanding psychosis, therapy, and recovery. 1st edition. Routledge; 2013.
18. Garret M. Psychotherapy for psychosis. Integrating cognitive-behavioral and psychodynamic treatment. 1st edition. Guilford Press; 2019.
19. Giannopoulou I, Georgiades S, Stefanou MI, et al. Links between trauma and psychosis (Review). *Exp Ther Med* 2023;26(2):386.

20. Available at: <https://www.nasmhpd.org/content/what-psychosis>. (Accessed August 12 2024).
21. Brown GW, Monck EM, Carstairs GM, et al. Influence of family life on the course of schizophrenic illness. *Br J Prev Soc Med* 1962;16:55–68.
22. Drapalski AL, Piscitelli S, Lee RJ, et al. Family Involvement in the clinical care of clients with first-episode psychosis in the RAISE connection program. *Psychiatr Serv* 2018;69(3):358–61.
23. Stavely H, Hughes F, Pennell K, et al. EPPIC model and service implementation guide. Melbourne (AU): Orygen Youth Health Research Center; 2013.
24. Kern RS, Zarate R, Glynn SM, et al. A Demonstration project involving peers as providers of evidence-based, supported employment services. *Psychiatr Rehabil J* 2013;63:99–107.
25. Yung AR, Yuen HP, Phillips LJ, et al. Mapping the onset of psychosis: the comprehensive assessment of at risk mental states (CAARMS). *Schizophrenia Research* 2003;60(1):30–1.
26. Salazar de Pablo G, Radua J, Pereira J, et al. Probability of Transition to psychosis in individuals at clinical high risk. *JAMA Psychiatr* 2021;78(9):970–8.
27. Stowkowy J, Colijn M, Addington J. Pathways to care for those at clinical high risk of developing psychosis. *Early Intervention in Psychiatry* 2013;7(1):80–3.
28. Miller TJ, McGlashan TH, Rosen JL, et al. Prodromal assessment with the structured interview for prodromal syndromes and the scale of prodromal symptoms: predictive validity, interrater reliability, and training to reliability. *Schizophr Bull* 2003;29(4):703–15.
29. Loewy RL, Therman S, Manninen M, et al. Prodromal psychosis screening in adolescent psychiatry clinics. *Early Intervention in Psychiatry* 2012;6(1):69–75.
30. Hua LL, COMMITTEE ON ADOLESCENCE. Collaborative care in the identification and management of psychosis in Adolescents and young adults. *Pediatrics* 2021;147(6):e2021051486.
31. Varese F, Smeets F, Drukker M, et al. Childhood adversities increase the risk of psychosis: a meta-analysis of patient-control, prospective- and cross-sectional cohort studies. *Schizophr Bull* 2012;38:661–71.
32. Rössler W, Ajdacic-Gross V, Rodgers S, et al. Childhood trauma as a risk factor for the onset of subclinical psychotic experiences: Exploring the mediating effect of stress sensitivity in a cross-sectional epidemiological community study. *Schizophr Res* 2016;172:46–53.
33. McGrath JJ, McLaughlin KA, Saha S, et al. The association between childhood adversities and subsequent first onset of psychotic experiences: a cross-national analysis of 23 998 respondents from 17 countries. *Psychol Med* 2017; 47:1230–45.
34. Karcher NR, Niendam TA, Barch DM. Adverse childhood experiences and psychotic-like experiences are associated above and beyond shared correlates: Findings from the adolescent brain cognitive development study. *Schizophr Res* 2020;222:235–42.
35. Folk JB, Tully LM, Blacker DM, et al. Uncharted waters: treating trauma symptoms in the context of early psychosis. *J Clin Med* 2019;8(9):1456.
36. Dunkley JE, Bates GW, Findlay BM. Understanding the trauma of first-episode psychosis. *Early Interv Psychiatry* 2015;9(3):211–20.
37. Rodrigues R, Anderson KK. The traumatic experience of first-episode psychosis: a systematic review and meta-analysis. *Schizophr Res* 2017;189:27–36.

38. Buswell G, Haime Z, Lloyd-Evans B, et al. A systematic review of PTSD to the experience of psychosis: prevalence and associated factors. *BMC Psychiatr* 2021;21:9.
39. Pumariega AJ, Jo Y, Beck B, et al. Trauma and US minority children and youth. *Curr Psychiatry Rep* 2022;24(4):285–95.
40. Michaels TI, Simon-Pearson L, Kane JM, et al. Racial disparities among clinical high-risk and first-episode psychosis Multisite research participants: a systematic review. *Psychiatr Serv* 2024;11:appips20230120.
41. Muroff J, Edelson GA, Joe S, et al. The role of race in Diagnostic and disposition decision making in a pediatric psychiatric emergency service. *Gen Hosp Psychiatr* 2008;30(3):269–76.
42. Bazargan-Hejazi S, Shirazi A, Hampton DA, et al. Examining racial disparity in psychotic disorders related ambulatory care visits: an observational study using national ambulatory medical care survey 2010–2015. *BMC Psychiatr* 2023;23(1).
43. Barnes A. Race, schizophrenia, and admission to state psychiatric hospitals. *Administration and Policy in Mental Health* 2003;31(3):241–52.
44. Schwartz RC. Racial disparities in psychotic disorder diagnosis: a review of empirical literature. *World J Psychiatr* 2014;4(4):133.
45. Kelly DL, Dixon LB, Kreyenbuhl JA, et al. Clozapine utilization and outcomes by race in a public mental health system: 1994-2000. *J Clin Psychiatry* 2006;67(09):1404–11.
46. Burke HH, Murray A. Systemic Racism's impact on minority children and youth with psychosis: Enacting antiracist strategies in psychosis care. *Journal of the American Academy of Child and Adolescent Psychiatry* 2023;62(10):1080–2.
47. van de Leemput J, Hess JL, Glatt SJ, et al. Genetics of schizophrenia: historical insights and Prevailing evidence. *Adv Genet* 2016;96:99–141.