



First Episode Psychosis

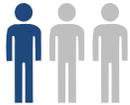
Client Profiles and Baseline Characteristics

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Report to the Department of Social and Health Services, Division of Behavioral Health and Recovery

PSYCHOTIC DISORDERS are serious mental illnesses associated with increased rates of morbidity and mortality (Whiteford et al., 2013). Research has provided ample evidence that early intervention and reduction in the duration of untreated psychosis is critical to effective treatment and long-term recovery (Marshall et al., 2005; Penttilä et al., 2014). A new initiative of the Substance Abuse and Mental Health Services Administration (SAMHSA) of the U.S. Department of Health and Human Services requires states to focus attention on this issue through the set-aside of Mental Health Block Grant funding to address the needs of persons with early signs of serious mental illness, including those who have experienced the first onset of psychotic symptoms. This report is the initial attempt, using Washington State administrative data, to identify and describe a population of individuals having had a first episode of psychosis. Demographic characteristics and service histories are described for a cohort of DSHS clients with psychotic disorders in State Fiscal Year (SFY) 2015, and a subgroup of individuals who experienced a first episode of psychosis that same year.

Key Findings



1 in 3 were first diagnosed in **Emergency Departments**



2 of 5 under age 18 were involved with the **child welfare system**



1 in 5 experienced **homelessness** in the 24 months leading up to their first episode

Almost 40,000 DSHS clients were living with psychotic disorders in SFY 2015. Among them, we identified 3,062 individuals who received a psychotic disorder diagnosis for the first time during the year. Of the 3,062 individuals:

- 1. One in three first episode psychosis (FEP) clients received their first psychotic disorder diagnoses in an emergency department.** More than half of the FEP clients had at least one emergency room visit during the 24 months before being diagnosed.
- 2. Two of five FEP clients under the age of 18 were involved with the child welfare system during the two years before being diagnosed.** Among FEP clients of all age groups, one in five received services from the Children's Administration during the two years before being diagnosed.
- 3. One in five FEP clients experienced homelessness or housing instability during the 24 months before being diagnosed.** Eleven percent of the FEP clients were homeless or in unstable housing during the month of diagnosis.
- 4. Three in four FEP clients had identified mental health treatment needs during the 24 months before being diagnosed.** Only 44 percent of the FEP clients received publicly funded mental health services during the two years before being diagnosed.

Demographics

We define the broad group of individuals with psychotic disorders as those who received at least one psychotic disorder diagnosis, as documented in state administrative data, during SFY 2015. A total of 39,334 clients met these criteria.¹ We further reviewed the lifetime mental health history of these clients, and identified a subgroup of 3,062 individuals who received their first psychotic disorder diagnosis in SFY 2015.

To ensure sufficient health history for analyses, this subgroup only included clients who were enrolled in Medicaid in at least two of the three years prior to SFY 2015.² In doing so, we excluded any clients who only enrolled in Medicaid following the implementation of the Affordable Care Act in 2014.

Demographics of Individuals with Psychotic Disorders

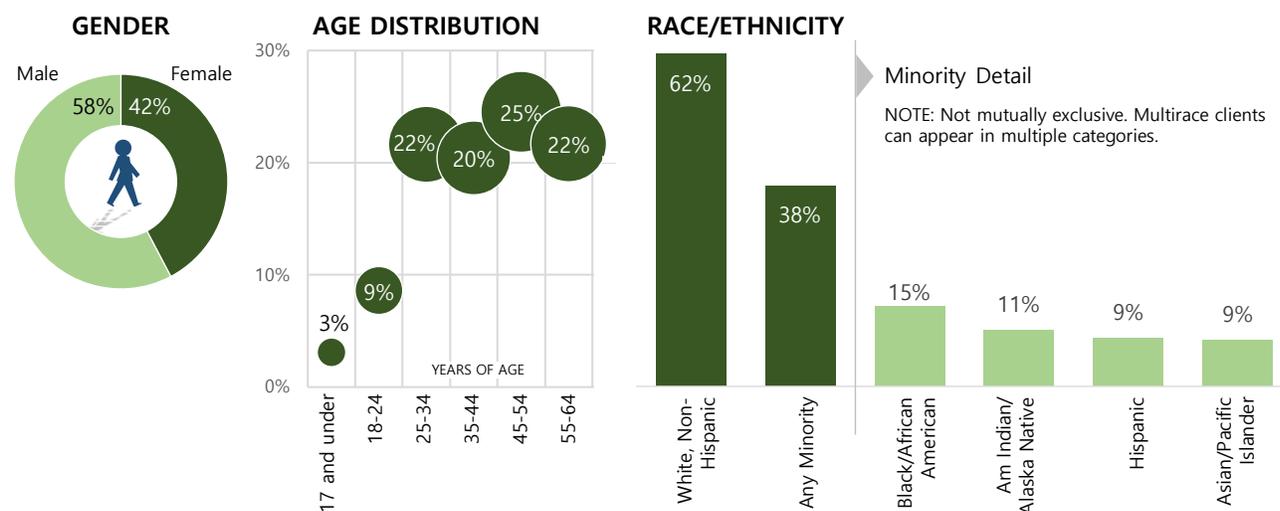
The demographic characteristics of individuals with psychotic disorders in SFY 2015 are presented in Figure 2. These individuals were more likely to be male than female. Sixty-two percent of the individuals with psychotic disorders were non-Hispanic white, while 38 percent were members of minority groups. The percentage of minorities reflects the overall population served by DSHS (39 percent minority) and those receiving publicly funded mental health services in Washington State (38 percent minority).³ The largest minority groups were black (15 percent) and American Indian or Alaskan Native (11 percent).

About 3 percent of the clients identified with psychotic disorders were children and youth (aged 17 or younger), and 9 percent were young adults (aged between 18 and 24). The remaining four age groups each accounted for between 20 to 25 percent of those with psychotic disorders.

FIGURE 2.

Demographics of Clients with Psychotic Disorders

Clients with any psychotic disorders in SFY 2015, TOTAL = 39,334



¹ See Appendix for the definition of psychotic disorder used in this report. Clients must be under the age of 65 and not receiving Medicare or other third party health coverage to be included in the analysis. Psychiatric diagnoses only given in ambulance claims and not corroborated in any other settings were excluded from the analysis.

² See technical notes at the end of this report for a more detailed definition of clients with first episode psychosis.

³ DSHS client data for SFY 2015 <https://www.dshs.wa.gov/sesa/research-and-data-analysis/client-data>.

Demographics of Individuals with First Episode Psychosis

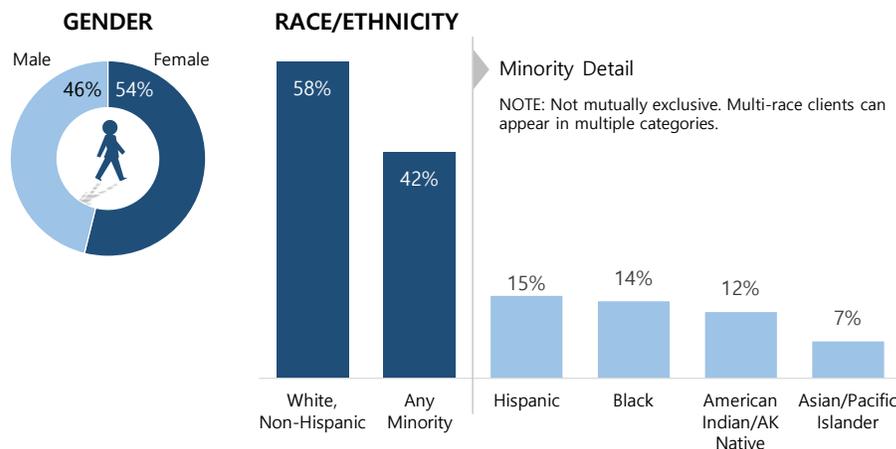
A total of 3,062 DSHS clients met the criteria of "first episode psychosis" in SFY 2015. As shown in Figure 3, this group of clients was comprised of individuals who were 58 percent non-Hispanic white and 42 percent minorities. Individuals of Hispanic origin accounted for 15 percent of the group. About 14 percent were Black, 12 percent were American Indian or Alaskan Native, and 7 percent were Asian or Pacific Islanders. There were more females than males in this group of clients, in part reflecting more continuous medical eligibility for females than males prior to Medicaid expansion in the State.

Figure 3 depicts the age at which FEP clients had their first episode of psychosis. As the chart indicates, the first episode of psychosis occurred across the age span, with the highest proportion occurring in adolescence, 14 to 19 years old. Other research findings have also indicated that the onset of psychosis most frequently occurs in late adolescence and early adulthood (Compton, 2010; Piccinelli & Homen 1997).

FIGURE 3.

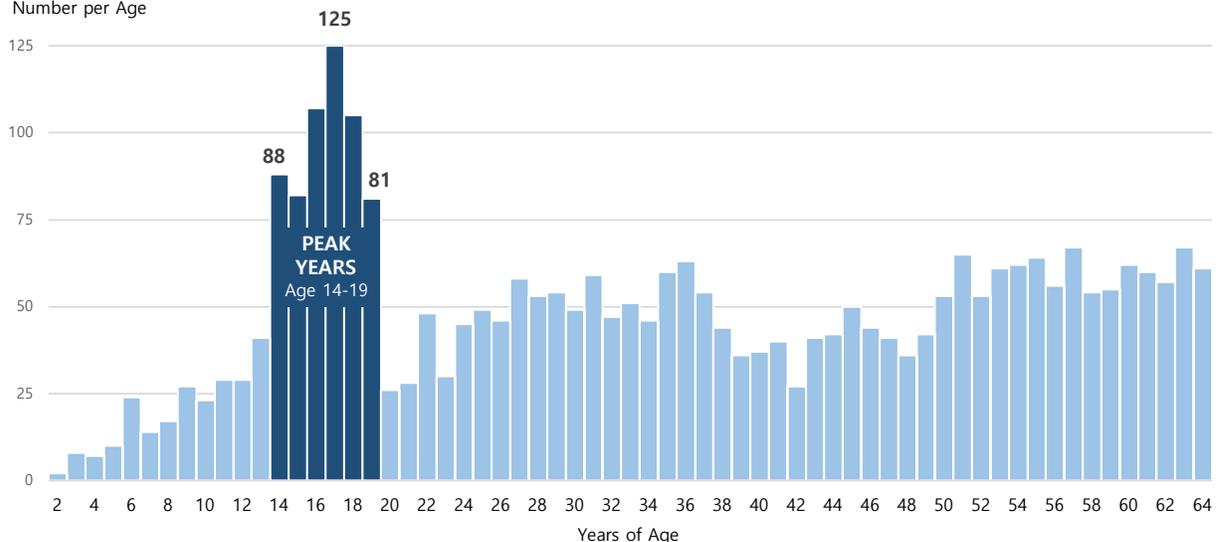
Demographics of Clients at First Episode Psychosis

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062



AGE AT FIRST EPISODE OF PSYCHOSIS

Number per Age



Types of Psychotic Disorders and Client Mental Health History

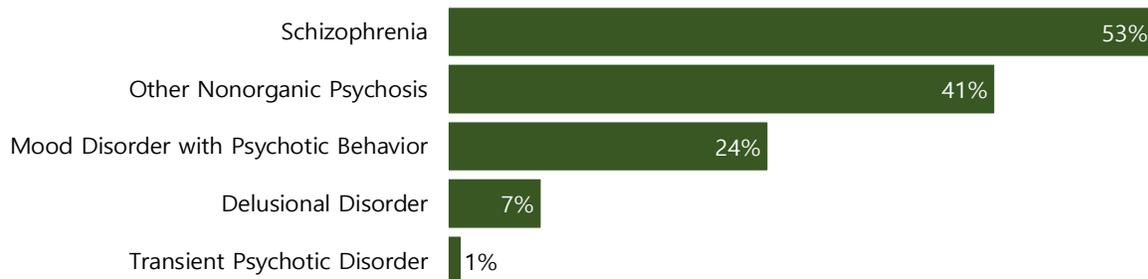
Diagnoses for Individuals with Psychotic Disorders

We examined the diagnostic categories for individuals with psychotic disorders in SFY 2015. The most prevalent psychotic diagnosis was schizophrenia. More than 20,000 clients, or 53 percent of the group with psychotic disorders, were diagnosed with a schizophrenia disorder during SFY 2015. More than 40 percent of the clients were diagnosed with other nonorganic psychosis⁴. Almost 10,000 clients, or 24 percent of the group, had episodic mood disorders with psychotic behaviors (Figure 4).

FIGURE 4.

Types of Psychotic Disorder for Clients with Psychotic Disorders

Clients with any psychotic disorders in SFY 2015, TOTAL = 39,334 (Not mutually exclusive)

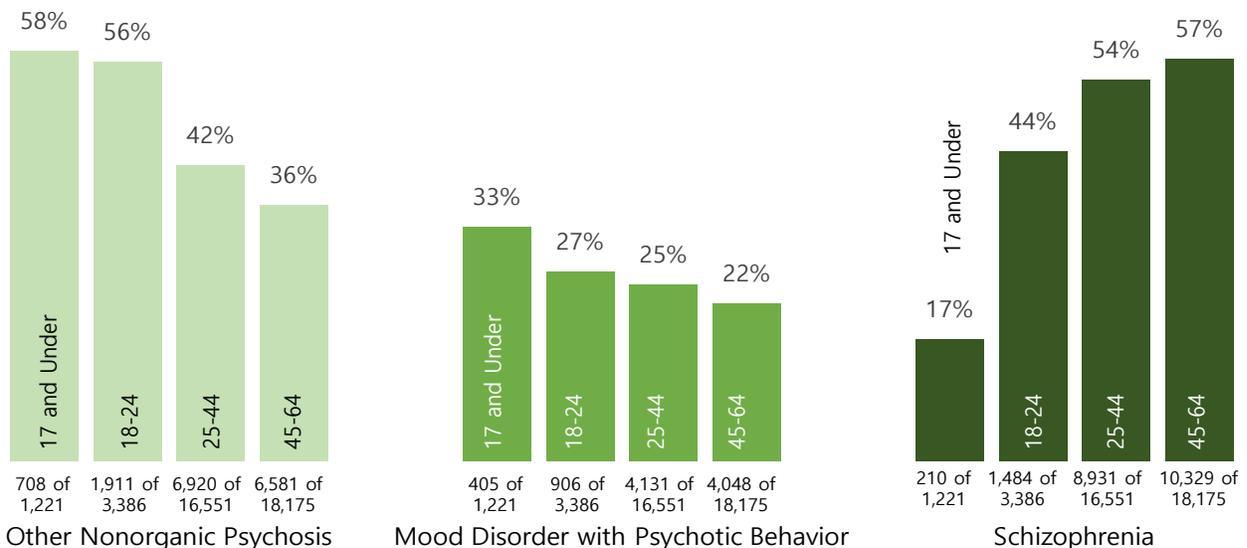


As Figure 5 shows, the prevalence of psychotic disorder diagnostic categories differs by age. The percentage of clients diagnosed with schizophrenic disorders increased with age, while “other nonorganic psychosis” diagnoses decreased with age. Mood disorders with psychotic behaviors were also less frequently diagnosed in older age groups, and were most prevalent among youth aged 17 and under.

FIGURE 5.

Types of Psychotic Disorder by Age Group

Clients with any psychotic disorders in SFY 2015, TOTAL = 39,334 (Not mutually exclusive)



⁴ ICD-9 diagnosis codes for “other nonorganic psychoses” include psychotic conditions due to or provided by emotional stress, or environmental factors as major part of etiology. This category includes unspecified psychosis.

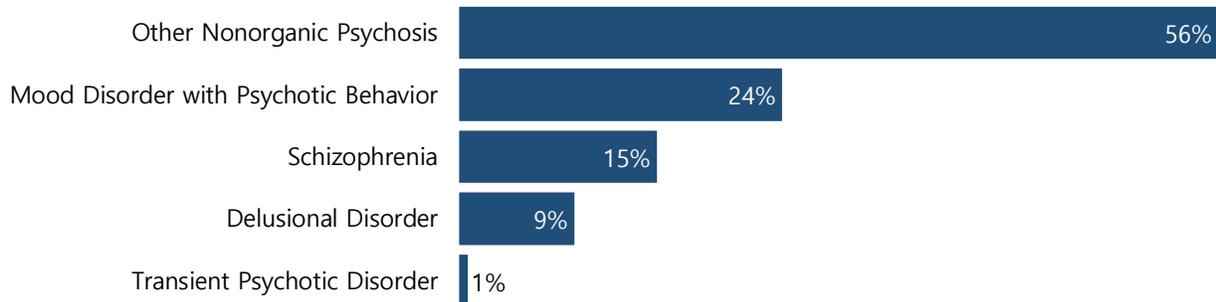
Diagnoses at First Episode of Psychosis

We examined the type of diagnosis that clients received at their first episode of psychosis. As shown in Figure 6, over half of the clients were diagnosed with "other nonorganic psychosis" in their first documented episode. About one in four clients in this group was diagnosed with a mood disorder with psychotic behavior, and about 15 percent were diagnosed with schizophrenia in the initial episode.

FIGURE 6.

Psychotic Disorder Diagnoses at First Episode Psychosis

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062 (Not mutually exclusive)

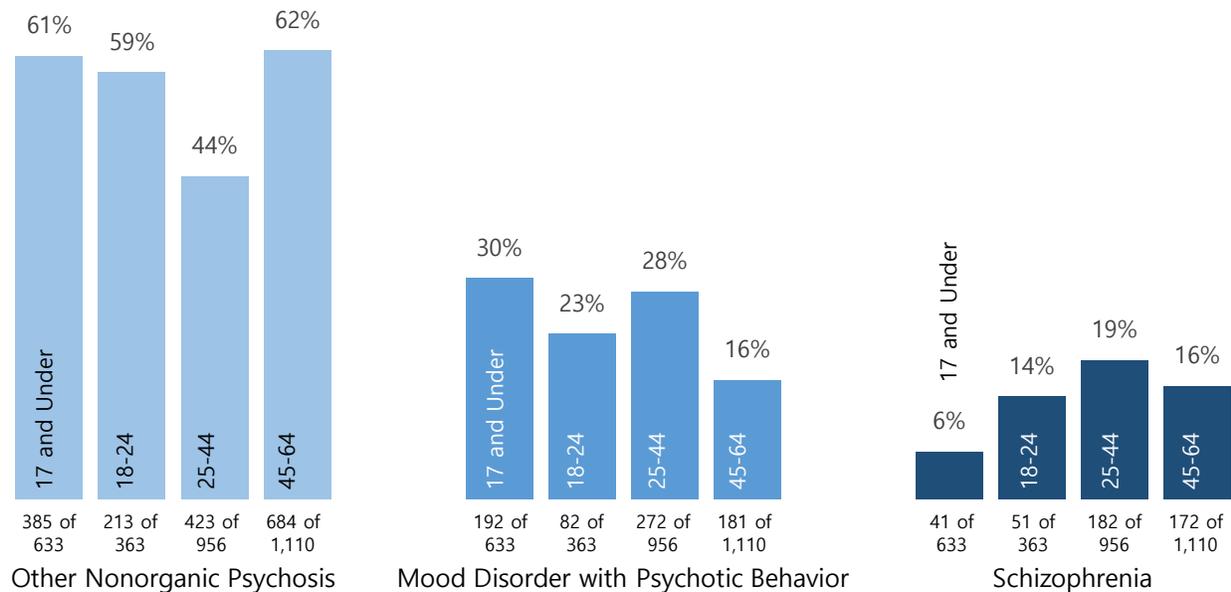


We also examined the type of first psychotic diagnoses by age group. As shown in Figure 7, adults between age 25 and 44 were less likely to be diagnosed with other nonorganic psychosis than other age groups. Older adults between 45 and 64 were the least likely to be diagnosed with mood disorders with psychotic behaviors. Meanwhile, children and adolescents aged 17 or younger were the least likely to be diagnosed with schizophrenia.

FIGURE 7.

Diagnoses of First Episode Psychosis by Age Group

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062 (Not mutually exclusive)



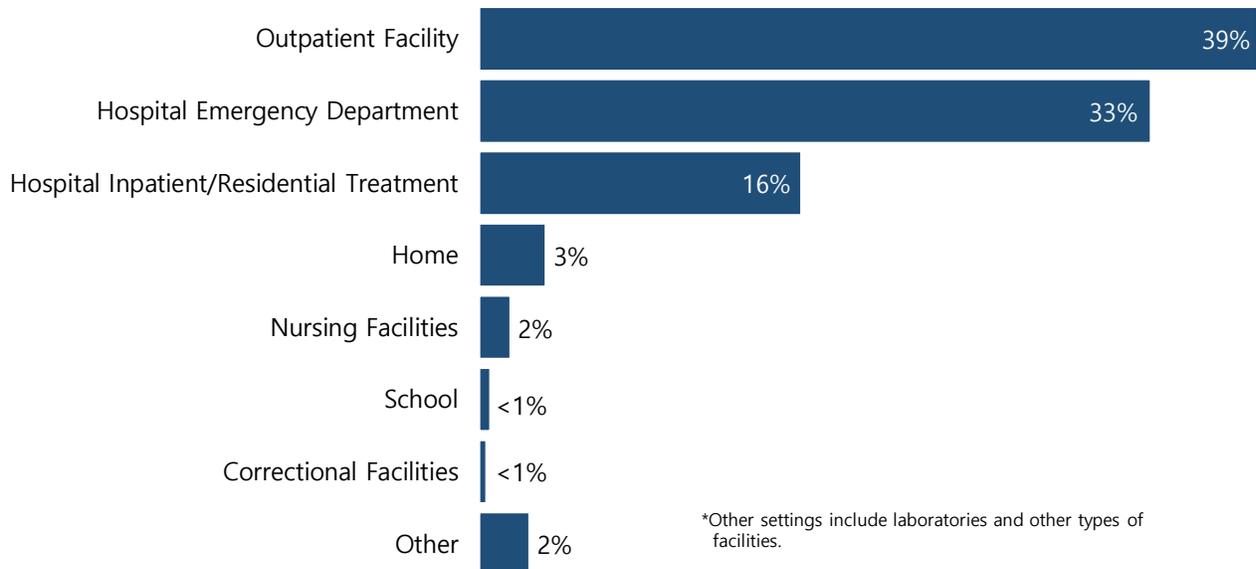
Setting at First Psychotic Disorder Diagnosis

Clients most frequently received their first psychotic disorder diagnosis in outpatient settings. Almost 40 percent of the FEP cohort was first diagnosed with psychotic disorders in an outpatient facility setting. Nearly one-third of the FEP clients were first diagnosed in a hospital emergency department setting. Additionally, a considerable number of clients (16 percent) were first diagnosed in an inpatient or residential treatment setting.

FIGURE 8.

Setting at First Psychotic Disorder Diagnoses

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062 (Not mutually exclusive)



Behavioral Health History Prior to First Episode of Psychosis

The onset of psychotic disorders is often gradual. An individual typically experiences a prodromal period with changes in emotions and behaviors before eventually developing psychotic symptoms (Van Os and Delespaul, 2005). Many patients also have a prolonged period of untreated psychosis before eventually being diagnosed with psychotic disorders (Marshall et al., 2005). Understanding the mental health service history patterns of clients prior to the onset of psychosis is therefore important to identify strategies for early identification and intervention.

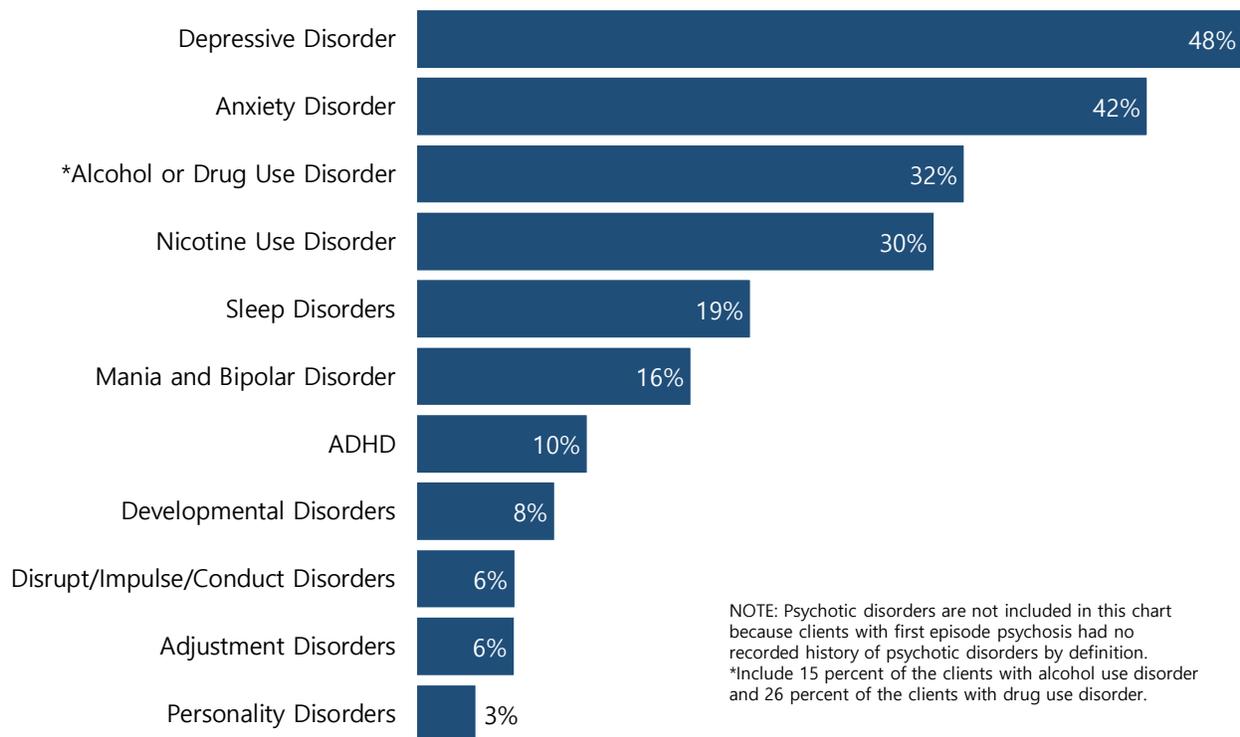
The vast majority of the 3,062 clients who received their first diagnoses of psychotic disorders in SFY 2015 had recorded behavioral health problems prior to the onset of psychosis. Specifically, 75 percent of individuals with first episode psychosis in SFY 2015 had mental health treatment needs indicated in the two years prior to their first recorded diagnosis of a psychotic disorder.

As shown in Figure 9, 48 percent of the clients had been diagnosed with depressive disorders and 16 percent had bipolar disorders in the two years prior, but with no psychotic features noted. Forty-two percent of the clients had anxiety disorders. Almost one-third of the clients had substance use diagnoses (26 percent drug use, 15 percent alcohol use, 32 percent either alcohol or drug use) recorded in the prior two years. Thirty-percent of the clients had nicotine use diagnoses. Other mental illnesses frequently experienced by this group of clients include sleep disorders (19 percent) and ADHD (10 percent). Among youth 17 and younger, ADHD (23 percent), conduct disorders (18 percent), and adjustment disorders (12 percent) were the most commonly diagnosed mental illness prior to the onset of psychosis.

FIGURE 9.

Behavioral Health History Prior to First Episode Psychosis

Clients with first episode psychosis in SFY 2015, based on diagnoses in the two years prior to the first episode, TOTAL = 3,062 (Not mutually exclusive)



Behavioral Health Service Utilization Prior to First Episode Psychosis

Almost half of the clients with first episode psychosis received publicly funded mental health services in the two-year period prior to the onset of psychosis. Thirty-nine percent received Division of Behavioral Health and Recovery (DBHR)-funded outpatient services, and 14 percent received mental health services administered through the Health Care Authority. About four percent received DBHR-funded mental health treatment in inpatient settings, and less than one percent received behavioral rehabilitation services administered through the Children’s Administration (Figure 10).

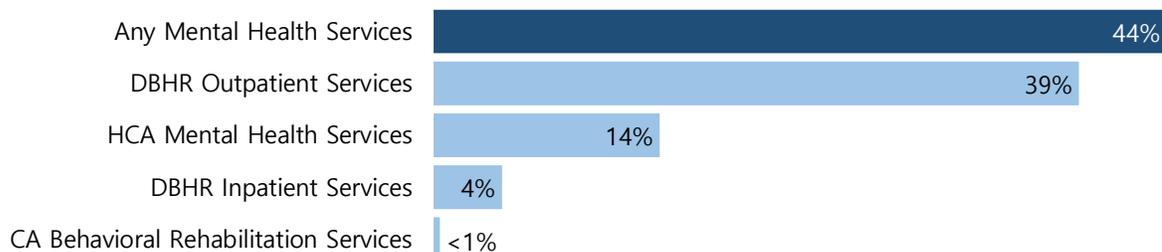
Fifteen percent of the clients received publicly funded substance use disorder (SUD) services. Nine percent received treatment in outpatient settings, and four percent received treatment in inpatient settings. A substantial number of clients (13 percent) also received SUD assessment, case management, or other services.

FIGURE 10.

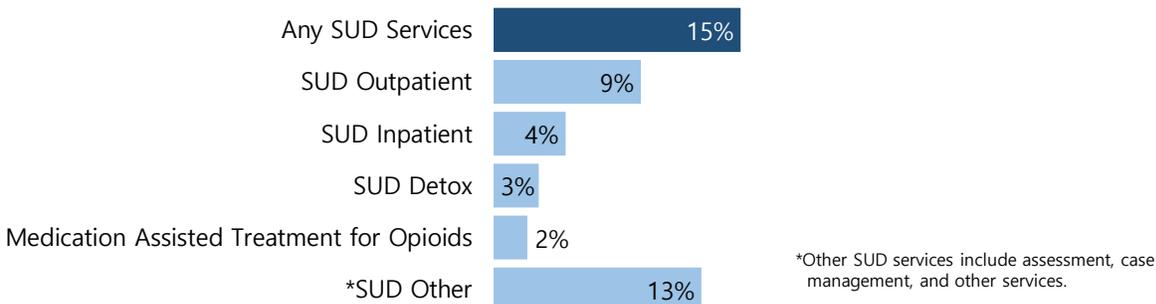
Behavioral Health Service Utilization Prior to First Episode Psychosis

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062 services received in the 2 years prior to first episode psychosis (Not mutually exclusive).

Mental Health Services



Substance Use Disorder Services



Risk Factors and Social Service Use

We examined the risk factors and social service use of individuals with psychotic disorders. The majority of individuals living with psychotic disorders received various social services from state agencies in addition to behavioral health services. The proportions of individuals who received social services, experienced homelessness, had criminal justice involvement, or attempted suicide and had self-inflicted injuries in SFY 2015 can be found in Table 1.

TABLE 1.

Client Services and Experiences in SFY 2015

	Clients with Psychotic Disorders TOTAL = 39,334		Clients with First Episode Psychosis TOTAL = 3,062	
	NUMBER	PERCENT	NUMBER	PERCENT
Receiving Basic Food	29,858	75.9	2,451	80.1
Receiving TANF Benefits	1,296	3.3	333	10.9
Outpatient Hospital Emergency Department Visits	16,945	43.1	1,801	58.8
Receiving DSHS Child Welfare Services	2,771	7.0	587	19.2
DSHS Developmental Disability Service Use	2,612	6.6	174	5.7
Arrests, Charges, or Convictions	7,899	20.1	520	17.0
Homelessness and Housing Instability	8,494	21.6	543	17.7
Attempted Suicide and Self-inflicted Injuries	486	1.2	53	1.7

Figure 11 presents the service history of clients with first episodes of psychosis prior to being diagnosed with psychotic disorders. During the 24 months prior to the first recorded diagnosis of psychotic disorder, more than half visited hospital emergency departments at least once. This does not include the month when they received their first psychotic disorder diagnosis.

The majority of individuals with a first episode of psychosis (85 percent) had received low-income assistance from the Economic Services Administration in the two years prior to being diagnosed. Specifically, 84 percent received Basic Food (food stamps) and 16 percent received benefits from the Temporary Assistance to Needy Families (TANF) program.

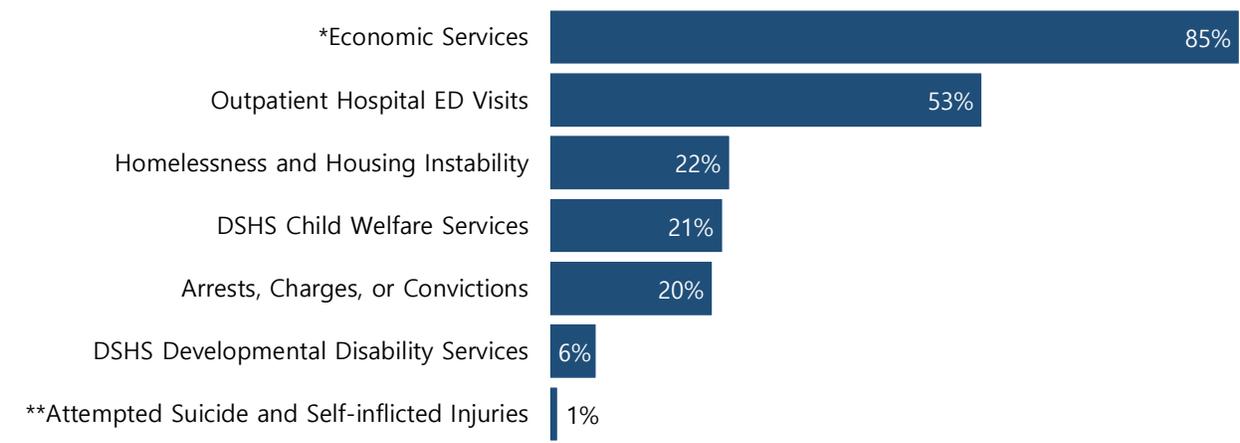
Overall, one in five clients with first episode psychosis were involved with the child welfare system during the two years before being diagnosed with psychotic disorders. This number was even higher among youth first diagnosed when under the age of 18; of those youth, 38 percent received services from the Children’s Administration in the two years prior to diagnosis.

About 22 percent of the clients were homeless or in unstable housing during the two-year period prior to FEP diagnosis. One in five clients had been arrested, charged, or convicted.

FIGURE 11.

Client Services and Experiences in the Two Years Prior to First Episode of Psychosis

Clients with first episode psychosis in SFY 2015, TOTAL = 3,062 (Not mutually exclusive)



* Excludes clients only receiving child support services.

** Identified through Medicaid claims data.

Discussion

This report summarizes the characteristics of DSHS clients who were diagnosed with psychotic disorders in SFY 2015, and those who received such diagnoses for the very first time in the same year. This is the first attempt to draw upon administrative data from the Integrated Client Data Bases, including Medicaid claims and encounters, to identify clients experiencing a first episode of psychosis. The data presented here about the characteristics and experiences of these clients are intended to inform the development of strategies towards more effective identification, referrals, services, and treatment for this population.

Psychotic disorders are a form of serious mental illness that may lead to long-term disability and premature death. Our results indicate that almost 40,000 DSHS clients were living with diagnosed psychotic disorders in SFY 2015.

Of the over 3,000 clients who were diagnosed with psychotic disorders for the first time in SFY 2015, eighty-five percent had contact with the economic services system in the two years prior to diagnosis (84 percent Basic Food and 16 percent TANF). More than half of the clients with first episode psychosis had visited hospital emergency rooms in the past two years.

One in five clients had been homeless or in unstable housing, and one in five had involvement with the criminal justice system. Three out of four clients from this group had identified mental health treatment needs in the 24 months before being diagnosed with psychotic disorders and 44% received mental health services, and yet hospital emergency department was the place where one third of these clients received their first psychotic disorder diagnoses.

These results indicate that outreach and screening in mental health treatment settings, as well as other social and health service settings, may help improve early identification and intervention for this population.

There are two important limitations of this study. First, we identified clients experiencing the onset of psychosis through diagnoses given by healthcare providers. To ensure that we have enough historical treatment information, we limited the analyses to individuals who enrolled in Medicaid in at least two of the past three years. As such, some clients who had their first episodes of psychosis in SFY 2015 may have been excluded, including those who enrolled in Medicaid under the Affordable Care Act (ACA) in 2014. Future analysis should include this population of newly eligible Medicaid recipients, who are more likely to be male, and to have more substance abuse problems, when more historical data are available.

Second, we may erroneously identify an individual as experiencing his or her first episode of psychosis if the individual had psychosis episodes in the past but did not use publicly funded mental health services. Although we excluded individuals with very short Medicaid histories, we could not exclude individuals who may have experienced psychosis but did not seek or receive any treatment, or have a diagnosis recorded. The limitation of the administrative data may have led to mis-identification of a psychotic episode being the "first" for some clients. The second phase of the project, in which we will use predictive modeling techniques to assess the risks in developing psychotic disorders, will further inform models for identifying and working with this complex group of individuals experiencing first episodes of psychosis.

TECHNICAL NOTES

STUDY POPULATION

This report summarizes characteristics of two groups of clients.

1. Clients with psychotic disorders was comprised of DSHS clients who received at least one diagnosis in psychotic disorder in SFY 2015 (June 2014 – July 2015). Psychotic disorder diagnoses were defined using ICD-9 codes in the following categories:

Type of Psychotic Disorder	ICD-9 Code
Schizophrenic Disorders	295 – 295.99
Delusional Disorders	297 – 297.99
Other Nonorganic Psychoses	298 – 298.99
Transient Psychotic Disorder with Delusions or Hallucinations in Conditions Classified Elsewhere	293.81, 293.82
Mood Disorder with Psychotic Behavior	296.04, 296.14, 296.24, 296.34, 296.44, 296.54, 296.64

*Psychotic disorder diagnoses only received in an ambulance setting were not included in the analysis.

2. Clients experiencing first episode psychosis were defined as clients who:

- Were enrolled in Medicaid in at least one month in 2 of the 3 years between SFY 2012 and SFY 2014;
- Were less than 65 years of age, and were not receiving Medicare benefits;
- Received a diagnosis of a psychotic disorder for the first time in SFY 2015; and
- Did not use anti-psychotic medications between SFY 2012 and SFY 2014.

DATA SOURCES AND MEASURES

To identify clients with psychotic disorders and describe their characteristics, RDA leverage administrative data from the Integrated Client Database (ICDB), a set of longitudinal client databases containing 20 years of detailed service risks, history, costs, and outcomes (Mancuso, 2014).

- **Psychotic Disorders:** Psychotic disorders were identified using ICD-9 codes from the mental health treatment records maintained by the Division of Behavioral Health and Recovery (DBHR), ProviderOne medical claims maintained by the Health Care Authority, and CARE assessment records maintained by Aging and Long-term Support Administration.
- **Mental Health Treatment Need:** A client is identified as having mental health treatment needs if the individual had at least one mental health diagnosis, prescription or service recorded in the administrative data.
- **Substance Use Disorder Treatment:** Substance use disorder treatment records were retrieved from the Treatment and Assessment Report Generation Tool (TARGET) maintained by DBHR.
- **Homelessness and housing instability:** Homelessness and housing instability indicators are based on living arrangement code recorded during eligibility determination in the Automated Client Eligibility System (ACES).
- **Child welfare:** Child welfare involvement is defined as receiving any Children’s Administration services, with the exception of child support services.
- **Criminal Justice Involvement:** Criminal justice involvement is defined as receiving any service from Juvenile Rehabilitation, or having any arrest, charge, conviction records in the Washington State Patrol (WSP) data and the WSIPP Criminal History Database.

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