CONNECTION LEARNING HEALTH SYSTEMS
HUB-WIDE DATA SNAPSHOT
PERSISTENT NEGATIVE SYMPTOMS IN EARLY INTERVENTION FOR FIRST-EPISODE PSYCHOSIS

EPINET Early Psychosis Intervention Network

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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**

15% met criteria for PNS

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.

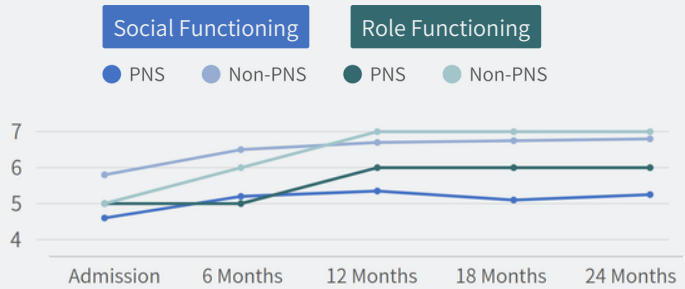


Social withdrawal
Pulling away from friends, family, or social activities and spending more time alone.

- 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.

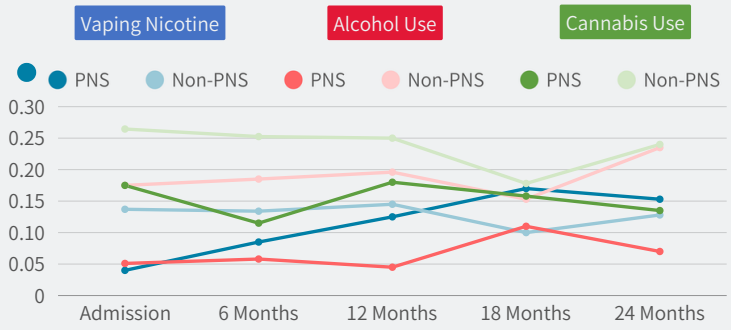
Role and Social Functioning

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.