

# CONNECTION LEARNING HEALTH SYSTEMS HUB-WIDE DATA SNAPSHOT

## PERSISTENT NEGATIVE SYMPTOMS IN EARLY INTERVENTION FOR FIRST-EPISEDE PSYCHOSIS



Connection Learning Healthcare System consists of 23+ CSC programs in Maryland and Pennsylvania that collect data using a Core Assessment Battery of measures related to psychosis symptoms, functioning, and recovery. Data in this snapshot come from 1,065 program participants over a 2-year period.

### Persistent Negative Symptoms (PNS)

PNS were defined as 2 + timepoints of data with ratings of:

- ✓ > 3 (moderate/higher) on at least one **negative symptom** item.
- ✓ < 3 (mild/less) on **positive symptom** items.
- ✓ < 2 (mild/less) on the **depressed mood** item.

#### 470 individuals

provided data on **negative symptoms** at **2 or more timepoints**



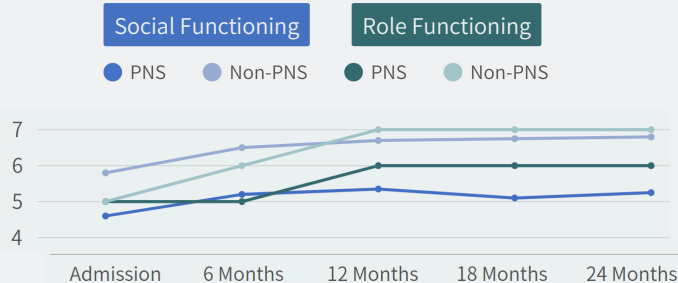
### Negative Symptoms of Psychosis include:

- Anhedonia**  
Difficulty feeling pleasure or enjoyment from activities or experiences.
- Affective flattening**  
Reduced ability to show emotions through facial expressions, tone of voice, or body language.
- Avolition**  
Trouble starting or sticking with tasks or activities due to a lack of motivation.
- Social withdrawal**  
Pulling away from friends, family, or social activities and spending more time alone.

- Individuals with PNS were **younger**, had **higher rates of schizophrenia**, **less substance use**, and **lower social and role functioning** compared to those in the non-PNS group.
- Exploratory analyses indicated that service engagement at 6 months mediated the relationship between baseline negative symptoms and 12-month social and role functioning. That is, those with PNS who had higher service engagement at 6 months had better functioning at 12 months.

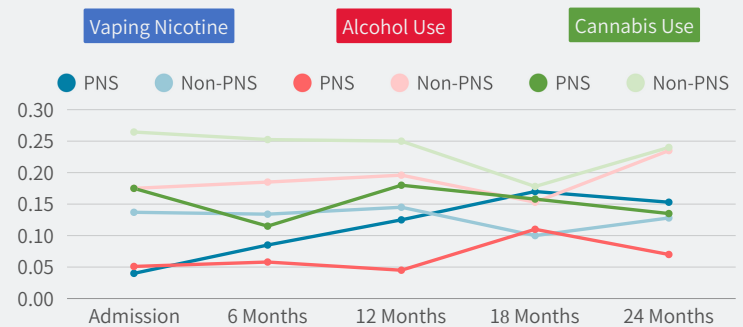
### Role and Social Functioning

**Social functioning:** the capacity to maintain relationships with others and fulfill social roles. **Role Functioning:** the ability to adapt to work or school and be independent in the community.



The PNS group exhibited poorer **social functioning** ( $t = -6.25, p < 0.001$ ) and poorer **role functioning** ( $t = -2.73, p = 0.006$ ) relative to the non-PNS group.

### Substance Use



Relative to non-PNS, the PNS group showed no significant main effect for cannabis use ( $z = -1.57, p = 0.12$ ), a downward trend in vaping nicotine ( $t = -1.76, p = 0.079$ ), and significantly less alcohol use ( $t = -2.22, p = 0.0256$ ).

These findings underscore the heterogeneity of FEP and the **need for a tiered, personalized treatment approach** within CSC programs. In our exploratory analysis, we found that higher clinician-rated engagement at six months mediated improvements in role and social functioning at 12 months. These results emphasize the **importance of engagement** for any personalized treatment for PNS.