

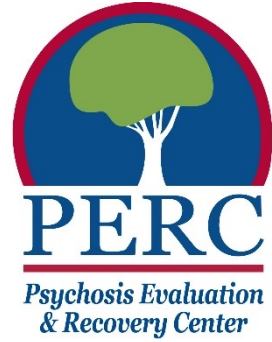
Early Intervention in Psychosis at Penn Program Overview

Christian Kohler, MD

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Links and Resources

NEURODEVELOPMENT AND
PSYCHOSIS SECTION



To Participate in Research



Adapting the TMCU for Youth and Young Adults with First Episode Psychosis

Donna J. Bencivengo, MS

Clinical Research Coordinator at the University of Pennsylvania Perelman School of Medicine

Site PI: Dr. Monica Calkins

A collaboration with the University of Maryland

- **Purpose of the study:** To learn how to improve mental health services for young adults who have experienced psychosis and also use marijuana.
- **Who would we like to talk with?** Family members of young adults receiving care at this clinic who have used marijuana in the last few months.
We want to hear about your personal experiences discussing marijuana use as part of mental health services, and we hope to use this information to learn how to make these conversations more helpful.
- The study is completely voluntary.
- If you have any questions, or want to learn more, please reach out to me by email or phone. If you are interested in participating, we would then go over the study in more detail, including information about what you would be asked to do and how your privacy would be maintained. Then we would schedule a time when you had about an hour to spare to participate in the interview.
- We can do the interview either virtually by zoom or in person on 10 Gates, whichever you prefer. Those who complete the interview are paid for their time with a \$25 electronic gift card.
- To learn more or to participate, please contact me at donna.bencivengo@penmedicine.upenn.edu or 267-608-6348.

Thank you!

Other Current Early Psychosis Research Studies at Penn

TRANSCENDS

- Investigation of a possible medication to improve cognitive processing
- 7 visits with 5 visits employing possible medication and fMRI

SSBC

- Investigation of brain based inflammatory markers associated with synaptic pruning
- 2 visits including MRI of brain and spinal fluid sampling

What is Psychosis?

Alteration in reality testing manifested by either

Hallucinations

Delusions

Disorganized behavior

Disorganized speech

Plus

Impaired functioning

Psychosis as a Continuum in the General Population

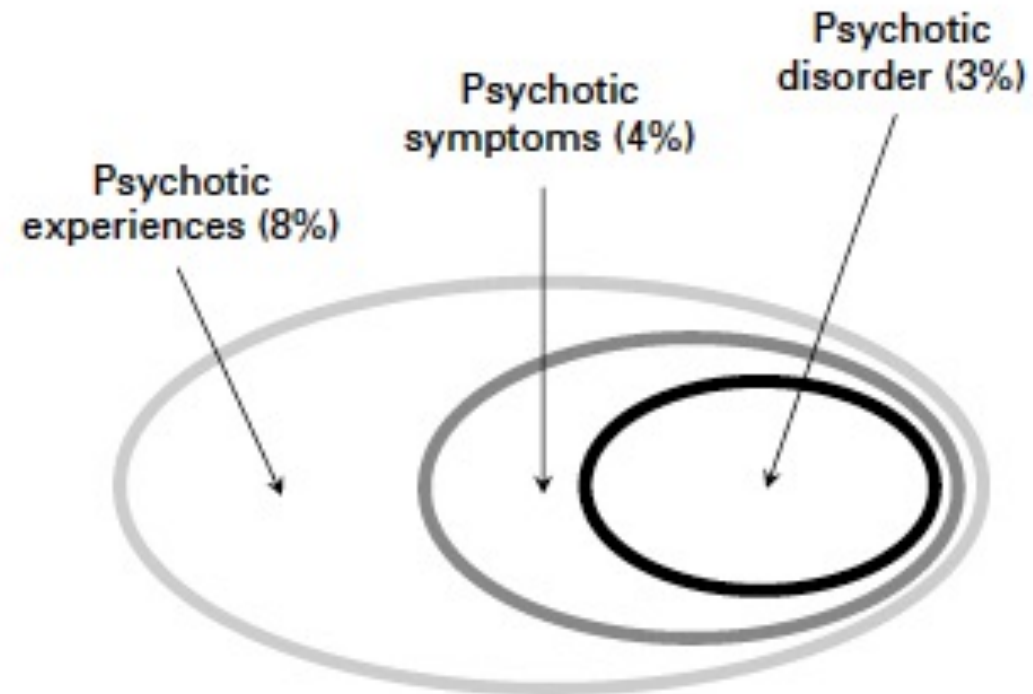
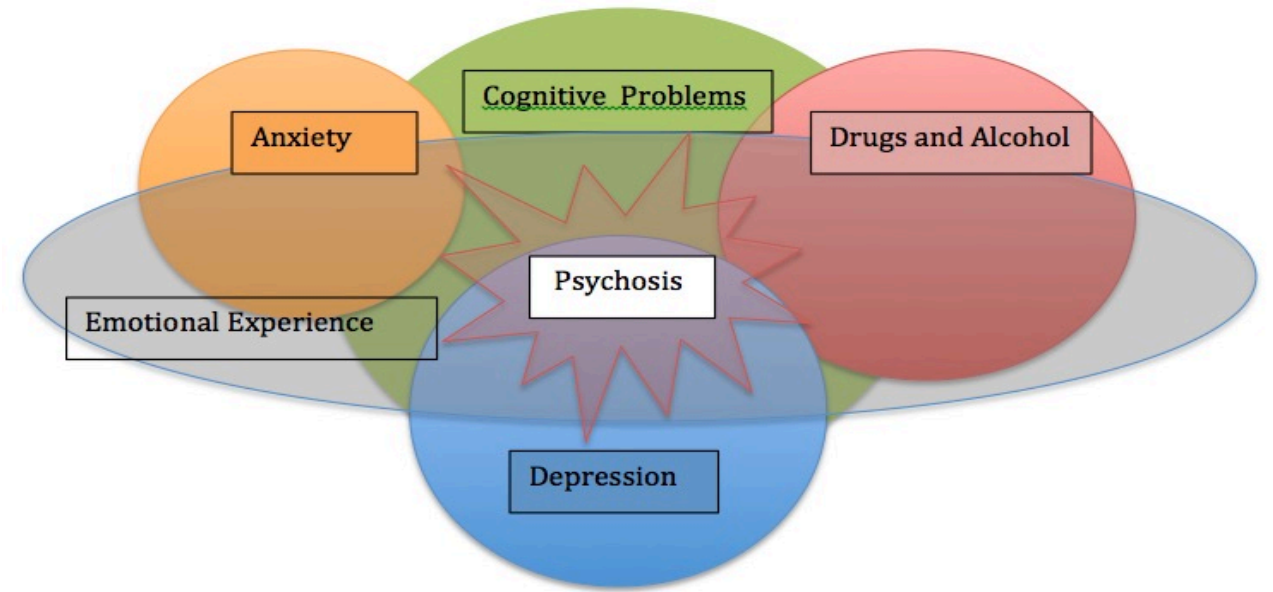


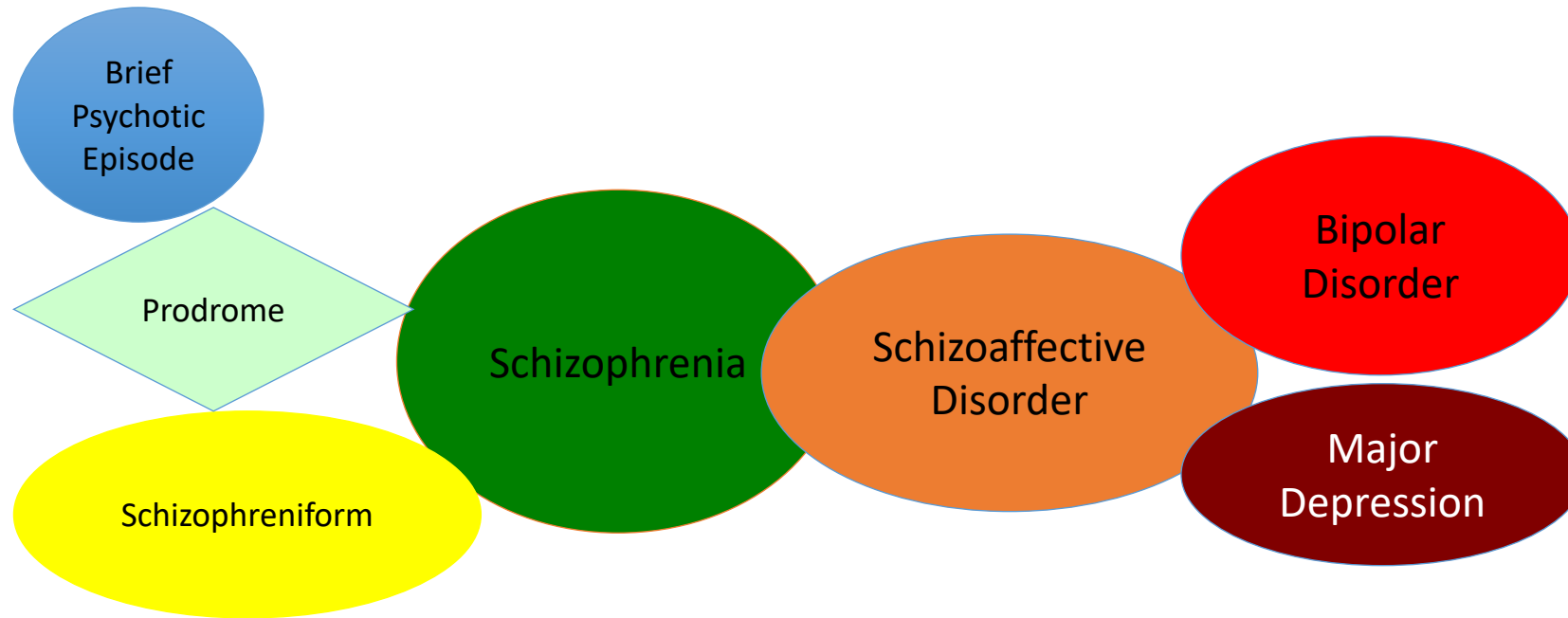
Fig. 4. Psychosis: variation along a continuum.

Considerations in First Episode Psychosis (FEP)



- Heterogeneity of Symptoms
- Insight/Willingness for Treatment
- Drug Use
- Duration of Untreated/Persistent Psychosis
- Medication Effects and Side-effects
- Family Unit
- Social-occupational Functioning

Outcome of Early Psychosis and First Episode Psychosis (FEP)



What is at Stake?

- ~100,000 young Americans experience first-episode psychosis (**FEP**) each year
- Challenge to
 - a. prevent **schizophrenia**
 - b. maximize clinical improvement and outcome
- 1 of 3 people with FEP will develop schizophrenia
- 2 of 3 people will experience a single episode of psychosis or be diagnosed with another disorder
- Lifetime prevalence of schizophrenia ~1%
- Point prevalence ~0.8%

Relevance: Longer Duration of Untreated Psychosis (DUP) for FEP

correlates with

- reduced symptomatic and functional recovery
- increased negative symptoms
- poorer medication response over time

WHO recommends DUP < 3 months

Many young persons experience DUP of 1 year and longer before treatment

Remission in **FEP**: 40-60% over 1-2 years

Lack of significant clinical response within 1-2 years treatment associated with lower chance of remission/recovery

Longterm Outcome after FEP if Dx: Schizophrenia

Personal Level

25% of individuals achieve full recovery with routine care

- Illness burden on self and families
- ~10% complete suicide, often early in their illnesses
- Life Expectancy decreased by 20%

Systems Level

- Economic burden of schizophrenia in the USA estimated at \$155 billion annually (2013)
- Estimated 23 million people worldwide
- Worldwide 8th leading cause of Disability Adjusted Life Years

What is at Stake in FEP?

- Duration of Untreated Psychosis: worse outcome (Perkins 2005)
- Critical window of 2-3 years for clinical stabilization and reconnect with expected trajectory of functioning
- 60-85% response rates based on positive symptoms (hallucinations, delusions, etc)
- Relapse rates 60-80% over 1-2 years → increased risk of schizophrenia
- 80% of relapse rates associated with medication nonadherence (Robinson 1999)

First-episode Psychosis Treatment

- Best chances of response/recovery
- Option of coming off medication over 1-2 years
- Possible prevention of schizophrenia
- Lack of effects of chronic illness
- Challenge of illness acceptance and treatment adherence
- Duration of prolonged untreated/recurrent psychosis leads to increased brain dysfunction

↑ Negative symptoms ↘

↑ Cognitive dysfunction → associated with functional impairment

Vincent van Gogh

"I shouldn't precisely have chosen madness if there had been any choice.

But once such a thing has taken hold of you, you can't very well get out of it."



Development of Early Psychosis Programs implementing Coordinated Specialty Care (CSC)

Mid-1980's

- England
- Australia

1990's

- Scandinavia
- Germany
- USA
- Canada

~2000

- Japan
- China
- South-East Asia



- ❖ Specialized phase specific intervention services may improve symptoms and clinical course
 - increase retention in treatment programs
 - improve outcome
 - reduce cost of treatment

- Summary of 8 randomized controlled trials (n=1200) of Early Psychosis Interventions comparing CSC versus TAU demonstrated
 - 6 Studies: reduced psychotic symptom burden
 - 4 Studies: higher retention in treatment with CSC
 - 3 Studies: showed higher recovery rates
 - 3 Studies: improved psychosocial functioning
 - 3 Studies: cost effectiveness despite higher utilization

Longterm Results from Danish OPUS trial (*American Journal Psychiatry 2021*)

547 randomized patients in initial trial (1998-2001)

3300 patients in implementation phase (2003-2014)

2 years of CSC treatment followed by community care)

In implementation group at least 2 years after CSC

- Fewer and shorter psychiatric hospitalizations
- Less medication exposure
- More likely to be in partner relationships
- More likely to work
- Lower mortality

FEP Early Intervention: Coordinated Specialty Care in Pennsylvania

2013

- Congress allocated funds to be distributed through SAMHSA at the state level (5% of MHBG) dedicated to treatment for those “with early serious mental illness”
- Evidence-Based Treatments for First Episode Psychosis: Components of Coordinated Specialty Care (CSC)

2015

- CSC Implemented in 28 States

2017

- Pennsylvania awarded funding to 9 programs – including PERC (Penn Psychosis Evaluation and Recovery Center);
- Pennsylvania Early Intervention Center (PEIC; [HeadsUp](#)) funded to oversee fidelity and program evaluation

2018

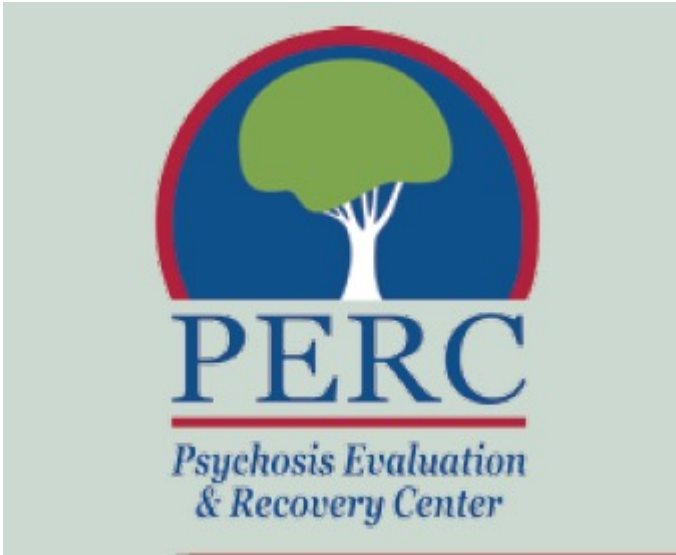
- SAMHSA funding awarded to some programs (including PERC and Pitt HOPE in PA) to extend CSC for individuals with clinical high risk (CHR-P)

2019

- FEP programs in all 50 states ([PEPPNET directory](#)).

2020

- Penn joins the University of Maryland, University of Pittsburgh, Johns Hopkins and as a regional hub of the national NIMH funded Early Psychosis Intervention Network (EPINET) – Connection Learning Health System (Connection LHS)
- 5 more programs funded in PA



Coordinated Specialty Care at UPENN

- Referrals screened within 24 hours
- Preliminary eligibility determined
 - Age 16-35
 - Onset of threshold psychosis in past 2 years

The initial evaluation typically includes:

- Interview and evaluation by a psychiatric expert in early psychosis
- Developmental, functional, and family history assessment by a psychologist
- Review of medical records and prior treatments
- Formulation of treatment and support plan

Treatment

Penn PERC offers a 24-month course of intensive multimodal personalized and group-based interventions to achieve maximal early improvement in clinical symptoms, cognition, and preservation of functioning.

Treatment plans may include:

- Medication and symptom management
- Individual psychotherapy
- Group family therapy
- Supported education and employment
- Cognitive remediation
- Educational and supportive family groups
- Peer support
- Case management
- Tele-psychotherapy



Advantages of Coordinated Specialty Care

- Small team
- Multidisciplinary approach
- Setting dedicated to early psychosis
- Work with young persons and family units
- Daily interactions between team members



Francesca
Stephanie
2 Peer Specialists



Cognitive therapy for psychosis: recovery oriented

Focus on

- Early experiences that shape person's belief system
- Reframing negative automatic thoughts
- Pursuing new behavior strategies to improve functioning
- Heavy focus on personal engagement (rapport building, activation)

Medication management: Antipsychotics

used for psychosis, depression, mania, sleep
oral or long acting injectables

Oral Choices

Abilify, Geodon, Latuda (milder and less side effects)

Risperdal, Invega, Zyprexa (more potent and more side effects)

Haldol, Trilafon (more potent and even more side effects)

Clozaril (reserved for lack of effectiveness of the other meds)

Low dosages/Reduction of dose

- Measure efficacy over 1-2 months
- Slow reduction in medication to lowest necessary dose
- Treatment period at least 1-2 years
- Risk of relapse

Employment/Scholastic Support

- Career profile: past employment, schooling and interests
- Follow up about job searches
- Interact with academic settings about support
- Referral to Office of Vocational Rehabilitation

Family Support/Therapy Group

- Monthly education group
- Periodic closed CT group

Cognitive Remediation

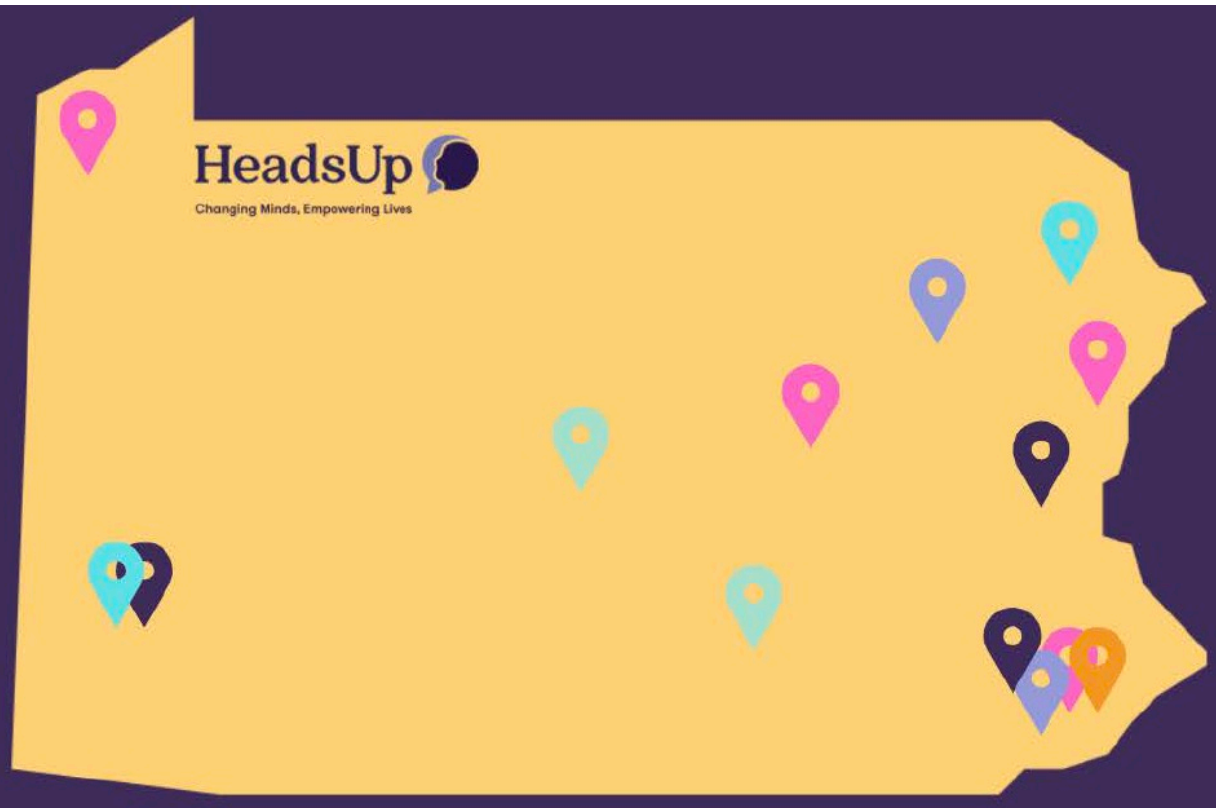
- Based on <https://www.brainhq.com>

Peer Specialist Support

- Young persons with lived experience supporting treatment and goals.
Certified and need to keep up training credentials.

Pennsylvania First-Episode Programs

17 total; 3 newly funded 2020



visit us online for more information or to connect to a center near you

find a center

- CAPSTONE-PPI/YWCA/CMU**
HARRISBURG
- Connect to Empower - CMSU Behavioral Health Services**
DANVILLE
- ENGAGE-Wesley Family Services**
WILKINSBURG
- HOPE-Children Services Center**
HONESDALE
- HOPE-Children Services Center**
STROUDSBURG
- HOPE-Children Services Center**
WILKES-BARRE
- InSight**
STATE COLLEGE
- On My Way-Child and Family Focus, Inc.**
ALLENTOWN
- On My Way-Child and Family Focus, Inc.**
BROOMALL
- On My Way-Child and Family Focus, Inc.**
VALLEY FORGE
- PEACE-Horizon House**
PHILADELPHIA
- PERC-University of Pennsylvania**
PHILADELPHIA
- Safe Harbor-UPMC Western Behavioral Health**
ERIE
- Services for the Treatment of Early Psychosis (STEP) Clinic**
PITTSBURGH

headsup-pa.org

coordinated specialty care

No two stories are exactly the same. Treatment is a collaboration between you and the team of professionals ready to help. Each individual at our centers has access to a variety of services and options.

Your Treatment Team

- Psychotherapy**
learning to focus on resiliency, managing the condition, promoting wellness and developing coping skills
- Medication Management**
finding the best medication at the lowest possible dose
- Supported Employment and Education**
providing support to continue or return to school or work
- Peer Support**
connecting the person with others who have been through similar experiences
- Case Management**
working with the individual to develop problem-solving skills, manage medication and coordinate services
- Family Support & Education**
giving families information and skills to support their loved one's treatment and recovery

HeadsUp

Changing Minds, Empowering Lives



A collaborating organization whose mission is to help end the stigma around psychosis through education, advocacy, and support.

We promote early intervention centered around personalized, accessible, and effective care for all people in Pennsylvania.



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HeadsUp Deliverables:

- Program Evaluation, Data Collection and Research
- Education, Training and Clinical Care
- Outreach and Systems Engagement



Funded through a generous grant by National SAMSHA and PA Office of Mental Health and Substance Abuse Services

Visit us online! <https://www.headsup-pa.org>



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Pennsylvania FEP Coordinated Specialty Care programs demonstrate improvements within 6 months of admission

- Improved mental health services satisfaction
- Improved self-ratings of hopelessness, happiness and quality of life
- Improved observer-based ratings for psychosis symptoms, depression and anxiety
- Decreased substance use and adverse behaviors
- Reduced hospitalization rates and loss of stable housing
- Increased employment, school enrollment and functioning
- Lower medication side effects

Early Intervention in Psychiatry. 2020;1-14.

Conclusions

- Early psychosis presents as **confusing** to young persons, family members and clinicians
- (Shorter) **duration of untreated psychosis** is critical to better outcome
- Young persons have **specific needs** for age and phase appropriate interventions
- Window of **full recovery** is limited to a few years
- **Coordinated specialty care clinics** provide focused and dedicated care for both young persons and their families
- Research can identify **mechanisms of psychosis** and **new interventions**