



First Episode Psychosis

Estimating Annual Incidence Using Administrative Data in SFY 2023

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Report to the Health Care Authority, Division of Behavioral Health and Recovery

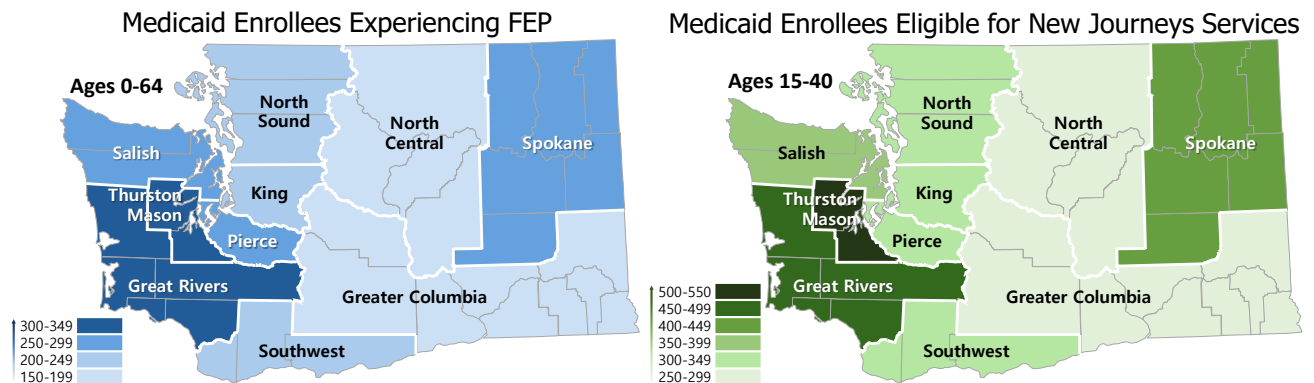
THE SUBSTANCE ABUSE AND MENTAL HEALTH SERVICES ADMINISTRATION (SAMHSA) of the U.S. Department of Health and Human Services requires states to set aside 10 percent of Mental Health Block Grant funds for evidence-based services for persons experiencing first episode psychosis (FEP). In 2019, the Washington State Legislature passed Senate Bill 5903, which requires the Health Care Authority to implement evidence-based services that provide early identification and intervention for individuals with psychosis. In response to both federal and state statutes, the Health Care Authority is using Mental Health Block Grant and Medicaid funding to implement evidence-based New Journeys early intervention services to meet statewide needs. This report provides estimates of annual FEP incidence rates among Washington's Medicaid population in State Fiscal Year (SFY) 2023.

Key Findings

1. A total of 4,106 Medicaid enrollees in Washington State received their first psychotic disorder diagnoses in SFY 2023. Among them, 2,541 individuals from the ages of 15 to 40 received New Journeys-qualifying diagnoses and potentially meet the New Journeys admission criteria.
2. In SFY 2023, the estimated annual incidence rate of FEP was 248 per 100,000 Medicaid enrollees. The incidence rate for those potentially meeting the expanded New Journeys admission criteria was 347 per 100,000. Dually enrolled individuals, those with intellectual disabilities and autism spectrum disorders, and those with histories of out-of-home placement have higher incidence rates than the general Medicaid population.
3. 2,871 individuals received a first diagnosis of non-affective psychosis compared to 1,329 who received a first diagnosis of affective psychosis. The incidence rate was 173 per 100,000 and 80 per 100,000 for non-affective psychosis and affective psychosis, respectively.

Estimated Annual Incidence Rates among the Medicaid Population

SFY 2023, by Apple Health managed care region per 100,000 eligible Medicaid enrollees



Study Methods

Study Population

The study population of this report includes individuals enrolled in Medicaid who were under the age of 65 and had no documented history of psychotic disorders prior to SFY 2023. To ensure sufficient health history for analyses, our estimates only included individuals who received full Medicaid or Children's Health Insurance Program (CHIP) coverage in at least two of the three years immediately before SFY 2023. There were 1,657,734 Medicaid enrollees who met these criteria in SFY 2023, including 1,617,606 individuals who were only enrolled in Medicaid and 40,128 individuals who were dually enrolled in Medicaid and Medicare.

We defined Medicaid enrollees experiencing FEP as individuals enrolled in Medicaid who received a diagnosis of a psychotic disorder for the first time in SFY 2023. Using this FEP definition (referred to as "Any FEP"), we identified 4,106 Medicaid enrollees experiencing FEP in SFY 2023.

New Journeys services are provided to a subset of individuals experiencing FEP who are 15 to 40 years of age and received a New Journeys-qualifying diagnosis (a list of qualifying diagnoses is provided in the Technical Notes). To be eligible for services, individuals must have symptoms of a psychotic disorder lasting from at least one week to a maximum of two years.

In previous years, qualifying diagnoses only included non-affective psychosis diagnoses (e.g., schizophrenia, schizoaffective disorder, etc.). However, New Journeys service providers are in the process of expanding services to also include individuals with affective psychosis (e.g. major depressive disorder and bipolar disorder with psychotic features). Using the updated New Journeys qualifying diagnosis codes for both affective and non-affective psychosis, we identified 2,541 Medicaid enrollees who potentially met the New Journeys admission criteria.^{1 2} For a complete list of the diagnosis codes that are included in the FEP definition and the eligibility requirements for New Journeys services, see the Technical Notes.



First Episode Psychosis Defined

We define individuals with FEP as individuals who:

- Received a psychotic disorder diagnosis* in SFY 2023 (July 2022 – June 2023);
- Had no documented history of psychotic disorders prior to SFY 2023; and
- Did not use anti-psychotic medications between SFY 2020 and SFY 2022.

To ensure sufficient health history for analyses, we only included individuals who were:

- Receiving Medicaid Title 19 or CHIP full coverage in SFY 2023; and
- Enrolled in Medicaid in at least one month in 2 of the 3 years between SFY 2020 and SFY 2022.

* See Technical Notes for psychotic disorder diagnosis codes that are included in the criteria for a first episode of psychosis and the New Journeys admission requirements.

Data and Measures

The analyses leveraged longitudinal data from linked administrative records in the Integrated Client Databases (ICDB). ICDB is a set of client databases containing over 20 years of data for service history,

¹ Affective psychosis diagnoses were not included in the list of New Journeys qualifying diagnoses in the previous report. [Link here.](#)

² Individuals with New Journeys qualifying diagnoses are considered "potentially" eligible in this report as eligibility to receive New Journeys services is determined by providers after a screening and evaluation process that includes an assessment of the duration of symptoms, which is not available in administrative data. For more information, see the Discussion section of this report.

costs, and outcomes (Mancuso & Huber, 2021). We reviewed individuals' Medicaid mental health records from 1997 forward. Psychotic disorders were identified using ICD-9 and ICD-10 codes from mental health treatment records, Medicaid claims maintained by the Health Care Authority, and assessment records maintained by the Aging and Long-term Support Administration. For the population dually enrolled in Medicare and Medicaid in SFY 2023, historical Medicare claims data from 2013 to 2023 were also included in the analyses.

Incidence Estimates of First Episode Psychosis

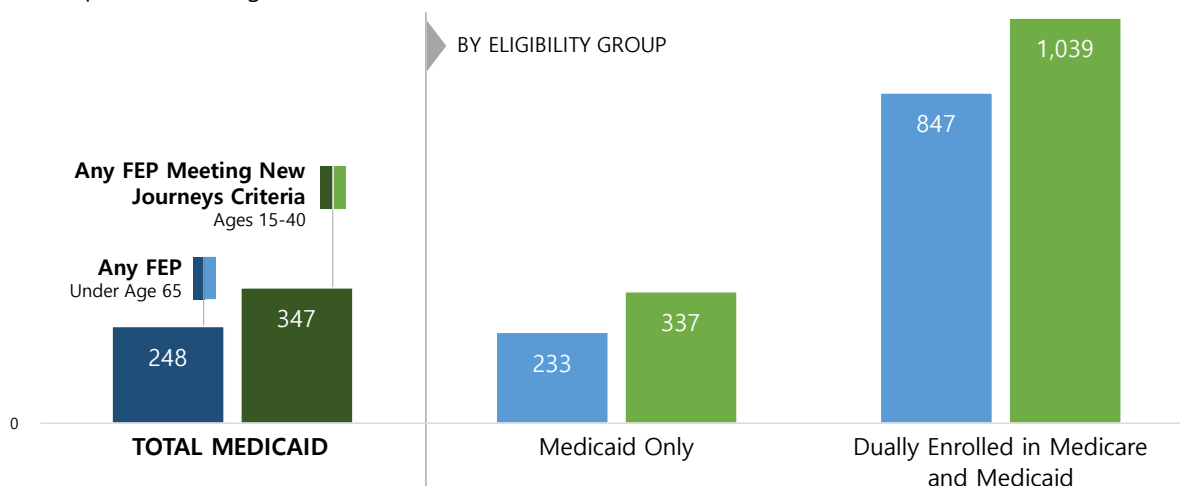
Of the eligible Medicaid population of 1,657,734 enrollees under the age of 65, we identified 4,106 individuals who received their first psychotic disorder diagnosis in SFY 2023. This translates into an annual incidence rate of 248 individuals with FEP per 100,000 eligible Medicaid enrollees. The annual incidence rate of FEP among Medicaid-only enrollees was 233 per 100,000, while the rate among individuals dually enrolled in Medicaid and Medicare was 847 per 100,000 (see Figure 1). The incidence rate for the dually enrolled population was almost four times higher than the Medicaid-only population, likely because the dually enrolled population under the age of 65 included a disproportionately large number of individuals with disabilities.

Among the 732,123 eligible Medicaid enrollees from the ages of 15 to 40, 2,541 individuals received New Journeys-qualifying diagnoses for the first time in SFY 2023 and were potentially eligible for services. The annual incidence rate of individuals potentially meeting the New Journeys eligibility criteria was 347 per 100,000 Medicaid enrollees (see Figure 1). The incidence rate for individuals dually enrolled in Medicaid and Medicare was three times higher than the rate for those enrolled only in Medicaid (1,039 per 100,000 enrollees vs. 337 per 100,000 enrollees).

FIGURE 1.

Estimated Annual Incidence Rates among the Medicaid Population

SFY 2023, per 100,000 eligible Medicaid enrollees



SOURCE: Research and Data Analysis Division, Integrated Client Databases.

Incidence Rates by Demographic Groups

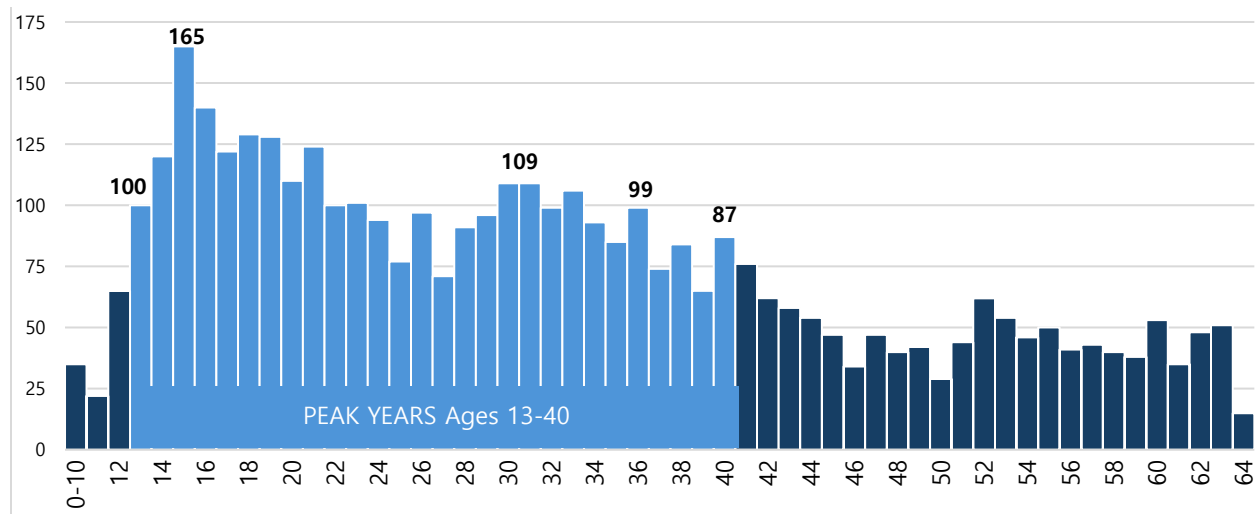
Figures 2 and 3 present the number of individuals experiencing FEP and FEP incidence rates by demographic characteristics in SFY 2023. Most individuals experiencing FEP were between the ages of 13 and 40 (see Figure 2); this overlaps with the age range of individuals who are potentially eligible for New Journeys services (15-40). The incidence rate was the highest among individuals in the New Journeys age range—between 15 and 40 (363 per 100,000)—followed closely by individuals over 40 years of age (341 per 100,000). Children and adolescents under fifteen years of age had the lowest

incidence rate of any age category at 57 per 100,000, which is consistent with other studies describing the age of onset of psychotic disorders (Solmi et.al., 2022).

FIGURE 2.

Estimated Number of Medicaid Enrollees with FEP by Age

SFY 2023

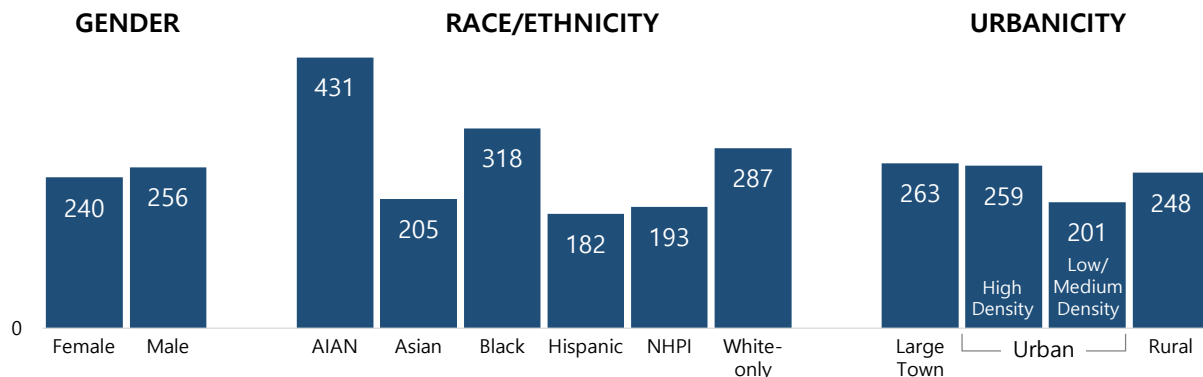


The incidence rate among females was slightly lower than the incidence rate among males, at 240 per 100,000 for females compared to 256 per 100,000 for males (*see* Figure 3). American Indian or Alaska Native individuals had the highest incidence rate of any race/ethnicity category at 431 per 100,000, followed by Black or African American individuals (318 per 100,000) and White, Non-Hispanic individuals (287 per 100,000) enrollees (*see* Figure 3). Incidence rates for all other race/ethnicity categories were similar, with incidence rates between 182 and 205 per 100,000 enrollees. The incidence rate was lowest for individuals residing in counties classified as low and medium density urban (201 per 100,000), while the rates were relatively consistent across other geographic areas (large towns: 263 per 100,000; high density urban areas: 259 per 100,000; rural areas: 248 per 100,000).

FIGURE 3.

Estimated Annual Incidence Rates among the Medicaid Population by Gender, Race/Ethnicity, and Urbanicity

SFY 2023, per 100,000 eligible Medicaid enrollees under age 65



AIAN = American Indian/Alaska Native • **Black** = Includes African American • **Hispanic** = Hispanic or Latino
NHPI = Native Hawaiian or Pacific Islander • **White-only** = White/Non-Hispanic, not reporting in any other race categories • Persons may claim more than one race/ethnicity, except white-only

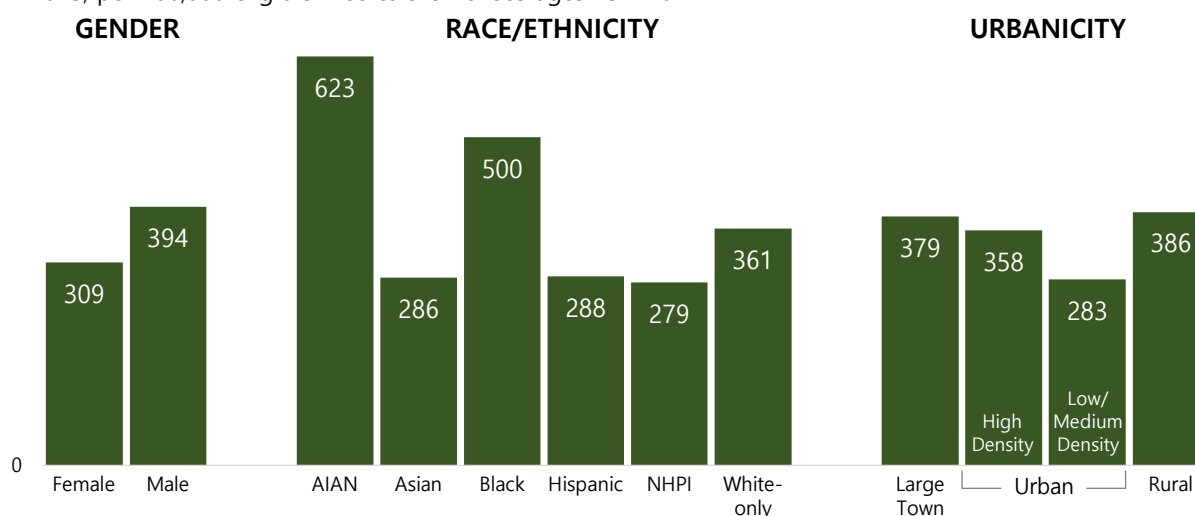
As shown in Figure 4, individuals enrolled in Medicaid who had a New Journeys-qualifying diagnosis from ages 15 to 40 shared similar demographic characteristics with all Medicaid enrollees experiencing FEP. The incidence rate among females who were potentially eligible for New Journeys was lower than the incidence rate among males who were potentially eligible, at 309 per 100,000 for females compared to 394 per 100,000 for males (*see* Figure 4).

Patterns were also consistent across race and ethnicity categories for individuals who were potentially eligible for New Journeys. American Indian and Alaska Native individuals had the highest incidence rates of any racial or ethnic group (623 per 100,000), followed by Black or African American individuals (500 per 100,000) and White, Non-Hispanic individuals (361 per 100,000). The incidence rate was again lowest for individuals residing in counties classified as low and medium density urban (283 per 100,000) compared to other urbanicity classifications, which were relatively consistent across groups.

FIGURE 4.

Estimated Annual Incidence Rates among Individuals Potentially Eligible for New Journeys Services by Gender, Race/Ethnicity, and Urbanicity

SFY 2023, per 100,000 eligible Medicaid enrollees ages 15 - 40



Incidence Rates by Apple Health Managed Care Region

This section presents the estimated numbers of individuals enrolled in Medicaid experiencing FEP by Apple Health managed care region. Apple Health managed care regions are service areas composed of groups of counties in which individuals enrolled in Medicaid receive physical health, behavioral health, and crisis services through managed care.³ Because psychotic disorders are relatively uncommon illnesses, we calculated FEP incidence by the state's ten Apple Health managed care regions rather than by county, which would likely yield unstable estimates.

The three left-hand columns of Table 1 (blue) represent the estimated numbers of individuals enrolled in Medicaid experiencing FEP by Apple Health managed care region, as well as the incidence rate per 100,000 individuals under the age of 65 enrolled in Medicaid (including individuals dually enrolled in Medicaid and Medicare). The three right-hand columns of Table 1 (green) represent the estimated numbers and incidence rates of individuals potentially meeting the New Journeys eligibility criteria.

³ For more information on the geographic coverage of Washington State's Apple Health managed care regions, see the 2024 online [service area map](#).

Eight of the ten Apple Health managed care regions had more than 200 individuals experiencing FEP in SFY 2023 (left-hand columns of Table 1). Of those eight Apple Health managed care regions, five regions had more than 200 individuals that were potentially eligible for New Journeys services (right-hand columns). Five Apple Health managed care regions had incidence rates above the statewide average of 248 individuals experiencing FEP for every 100,000 individuals enrolled in Medicaid. These five regions also had incidence rates for individuals potentially qualifying for New Journeys services above the statewide average of 347 per 100,000 Medicaid enrollees.

TABLE 1.

Estimated Number of Medicaid Enrollees with First Episode Psychosis by Apple Health Managed Care Region

SFY 2023

Apple Health Managed Care Region	Any FEP			Meeting New Journeys Criteria		
	Individuals with FEP	Individuals enrolled in Medicaid	Incidence rate per 100,000	Individuals with FEP	Individuals enrolled in Medicaid	Incidence rate per 100,000
Great Rivers	301	86,487	348	185	36,750	503
Greater Columbia	432	232,468	186	269	103,647	260
King	838	352,541	238	524	158,551	330
North Central	160	85,540	187	101	36,566	276
North Sound	595	249,458	239	368	108,650	339
Pierce	562	208,446	270	319	91,832	347
Salish	200	72,159	277	113	31,748	356
Southwest	271	117,359	231	172	51,691	333
Spokane	488	175,892	277	315	78,407	402
Thurston-Mason	257	76,919	334	175	34,066	514
Washington State	4,106	1,657,734	248	2,541	732,123	347

Incidence Rates by Type of Diagnoses (Affective vs. Non-Affective)

In previous years, New Journeys services were available to individuals experiencing their first episodes of non-affective psychosis, including schizophrenia, schizoaffective disorder, schizophreniform disorder, brief psychotic disorder, delusional disorder, or psychotic disorder not otherwise specified. In SFY 2024, New Journeys service providers began expanding services to include individuals presenting with the onset of affective psychosis, including major depressive disorder and bipolar disorder with psychotic features. Because of this expansion in the eligibility criteria, it is important to know the number of additional individuals who are now potentially eligible for New Journeys services.

For the 2023 analyses, ICD-9 and ICD-10 diagnosis codes for affective psychosis were added to our algorithm to identify individuals potentially meeting the New Journeys eligibility criteria. This section of the report presents incidence rates separately for affective and non-affective psychosis. A complete list of the diagnosis codes for affective and non-affective psychosis is available in the Technical Notes.

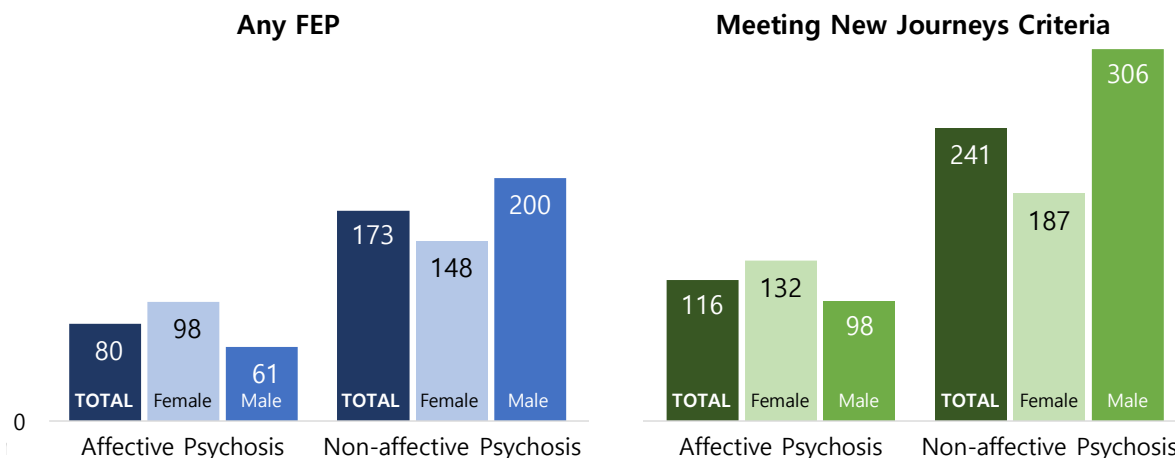
Among the 4,106 individuals identified as receiving their first psychotic disorder diagnoses in SFY 2023, 2,871 individuals received non-affective psychosis diagnoses compared to 1,329 individuals who received affective psychosis diagnoses (one individual may receive multiple diagnoses in the same time period), such that the ratio of individuals who received a first psychotic disorder diagnosis of non-affective to affective psychosis was approximately 2:1. The incidence rate for non-affective psychosis was 173 per 100,000 individuals compared to 80 per 100,000 for affective psychosis (see Figure 5).

Gender ratios differed by the type of first psychotic disorder diagnosis (*see* Figure 5). Females were 1.6 times as likely to receive an affective psychosis diagnosis as males, while males were 1.4 times as likely to receive a non-affective psychosis diagnosis as females.

FIGURE 5.

Estimated Annual Incidence Rates by Gender and Type of Diagnoses

SFY 2023, per 100,000 eligible Medicaid enrollees



Among individuals potentially meeting the New Journeys eligibility criteria, 1,763 received a first psychotic disorder diagnosis of non-affective psychosis compared to 852 individuals who received a diagnosis of affective psychosis. The ratio of individuals who received a first psychotic disorder diagnosis of non-affective to affective psychosis among potentially New Journeys-eligible individuals was also approximately 2:1—with an incidence rate of 241 per 100,000 for individuals with non-affective psychosis compared to 116 per 100,000 for individuals with affective psychosis (Figure 5).

Among individuals potentially eligible for New Journeys services, both genders continued to have higher rates of non-affective psychosis than affective psychosis. The affective psychosis incidence rate was higher for females compared to males (132 vs. 98 per 100,000, respectively). Conversely, the non-affective psychosis incidence rate was higher for males than females (306 vs. 187 per 100,000, respectively).

Co-occurrence with Developmental Disability

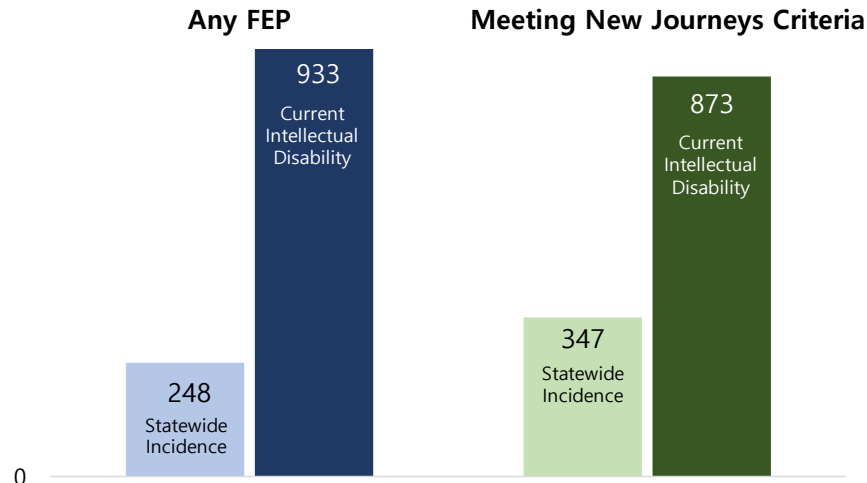
This section presents the estimated numbers of and incidence rates for individuals enrolled in Medicaid experiencing FEP who also had a current diagnosis of a developmental disability in SFY 2023, including intellectual disabilities and autism spectrum disorders (ASD).

Of 1,657,734 people enrolled in Medicaid in Washington State who met the eligibility criteria for this study, 12,971 had a current intellectual disability diagnosis in SFY 2023. Of those, 121 individuals received a first psychotic disorder diagnosis in SFY 2023 for an incidence rate of 933 per 100,000 (*see* Figure 6). While the population of individuals with a current intellectual disability diagnosis was small compared to the total number of individuals experiencing FEP in SFY 2023 (three percent of all individuals experiencing FEP), the incidence rate for individuals with a current intellectual disability was almost four times higher than the incidence rate for all individuals enrolled in Medicaid ("Statewide Incidence"). For individuals with a current intellectual disability diagnosis potentially meeting the New Journeys eligibility criteria, the incidence rate was 873 per 100,000—or about 2.5 times the statewide incidence rate (Figure 6).

FIGURE 6.

Estimated Annual Incidence Rates by Co-occurrence with Intellectual Disability

SFY 2023, per 100,000 eligible Medicaid enrollees

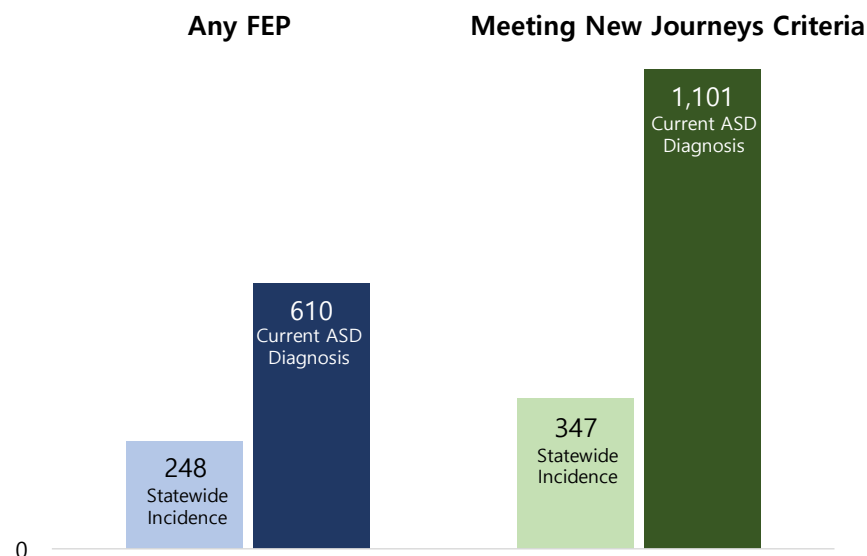


Of 1,657,734 people enrolled in Medicaid in Washington State who met the eligibility criteria for this study, 26,706 individuals had a current ASD diagnosis in SFY 2023. Of those, 163 individuals received first psychotic disorder diagnosis in SFY 2023 for an incidence rate of 610 per 100,000 (see Figure 7). While the population of individuals with a current ASD diagnosis was also small (four percent of all individuals experiencing FEP), the incidence rate for these individuals was about 2.5 times higher than the incidence rate for all individuals enrolled in Medicaid. For individuals potentially meeting the New Journeys eligibility criteria, the incidence rate was 1,101 per 100,000—or about three times the statewide incidence of FEP (Figure 7).

FIGURE 7.

Estimated Annual Incidence Rates by Co-occurrence with Autism Spectrum Disorders

SFY 2023, per 100,000 eligible Medicaid enrollees



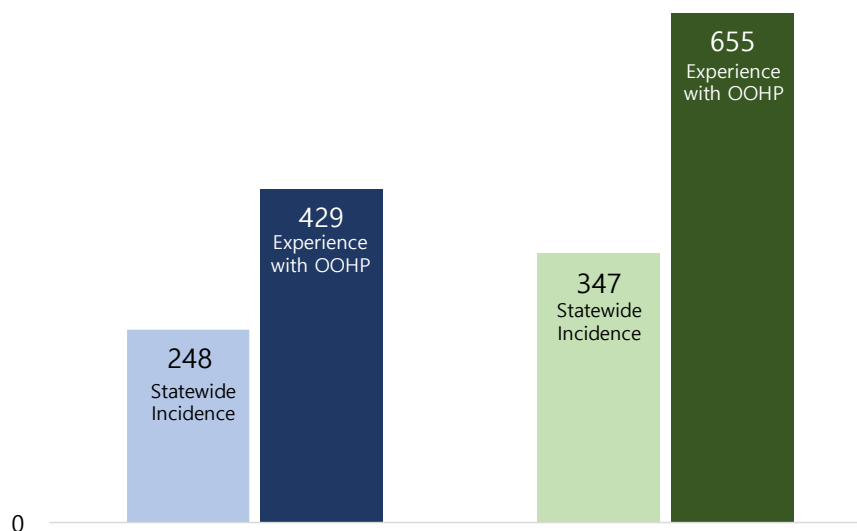
Out-of-home Placements

This section presents the estimated number and incidence rate for individuals enrolled in Medicaid experiencing FEP who had a history of out-of-home placement. Out-of-home placement refers to any child welfare placement outside of the home under the authority of the Department of Children, Youth, and Families (DCYF) and includes placement in licensed foster care, kinship care, and congregate settings as well as temporary events (e.g. hotel stays, detention, hospital).

Of 1,657,734 people enrolled in Medicaid who met the eligibility criteria for this study in Washington State, 67,064 experienced an out-of-home placement through DCYF since 1997 (the year that data first became available). Of those, 288 individuals received a first psychotic disorder diagnosis in SFY 2023 for an incidence rate of 429 per 100,000 (*see* Figure 8). Individuals who experienced an out-of-home placement make up seven percent of all individuals who received a first psychotic disorder diagnosis in SFY 2023. Most of these individuals were potentially eligible for New Journeys services (82 percent), and individuals who experienced out-of-home placement who were potentially eligible for New Journeys services had an incidence rate that was much higher than all individuals experiencing FEP, at 655 per 100,000 (Figure 8).

FIGURE 8.

Estimated Annual Incidence Rates by Experience with Out-of-Home Placement SFY 2023, per 100,000 eligible Medicaid enrollees



Discussion

This report presents incidence rates of FEP in Washington's Medicaid population. Using longitudinal data of behavioral health and medical services over the past 25 years, we identified Medicaid enrollees who received their first psychotic disorder diagnoses in SFY 2023.

We estimate that the annual incidence rate of FEP was 248 per 100,000 Medicaid enrollees, which is similar to the incidence rates found in other studies of the Medicaid population (Radigan et.al., 2019). A total of 4,106 Medicaid enrollees in Washington State received their first psychotic disorder diagnoses in SFY 2023. Among them, 2,541 Medicaid enrollees between the ages of 15 and 40 received New Journeys-qualifying diagnoses and potentially meet the program's admission criteria.

In addition to reporting statewide incidence rates of FEP, we present incidence estimates by Apple Health managed care regions, demographic groups, and types of diagnoses. As the New Journeys model expands to cover more of the population in Washington State, the findings of this report are useful in assisting the Health Care Authority in distributing resources to geographic areas and demographic groups with the highest needs.

These groups include American Indian and Alaska Native individuals, who had the highest incidence rate of any demographic group at 431 per 100,000, followed by Black individuals, at 318 per 100,000. This pattern was also observed among individuals potentially meeting the New Journeys qualifying criteria—American Indian and Alaska Native individuals continued to have the highest incidence rate, at 623 per 100,000, followed by Black or African American individuals, at 500 per 100,000. These findings are consistent with other studies that find racial disparities in the incidence rates of psychotic disorders, including higher incidence rates among Black or African American and American Indian and Alaska Native individuals. Several factors likely contribute to these disparities, including racial, ethnic, and cultural differences in healthcare seeking behavior, and biases on behalf of clinicians (Khalin, 2023).

In addition, individuals with developmental disabilities showed higher incidence rates than other populations, although these groups represented a small percentage of all individuals experiencing FEP. Individuals with current diagnoses of intellectual disability had an incidence rate of 933 per 100,000, while individuals with current diagnoses of an autism spectrum disorders had an incidence rate of 610 per 100,000 enrollees.

Because New Journeys services were originally limited to individuals diagnosed with non-affective psychoses, it is important to understand how the program's expansion to include individuals with affective psychosis diagnoses impacted the total number of individuals potentially eligible for these services. We found that among the 4,106 individuals identified with FEP in SFY 2023, 1,329 individuals received a diagnosis of affective psychosis. This corresponds to a 48 percent increase in the total population eligible for New Journeys services. The incidence rate for non-affective psychosis was 173 per 100,000 Medicaid enrollees compared to 80 per 100,000 for affective psychosis (or a ratio of approximately 2:1).

Limitations

These analyses are subject to three main limitations. First, to ensure data availability, our analyses only included individuals enrolled in Medicaid in SFY 2023 and in at least two of the three prior years. Therefore, we likely underestimated numbers of individuals experiencing FEP as those newly enrolled in Medicaid with FEP were not included in the estimates. Second, Medicare data prior to 2013 were not available to us, and some information (e.g. place of service) was incomplete. Consequently, mental health history for individuals dually enrolled in Medicare and Medicaid may be incomplete. Third, to meet the eligibility criteria for New Journeys services, an individual must have symptoms lasting one week to two years. Information on illness duration is unavailable in administrative data.

TECHNICAL NOTES

ICD-9 and ICD-10 diagnosis codes for psychotic disorders meeting FED definition

ICD-9	295 – 295.99	Schizophrenic disorders
ICD-9	297 – 297.99	Delusional disorders
ICD-9	298 – 298.99	Other nonorganic psychoses
ICD-9	293.81, 293.82	Transient psychotic disorder with delusions or hallucinations in conditions classified elsewhere
ICD-9	296.04, 296.14, 296.24, 296.34, 296.44, 296.54, 296.64	Mood disorder with psychotic behavior
ICD-10	F20.0 - F20.9	Schizophrenia
ICD-10	F21	Schizotypal disorder
ICD-10	F22	Delusional disorder
ICD-10	F23	Brief psychotic disorder
ICD-10	F24	Shared psychotic disorder
ICD-10	F25.0 - F25.9	Schizoaffective disorder
ICD-10	F28	Other psychotic disorder not due to a substance or known physiological condition
ICD-10	F29	Unspecified psychosis not due to a substance or known physiological condition
ICD-10	F30.2	Manic episode, severe with psychotic symptoms
ICD-10	F31.2, F31.5, F31.64	Bipolar disorder, severe with psychotic features
ICD-10	F32.3, F33.3	Major depressive disorder, severe with psychotic features
ICD-10	F53, F531	Puerperal psychosis

Qualifying ICD-9 and ICD-10 diagnosis codes for New Journeys Services

ICD-9	295.9	Schizophrenia, unspecified
ICD-9	295.7	Schizoaffective disorder, unspecified
ICD-9	295.4	Schizophreniform disorder, unspecified
ICD-9	298.8	Brief psychotic disorder
ICD-9	297.1	Delusional disorder
ICD-9	298.9	Psychotic disorder NOS
ICD-10	F20.9	Schizophrenia, unspecified
ICD-10	F25.0, F25.1	Schizoaffective disorder
ICD-10	F20.81	Schizophreniform disorder
ICD-10	F23	Brief psychotic disorder
ICD-10	F22	Delusional disorder
ICD-10	F29	Unspecified psychosis not due to a substance or known physiological condition
ICD-10	F28	Other psychotic disorder not due to a substance or known physiological condition
ICD-9	296.04, 296.14, 296.24, 296.34, 296.44, 296.54, 296.64	Mood disorder with psychotic behavior
ICD-10	F30.2	Manic episode, severe with psychotic symptoms
ICD-10	F31.2, F31.5, F31.64	Bipolar disorder, severe with psychotic features
ICD-10	F32.3, F33.3	Major depressive disorder, severe with psychotic features

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