Washington State Department of Social and Health Services

Transforming Lives

REPORT TO THE LEGISLATURE

Permanent Supportive Housing Need Forecast

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Scope and Purpose

Washington's engrossed Substitute Senate Bill 5187 (Chapter 475, Laws of 2023, §1208(9)) directed the Department of Social and Health Services' Research and Data Analysis Division (RDA) to "prepare an annual report in consultation with the Department of Commerce on the projected demand for permanent supportive housing." The following brief summarizes the results of the assigned analysis. Estimates of permanent supportive housing (PSH) need were calculated using data from RDA's Integrated Client Databases, which integrate administrative data from the state's Medicaid claims database, public assistance eligibility determination system, and Homelessness Management Information System, among others (Mancuso & Huber, 2021). We constructed unduplicated monthly counts of adults ages 18 and above with state or federally funded medical coverage who were potentially eligible for PSH from January 2018 to December 2022. These counts were then used to forecast the number of individuals potentially in need of PSH over a 36-month forecast period ending December 2025.

Key Findings

Based on a time-series analysis of administrative data used to identify individuals who fit the profile of a PSH client, we found the following:

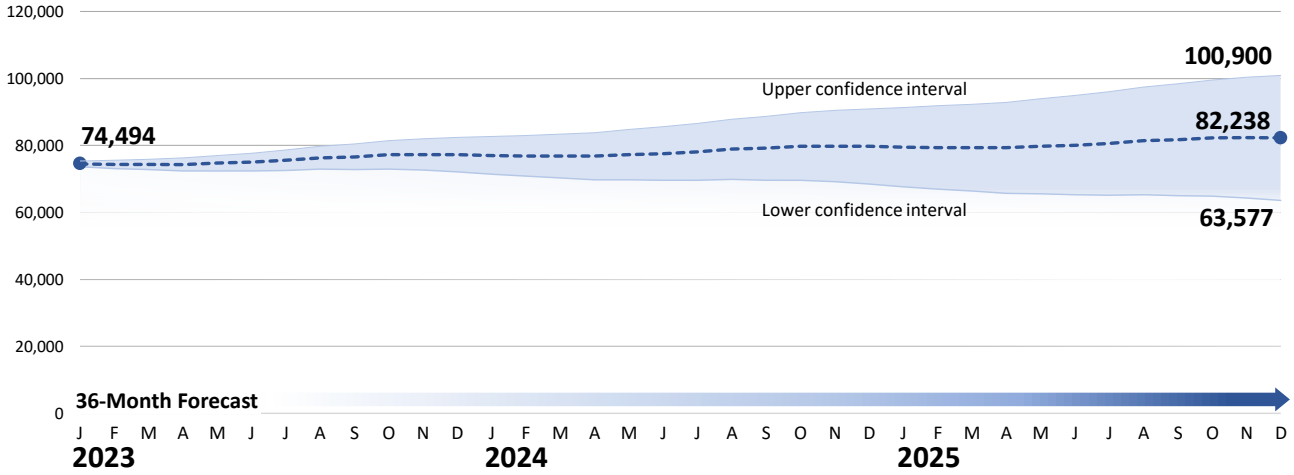
- The number of individuals potentially eligible for PSH increased 6 percent from 70,373 in January 2018 to 74,697 in December 2022.
- If recently observed trends continue, the projected number of individuals potentially eligible for PSH is expected to be 82,238 by December 2025. This is nearly equivalent to prior forecasts despite changes to inclusion criteria that increased the number of PSH-eligible individuals. These similarities are attributable to a slower projected rate of growth for this population.

The 82,238 projection is subject to uncertainty; with 95 percent confidence, the projected number of PSH-eligible individuals will be between 63,577 and 100,900 in December 2025.

FIGURE 1.

Forecasted Permanent Supportive Housing Need

January 2023 to December 2025



Permanent Supportive Housing Forecast

We used data from the DSHS-RDA Integrated Client Databases (ICDB) to identify individuals who appear likely to need PSH.[1] Individuals were counted towards each monthly observation if they:

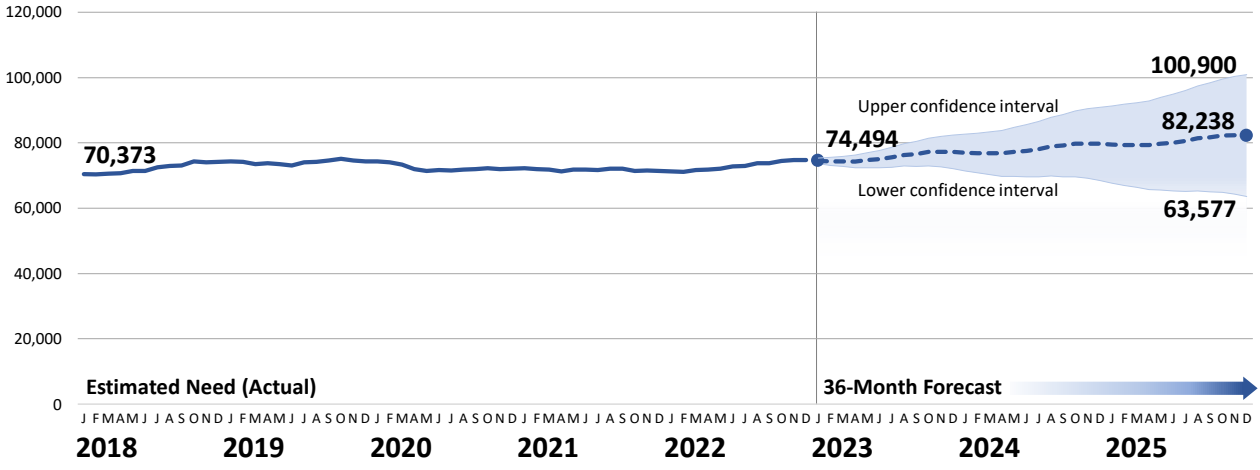
1. Were observed to be homeless in the month; AND
2. Were at least 18 years of age in that month; AND
3. Had at least one month of state or federally funded medical coverage[2] in the past year (inclusive of the month in question); AND
4. Had an indication of a mental health or substance use disorder in the past two years (inclusive of the month in question) OR an indication of a significant chronic illness based on Medicaid claims data.[3]

The resulting dataset was used to measure the total number of individuals potentially in need of PSH in each month from January 2018 to December 2022. The statistical model chosen to forecast PSH need is a variant of exponential smoothing.[4] As shown in Figure 2, the results of these analyses indicate that the total number of PSH-eligible clients is expected to increase from 74,494 in January 2023 to 82,238 in December 2025, which corresponds to a 10 percent increase over a three-year period. The forecasted number of persons needing PSH is anticipated to increase by 221individuals per month, on average, through December 2025.

FIGURE 2.

Historical and Forecasted Need for Permanent Supportive Housing

January 2018 to December 2025



[1] The ICDB integrates administrative data from several state data systems including the state's Automated Client Eligibility System (ACES), ProviderOne MMIS data system that contains Medicaid claims and encounter data, and the Homeless Management Information System (Mancuso & Huber, 2021).

[2] Including individuals dually enrolled in Medicaid and Medicare.

[3] Chronic illness is identified using a claims-based medical risk score that measures an individual's anticipated medical costs relative to the average disabled Medicaid client. Individuals were considered to have a chronic illness if that score is greater than or equal to 1.

[4] All forecasts were calculated using PROC ESM in SAS® 9.4. We compared several ESM approaches to identify a method that best fit the historical data. Based on these comparisons, we selected the Holt-Winters' additive method. This method prioritizes more recent data over earlier segments of the time series, assumes that there is an underlying linear trend in the data, and adjusts the forecasts for 12-month seasonality.

To acknowledge the inherent uncertainty of any forecast, we present this forecast with a 95 percent confidence interval, which ranges from a low of 63,577 to a high of 100,900 by December 2025. The monthly forecasted counts generated using this approach — and the upper and lower confidence limits — are provided in Table 1 below.

TABLE 1.

Forecasted Need for Permanent Supportive Housing Detail

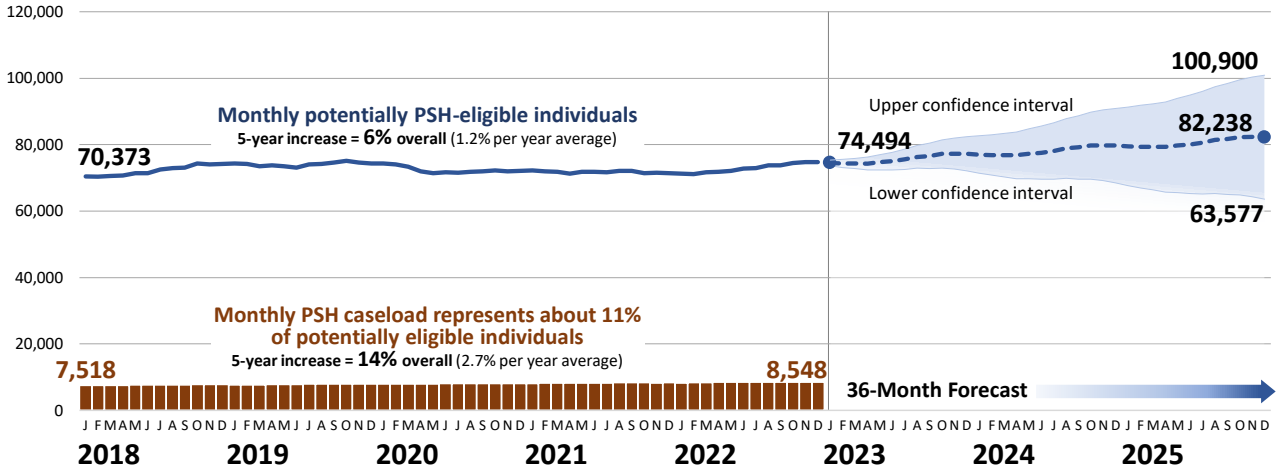
January 2018 to December 2025

Date		Lower 95% Confidence Limit	Forecasted PSH Need	Upper 95% Confidence Limit
2023	JAN	73,641	74,494	75,347
	FEB	73,137	74,363	75,589
	MAR	72,747	74,329	75,911
	APR	72,329	74,267	76,204
	MAY	72,379	74,678	76,978
	JUN	72,351	75,021	77,692
	JUL	72,527	75,578	78,630
	AUG	72,888	76,331	79,775
	SEP	72,764	76,611	80,458
	OCT	72,926	77,187	81,449
	NOV	72,611	77,299	81,988
	DEC	72,085	77,211	82,337
2024	JAN	71,397	77,008	82,619
	FEB	70,808	76,877	82,945
	MAR	70,306	76,842	83,379
	APR	69,764	76,780	83,797
	MAY	69,685	77,192	84,699
	JUN	69,528	77,535	85,543
	JUL	69,573	78,092	86,611
	AUG	69,805	78,845	87,885
	SEP	69,553	79,125	88,696
	OCT	69,588	79,701	89,814
	NOV	69,149	79,813	90,477
	DEC	68,500	79,725	90,949
2025	JAN	67,699	79,522	91,344
	FEB	66,990	79,391	91,791
	MAR	66,369	79,356	92,344
	APR	65,711	79,294	92,878
	MAY	65,518	79,706	93,894
	JUN	65,247	80,049	94,851
	JUL	65,182	80,606	96,030
	AUG	65,304	81,359	97,414
	SEP	64,944	81,638	98,333
	OCT	64,873	82,215	99,557
	NOV	64,330	82,327	100,325
	DEC	63,577	82,238	100,900

Permanent Supportive Housing Caseload

While the preceding analysis describes the potential demand for PSH, Figure 3 additionally describes the number of individuals 18 years of age and above who actually received PSH in Washington State.[5] According to data entered into each county's Homeless Management Information System (HMIS), the number of individuals receiving PSH has grown from 7,518 in January 2018 to 8,548 in December 2022, a 14 percent increase overall, or on average, a 2.7 percent increase per year. PSH caseloads represented an average of about 11 percent of the potentially eligible individuals in any given month.

FIGURE 3.
Permanent Supportive Housing Caseload versus Estimated Need
January 2018 to December 2022



Limitations and Additional Considerations

This forecast is subject to several limitations. First, because this is an update of the estimates provided earlier in 2023, this forecast relies solely on recent historical trends and does not incorporate information on external factors that may influence demand for PSH.

Second, this forecast is based in part on data generated during the COVID-19 pandemic. It is unclear to what degree the pandemic affected the number of individuals experiencing homelessness or the service utilization data used to identify those in need of PSH. Because state data systems are intended to support agencies' day-to-day business operations, they only include information on individuals who came in contact with state-funded health and human services systems. If an individual did not interact with these systems, we were not able to determine if they were potentially eligible for PSH. This was particularly problematic during the beginning of the COVID pandemic, as many key access points for public assistance and housing services (e.g., community service offices and emergency shelters) were closed. Additionally, recent analyses from RDA suggest that homeless individuals may have faced greater barriers than others to establishing or maintaining connections to public

[5] PSH recipients are restricted to individuals enrolled in PSH programs in the state's HMIS system and excludes those individuals who: 1) received PSH services/housing that were funded solely through local or philanthropic dollars; 2) were housed in units operated by, or that received vouchers from local housing authorities; or 3) were housed in a site-based PSH project funded through the Housing Trust Fund and administered by the Department of Commerce's Multi-Family Housing Unit.

assistance during the COVID pandemic (Patton et al. 2023). Consequently, we may have underestimated the number of clients who needed PSH and thus underestimated the forecasted demand.

To explore the sensitivity of our forecast to the use of data collected during the pandemic, we also estimated an exponential smoothing model applied to data from January 2018 through December 2019. This model, based on data from the years immediately prior to the pandemic, produced estimates almost 7,700 lower (approximately 74,538 individuals in need of PSH services) for December 2025 than those estimated using data spanning the full five years from January 2018 through December 2022. This difference may be due in part to the return of DSHS Community Service Offices to full in-person services on February 28th, 2022[6], which improved both client access to services and our ability to identify PSH-eligible clients as services returned to normal. Estimates suggest that from March through September 2022 there was a rapid increase in potentially PSH-eligible individuals compared to October through December 2022[7]. The surge in the number of individuals identified as potentially PSH-eligible may have influenced the forecasted growth rate for those estimates produced using all five years of data since the Holt-Winters' additive method places heavier weights on more recent observations. Still, the sensitivity forecast is within the bounds of the 95 percent confidence limits of the main forecast.

Third, as noted earlier, the unit of analysis used in these forecasts is the number of ***individuals*** 18 years and older potentially eligible for PSH in a month. However, PSH service units are allocated at the household level. Other housing projections (e.g., those previously produced under Engrossed Second Substitute House Bill 1220, Chapter 254, Laws of 2021) center on the number of ***households*** that need PSH. The decision to focus on individuals here is due to the difficulty in identifying and constructing households using administrative data, where individuals are grouped together into household-like structures based on program rules.

Fourth, our estimates rely primarily on Medicaid claims data to identify individuals with some indication of a significant chronic illness or behavioral health disorder. Claims paid solely through other funding mechanisms (e.g., third-party payers, Medicare) are not reflected in these data at this time. Consequently, the forecasts presented here may systematically undercount clients dually enrolled in Medicaid and Medicare and those with third-party liability coverage, such as veterans, potentially eligible for PSH. We mitigate this risk through the inclusion of individuals with a mental health or substance use disorder over the past two years through Medicaid claims.

Finally, this forecast may not fully reflect the level of need for PSH in Washington. In contrast to other states that limit eligibility for PSH to the chronically homeless, Washington has adopted more expansive eligibility criteria. Specifically, individuals with a behavioral health need or disabling condition who are currently housed but whose household earnings are less than or equal to 80 percent of the Area Median Income (AMI) are eligible for PSH in Washington State (Washington State Department of Commerce, 2023). Because these forecasts focus on individuals who were homeless in a month, they omit housed individuals potentially eligible for PSH.

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[6] DSHS Community Services Offices return to full in-person services: https://www.dshs.wa.gov/os/office-communications/media-release/dshs-community-services-offices-return-full-person-services.

[7] Specifically, the average increase in the number of potentially PSH-eligible individuals was 356 per month from March to September 2022 compared to the average increase of 149 per month from October to December 2022.

TECHNICAL NOTES

Measures

Medical Coverage. Medicaid and other medical coverage information was obtained from eligibility codes recorded in ProviderOne.

Behavioral Health Indicators. Data from the Health Care Authority's (HCA's) ProviderOne Medicaid claims system and Behavioral Health Data System (BHDS), and Aging and Long-Term Support Administration's Comprehensive Assessment Reporting Evaluation (CARE) data available in RDA's Integrated Client Databases were used to identify indicators of substance use disorders and/or mental health conditions based on diagnoses, prescriptions, and treatment records. Drug- and alcohol-related arrest data maintained by the Washington State Patrol were also used to identify probable substance use issues and were included in the definition of treatment need for substance use disorders.

- **Mental Health Condition.** Mental health condition is indicated for any individual who: 1) was diagnosed with a psychotic, mania/bipolar, depressive, anxiety, attention deficit and/or hyperactive, disruptive/impulse control/conduct, or adjustment disorder; 2) had an antipsychotic, antimanic, antidepressant, antianxiety, or ADHD prescription filled; 3) received mental health services; or 4) received behavioral rehabilitation services from The Department of Children, Youth, and Families.
- **Substance Use Disorder.** A substance use disorder is indicated for any individual who: 1) was diagnosed with a substance use disorder; 2) had a prescription filled for medication for opioid or alcohol use disorder treatment; 3) received substance use disorder treatment services; or 4) was arrested for a substance-related offense.
- **Chronic Illness Risk Score.** An indicator of chronic illness was developed to identify individuals with significant health problems. A risk score equal to one is the score for the average Medicaid participant in Washington State meeting Supplemental Security Income disability criteria. Chronic illness risk scores were calculated from health service diagnoses and pharmacy claim information, with scoring weights based on a predictive model associating health conditions with future medical costs (*see* Gilmer et al., 2001; Kronick et al., 2000 for more information). Individuals were identified as having chronic illness if their risk score was greater than or equal to one.
- **Housing Indicator.** Data from the Automated Client Eligibility System, Electronic Jobs Automated System, ProviderOne, and the Homelessness Management Information System were used to determine if individuals who received any form of cash, food, or medical assistance and/or housing service experienced homelessness in the month. An individual was considered unhoused if, for at least one day in the month: 1) they were identified as homeless based on client living arrangement data entered into ACES; 2) they had an address of "homeless" or an address format code that indicated the client was homeless; 3) a medical or behavioral health provider submitted a claim to ProviderOne for that client with a "Z590" or "Z591" diagnosis code; or 4) they were enrolled in any housing service that requires someone to be literally homeless to be eligible for the service and did not have a valid move-in date.

Permanent Supportive Housing. An individual was identified as having received permanent supportive housing if they were enrolled in—but not necessarily housed through—a permanent supportive housing program in HMIS in a given month. This measure excludes individuals who received permanent supportive housing services through the Health Care Authority's Foundational Community Supports program and individuals housed through site-based PSH.

APPENDIX

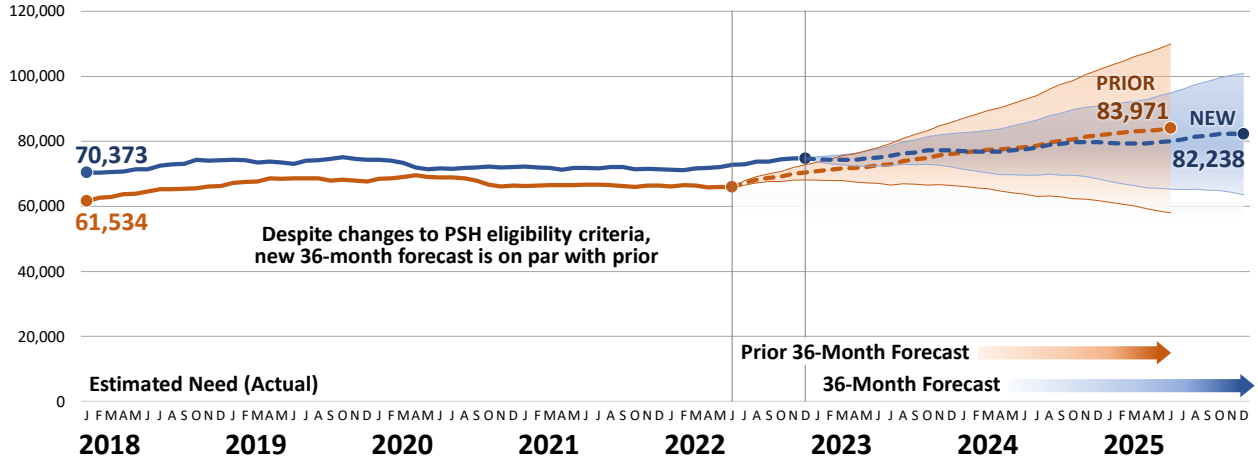
Changes from Previous Forecast

There are several differences between the new forecast and the prior forecast. First, we relaxed coverage-based exclusions to include individuals who had any form of medical coverage in at least one month in the previous year. Prior forecasts were restricted to individuals with at least one month of Title XIX Medicaid in the previous year. Second, current estimates include individuals dually enrolled in Medicare and Medicaid. Prior forecasts excluded dual-eligible clients, which artificially depressed the number of individuals 65 years old and older who met PSH inclusion criteria. As shown in Figure 4, these two changes in our inclusion criteria resulted in an increase in the absolute number of individuals identified as potentially eligible for PSH benefits relative to previous estimates.

Third, the estimated rate of increase in the current forecast is lower than that previously reported, with the 36-month PSH-eligible population forecasted to be 82,238 by December 2025, which is on par with the prior forecast of 83,971 in June 2025 despite the higher January 2023 starting point for the new forecast. One potential explanation for a comparatively lower rate of increase in the new forecast is that we observed a sharp uptick in the number of individuals potentially eligible for PSH during the last three months of the time series used in the previous forecast. Because the forecasting method prioritizes more recent data, this uptick in the count of individuals potentially eligible for PSH carried forward into the caseload forecast. Updated information indicates that the rapid increase observed from March to July 2022 leveled off over the following six months, dampening the forecasted trends in the current estimate presented here.

FIGURE 4.

Comparison of Current Forecast with Previous Forecast



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