Academic Learning Collaborative Symposium

Friday, October 2, 2025

8:30 a.m. – 12:30 p.m.

Washington State Health Care Authority

Variation in SUD Treatment and Follow-up Care Across Initial Clinical Setting in which SUD is Identified in a Large U.S. Healthcare System

Edwin S. Wong, PhD | Research Associate Professor

Academic Learning Collaborative Symposium | Washington State Health Care Authority | October 2, 2026

SCHOOL OF PUBLIC HEALTH
HEALTH SYSTEMS AND POPULATION HEALTH
UNIVERSITY of WASHINGTON

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- The content is solely the responsibility of the authors and does not necessarily represent the official views of the NIH
- All authors declare no conflicts of interest

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Background & Objectives

- **Healthcare systems should offer SUD care to patients no matter where patients are first identified as having SUD**
- **Little is known about how the setting where SUD is first identified shapes what happens next**
- **We examined across clinical settings of initial SUD identification:**
  - Rates of having an SUD care visit after identification
    - Time to first SUD care visit
    - First type of SUD care received
  - Duration of SUD care after initial identification

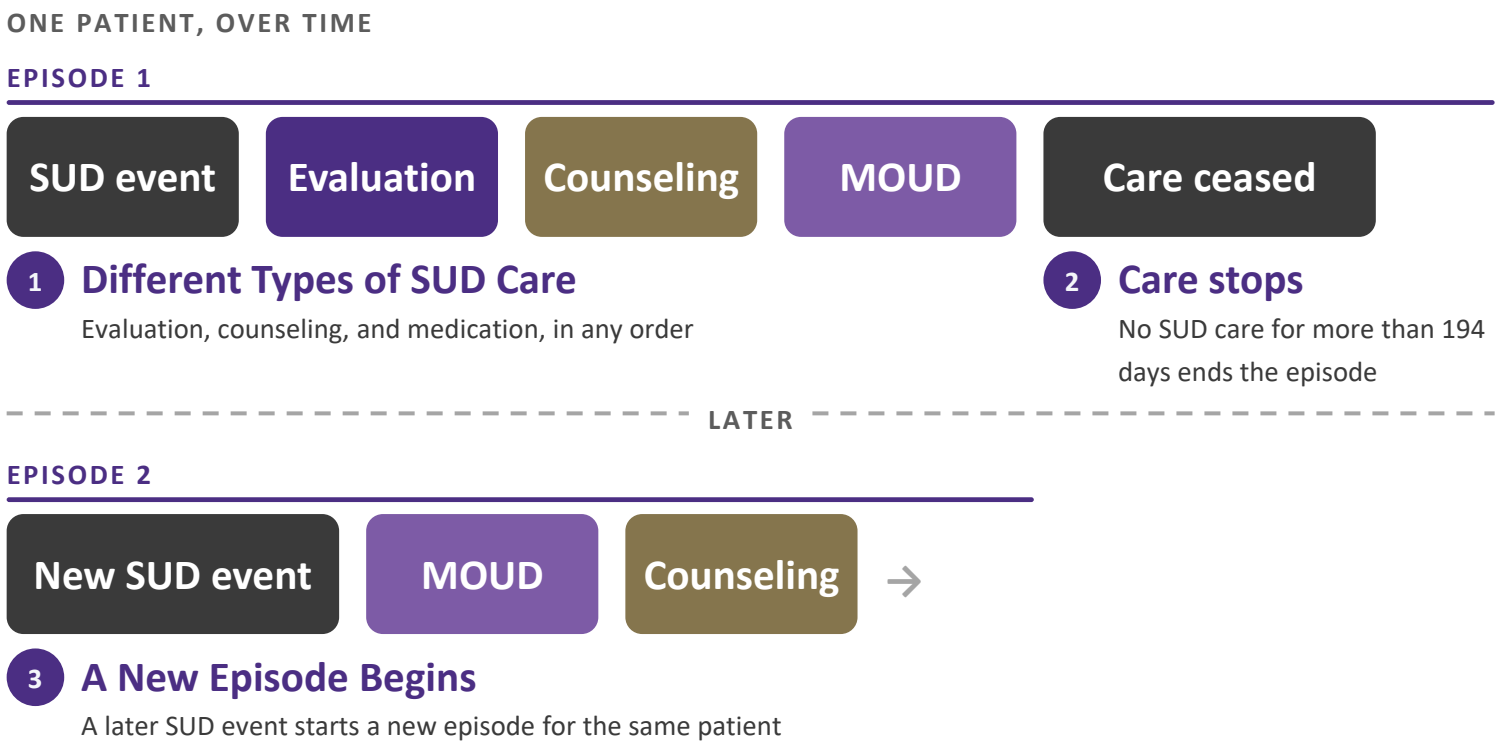
Data & Methods

- **Enrollment data, electronic health records, and insurance claims, Kaiser Permanente Washington (1/1/2017–9/30/2025)**
- **Identified care episodes via incident SUD events: an SUD diagnosis among patients with no diagnosis in the prior 6 months**
- **Care episodes classified by setting of initial identification:**
  - Primary care
  - Acute care (ED / hospital / urgent care)
  - Behavioral health
  - Other settings

Outcomes Described

- **Having an SUD care visit after initial identification**
- **Time to first SUD care visit after initial identification**
- **First SUD care visit type**
  - Places of service: Inpatient/residential, intensive outpatient, outpatient
  - SUD services type
    - Evaluation and Assessment
    - Counseling
    - Prevention, Education, and Care Management
    - Pharmacotherapy
    - Other
- **Duration of SUD care (time from initial visit to last visit before a gap in SUD care visits)**

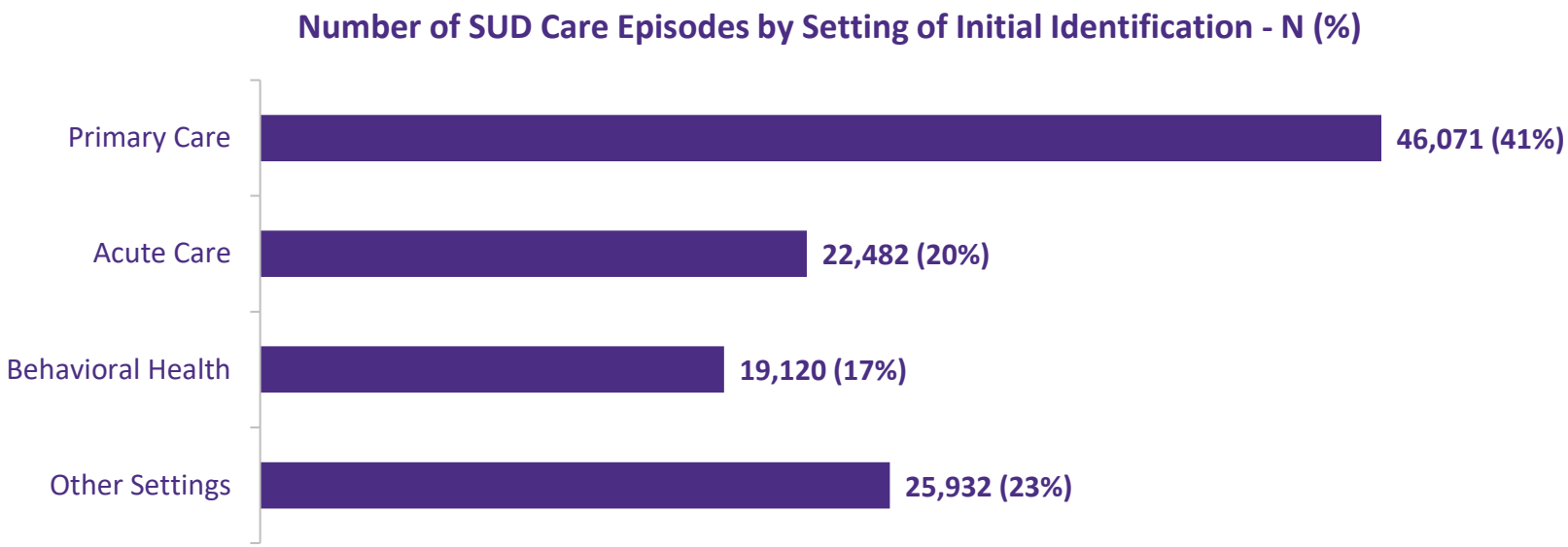
What is a SUD care episode?



Hypothetical patient. Definitions from Glass et al., JMIR Res Protoc 2026.

Sample

- 81,820 unique patients
- 113,605 SUD care episodes from 2017–2025



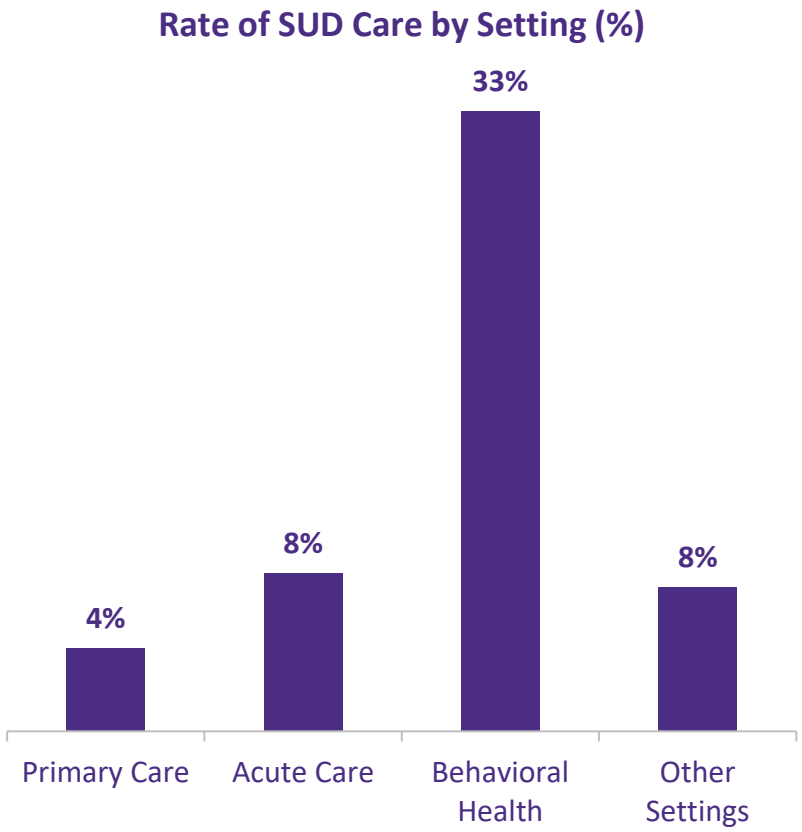
SUD Care Episodes: Patient Characteristics Overall and by Where SUD was Identified

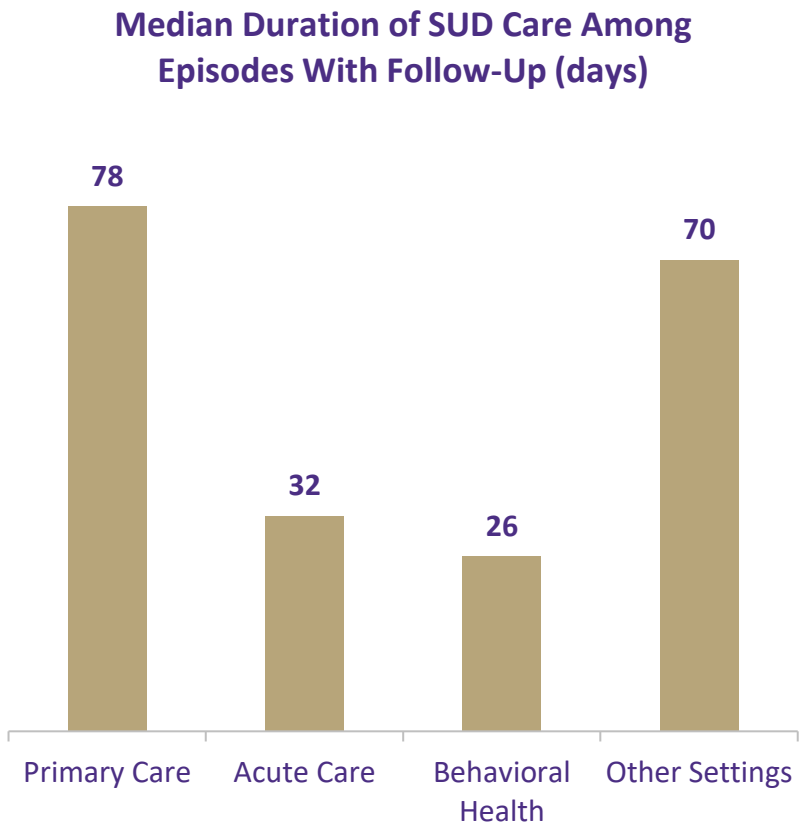
	Overall	Primary Care	Acute Care	Behavioral Health	Other Settings
Age, mean (SD)	45 (18)	44 (17)	50 (19)	38 (14)	49 (17)
Female	43%	41%	45%	47%	43%
Insurance					
Medicare	20%	18%	29%	9%	23%
Medicaid	9%	11%	5%	11%	7%
Commercial	66%	68%	61%	76%	65%
Other	5%	6%	5%	5%	4%
Past-Year SUD					
Alcohol	49%	38%	68%	46%	56%
Cannabis	15%	12%	15%	26%	13%
Opioid	15%	10%	20%	11%	21%
Stimulant	6%	4%	9%	6%	5%
Other	7%	5%	11%	8%	8%

Receiving SUD Care Was Rare

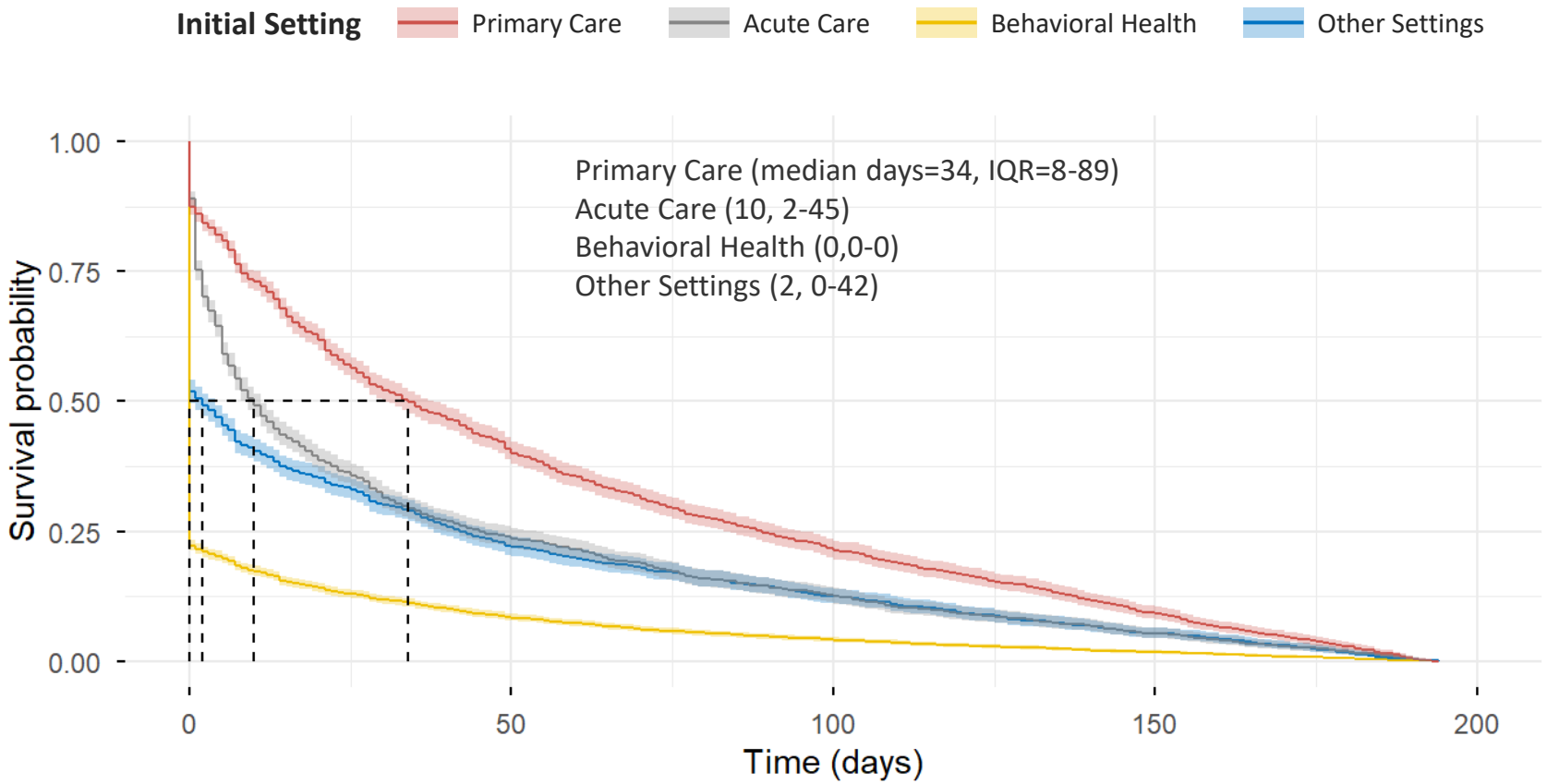
- SUD care was present in only 11% of episodes
- Of episodes with an SUD care visit, 42% had just one SUD care visit
- Characteristics of SUD care varied widely by the setting where SUD was first identified

Rates and Duration of SUD Care Varied by Where SUD Was Identified

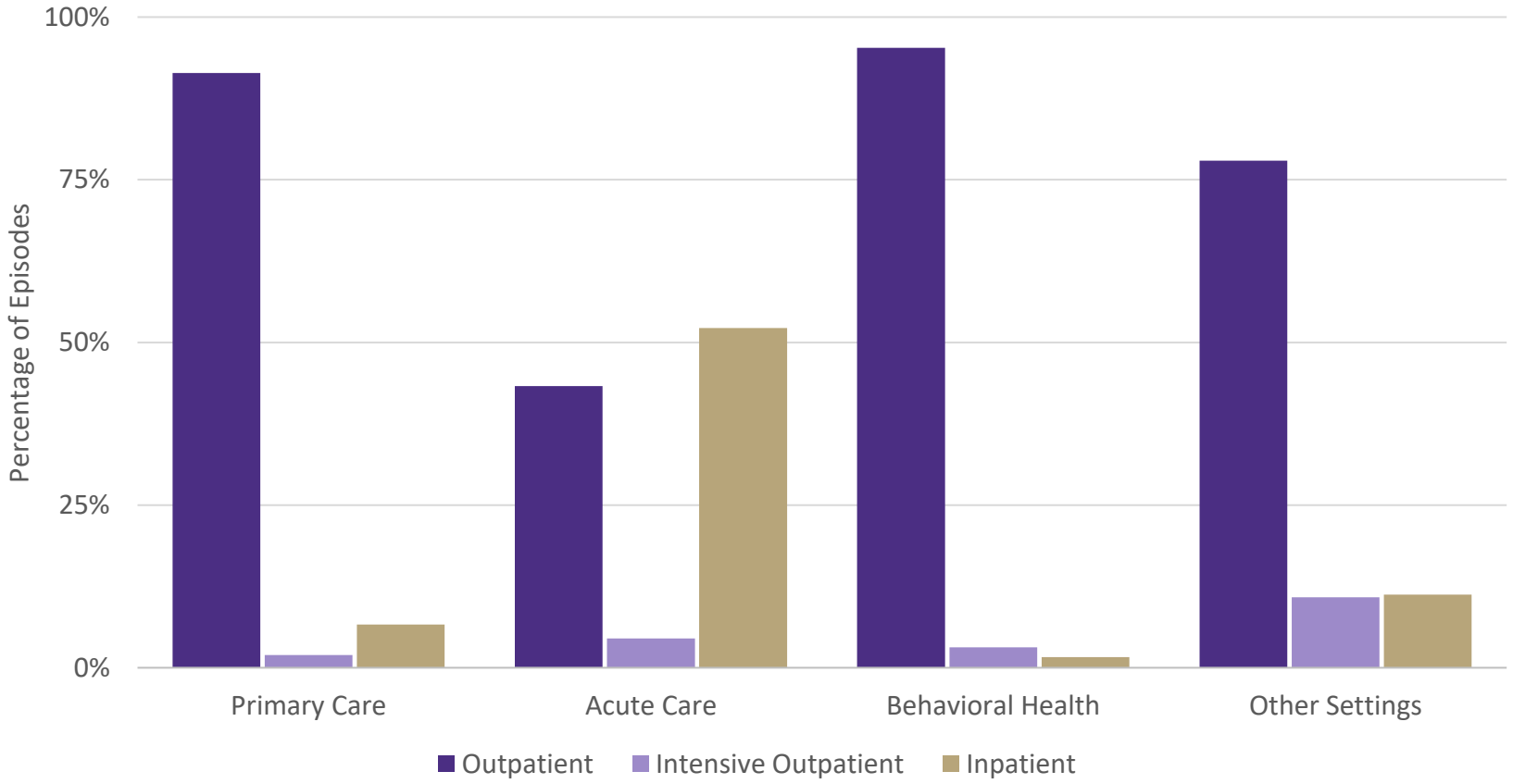




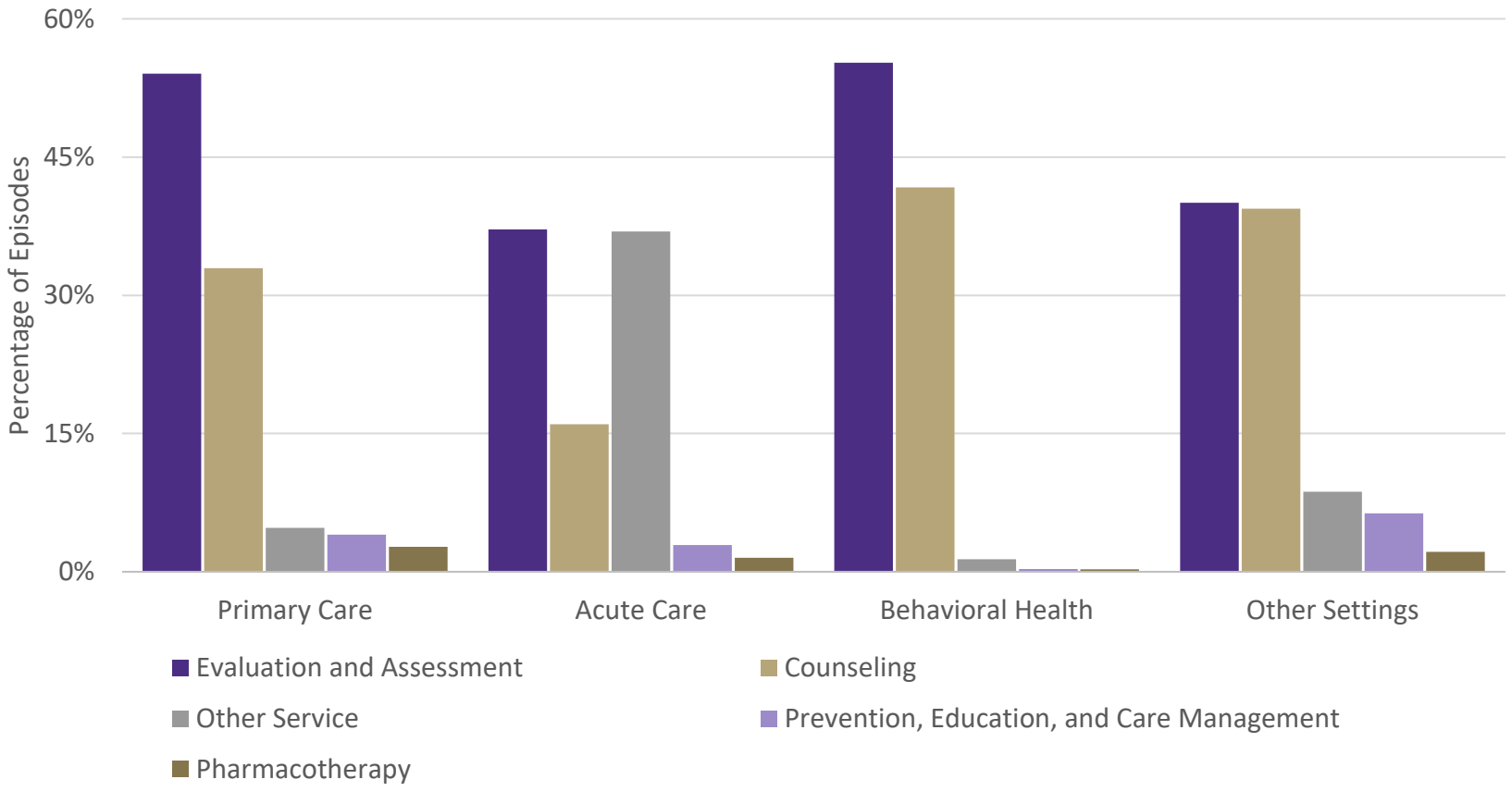
Survival Curves of Time-to-Initial SUD Care Varied by Where SUD Was Identified



Location of First SUD Care Visit Varied by Where SUD Was Identified



Type of First SUD Care Varied by Where SUD Was Identified



Quality Improvement Opportunity: Primary Care

- **Most common place to identify SUD, but lowest follow-up across all settings**
  - Only 4.5% of primary care episodes later had SUD care
- **Longest time to first SUD care visit**
  - Median 34 days
- **But, when care was initiated, treatment episodes were the longest**
  - Median 78 days
- **MOUD/MAUD as the first form of treatment was most likely in primary care, but it will still rare**
  - 2.8% of primary care episodes started with medication compared to 0.3% in behavioral health

Implications

- Follow-up, care duration, and service types varied by where SUD was identified
- Opportunities remain to integrate SUD care and improve linkage across settings
- Treatment initiation and follow-up need improvement, especially in primary care
- Primary care strengths may reflect KPWA guidelines emphasizing medication and follow-up

Thank You!

Examples SUD services

Service type	Examples	Sample codes
Evaluation and assessment	Diagnostic evaluation, SUD assessment	90791, H0001
Counseling	Individual, group, or family therapy	90834, 90853, H0004
Prevention, education, and care management	Case management, SBIRT	T1016, 99408
Pharmacotherapy	MOUD/MAUD administration or fills	H0020, J0572, J2315
Other	Inpatient, residential, partial hospitalization	99221, H0018, H0035

Illustrative codes only (CPT/HCPCS)

Washington's Young Adult Health Survey: Findings after 12 Years of Data Collection

Jason R. Kilmer, Ph.D., Isaac C. Rhew, Ph.D., Michael S. Gilson, Ph.D., J.D., Katarina Guttmannova, Ph.D., & Mary E. Larimer, Ph.D.

Center for the Study of Health & Risk Behaviors,
University of Washington, Psychiatry & Behavioral Sciences

October 2, 2026

Before we get started…

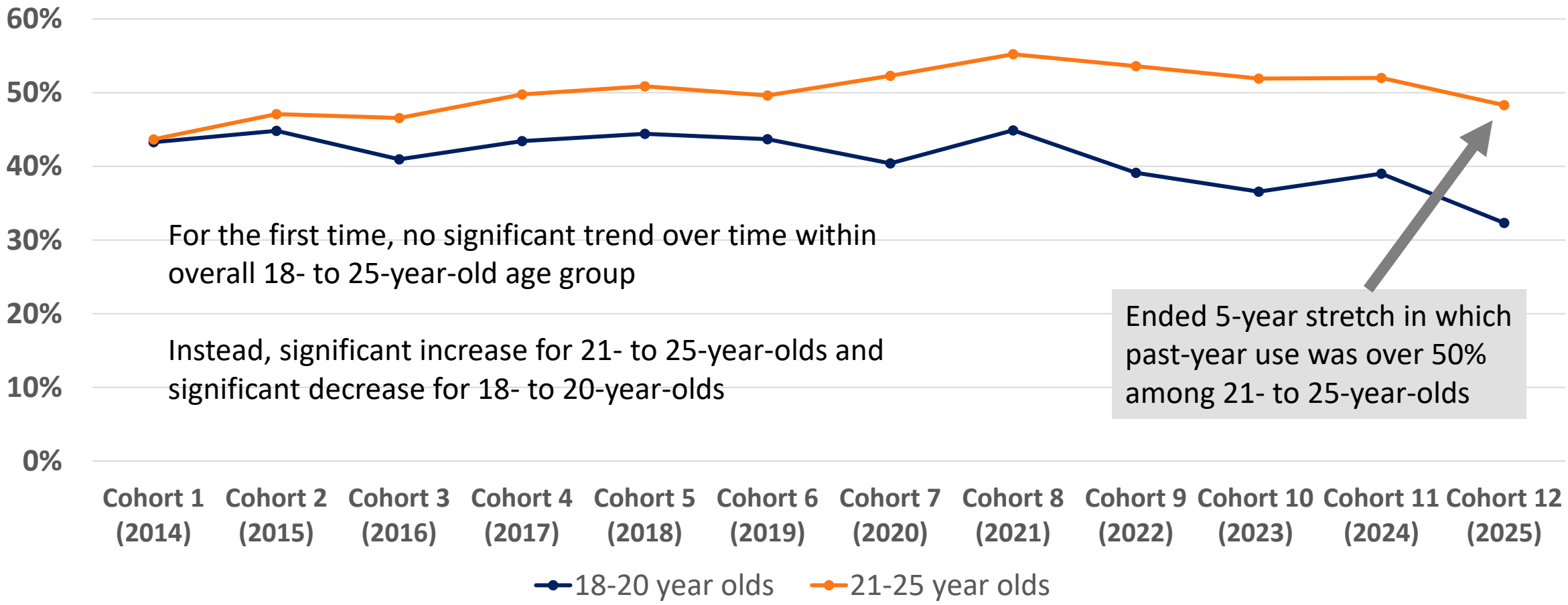
- Special thank you to Sarah Mariani, Kasey Kates, Rachel Oliver, and Megan Stowe
- Thanks to our research team, Rose Lyles-Riebli and Ty Tristao, as well as my research colleagues who have supported YAHS in some way, including Dr. Mary Larimer, Dr. Isaac Rhew, Dr. Katarina Guttmannova, Dr. Mike Gilson, and Koren Hanson
- Thank you to Melanie Golob and the Academic Learning Collaborative planning team

Young Adult Health Survey Recruitment: Main Steps

- Participants recruited using a combination of direct mail advertising to a random sample from DOL as well as social media advertising
- Assessed demographics on ongoing basis and modified strategies to recruit under-represented groups
- To improve generalizability, used post-stratification weights based on sex, race, and geographic region
- Each year we collect data from a new cohort of 18- to 25-year-olds (n=21,494 unique participants across 12 cohorts) and follow-up with select longitudinal cohorts

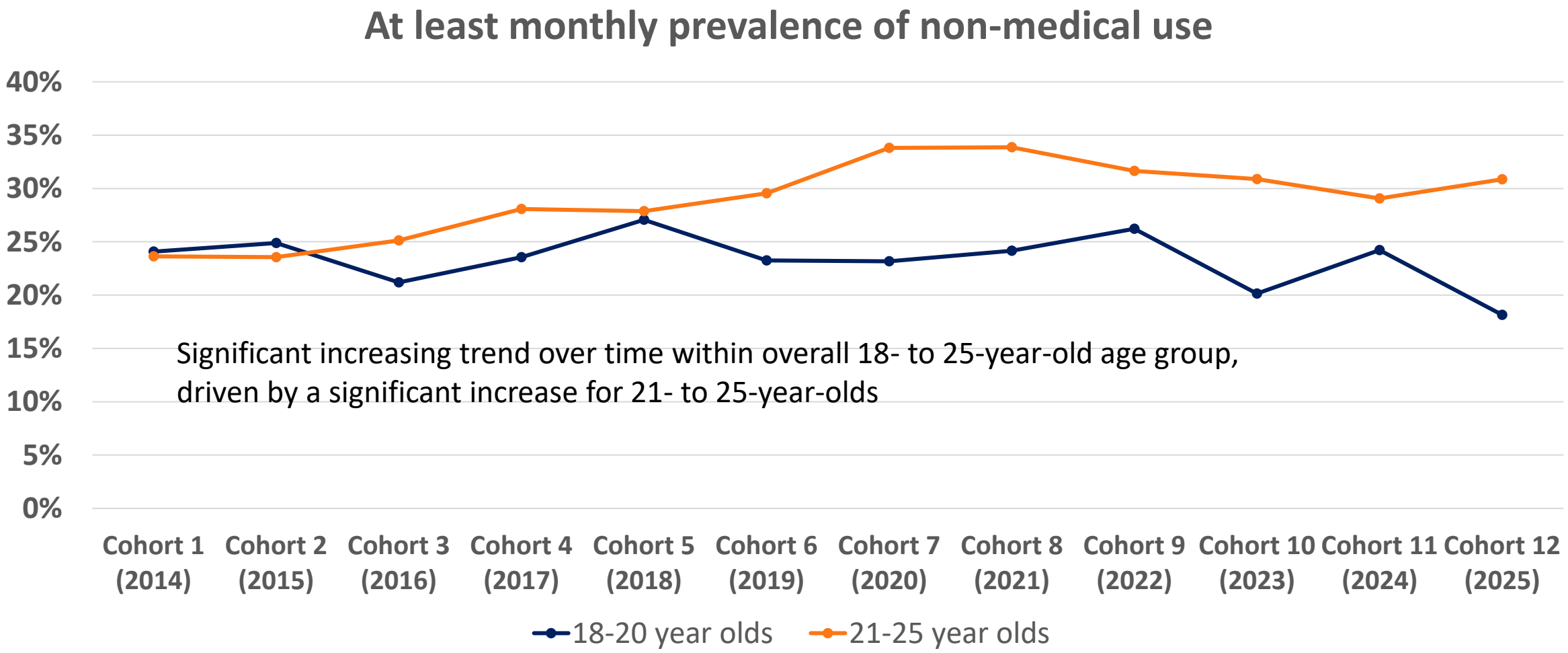
Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Non-medical (or "recreational") use in the past year by age group



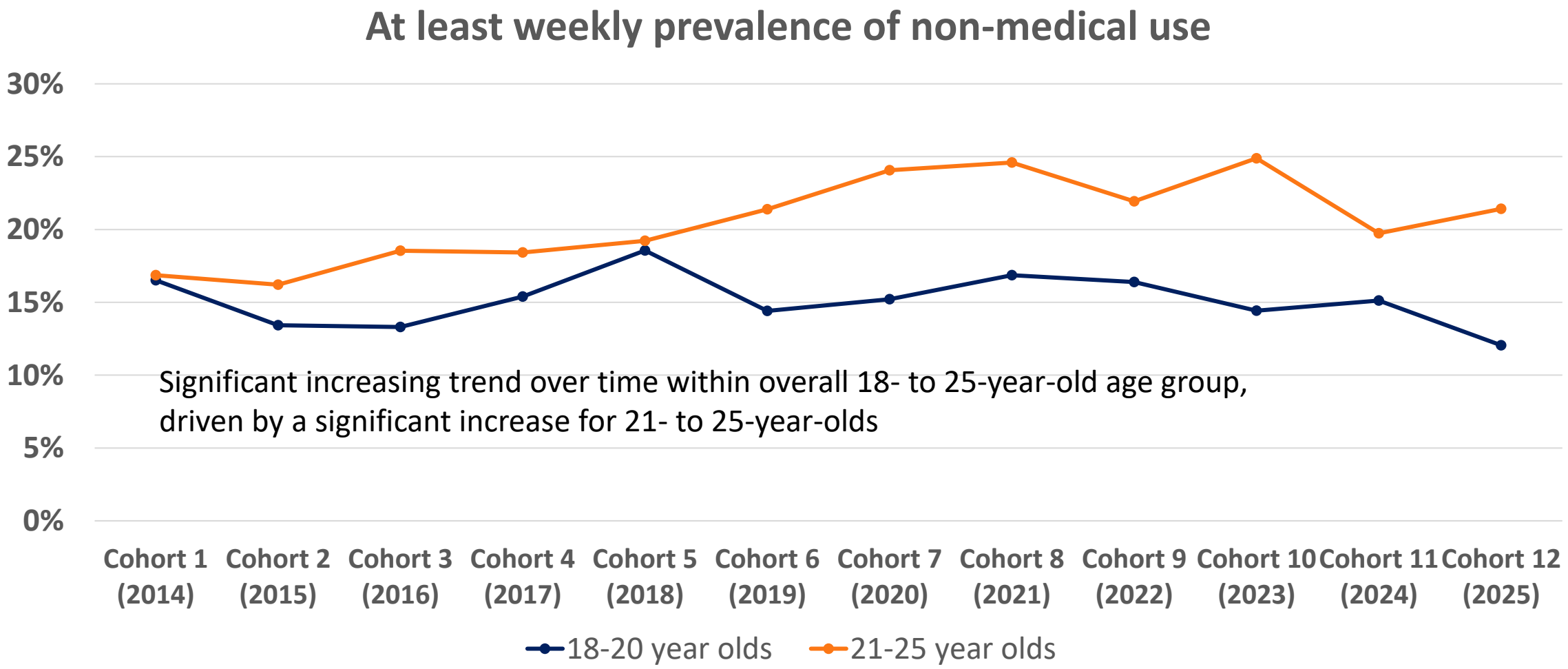
Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

At least monthly non-medical (or "recreational") use by age group



Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

At least weekly non-medical (or “recreational”) use by age group



WHERE DO PEOPLE GET CANNABIS BY AGE

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Decreasing trend significant
Increasing trend significant

WHERE DO PEOPLE GET CANNABIS, 18–20-year-olds

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024	Cohort 12 2025
From friends	72.86%	76.24%	69.68%	77.40%	63.75%	60.74%	66.87%	65.62%	59.68%	58.06%	63.88%	60.87%
Gave money to someone	23.29%	26.47%	34.72%	41.45%	39.29%	43.17%	40.55%	39.80%	37.62%	33.36%	35.45%	33.19%
Got it from someone w/ medical card	17.60%	14.12%	4.30%	5.24%	2.79%	2.82%	4.27%	4.58%	4.10%	1.62%	5.02%	8.24%
Got it from a medical dispensary	13.65%	18.99%	5.58%	4.72%	6.50%	8.28%	8.41%	12.03%	3.40%	7.53%	6.96%	3.76%
Got it at a party	22.99%	22.14%	23.08%	24.92%	20.12%	22.91%	8.82%	24.67%	16.43%	10.98%	13.56%	14.97%
Got it from family	5.65%	5.18%	11.75%	9.75%	11.24%	10.92%	13.49%	7.09%	11.36%	9.67%	9.52%	8.81%
Got it some other way	11.64%	4.12%	6.12%	9.02%	7.30%	6.21%	5.04%	6.24%	3.62%	4.28%	2.20%	9.20%
Bought from retail store	0.99%	4.58%	1.73%	1.92%	2.03%	3.55%	1.58%	1.03%	3.08%	1.53%	1.71%	1.32%
Got it from parents w/ permission	5.75%	6.02%	12.33%	10.44%	11.69%	12.91%	13.08%	13.91%	12.38%	15.77%	14.00%	10.38%
Grew it themselves	1.91%	1.15%	1.65%	0.23%	1.47%	2.78%	1.64%	0.42%	0.59%	0.56%	1.85%	0.00%
Stole it from store/ dispensary	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.16%	2.40%	0.00%	0.57%	0.36%	0.00%

*Note: ** Parents with permission has moved to the fourth most mentioned source by 18–20-year-olds after two years as the third most mentioned source**

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Decreasing trend significant
Increasing trend significant

WHERE DO PEOPLE GET CANNABIS, 21–25-year-olds

	Cohort 1 2014	Cohort 2 2015	Cohort 3 2016	Cohort 4 2017	Cohort 5 2018	Cohort 6 2019	Cohort 7 2020	Cohort 8 2021	Cohort 9 2022	Cohort 10 2023	Cohort 11 2024	Cohort 12 2025
From friends	67.50%	54.89%	42.78%	36.51%	33.80%	25.72%	20.26%	26.44%	26.04%	21.17%	26.70%	33.08%
Gave money to someone	19.87%	10.72%	8.10%	5.64%	4.97%	3.63%	5.08%	4.61%	7.75%	4.46%	1.27%	2.56%
Got it from someone w/ medical card	18.85%	9.41%	2.53%	2.02%	0.17%	0.65%	0.27%	0.62%	1.16%	1.03%	0.21%	0.00%
Got it from med dispensary	20.65%	13.03%	12.60%	9.96%	10.15%	14.23%	14.71%	15.62%	16.02%	16.90%	9.85%	19.59%
Got it at a party	11.81%	10.76%	10.93%	8.06%	6.54%	5.76%	1.57%	7.12%	10.93%	3.87%	6.94%	5.49%
Got it from family	11.48%	8.26%	4.08%	7.04%	5.76%	4.37%	4.02%	5.52%	4.56%	4.04%	5.74%	3.18%
Got it some other way	5.13%	6.68%	3.29%	3.41%	3.71%	3.71%	1.24%	2.13%	1.85%	1.97%	1.29%	3.65%
Bought from retail store	8.80%	51.86%	72.60%	76.31%	80.06%	78.03%	77.27%	74.42%	70.93%	72.28%	78.09%	72.17%
Got it from parents w/ permission	4.56%	3.50%	2.02%	4.28%	4.47%	3.15%	2.75%	4.75%	4.41%	5.79%	1.97%	2.26%
Grew it themselves	1.51%	3.01%	1.49%	1.82%	1.81%	0.71%	1.11%	1.74%	0.79%	1.16%	0.86%	0.00%
newly significant decreasing trend												
Stole it from store/disp.	2.84%	0.17%	0.60%	0.29%	0.17%	0.11%	0.97%	0.43%	0.69%	0.78%	0.46%	0.45%

DRIVING AFTER CANNABIS USE

Driving after cannabis use

"During the past 30 days, how many times did you drive a car or other vehicle within three hours after using cannabis (e.g., marijuana, hashish, edibles)?"

	Cohort 1	Cohort 2	Cohort 3	Cohort 4	Cohort 5	Cohort 6	Cohort 7	Cohort 8	Cohort 9	Cohort 10	Cohort 11	Cohort 12
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Never	50.59%	55.29%	58.19%	58.56%	58.73%	61.80%	65.00%	66.38%	64.64%	68.69%	68.10%	69.91%
1 time	14.13%	13.13%	12.50%	12.85%	12.11%	8.32%	9.56%	10.25%	10.27%	7.70%	10.15%	11.00%
2-3 times	13.28%	12.34%	11.97%	11.98%	10.59%	11.66%	11.24%	10.51%	11.50%	9.83%	10.09%	11.15%
4-5 times	6.43%	4.35%	3.48%	4.48%	6.04%	4.00%	4.51%	4.39%	2.53%	3.40%	2.65%	2.23%
6 or more times	15.57%	14.88%	13.85%	12.12%	12.52%	14.21%	9.69%	8.47%	11.05%	10.38%	9.02%	5.70%

There are declines in driving after cannabis use between Cohorts 3-12 and Cohort 1 (Cohort 3, p<.05; Cohort 4, p<.01; Cohort 5, p<.05; Cohort 6, p<.01; Cohort 7, p<.001; Cohort 8, p<.001; Cohort 9, p<.001; Cohort 10, p<.001; Cohort 11, p<.001; Cohort 12, p<.001), as well as a significant decreasing linear trend (p<.001).

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Other substances

- Significant decreasing trend in:
  - Medical cannabis, past year
  - Alcohol, at least once in past year
  - Alcohol, at least monthly
  - Cigarettes, at least once in the past year
  - Pain relievers to get high, at least once in the past year
  - Heroin use, at least once in the past year
- Significant increasing trend in:
  - Perceived norms, non-medical use
  - Perceived norms, medical use

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Perceived risk

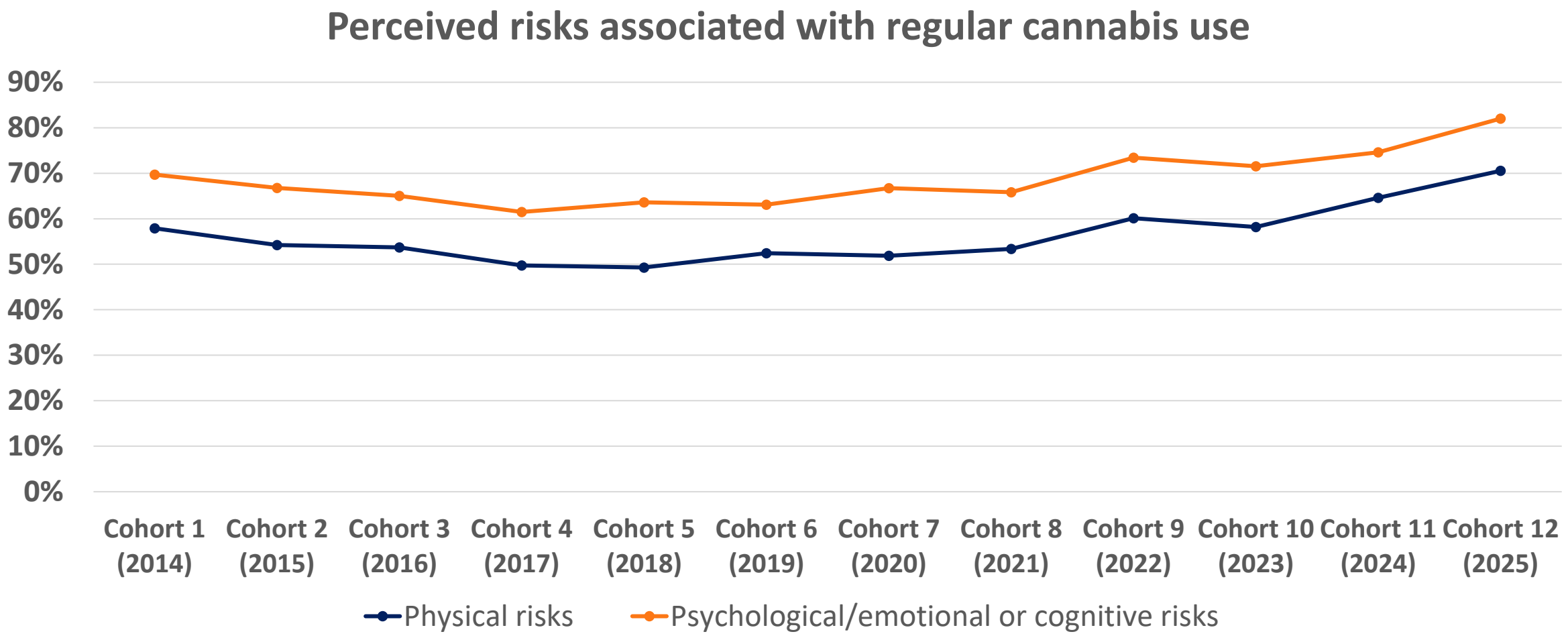
- **Cannabis**
  - Physical risk of occasional cannabis use ** newly significant **
  - Psychological/emotional risk of occasional cannabis use
  - Physical risk of regular cannabis use
  - Psychological/emotional risk of regular cannabis use
- **Alcohol**
  - Physical risk of 2 drinks every day
  - Psychological risk of 2 drinks every day
  - Physical risk of 5+ drinks every weekend
  - Psychological risk of 5+ drinks every weekend ** newly significant **

Source: Young Adult Health Survey,
Preliminary Data Report to DBHR, Kilmer (PI)

** significant increasing linear trend **

Source: Young Adult Health Survey, Preliminary Data Report to DBHR, March 2026, Kilmer (PI)

Percentage endorsing moderate or great risk



Next Steps

- Currently collecting our 13th year of data
- Dr. Katarina Guttmannova and her team have published numerous articles using YAHS data after receiving two secondary data analysis grants from NIDA
- Dr. Mike Gilson analyzed gambling-related data and associations with substance use and mental health outcomes, submitted to partners at HCA
- Dr. Isaac Rhew prepared a summary of mental health related findings, submitted to partners at HCA
- Really an amazing data set – I/we feel so very lucky to partner with HCA on this.

jkilmer@uw.edu

Thank you!

- DBHR:
  - Sarah Mariani
  - Kasey Kates
  - Rachel Oliver
  - Megan Stowe
- YAHS core study team:
  - Mary Larimer
  - Rose Lyles-Riebli
  - Ty Tristao

This research was supported by a contract with the Washington State Health Care Authority (Division of Behavioral Health and Recovery) (PI: Kilmer)

ADAM ELDER, PHD, OCTOBER 2, 2026
DEPARTMENT OF EPIDEMIOLOGY
UNIVERSITY OF WASHINGTON

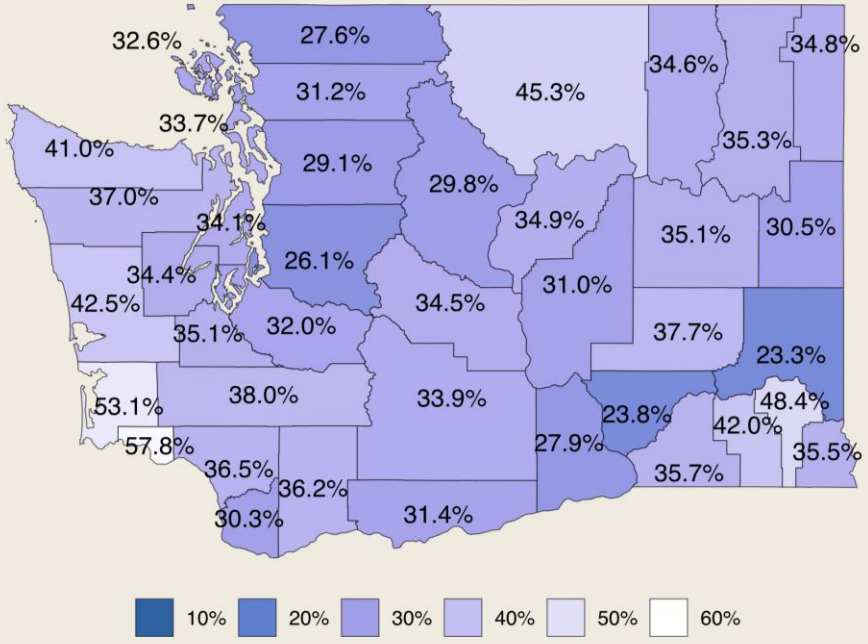
Better Data, Better Policy, Better Outcomes

Leveraging data from electronic health records to better understand and address chronic illness at a population level.

Background

- Chronic illnesses have negative impacts on millions of Washington State residents
- Relative to the importance of these conditions, public health has limited data to understand and address chronic illnesses
- Here we focus on hypertension and the Rural Health Transformation Program (RHTP)

Hypertension prevalence estimate (Self Report)



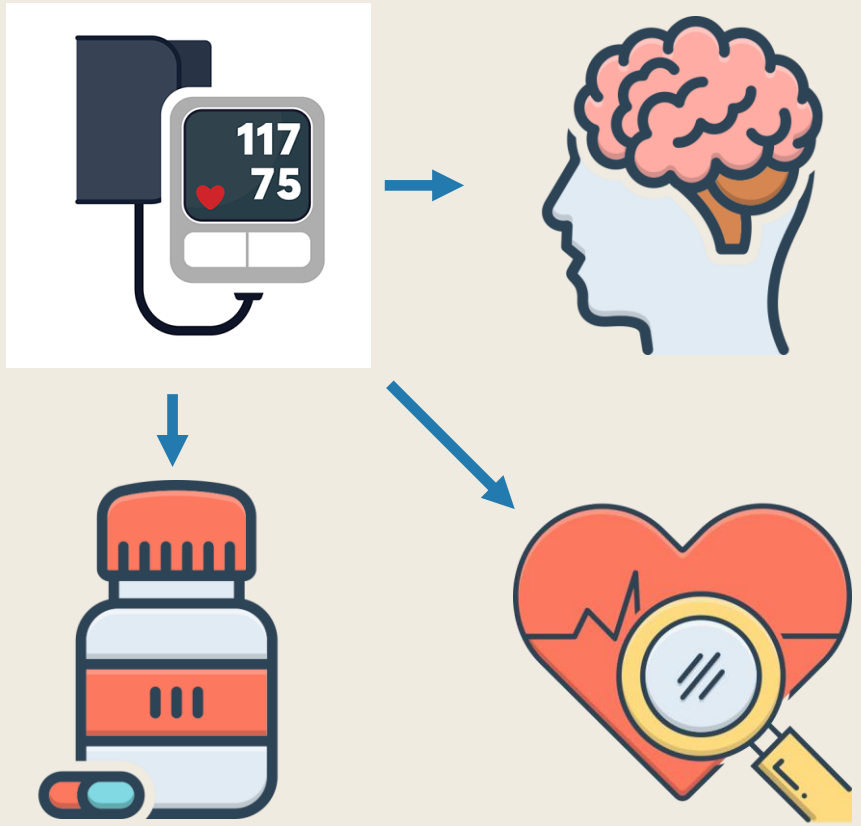
Background

- RHTP funding > $100 million each year
- ≈1 million rural Washington state residents
- Many outcomes goals are short-term intermediate steps to residents' health
- Measuring the health benefits of a program directly is difficult but important



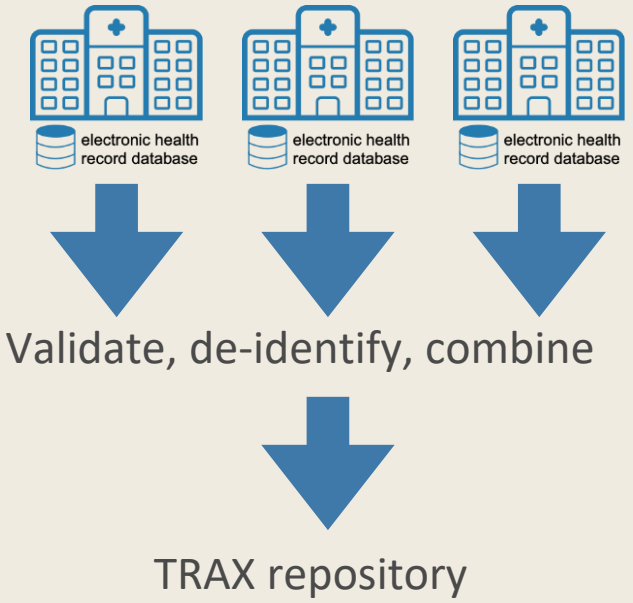
How to allocate funds?

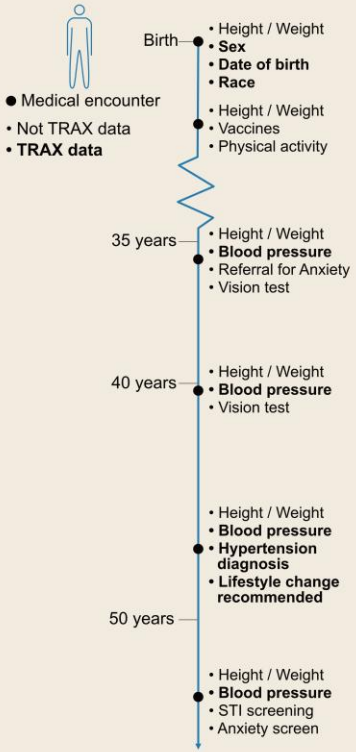
- The RHTP plans invest in home diagnostic screening and testing kits
- Do we invest in blood pressure monitors?
- How much can blood pressure monitors improve short-term and long-term health?



How to measure impact?

- Conducting longitudinal studies is difficult
- Data already exists in EHRs
- The TRAX initiative will create a repository of EHR data on chronic illness for public health



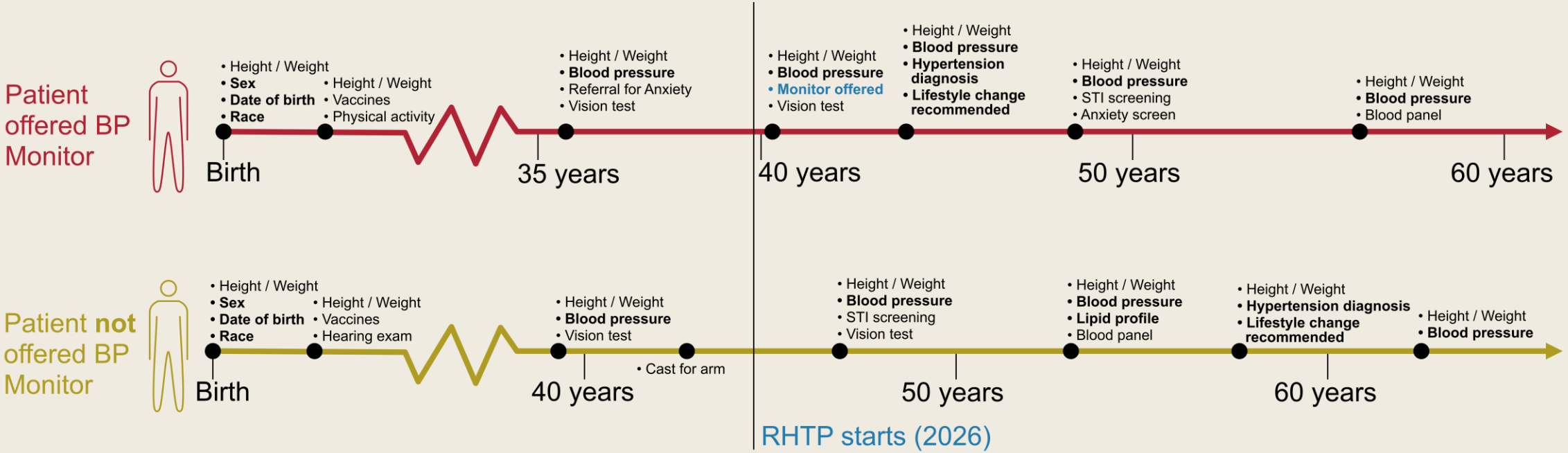


Methods (data simulation)

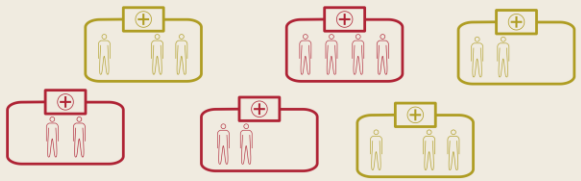
- Program provides free blood pressure monitoring devices to patients 40-50
- We will compare policy evaluations with:
  - Washington State All Payer Claims Database (WA-APCD)
  - TRAX and WA-APCD
- Patients randomly assigned to receive a BP monitor or not
- “Events” include heart failure, chronic heart disease and stroke

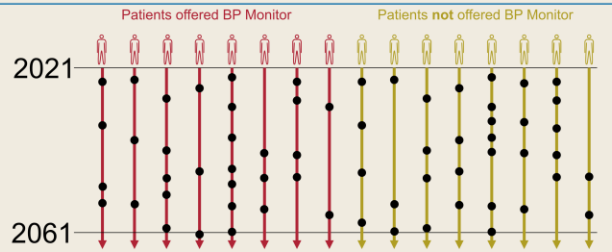
	TRAX		APCD All in millions of dollars		
	Mean SBP	Event rate Per 1,000 person years	Prescription payments	Procedure payments	Total payments
Year 2	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment
Year ….	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment
Year 40	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment	Control vs treatment

How to measure impact?



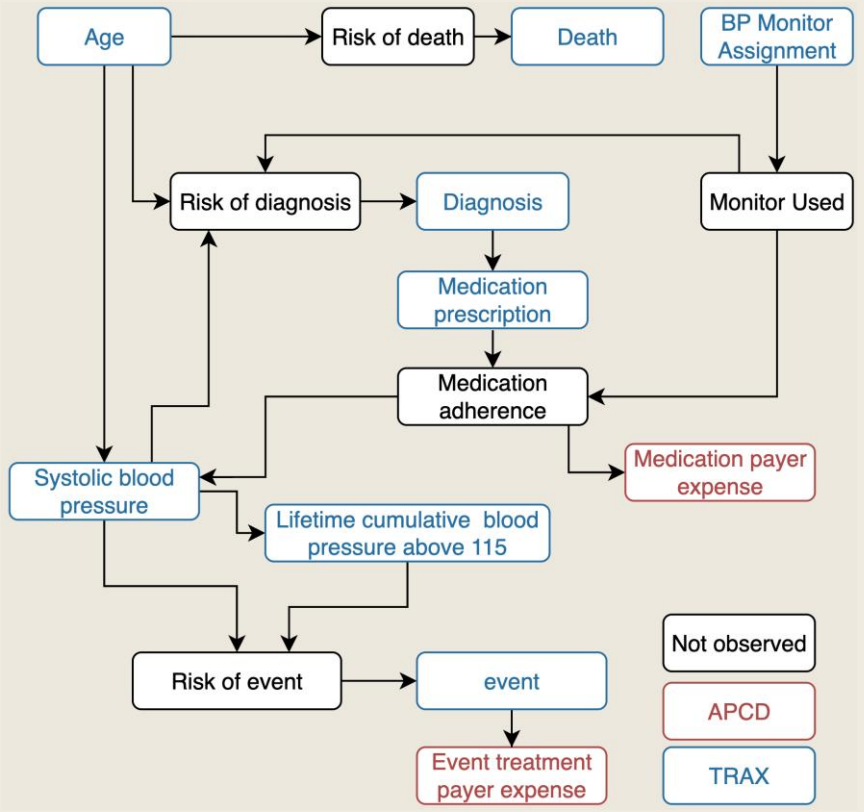
Collecting data at a population level





Methods (data simulation)

- Population of 1 million simulated from WA population for age, sex, systolic blood pressure (SBP)
- We simulate:
  - Only some patients obtain the monitor,
  - Only a subset of those use the monitor,
  - Patients using a monitor are more likely to be diagnosed and more likely to adhere to prescription
  - Higher blood pressure increases risk of events



Results
2-5 years after

	TRAX		APCD All in millions of dollars		
	Mean SBP	Event rate Per 1,000 person years	Prescription payments	Procedure payments	Total payments
Year 2	122 vs 120	2.2 vs 1.9	2.2 vs 4.9	16.6 vs 15.4	18.8 vs 20.3
Year 3	122 vs 119	2.2 vs 2.0	3.8 vs 7.5	23.7 vs 21.8	27.5 vs 29.3
Year 5	122 vs 119	2.3 vs 2.1	8.2 vs 13.9	40.8 vs 36.7	49.0 vs 50.6

Control vs Treatment

Results
10-40 years after

	TRAX		APCD All in millions of dollars		
	Mean SBP	Event rate Per 1,000 person years	Prescription payments	Procedure payments	Total payments
Year 10	121 vs 119	2.7 vs 2.4	25.4 vs 36.4	105 vs 96	131 vs 132
Year 30	122 vs 119	5.6 vs 5.3	170 vs 220	930 vs 867	1100 vs 1087
Year 40	123 vs 120	6.8 vs 6.3	231 vs 296	1399 vs 1301	1629 vs 1597

Control vs Treatment

Future of TRAX

- TRAX data provides better answers to what inputs cause each outcome of interest
- Work is ongoing to establish hospital partners and technical and legal infrastructure
- Evaluation questions (me): eldera3@uw.edu
- TRAX initiative questions: ashley.Petyak@doh.wa.gov

CIRG
Clinical Informatics Research Group

Washington State Department of HEALTH

hcp

OneHealthPort

APHL

MultiCare

eHealth Exchange

EPIDEMIOLOGY
SCHOOL OF PUBLIC HEALTH

Questions?

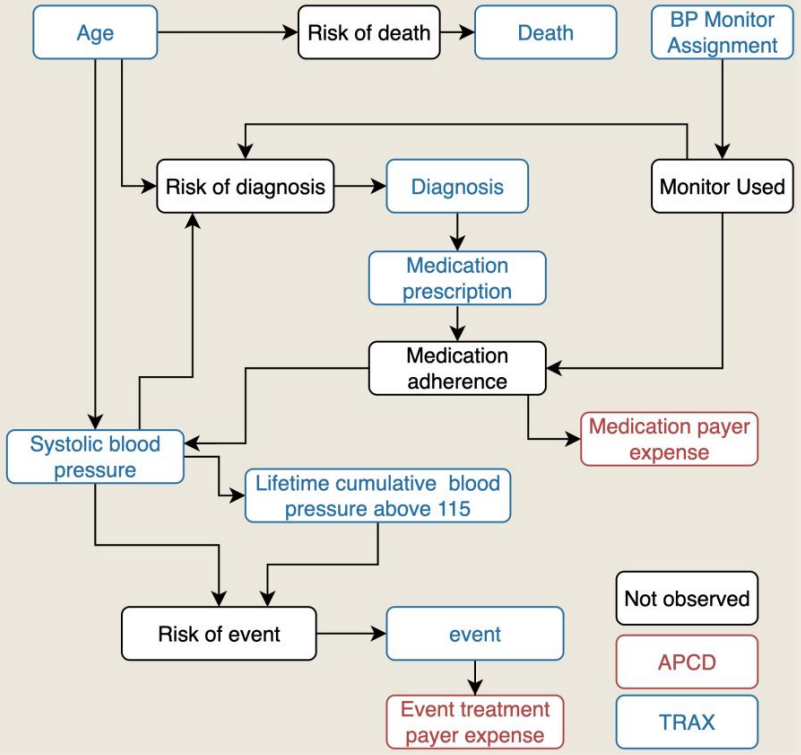
Appendix

Citations

- Baumgartner CJ, Karras BT, Petyak A, Bair J. Charting the Way with TRAX for Chronic Disease Surveillance. AMIA Annu Symp Proc. 2025 May 22;2024:187-195. PMID: 41726423; PMCID: PMC12919575.

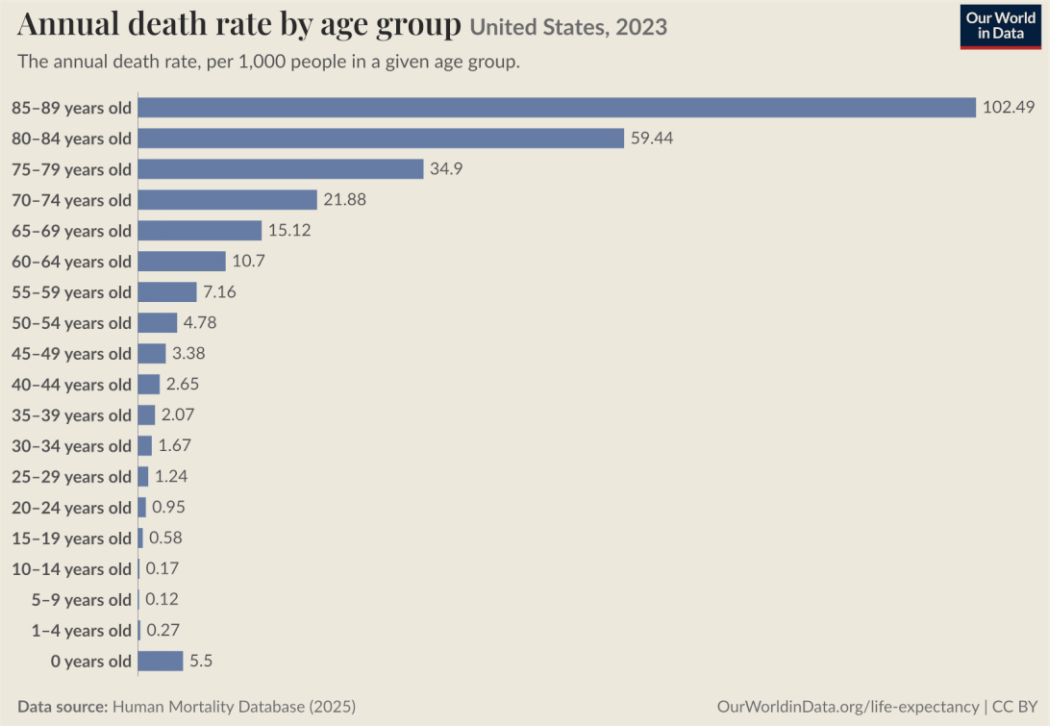
Model details

- A model is used to for simulating the health effects of providing patients with a blood pressure monitor.
- The model seeks to be as simple as possible while still accounting for the most important and well known relationships between blood pressure, anti-hypertensives and risk of either atherosclerotic CVD (ASCVD) or heart failure (HF).



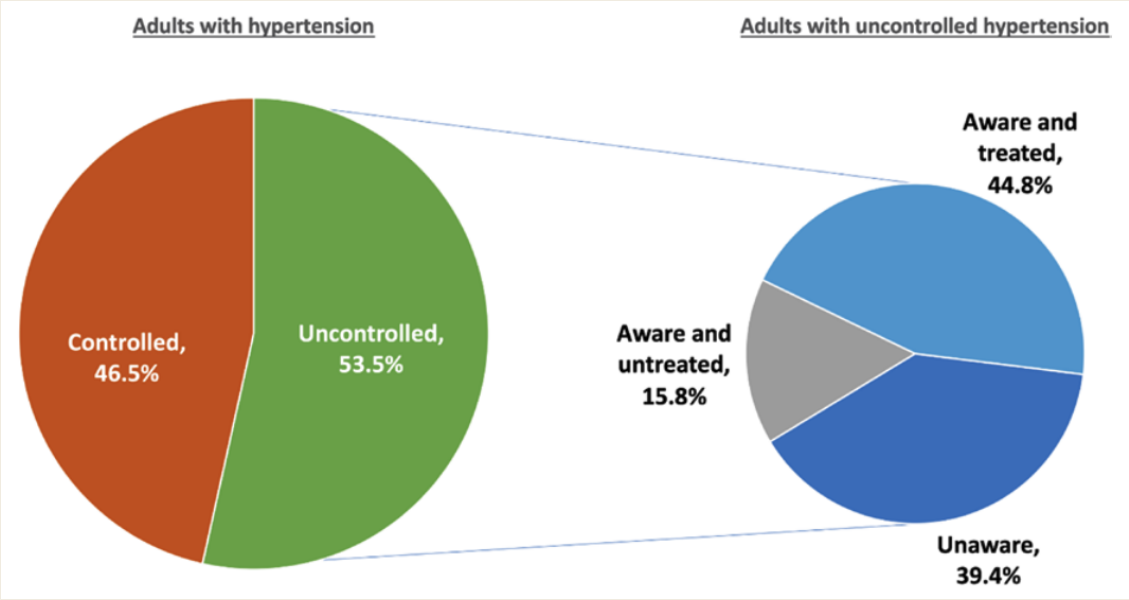
Age

- Each year each individual has a chance of dying that year. The risk of death is based on data from OurWorldInData via the Human Mortality Database.
- Aging out in this model is mostly important to ensure we don't over-estimate the number of events caused by high blood pressure.



Blood pressure medication

- Medication is modeled as a three step process and all three steps must be completed for an individual to take medication;Diagnosis, Prescription, and Adherence
- Individuals with a monitor are more likely to get diagnosed and maintain adherence to takin antihypertensives.



Systolic Blood Pressure

- Each individual has a baseline systolic blood pressure (SBP) resulting from the population average based on age and a random component that models random variations from genetics and lifestyle choices.
- Because many SBP averages include effects from anti-hypertensives, we use estimates that aim to estimate population averages if no one used anti-hypertensives.

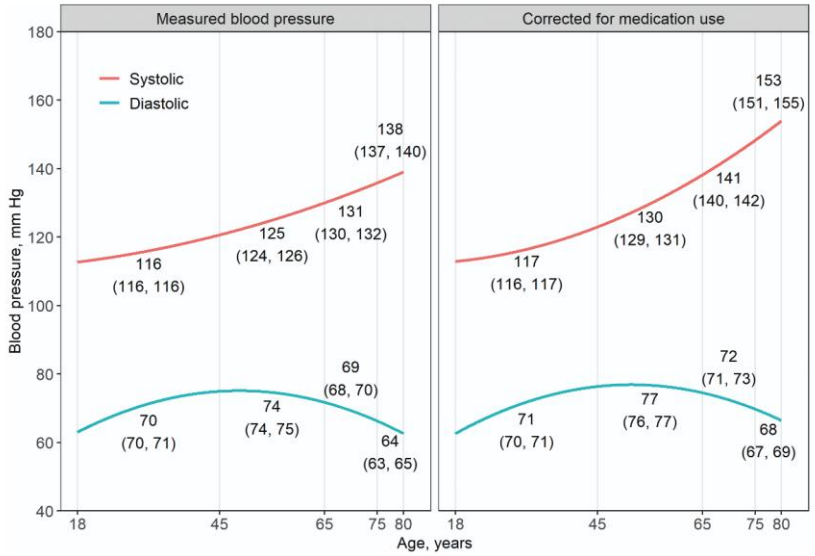
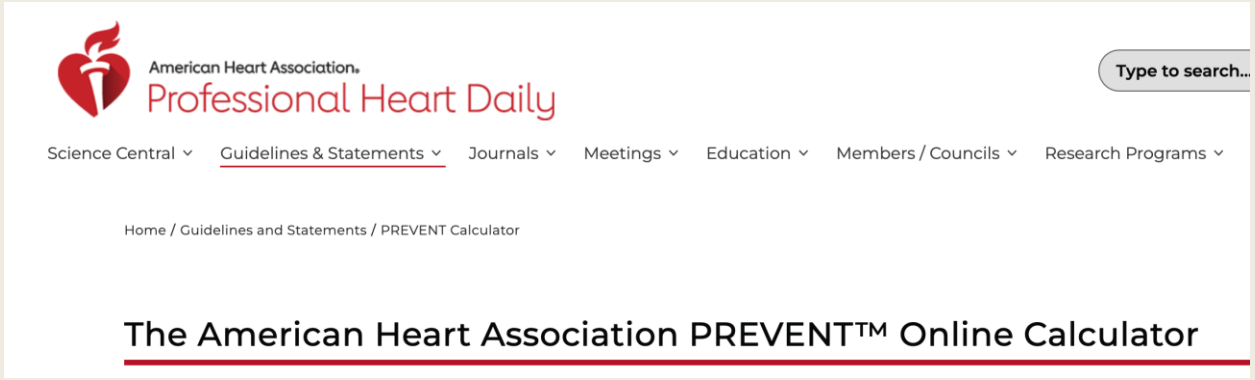


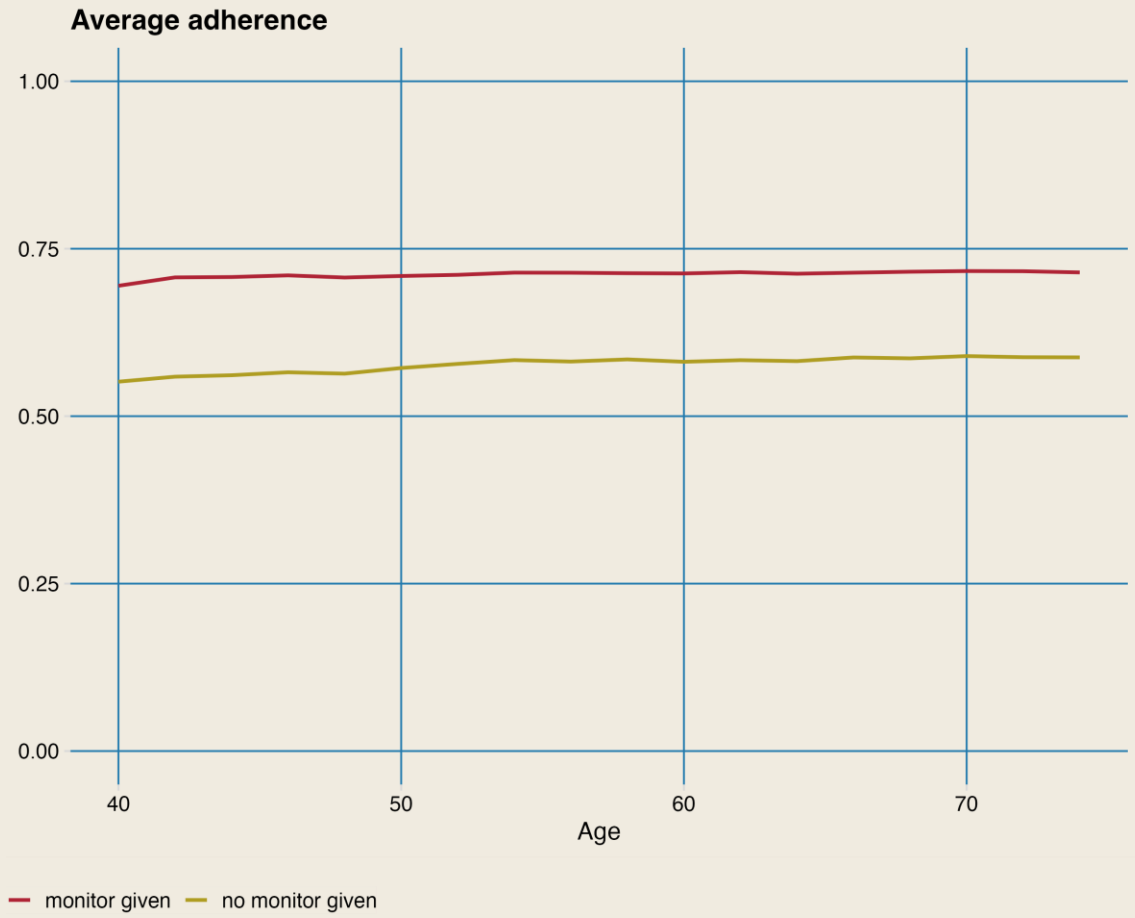
Figure 1. Mean systolic and diastolic blood pressure from 18 to 80 years of age among US adults. The mean blood pressure for US adults 18–44, 45–64, 65–74, and ≥75 years of age is provided in the figure with 95% confidence intervals in parentheses. The left panel provides results from a model of the measured systolic and diastolic blood pressure. The right panel provides results from a model of systolic and diastolic blood pressure adjusted for antihypertensive medication use as described in the methods section.

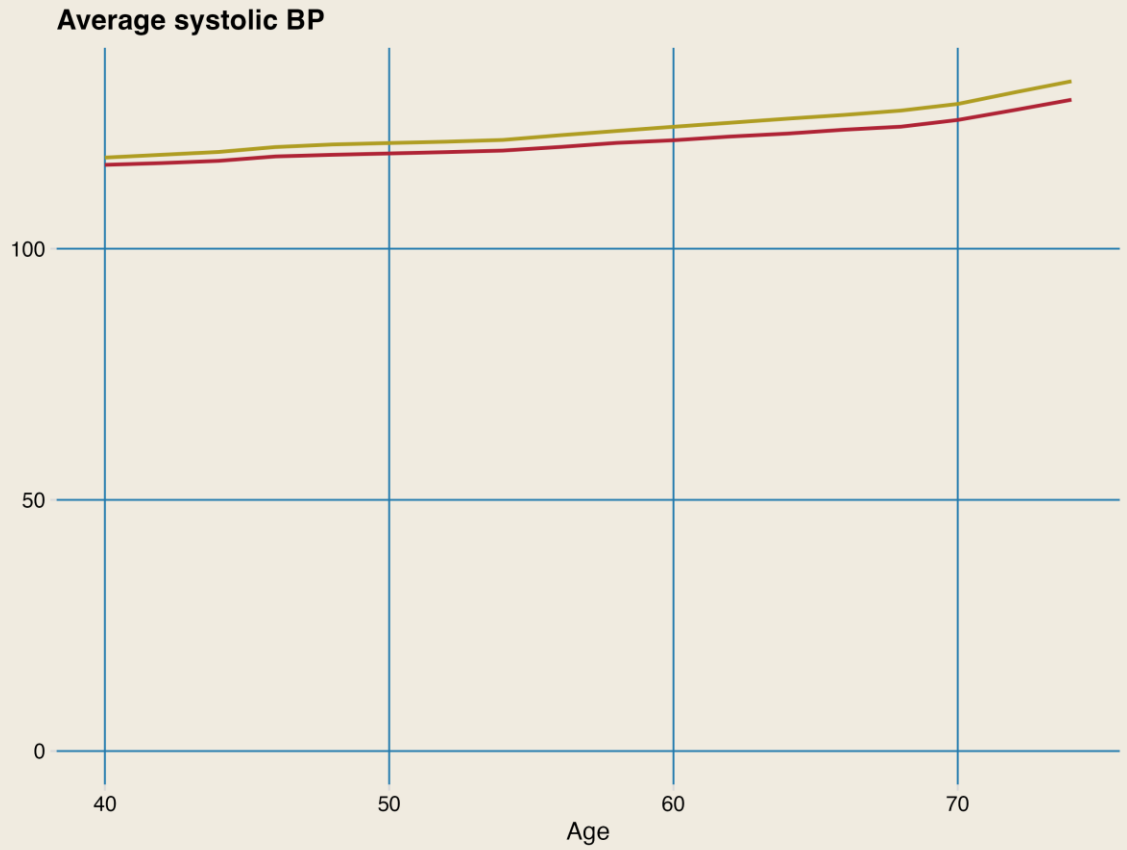
Risk of cardiac event

- Systolic blood pressure and age are the main components influencing risk of cardiac events in our simulation. The risk of event is taken from the PREVENT risk score which is a function of age, systolic blood pressure and other factors.
- We only use the risk calculation for baseline risk of event.
- Individuals with higher cumulative lifetime SBP above 140 have higher their risk of cardiac event elevated.



Additional Plots





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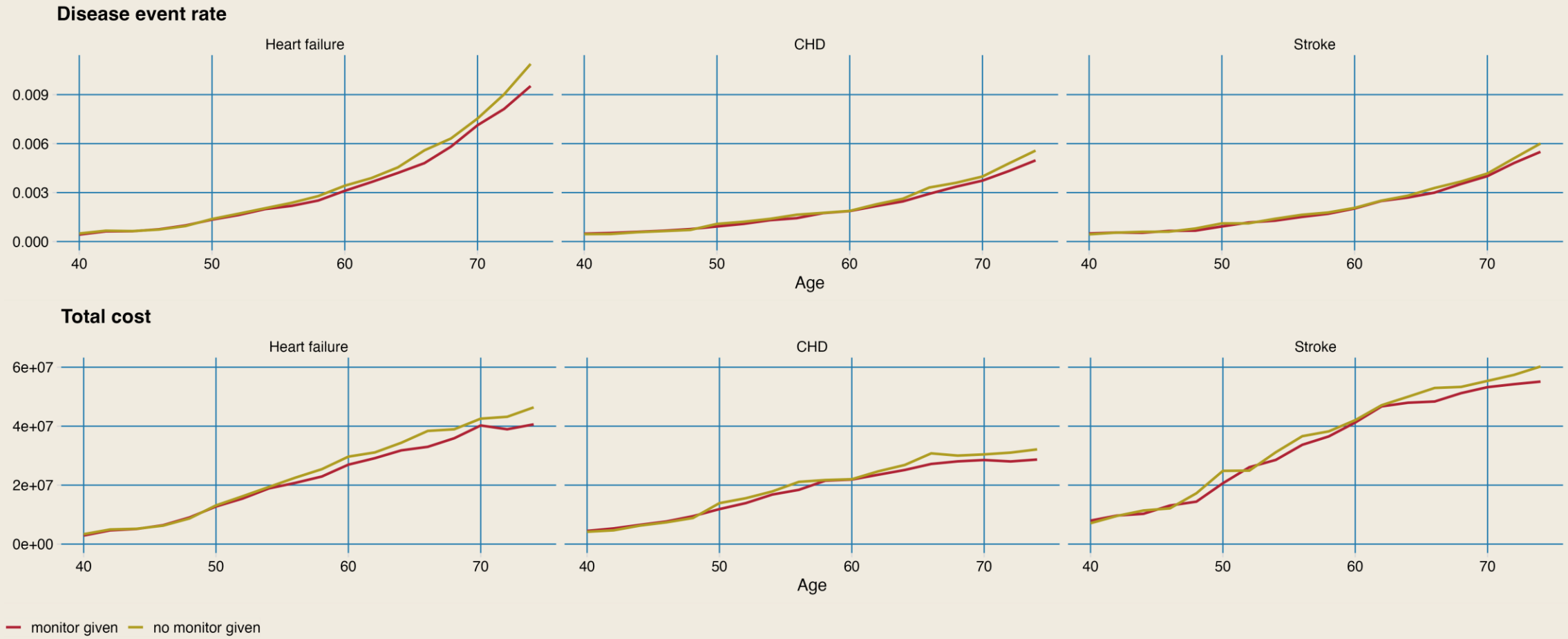

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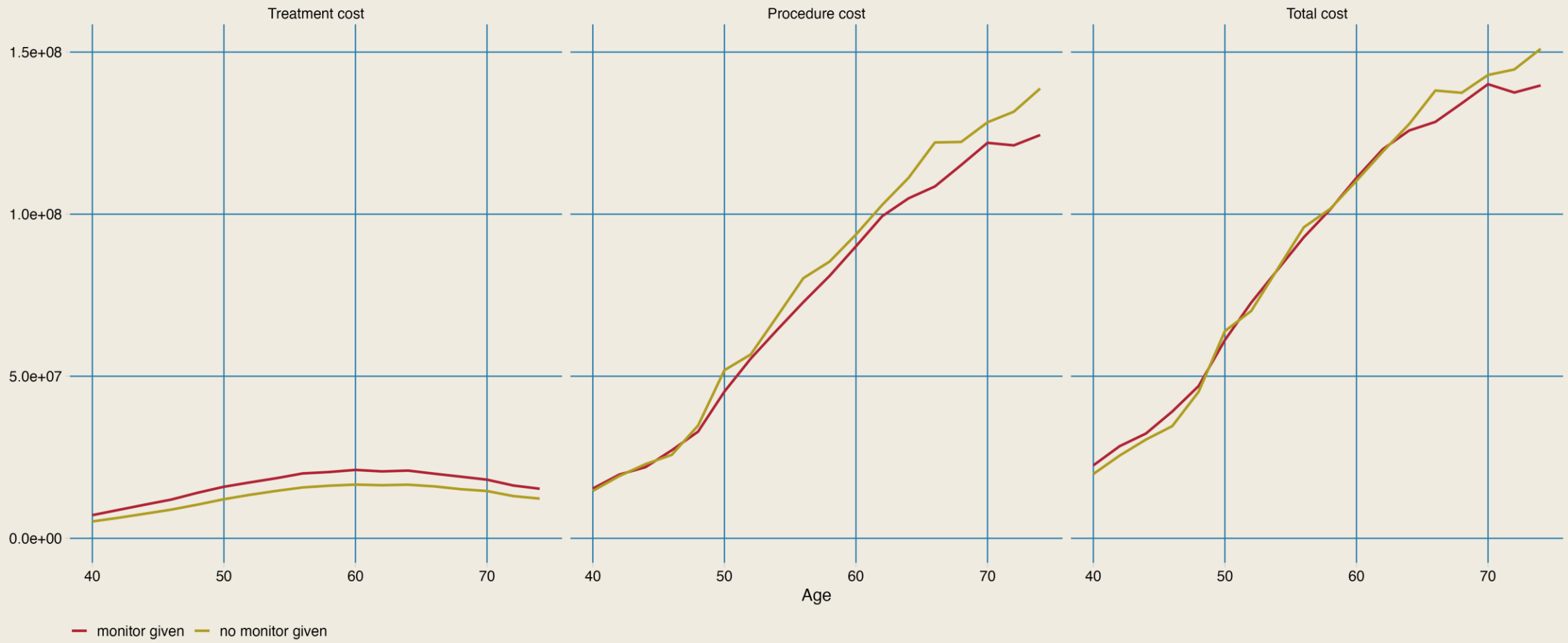


Prenatal Syphilis Screening Among Medicaid Eligible in Washington State

HCA-Academic Learning Collaborative - October 2026

Tenaya Sunbury, PhD (HCA First Steps Database)

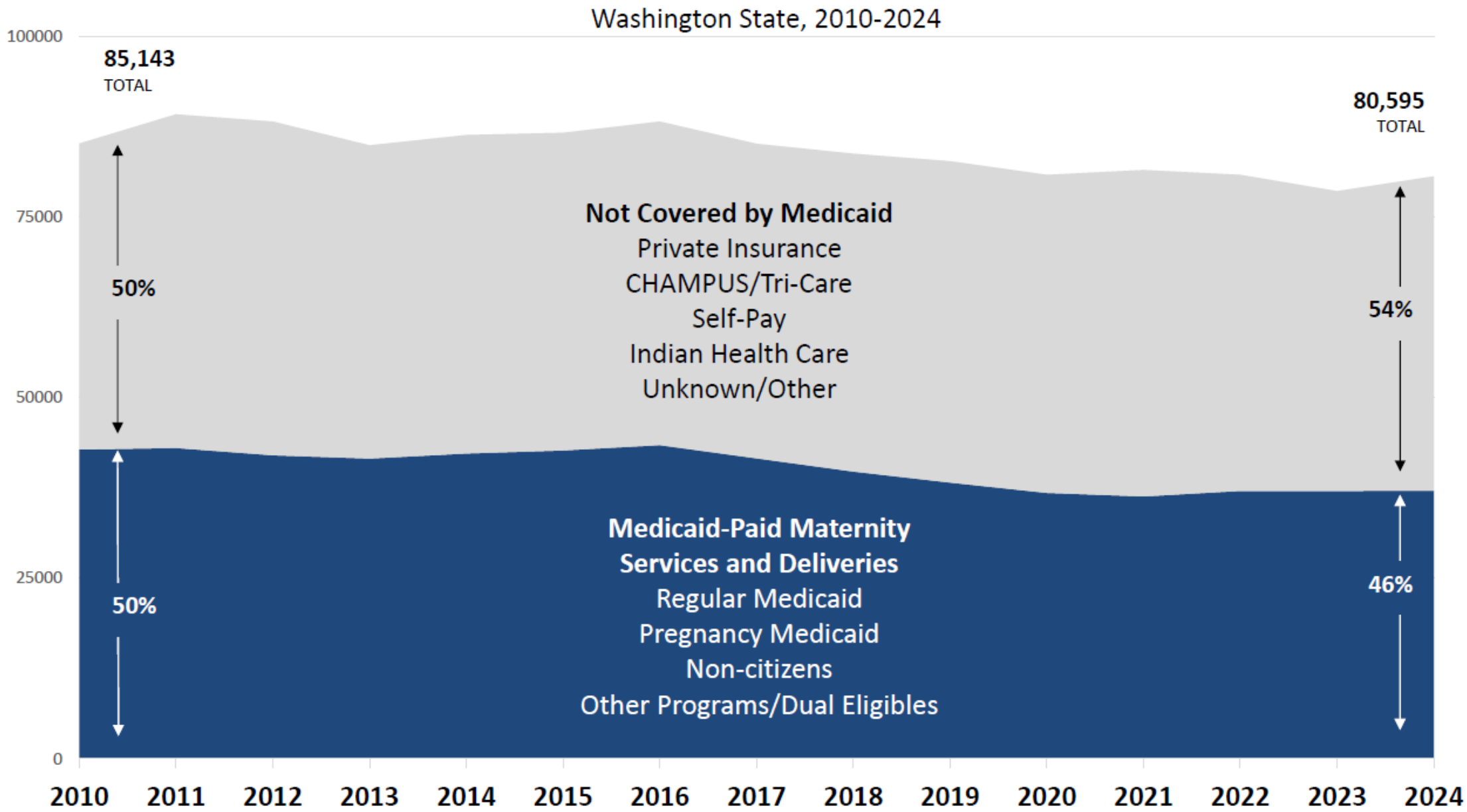
Washington State Health Care Authority

Federal and State Medicaid Policy Changes



Washington State Health Care Authority

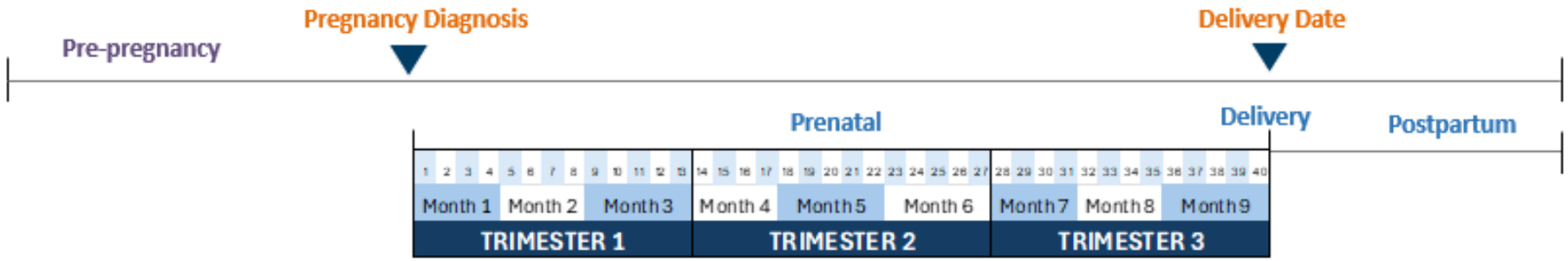
Medicaid-Paid Deliveries (count of birthing individual)

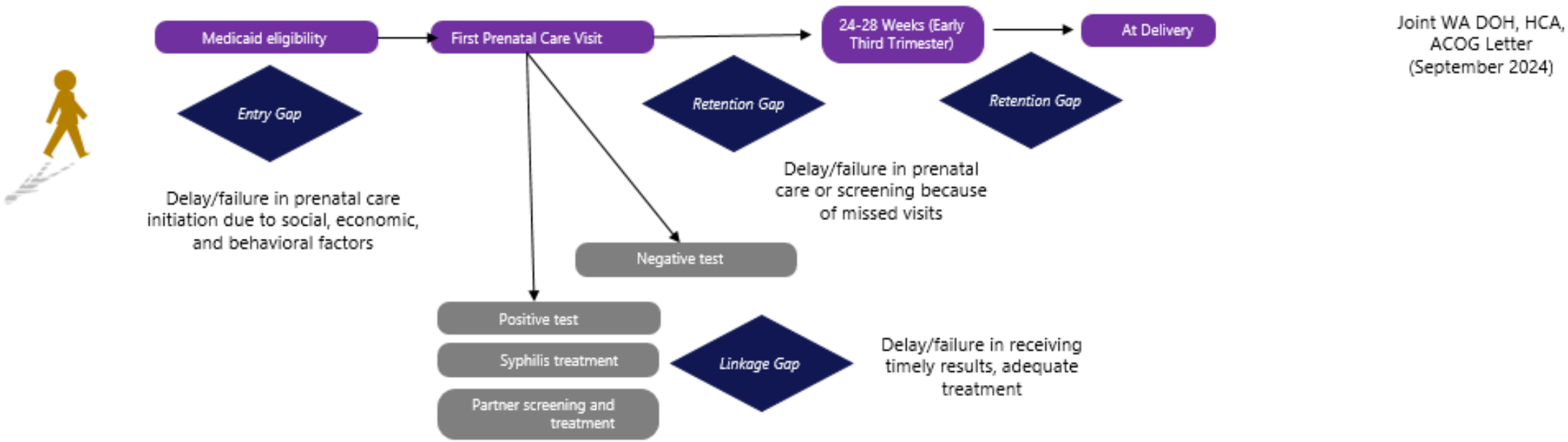


SOURCE: HCA FSDB Team, Calendar Year 2024 .Not accounted for: ~1,400 births per year outside of WA state since 2014; ~2,500 adoptions per year.

Expanded Congenital Syphilis Prevention Cascade Framework

To identify entry, linkage, and retention gaps





Joint WA DOH, HCA, ACOG Letter (September 2024)

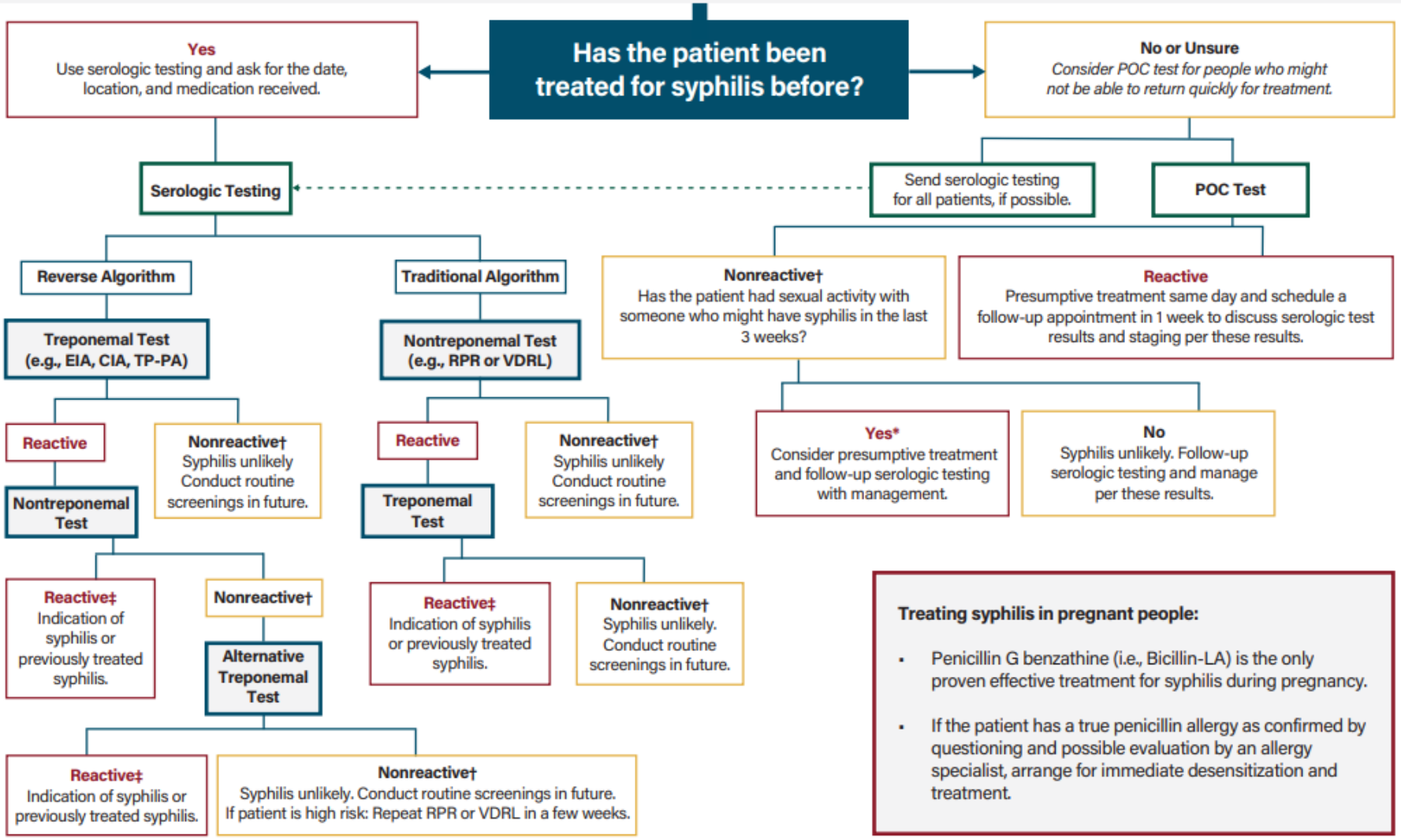
SOURCE: Park, E., Yip, J., Harville, E., et al. (2022). Gaps in the congenital syphilis prevention cascade: qualitative findings from Kern County, California. BMC Infectious Diseases. 22: 129.

Washington State Health Care Authority

SYPHILIS TESTING ALGORITHM

Patient History & Physical Exam*

For Pregnant Patients: Screen for syphilis three times every pregnancy (first encounter, 28 weeks, and delivery)



CIA, chemoluminescence immunoassay; EIA, enzyme immunoassay; POC, point of care; RPR, rapid plasma reagin; TP-PA, Treponema pallidum particle agglutination assay; VDRL, Venereal Disease Research Laboratory test.

* If a person has signs and/or symptoms consistent with primary or secondary syphilis, consider immediate presumptive treatment. People exposed through sexual contact to a person who has syphilis should also be considered for immediate presumptive treatment based on CDC STI Treatment Guidelines (https://www.cdc.gov/std/treatment-guidelines/syphilis.htm)

† If patient has had sexual activity with someone who might have syphilis in the last 3 weeks, consider repeat syphilis testing in 2–4 weeks.

‡ Compare to previous RPR as available and treat per guidelines.

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This information is designed as an educational resource to aid clinicians in providing care, and use of this information is voluntary. This information should not be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. This information does not represent ACOG clinical guidance. It is not intended to substitute for the independent professional judgment of the treating clinician. For ACOG's complete disclaimer, visit www.acog.org/tr-disclaimer.

ACOG The American College of Obstetricians and Gynecologists

Claim/Encounters

Electronic Health Records/LOINC

Electronic Health Records/LOINC

ton State
n Care Authority

Methods

Study Design: Retrospective cohort study consisting of First Steps Database (FSDB) Medicaid-paid deliveries in calendar years 2021-2024 (combined N=147,665 deliveries)

First Steps Database (FSDB) is a WSIRB approved research project #D-092711-A linking vital records from the WA State Department of Health (DOH) to Health Care Authority (HCA) Medicaid eligibility, claims/encounters.

- 42 CFR Part 2 refers to the confidentiality of substance use disorder patient records, and section 42 CFR 2.52(a) - details the use and disclosure of patient identifying information for scientific research, (b) – requirements for researchers, (c) – requirements regarding data linkages.

Measures: Used Current Procedural Terminology (CPT) codes to measure syphilis screening through Medicaid claims/encounters*.

Date of delivery and gestational age were used to calculate the estimated pregnancy start date. Trimester start and end dates were estimated for each Medicaid client and screening/treatment dates of service were obtained from ProviderOne paid fee-for-service claims or MMC encounters.

Additional covariates included: birth parent demographics, Medicaid program eligibility during pregnancy, start of prenatal care, housing instability, any prenatal ER visit, Maternity Support Services (MSS) program participation, any prenatal mental health diagnosis, any prenatal substance use treatment, any prenatal WSP arrest, any

Statistical Analysis: Descriptive and multivariable statistics

Number and percentage of Medicaid beneficiaries with a paid claim/encounter for a syphilis test were calculated for each trimester and at any time during pregnancy, overall and among specific subgroups.

Multivariable logistic regression to model/estimate the probability of Medicaid-paid beneficiary receiving a syphilis screen during the first trimester

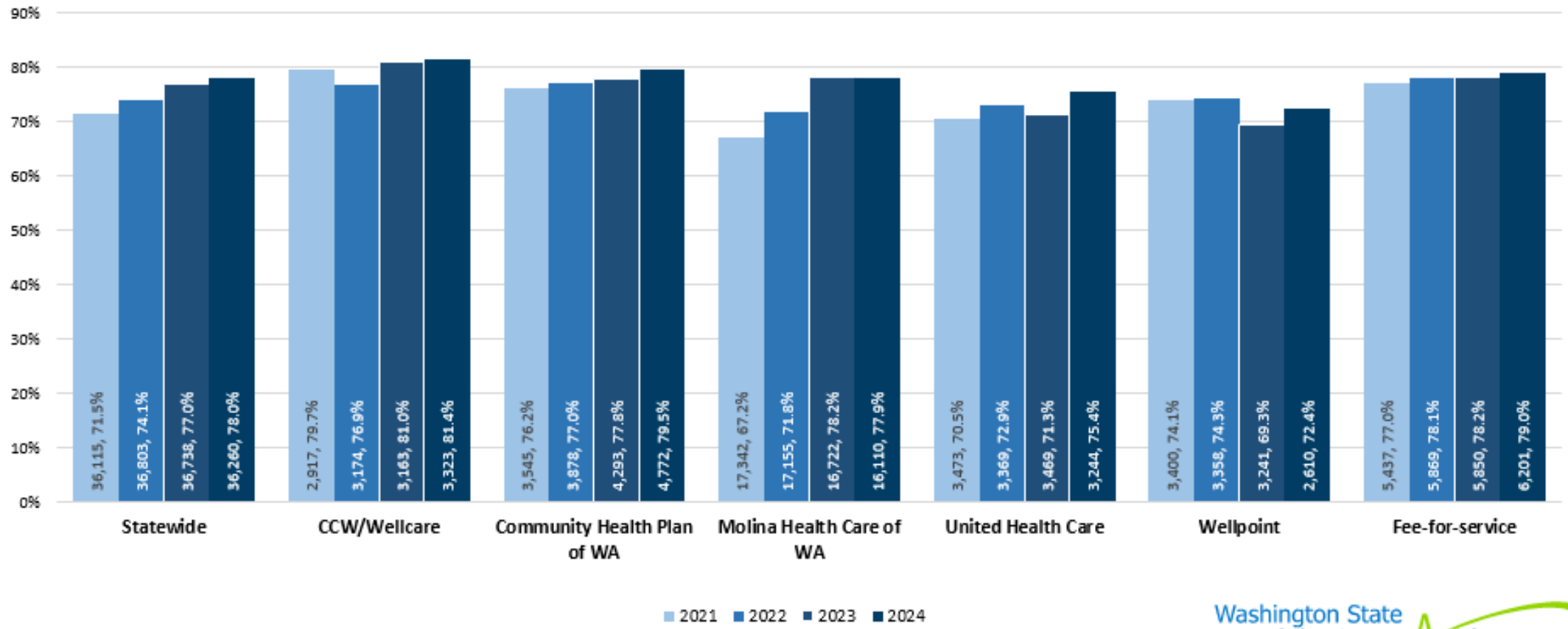
***SOURCE:** Lanier, P, Kennedy, S, Snyder, A, et al., (2022). Prenatal Syphilis Screening Among Medicaid Enrollees in 6 Southern States. *Am. J. of Preventive Medicine*. 62(5): 770-776.

Q *How many Medicaid clients received at least one Syphilis screening during pregnancy?*

- Most Medicaid (approximately 3 out of 4) clients received at least one screening for Syphilis during their pregnancy.
- Statewide, the percentage of Medicaid clients receiving at least one Syphilis screening during pregnancy has increased from 71.5% in 2021 to 76.9% in 2024 (80.5% in 2025 (*preliminary*)).
- There were no differences between fee-for-service (FFS) and Medicaid Managed Care (MMC) in the percentage of Medicaid clients receive at least one Syphilis screening during pregnancy.

Count and Percent of Medicaid Clients Screened for Syphilis At Least Once During Pregnancy

by Year, Washington State, MMC Plan, and FFS



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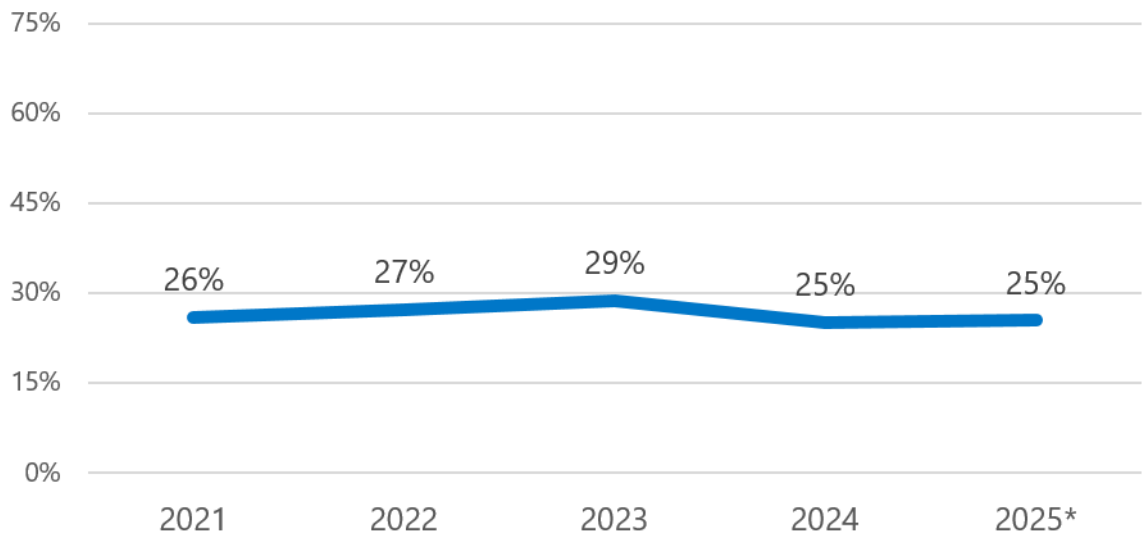
Obstetric Panel Underutilized

(Percent clients with at least one obstetric panel CPT code during pregnancy)



Obstetric Panel *(CPT codes 80055 & 80081)* **includes several tests to assess a pregnant person's health**

- Complete blood count (CBC)
- Blood typing (ABO and Rh)
- Antibody screening (Rubella)
- Syphilis test
- HIV test (CPT 80081 only)
- Hepatitis

NOTE: 2025 FSDB data are preliminary until Fall 2026. CPT Current Procedural Terminology (CPT) copyright 2025 American Medical Association (AMA). All rights reserved. CPT is a registered trademark of the AMA.

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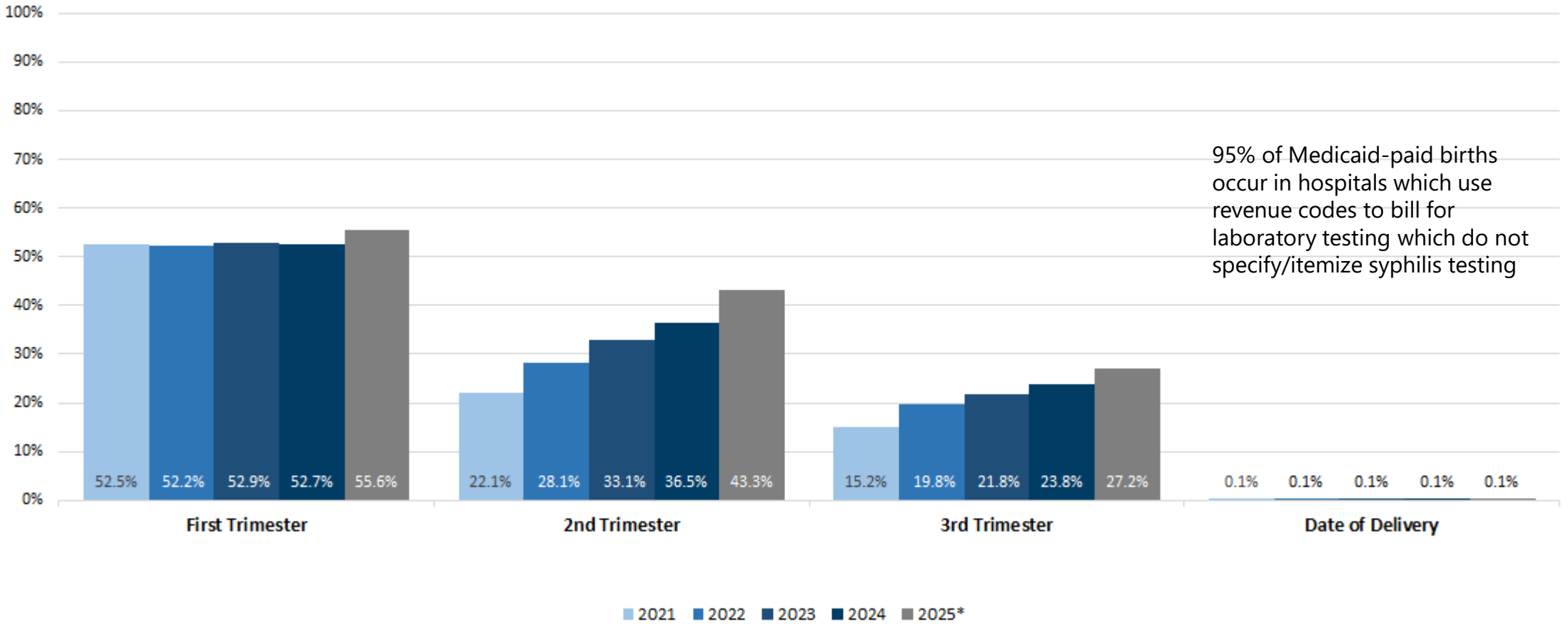
Q *How many Medicaid clients received a Syphilis screening during each trimester and at delivery during pregnancy?*

- A little over half of Medicaid clients received screening for Syphilis during the first trimester of pregnancy between 2021 and 2024.
- Hospital revenue codes do not specify/itemize syphilis screening so analysis will require clinical data.
- Very few Medicaid clients were being screening during more than one trimester during pregnancy.

Count and Percent of Medicaid Clients Screened for Syphilis During Pregnancy

Washington State
by Year, Trimester, and Date of Delivery



95% of Medicaid-paid births occur in hospitals which use revenue codes to bill for laboratory testing which do not specify/itemize syphilis testing

NOTE: 2025 FSDB data are preliminary until Fall 2026

Q *Which factors are associated with likelihood of Medicaid clients receiving a Syphilis screening during first trimester of pregnancy?*

- Increased Odds (Protective Factors)
  - Having at least one ER visit during pregnancy (compared to no ER visit during pregnancy)
  - Participating in Maternity Support Services (MSS) program (compared to no MSS participating during pregnancy)
  - Receiving a mental health diagnosis during pregnancy (compared to no MH diagnosis)
- Decreased Odds (Risk Factors)
  - Starting prenatal care after first trimester
  - Being homeless or unstably housed during pregnancy (compared to stable housing)
  - Receiving Opiate or substance use treatment
  - Being arrested by Washington State Patrol (WSP) during pregnancy (compared to no WSP arrest)

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Note: Logistic regression models were adjusted for birth parent demographics and Medicaid program.

Thank you & Questions

- First Steps Database (FSDB) Team
  - I am grateful to work with a research team dedicated to improving maternal/child health at HCA
  - Tenaya.Sunbury@hca.wa.gov
- HCA CQCT
- DOH Office of Infectious Disease (OID)
- Washington State Perinatal Collaborative

Public Health

- Q&A

Washington State Health Care Authority

Break & Poster Session

Poster presenters, please stand by your posters for attendees to ask questions



Primary Care Expenditures in Washington State

Presentation to the Academic Learning Collaborative

October 2, 2026

Washington State Health Care Authority

Background

- Why is primary care spending important?
  - Primary care providers (PCPs) keep communities healthy and help people connect to the services they need.
    - Better outcomes[1/]
    - Less likely to rely on the emergency room[2/]
  - Continuity of primary care reduces health care costs
- State legislature set a statewide primary care target of 12% of total healthcare expenditures (RCW 70.390.080).

1/ Friedberg, M. W., Hussey, P. S., & Schneider, E. C. (2010). Primary care: a critical review of the evidence on quality and costs of health care. *Health Affairs*, *29*(5), 766-772.
2/ Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *The Milbank Quarterly*, *83*(3), 457-502.

Research questions

- How much is total primary care spending as a proportion of total health care spending in Washington?
- How does it compare to the primary care spending target of 12%?
- What is the share of claims and non-claims spending to primary care spending?
- Does primary care spending vary by market and carriers?
- Is the growth in primary care spending driven by utilization or price?

Data

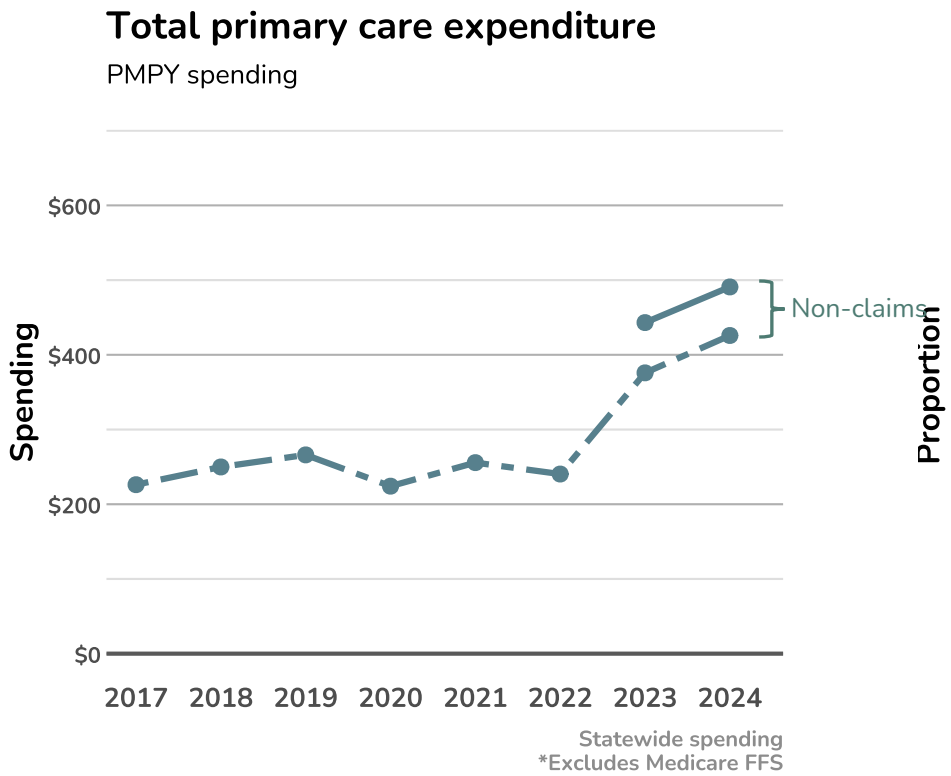
- Health Care Cost Transparency Board Data Calls
  - Collected data on health care spending (by market and service categories) from payers since 2017
  - Primary care (PC) is one of the service categories
    - Claims spending data available since 2017
    - Non-claims spending data available in 2024 (NEW)
    - 2017-2022 data: based on OFM definition
    - 2023 onwards data: based on Advisory Committee on Primary Care definition
  - PC spending not available separately for Medicare FFS
- All-Payer Claims Database
  - Allows breakdown of claims spending on PC by utilization and price
  - Does not include all claims (excludes self-funded claims spending and Medicare FFS)

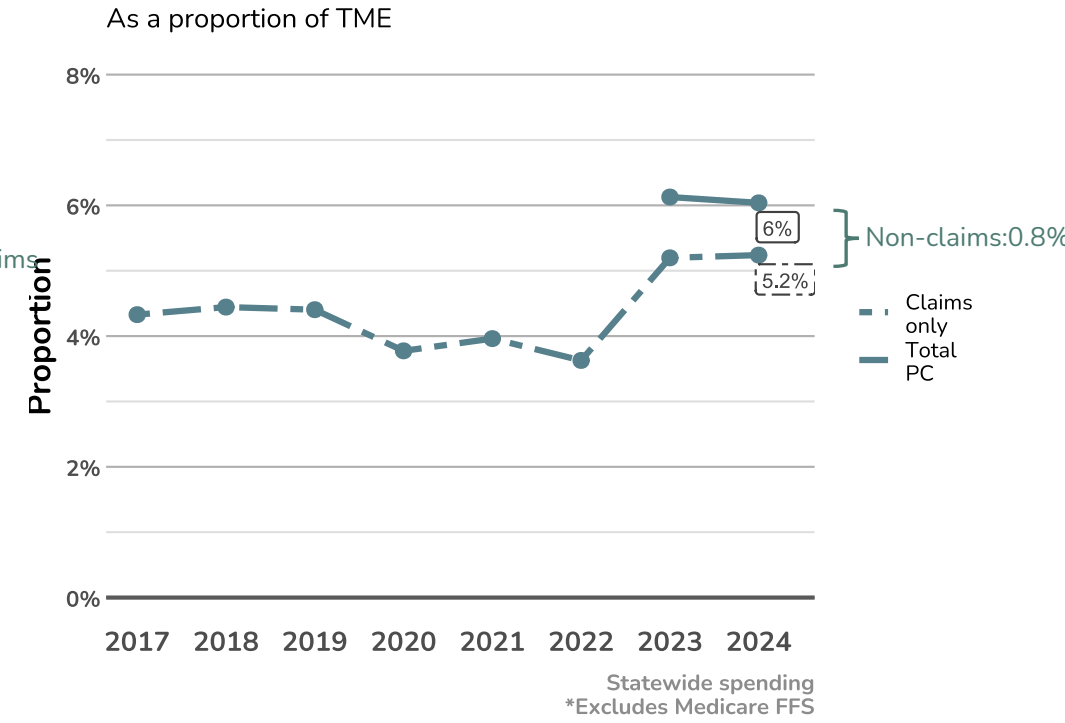
Methodology

- Summary statistics
- Spending growth breakdown by price and utilization:
  - First calculate the change in PMPM attributed to utilization
    - Assume average allowed amount per service remained constant
  - The remainder of change in PMPM is assumed to be due to changes in price and/or intensity of services.
  - Changes due to price vs. intensity can't be disentangled here because the data includes only service category level averages of allowed amount per service.

Total PC expenditures, statewide

- As of 2024, PC spending constitutes **6% of TME**
  - Claims: 5.2%
  - Non-claims = 0.8%
- This 6 percentage points lower than the 12% target.





Source: 2026 Cost Board Data Call (Preliminary)
Notes: 1. TME is Total Medical Expenditure.
2. PMPY stands for Per Member Per Year.
3. FFS is Fee for service.

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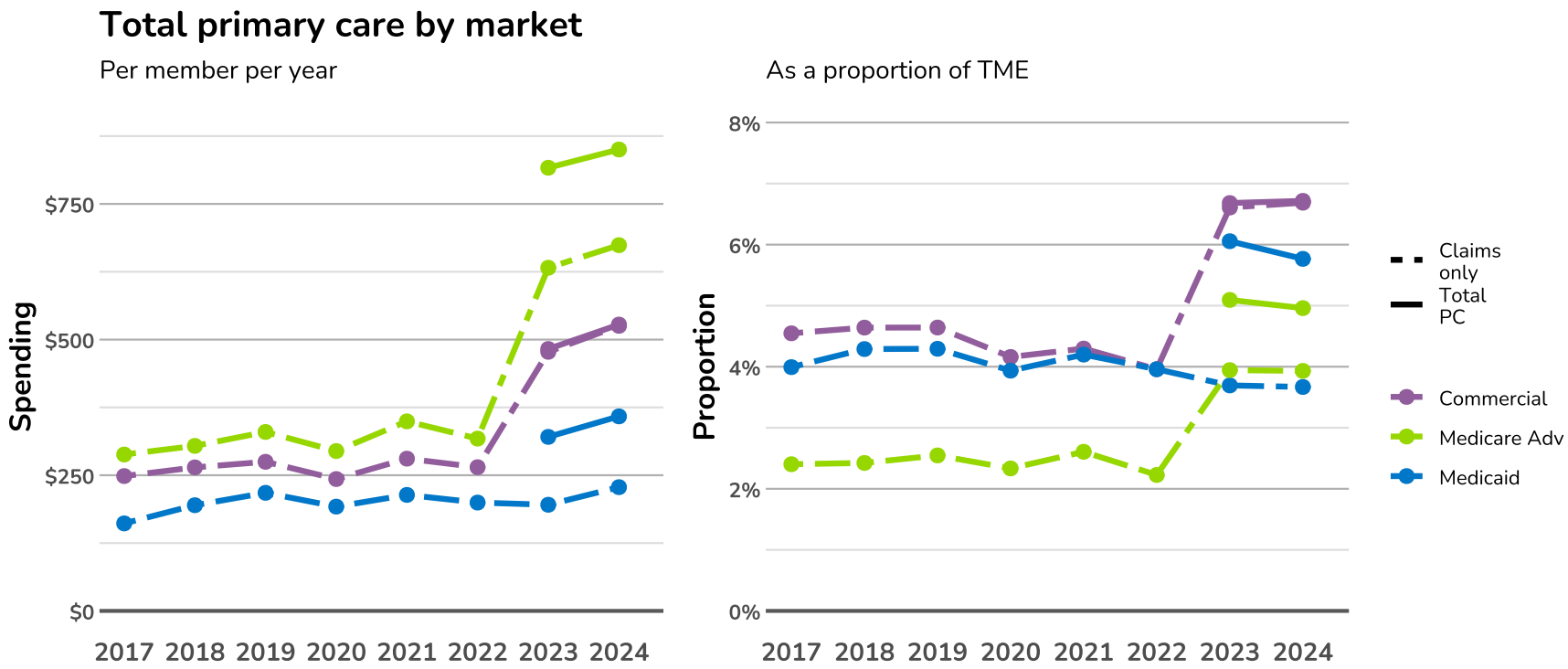
Total PC expenditures, by market

- The addition of non-claims spending on PC has different impacts by market:
  - **Increased** the per capita spending on PC for Medicare Advantage (1 ppt) and Medicaid (2 ppts) markets.
  - **No change** in the commercial market
- Apparent large increase in 2023 is mostly due to reporting changes



Source: 2026 Cost Board Data Call (Preliminary)
Note: 1. TME is Total Medical Expenditure.

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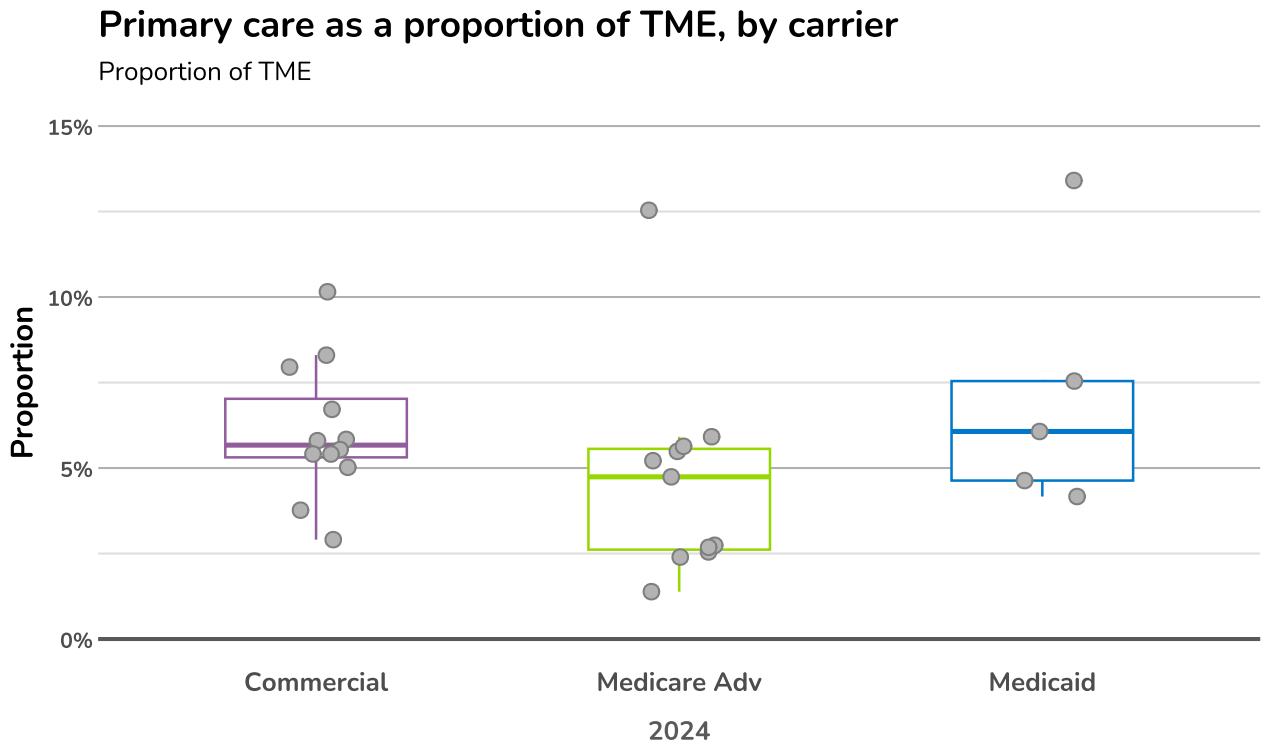
PC expenditures by carriers

- The percentage of TME spent on PC is highly variable across carriers.
- Some carriers have PC spending close to the 12% target.
- Medicare carriers show a bit more clustering around lower values while commercial is a more spread out.



Source: 2026 Cost Board Data Call (Preliminary)
Note: 1. TME is Total Medical Expenditure.

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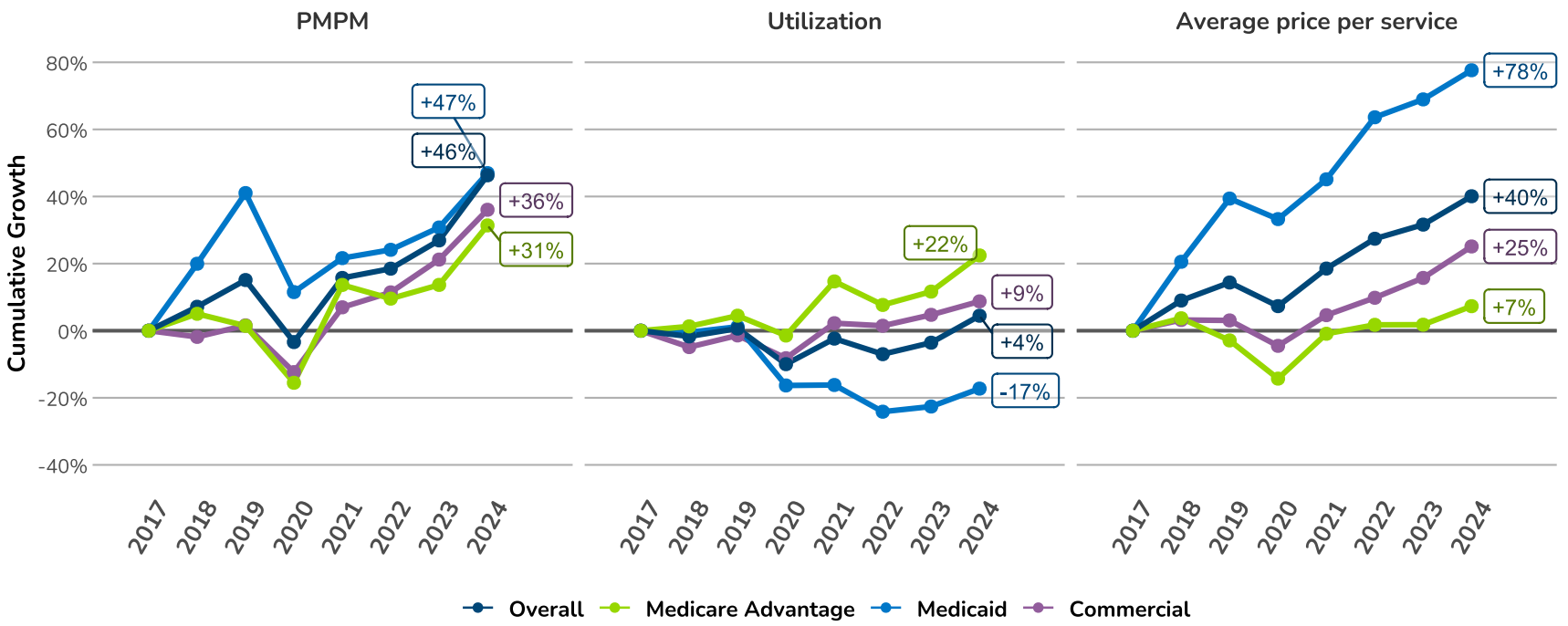
Primary care growth over time

Primary Care Spending and Utilization by Market



2024 averages:

- Services per member
  - Commercial: 1.8
  - Medicaid: 1.8
  - MA: 3.6
  - Overall: 2.1
- Price per service
  - Commercial: $193
  - Medicaid: $118
  - MA: $132
  - Overall: $149

Data source: WA APCD; OnPoint data pull.
Notes: 1. Utilization is measured by claim header count for primary care services.
2. Overall excludes Medicare FFS
3. PMPM stands for Per Member Per Month

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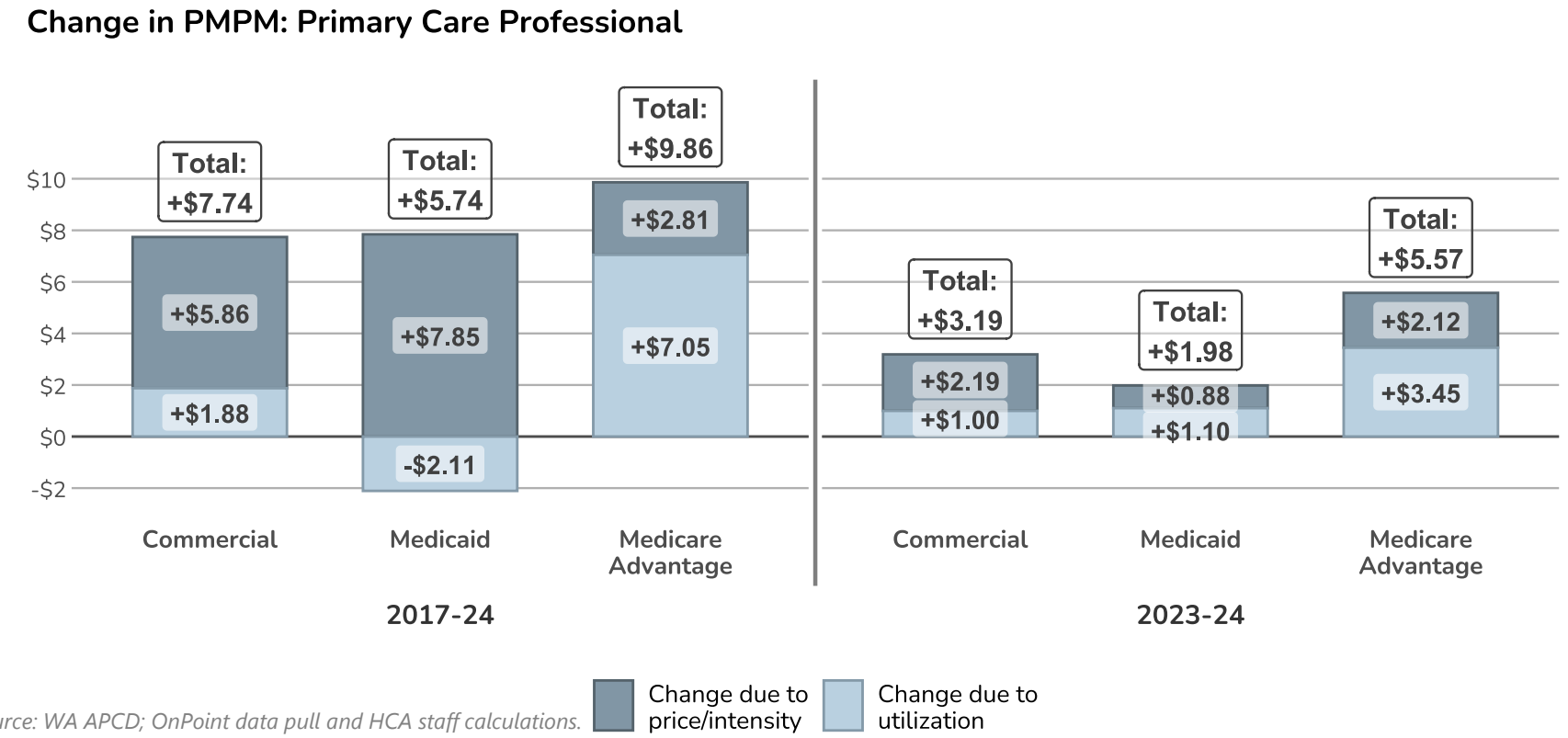
Primary care PMPM growth drivers: utilization or price/intensity?

- Change in PMPM spending can be split into:
  - Change due to utilization (services per 1000)
  - Change due to price/intensity (average allowed per service)
- For reference, 2024 PMPMs were:
  - Commercial: $29
  - Medicaid: $18
  - Medicare Adv: $41



Source: WA APCD; OnPoint data pull and HCA staff calculations.
Notes:1. Utilization is measured by claim header count for primary care services.
2. Important caveat: This assumes that the only factors that impact PMPM are utilization and price/intensity
3. PMPM stands for Per Member Per Month..

Washington State Health Care Authority

Limitations

- Data improvements from carriers may affect interpretation of trends from the data call
- Medicare FFS is excluded because CMS reports different professional service categories
- Limited longitudinal data, particularly for non-claims
- See data notes for data limitations of the WA-APCD.

Conclusions

- As of 2024, spending on PC in Washington is 6% of TME.
- This proportion is half the 12% target set in RCW 70.390.080.
- Non-claims spending is about 1% of TME while claims spending is about 5% of TME.
- The commercial market has registered the highest spending on primary care as a % share of TME, followed by Medicaid and Medicare. The percentage of TME spent on PC is highly variable across carriers.
- Primary care PMPM growth drivers differ by market.
  - Commercial is primarily price/intensity-driven
  - Medicare Advantage is primarily utilization-driven
  - Medicaid saw long-term falling utilization with rising price/intensity.

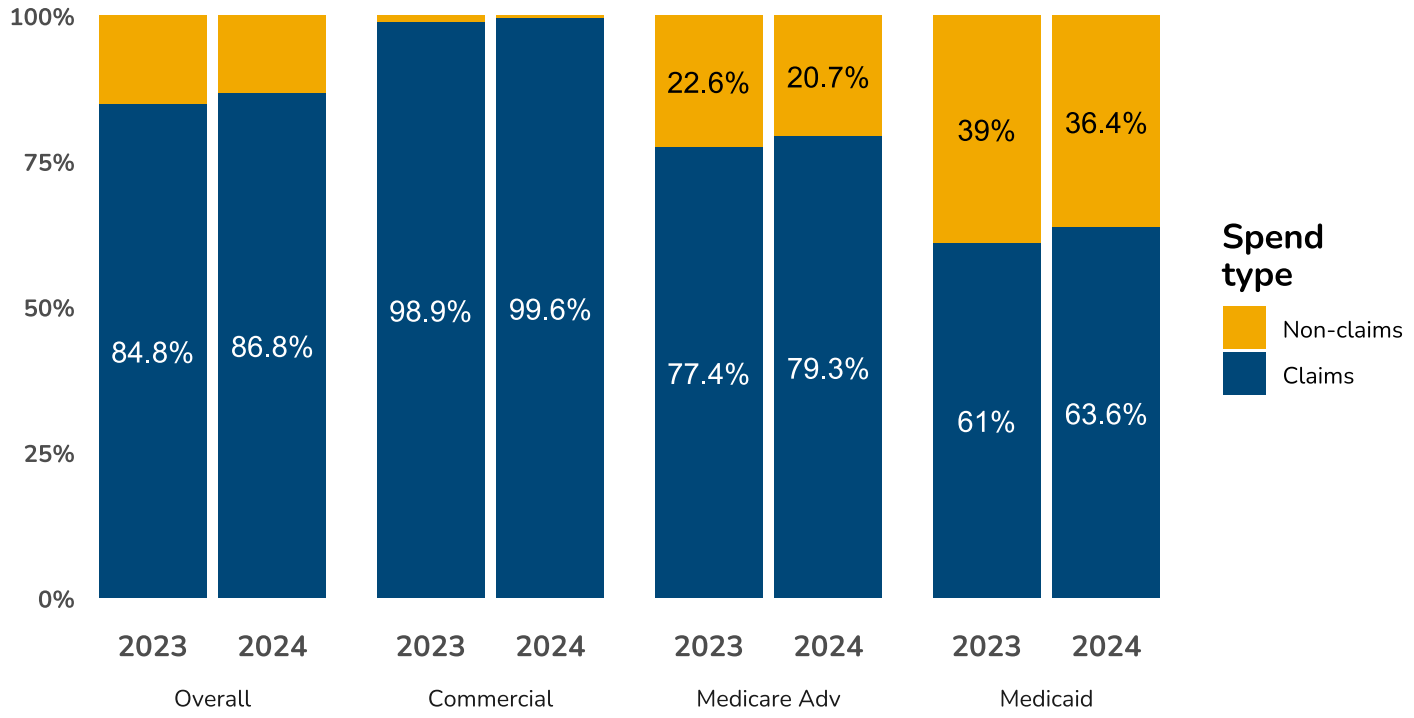
Appendix

PC spending by type

- Across all markets, about 15% of PC spending is on non-claims.
- Almost all PC spending in the commercial market is claims-based.
- Medicaid has the highest percentage of non-claims spending, at 36%.
- Total PC spending PMPY in 2024:
  - Commercial: $527
  - Medicare Adv: $850
  - Medicaid: $358

Claims and non-claims spending on primary care

Percent share to total pc spending



*Overall excludes Medicare FFS

Source: 2026 Cost Board Data Call (Preliminary)

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Claims-based PC expenditures

- Services (what)
  - New patient visits
  - Preventive visits
  - Treatment visits
  - Contraceptive care
  - Routine and developmental screenings



- Providers (by whom)
  - Pediatricians
  - Family medicine physicians
  - Internal medicine physicians specializing in geriatric or adolescent medicine
  - Physician assistants, nurse practitioners, and clinical nurse specialists specializing in pediatrics, gerontology, adult health, women's health, and more



- Locations (where)
  - Schools
  - Outpatient offices
  - Telehealth
  - Tribal and Indian Health Service facilities
  - Federally Qualified Health Centers (FQHCs)

Non-claims PC expenditures

- Payments from carriers to PC providers that may not appear on a claims form. Includes:
  - Capitation
    - Carriers with global capitation agreements were asked to estimate primary care payments
  - Salaries
  - Incentives
  - Population health payments
  - Practice support payments

Primary Care Providers (taxonomy)

New definition

Primary care provider and subspecialty codes

Specialty	Subspecialty	Provider taxonomy code
Clinic/Center	Primary Care	261QP2300X
Clinic/Center	Federally Qualified Health Center (FQHC)	261QF0400X
Clinic/Center	Critical Access Hospital	261QC0050X
Clinic/Center	Urgent Care	261QU0200X
Clinic/Center	Rural Health	261QR1300X
Clinical Nurse Specialist	Family Health	364SF0001X
Clinical Nurse Specialist	—	364S00000X
Clinical Nurse Specialist	Pediatrics	364SP0200X
Clinical Nurse Specialist	Gerontology	364SG0600X
Clinical Nurse Specialist	Adult Health	364SA2200X
Clinical Nurse Specialist	Women's Health	364SW0102X
Clinical Nurse Specialist	Chronic Care	364SC2300X
Clinical Nurse Specialist	Holistic	364SH1100X
Family Medicine	Geriatric Medicine	207QG0300X
Family Medicine	—	207Q00000X
Family Medicine	Adolescent Medicine	207QA0000X
Family Medicine	Adult Medicine	207QA0505X
General Practice	—	208D00000X
Internal Medicine	—	207R00000X
Internal Medicine	Geriatric Medicine	207RG0300X
Internal Medicine	Adolescent Medicine	207RA0000X
Naturopath	—	175F00000X
Nurse Practitioner	—	363L00000X
Nurse Practitioner	Pediatrics	363LP0200X
Nurse Practitioner	Primary Care	363LP2300X
Nurse Practitioner	Adult Health	363LA2200X
Nurse Practitioner	Family	363LF0000X
Pediatrics	—	208000000X
Pediatrics	Adolescent Medicine	2080A0000X
Physician Assistant	—	363A00000X
Physician Assistant	Medical	363AM0700X
Preventive Medicine	Preventive Medicine/Occupational Environmental Medicine	2083P0500X

Old definition

Narrow definition of primary care provider

Taxonomy Code	Description
207Q00000X	Family Medicine
207QA0000X	Family Medicine, Adolescent Medicine
207QA0505X	Family Medicine, Adult Medicine
207QG0300X	Family Medicine, Geriatric Medicine
261QF0400X	Federally Qualified Health Center
208D00000X	General Practice
207R00000X	Internal Medicine
207RG0300X	Internal Medicine, Geriatric Medicine
175F00000X	Naturopath
208000000X	Pediatrics
2080A0000X	Pediatrics, Adolescent Medicine
2083P0500X	Preventive Medicine, Preventive Medicine/Occupational Environmental Medicine
261QP2300X	Primary care clinic
261QR1300X	Rural health clinic

Nurse practitioner and physician assistant definitions

Taxonomy Code	Description
363L00000X	Nurse Practitioner
363LA2100X	Nurse Practitioner, Acute Care
363LA2200X	Nurse Practitioner, Adult Health
363LC1500X	Nurse Practitioner, Community Health
363LC0200X	Nurse Practitioner, Critical Care Medicine
363LF0000X	Nurse Practitioner, Family
363LG0600X	Nurse Practitioner, Gerontology
363LN0000X	Nurse Practitioner, Neonatal
363LN0005X	Nurse Practitioner, Neonatal, Critical Care
363LX0001X	Nurse Practitioner, Obstetrics & Gynecology
363LX0106X	Nurse Practitioner, Occupational Health
363LP0200X	Nurse Practitioner, Pediatrics
363LP0222X	Nurse Practitioner, Pediatrics, Critical Care
363LP1700X	Nurse Practitioner, Perinatal
363LP2300X	Nurse Practitioner, Primary Care
363LP0808X	Nurse Practitioner, Psychiatric/Mental Health
363LS0200X	Nurse Practitioner, School
363LW0102X	Nurse Practitioner, Women's Health
363A00000X	Physician Assistant
363AM0700X	Physician Assistant, Medical
363AS0400X	Physician Assistant, Surgical

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Data notes | APCD

- The APCD covers about 70% of the Washington population
- Self-insured commercial plans are not required to report data to APCD and self-insured data is limited.
- No data is available for the uninsured.
- Medicare FFS data is available through only 2022 so is excluded from some totals.
- Alternative payments (e.g., capitated payments, pharmacy rebates) currently are not reported to the APCD.
- Long-term care data for Medicaid is not reported to the APCD

Independent versus system-affiliated hospitals: a comparative analysis of hospitals in Washington State

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Strategy, Policy, and Innovation (SPI), Health Care Authority
10/02/2026

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Background

- The hospital "merger mania" and the formation of hospital systems during the 1990s
- System-affiliated hospitals operate more efficiently
- Hospital consolidation reduces market competition and increases commercial insurance prices

Cuellar AE, Gertler PJ. Trends in hospital consolidation: the formation of local systems. Health Aff (Millwood). 2003 Nov-Dec;22(6):77-87
Buchner, V. A., V. Hinz, and J. Schrey€ogg. 2016. "Health Systems: Changes in Hospital Efficiency and Profitability." Health Care Management Science 19 (2): 130–43.
Madison, K. 2004. "Multihospital System Membership and Patient Treatments, Expenditures, and Outcomes." Health Services Research 39 (4 Pt 1): 749–70.
Capps, Cory and David Dranove, "Hospital Consolidation and Negotiated PPO Prices," *Health Affairs* 23.2 (2004): 175-181.
Dafny, Leemore, "Estimation and Identification of Merger Effects: An Application to Hospital Mergers," 5 52.3 (2009): 523-550.
Cooper, Zack, et al., "The Price Ain't Right? Hospital Prices and Health Spending on the Privately Insured," Health Care Pricing Project, 2015.

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Objectives

- Analyzes the differences between independent hospitals and system-affiliated hospitals in Washington state
  - Hospital characteristics
    - System-affiliated hospital: Hospitals that are affiliated with a health system according to Compendium of U.S. Health Systems definition
    - Independent hospital: Hospitals that are not identified with any health system
  - Financial performance

Methods

- Data source: National Academy for State Health Policy's (NASHP) Hospital Cost Tool (HCT) dataset
  - Hospital revenue, costs, and profitability
  - Healthcare Cost Report Information System (HCRIS)
- Descriptive analysis

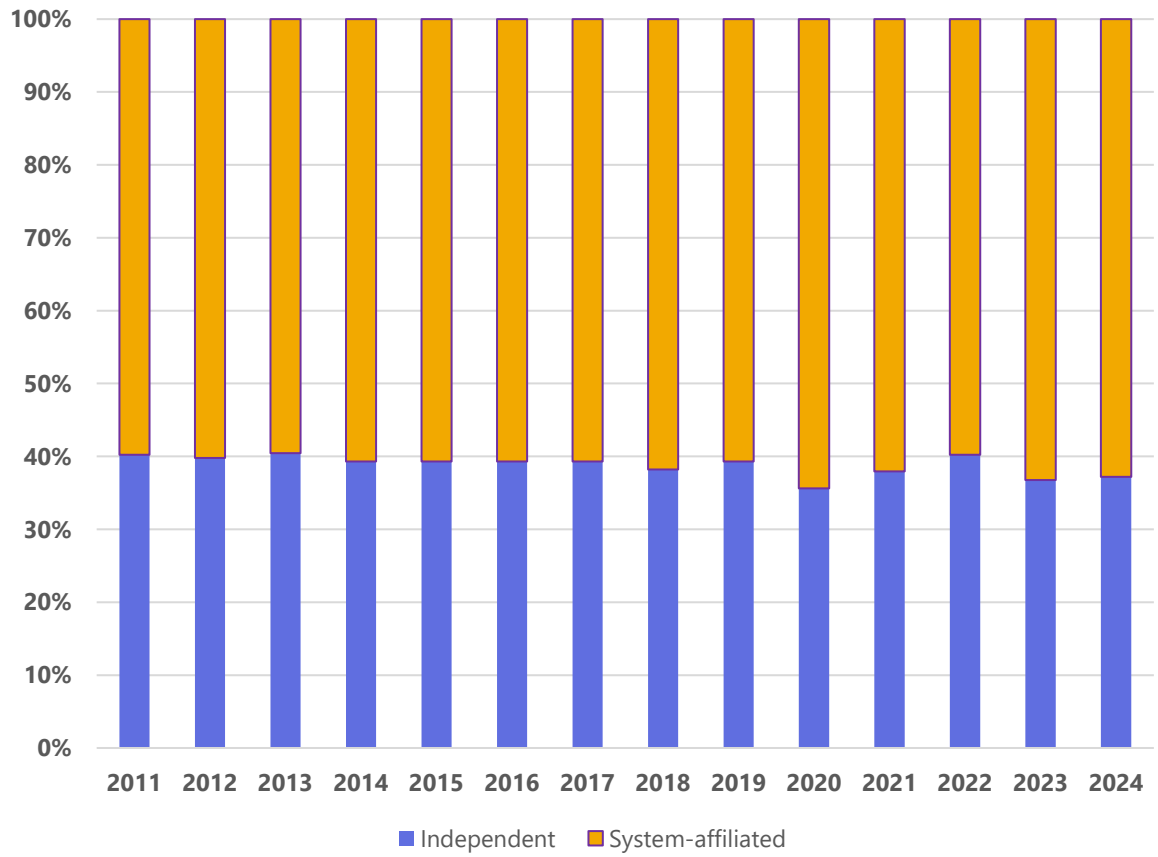
https://tool.nashp.org/

Results

Characteristics of Hospitals in Washington State (2024)

	Independent Hospitals	System-Affiliated Hospital	All Hospitals
Number of hospitals (%)	32 (37.2%)	54 (62.8%)	86 (100%)
Payer Mix			
Charity Care and Uninsured and Bad Debt (%)	3.7%	2.5%	3.00%
Medicaid, SCHIP and Low Income Gov't Program(%)	22.4%	18.3%	19.80%
Medicare (%)	34.4%	45.4%	42.50%
Commercial (%)	41.1%	34.9%	37.10%
Hospital Ownership			
For-profit	0 (0.0%)	2 (3.7%)	2 (2.3%)
Governmental	30 (93.8%)	11 (20.4%)	41 (47.7%)
Non-Profit	2 (6.3%)	41 (75.9%)	43 (50.0%)
Bed size	38	174	138
Urban location			
Metropolitan	4(12.5%)	43(79.6%)	47(54.7%)
Nonmetropolitan	28(87.5%)	11(20.4%)	39 (45.4%)
Number of hospitals in system	1	3	1.7

Results
Change of independent vs system-affiliated hospitals



- Top 3 largest health systems
  - Providence: 13
  - CommonSpirit Health: 8
  - Multicare Health System: 8

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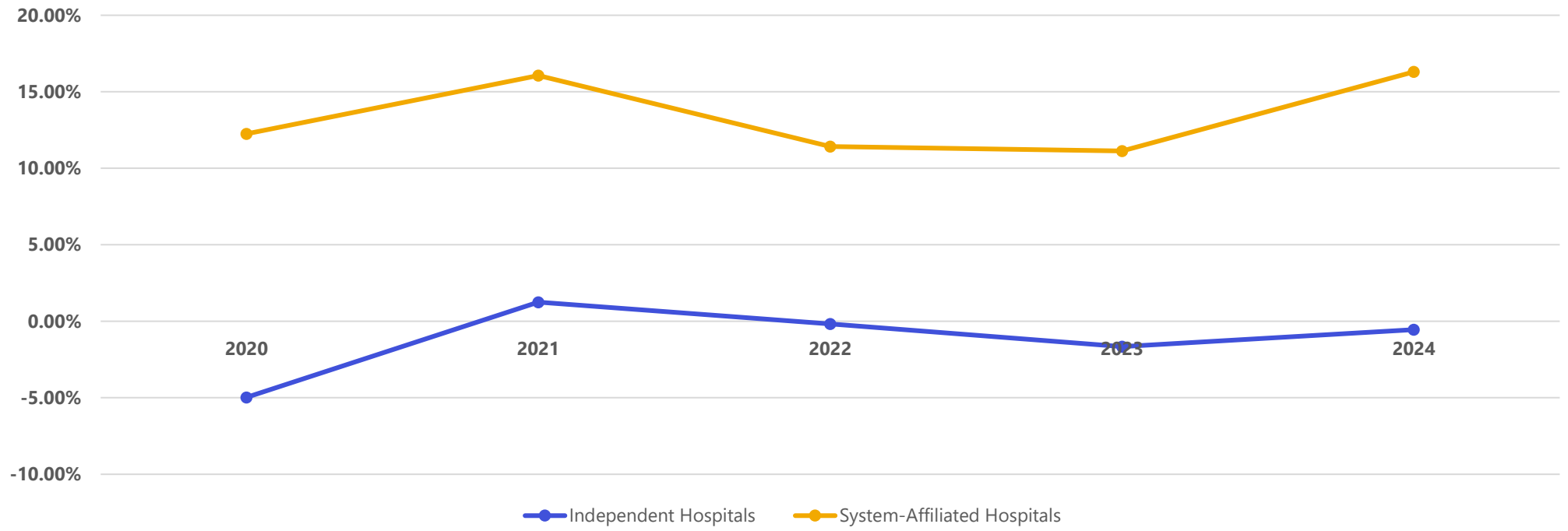
Results
Operating profit margin



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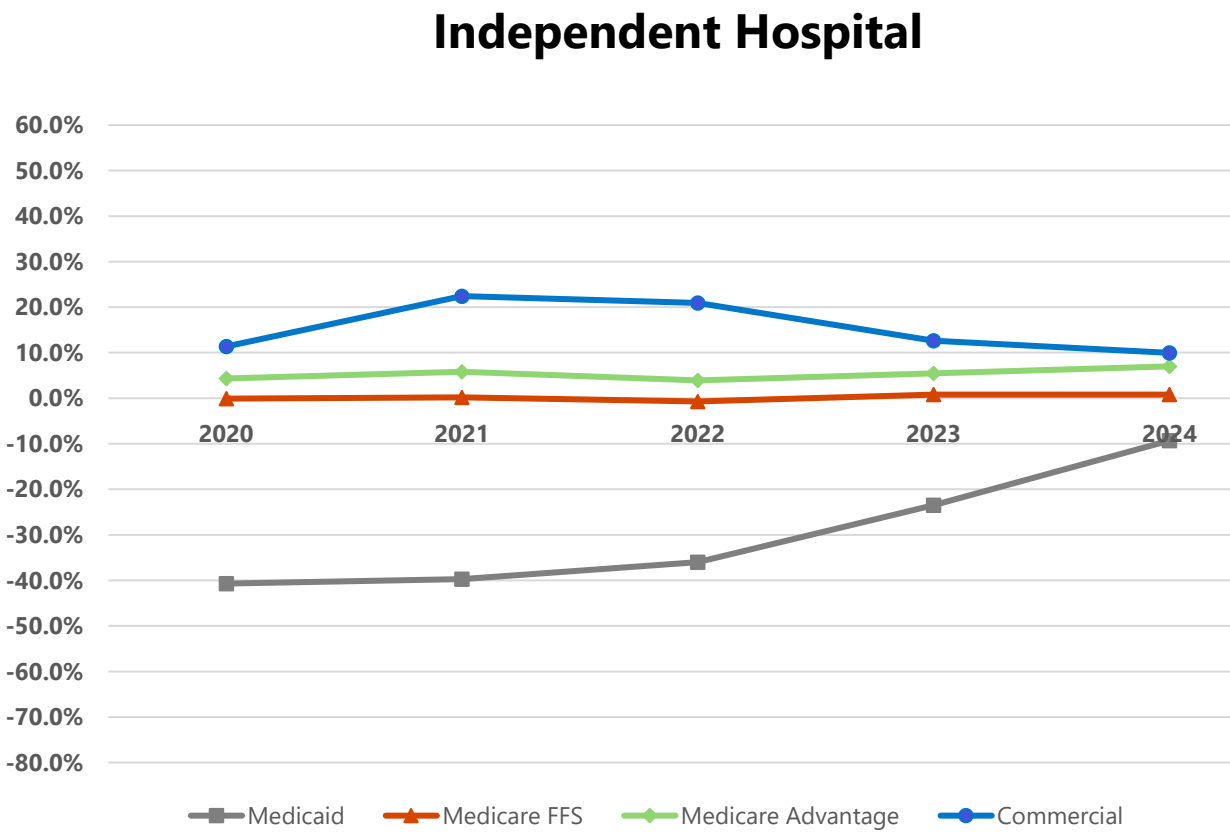
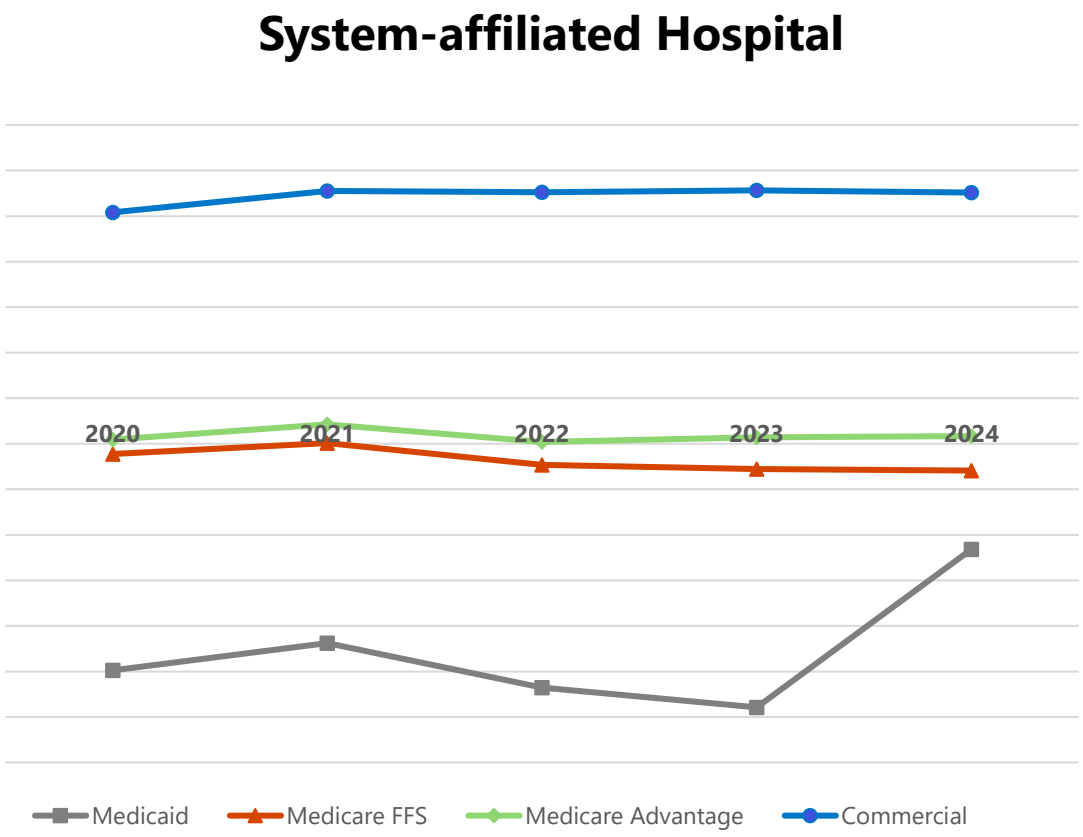
Results
Operating profit margin by payer





Medicaid: doesn't include Medicaid supplemental payments made to the hospital

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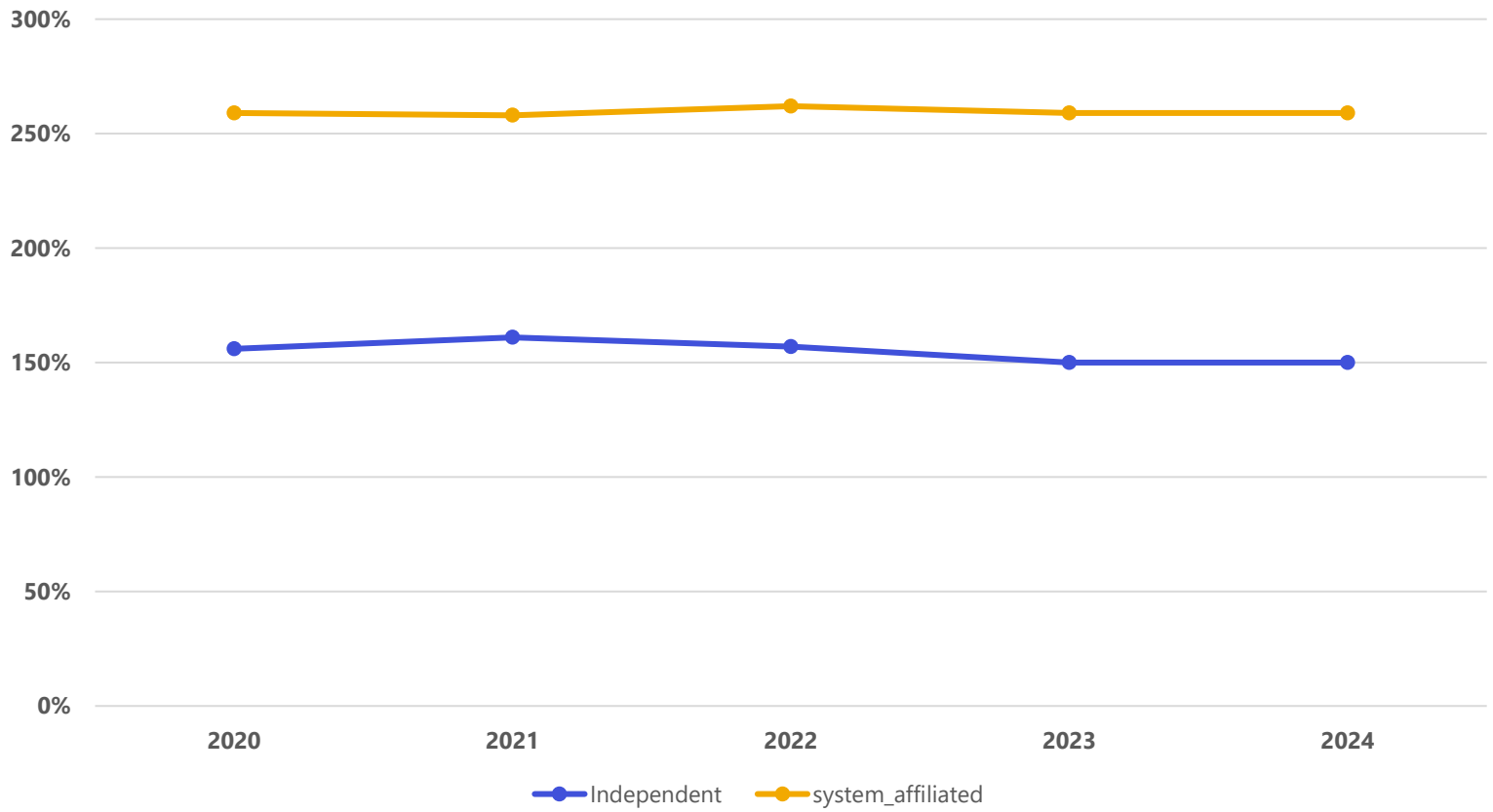
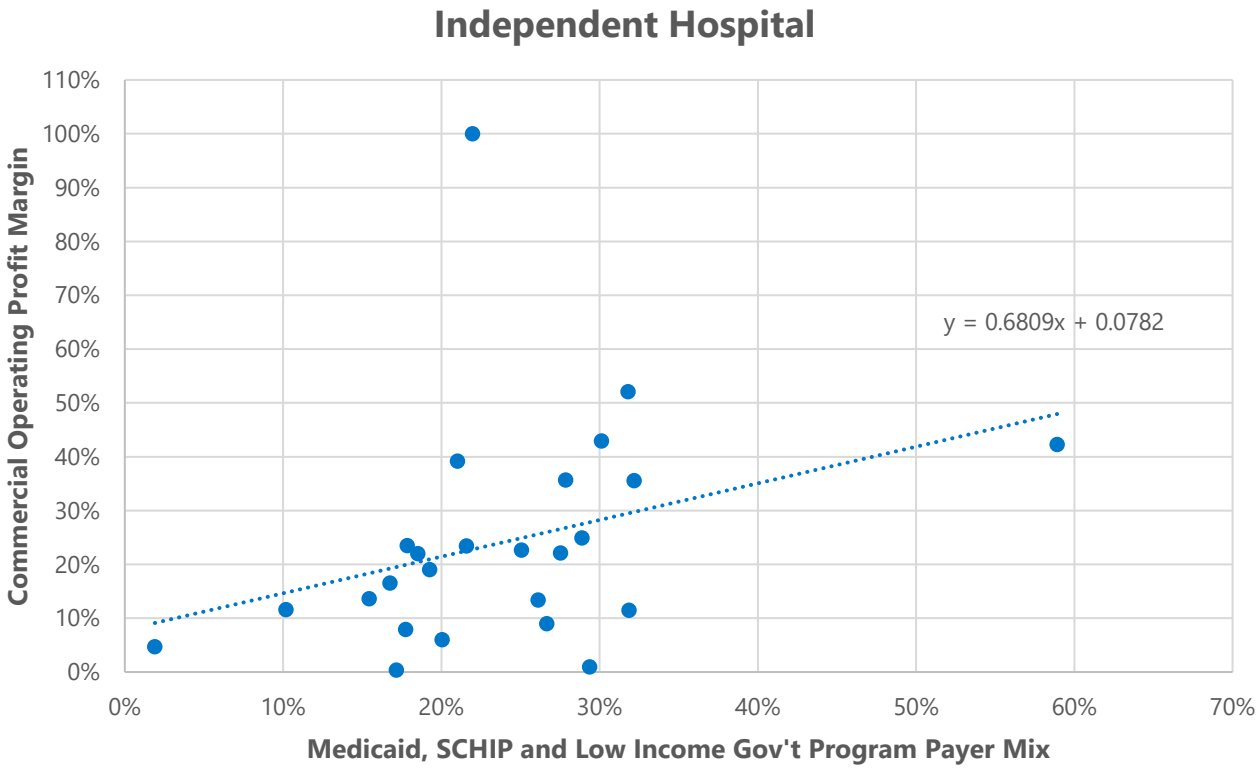
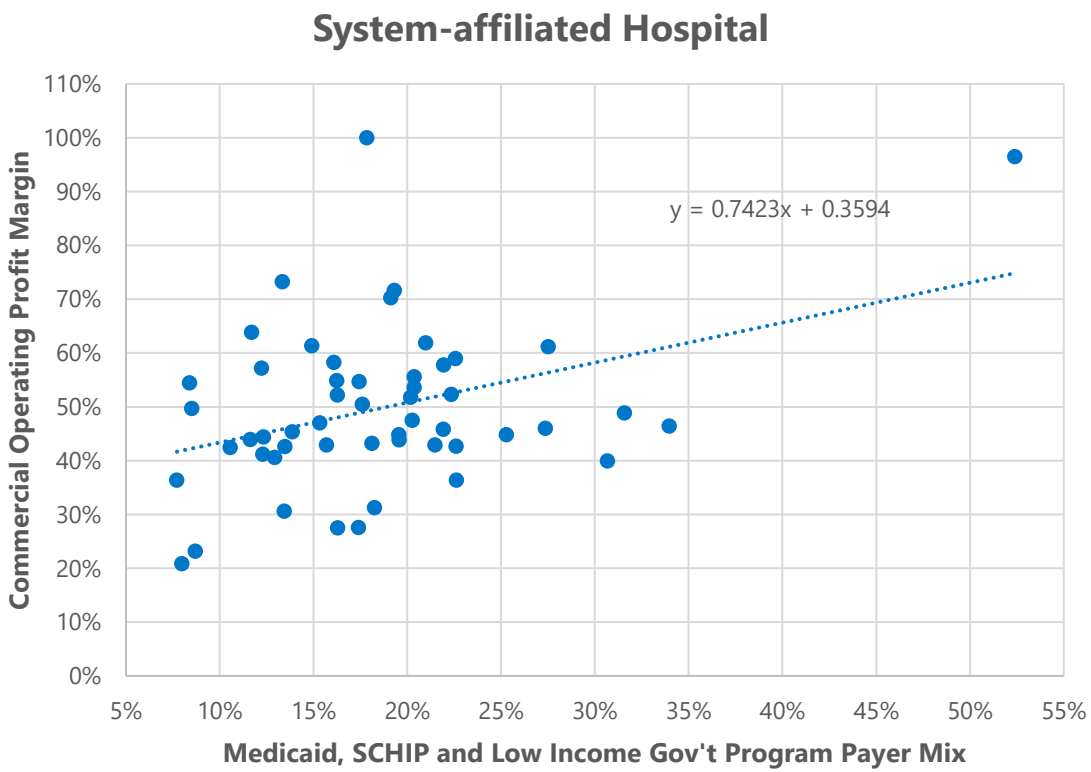
Results
RAND Price*



*: Prices paid for hospital inpatient and outpatient services by private health plans. Prices reflect the ratio of the actual paid amounts divided by the Medicare allowed amount for the same services provided by the same hospital

Relationship between low-income payer mix and commercial operating profit margin





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Conclusions

- System-affiliated hospitals are more profitable probably because they charge commercial clients higher price
- Hospitals may seek higher commercial profit margin to compensate for underpayments from public programs like Medicaid.

Limitations

- Other factors might impact how hospital set prices for commercial clients
  - Hospital non-patient care related revenue and expenses: e.g. investment earnings (losses), government funding
- Children’s hospital were not included in the analysis
  - Seattel children’s hospital
  - Mary Bridge Children's Hospital

Questions?



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HCA Research Priorities

October 2026

Judy Zerzan-Thul, MD, MPH

Washington State Health Care Authority

HR 1 and work requirements

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Work requirements

- Beginning January 1, 2027, a new eligibility criteria for all individuals applying for or renewing Apple Health for Adults will be required
  - Individuals who do not meet an exclusion at the time of application or renewal will need to either meet work requirements or qualify for an exemption
- Work requirements do not apply to any other Apple Health programs
- Centers for Medicare and Medicaid Services (CMS) published the Interim Final Rule (IFR) on June 1, 2026

Work requirement activities

- There are several ways to meet work requirements activities, including:
  - Having minimum monthly income of $580
  - Working at least 80 hours per month
  - Being enrolled in an education program
  - Participating in a work program
  - Volunteering or engaging in community service
  - A combination of these activities

Short-term hardship exemptions

Hardship	Automatic/Requested
Travelling outside your community for care related to a serious or complex condition for yourself or your dependent.	Requested
Spending part or all of a month in an inpatient hospital, nursing home, ICF/IID, inpatient psychiatric hospital services, or other services of similar acuity.	Requested
Living in an area where the President has declared a disaster.	Automatic
Living in a county with an unemployment rate that is 1.5 times the national unemployment rate.	Automatic

- There are four short-term hardships.
- Two hardships you must request, while two are automatic when you apply.

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Work requirement exclusions

- Some individuals do not need to meet work requirements because they meet a current month exclusion.
- Current month exclusions include:
  - Foster youth or former foster youth under age 26
  - Pregnant or in 12-month postpartum period
  - Parent/caretakers of children under 14
  - Parent/caretaker of individual with disability
  - Tribal members
  - Incarcerated or within 90 days post-release period
  - In a SNAP (food assistance) household required to meet work requirements or compliant with TANF (cash assistance) work requirements
  - Disabled veteran with 100% total disability
  - Medically frail
  - Alcohol or substance use disorder (AUD/SUD) treatment

Medically frail

- Apple Health for Adults individuals whose disability or condition significantly impairs their ability to work do not need to meet work requirements. Individuals are considered medically frail when they have:
  - A substance use disorder (SUD)
  - A disabling mental disorder
  - A physical, intellectual, or developmental disability that significantly impairs their ability to perform one or more activities of daily living
  - A serious or complex medical condition
  - Blindness or disability (as defined in section 1614 of the Social Security Act)

Medically frail and IFR

- The IFR added several layers to the medically frail definition not outlined in H.R.1
  - Lookback period is 12 months
  - After January 1, 2028, self-attestation is accepted only once
  - Condition significantly impairs ability to comply with work requirements
  - Excludes individuals in recovery for 5 or more years due to being in stable recovery
  - Narrows definition of serious or complex medical condition

Inability to work methodology

- Diagnosis needs ongoing care and likely impacts an individual's ability to work
- Health care utilization indicates severity of the condition, including:
  - Inpatient hospitalization
  - High intensity office visits
  - A procedure
- Lookback period for verification is 12 months

6-month redeterminations

- Effective January 2027, Apple Health for Adults certification period is reduced from 12 months to six months
- Impacts roughly 611,677* individuals
  - Excludes American Indian and Alaska Native (AI/AN) individuals
- Additional burden for individuals who must manually renew their coverage
  - Today, approximately 20% must manually renew
  - Almost 80% are auto-renewed monthly by verifying eligibility with existing verification systems
- View the fact sheet (available in 15 languages)

*Caseload data from June 2026

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Retroactive coverage period reduction

- Individuals may apply for coverage before their application date when they have outstanding medical bills.
  - View the retroactive coverage fact sheet
    - Available in 15 languages
- Effective January 2027, the retroactive period is reduced from three months to:
  - One month for Apple Health for Adults
  - Two months for all other Apple Health programs
- Individuals with October medical bills will need to apply for retroactive coverage by December 2026.

H.R. 1 landing page

- Consolidates current resources, webpages, and materials.
  - hca.wa.gov/whats-changing-ah



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Other areas of interest

- Apple Health Expansion
- Gender affirming care
- Potential for budget cuts – anything that would help
- Prior authorization
- Primary care
- Pharmacy
- Prevention to chronic disease
- Opioid settlement funds and programs
- ER use

Questions

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Thank you

Questions? Want to get involved in the ALC? Contact melanie.golob@hca.wa.gov

https://public.govdelivery.com/accounts/WAHCA/subscriber/topics

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