



Analysis of Potentially Preventable Health Care Events of Florida Medicaid Enrollees

***Report to the Florida Legislature
October 2024***



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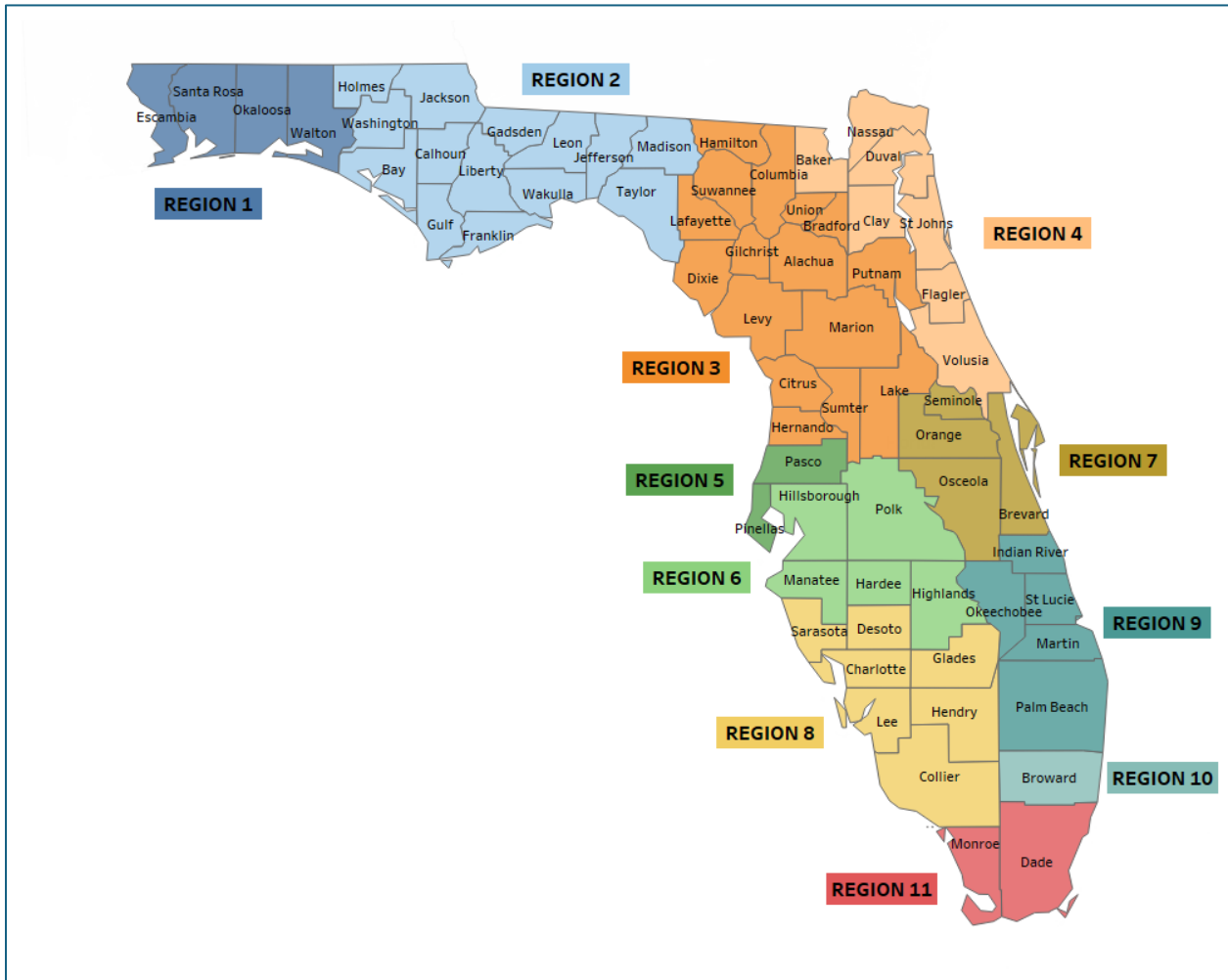
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List of Abbreviations

Abbreviation	Definition
ACRG3	Aggregated Clinical Risk Group, Third Level
APR DRG	All-Patient Refined Diagnosis Related Groups
CGS	Core Grouping Software
EAPG	Enhanced Ambulatory Patient Group
ED	Emergency Department
FMMIS	Florida Medicaid Management Information System
PACE	Program for All-Inclusive Care for the Elderly
PPA	Potentially Preventable Admissions
PPE	Potentially Preventable Events
PPR	Potentially Preventable Readmissions
PPV	Potentially Preventable Emergency Department Visits
SSI	Supplemental Security Income

Florida map with plan regions and counties



Potentially Preventable Events Background

As directed by the Florida Legislature and in accordance with Section 409.967(2)(e)4, Florida Statutes, the Agency for Health Care Administration (Agency) is required to create an Annual Report on Potentially Preventable Events (PPEs) in Florida Medicaid. This report is due October 1 of each calendar year and contains analysis and trends of PPEs. Specifically, statute states:

The agency shall annually produce a report entitled “Analysis of Potentially Preventable Health Care Events of Florida Medicaid Enrollees.” The report must include, but need not be limited to, an analysis of the potentially preventable hospital emergency department visits, hospital admissions, and hospital readmissions that occurred during the previous state fiscal year which may have been prevented with better access to primary care, improved medication management, or better coordination of care, reported by age, eligibility group, managed care plan, and region, including conditions contributing to each potentially preventable event or category of potentially preventable events. The agency may include any other data or analysis parameters to augment the report which it deems pertinent to the analysis. The report must demonstrate trends using applicable historical data. The agency shall submit the report to the Governor, the President of the Senate, and the Speaker of the House of Representatives by October 1, 2024, and each October 1 thereafter. The agency may contract with a third-party vendor to produce the report required under this subparagraph.

As the single state agency designated to administer Medicaid services to the nation’s fourth largest Medicaid population, the Agency, through its Medicaid program, seeks to provide access to cost-effective quality health care. Reduction of Potentially Preventable Events can be central to this. PPEs are encounters within the health care system determined to be potentially preventable for one or more reasons, including poor outpatient coordination management, limited use of primary care, lack of adequate care or ambulatory care coordination, and readmissions due to complications that result from previous care. By identifying, reducing, and eliminating these PPEs, the program can drive down health care costs, mitigate waste of resources and health care spending, and improve the overall quality of patient care. Moreover, by measuring incidence of PPEs among subpopulations the Agency can evaluate relative performance and identify specific ways to enhance administration of care and resources.

Reducing and eliminating PPEs requires the development of an effective method to analyze available administrative data on PPEs. Solventum (formerly 3M Health Information Systems) developed a suite of Core Grouping Software (CGS¹) to measure PPEs using eligibility and encounters. This software provides the tools to measure the impact of PPEs at varying levels of population granularity and across different health care settings. In addition, this methodology accounts for differences in population chronic health burden by including a means to risk adjust PPE rates.

¹ This report used proprietary software created, owned, and licensed by Solventum (formerly the 3M Health Information Systems). All copyrights in and to the Solventum software (including the selection, coordination, and arrangement of all codes) are owned by Solventum. All rights reserved.

The report evaluates three types of PPEs: potentially preventable emergency department visits (PPVs), potentially preventable admissions (PPAs), and potentially preventable readmissions (PPRs). Solventum's CGS defines PPVs as emergency department (ED) visits for conditions which may have otherwise been treated by a provider in a non-emergency setting. Higher rates of PPVs may follow from a lack of ambulatory care coordination or relatively higher rates of residential nursing home trauma-related emergency department visits. PPAs are hospital admissions for medical issues which could potentially have been addressed in an outpatient setting. Higher rates of PPAs may result from poor case management for patients with complex chronic conditions, or from inadequate patient safety measures in the nursing home care setting that led to trauma-related admissions. PPRs are re-hospitalizations within 30 days of a clinically related prior admission. Higher PPR rates may indicate a relatively high number of follow-up admissions or surgical procedures needed to address acute medical conditions or complications related to the prior admission.

This report describes trends in PPE rates from October 1, 2018, to September 30, 2023. The Agency analyzes PPE rates by Florida Medicaid managed care rate year which coincides with the Federal Fiscal Year (October 1 to September 30). PPE analyses for the previous state fiscal year 2023-2024 correspond with the analyses for the most recent complete rate year 2022-2023. In addition to statewide rates, analyses examine PPE rates by health plan, plan region, hospital, eligibility, and age. To enhance understanding of underlying factors behind statewide and subpopulation trends in PPE rates, the report also presents trends in the top 10 contributing conditions across the same time span. The analyses focus on services provided in Florida's Statewide Medicaid Managed Care program and do not consider fee for service since it accounts for a smaller and more variable portion of the Medicaid program. The PPE data in this report and additional detail are also available on the Agency's website in the form of an interactive dashboard²

²https://bi.ahca.myflorida.com/t/FLMedicaid/views/PPEDashboard01_08_24/AboutPPEs?

PPEs Methodology

PPEs were identified with Solventum's Core Grouping Software from administrative data in the Agency's Florida Medicaid Management Information System (FMMIS). Encounters were analyzed for PPV, PPA, and PPR events in each analysis year. Encounters were also collected for the year prior to the analysis year ("history year") to determine each enrollee's chronic illness burden and risk adjust PPE rates. The analysis period ran from October 1 to September 30 of each year, which covers the Florida Medicaid managed care rate year.

PPEs were analyzed for Medicaid enrollees who had full Medicaid coverage. Medically Needy, dual eligibles, and enrollees in either the Family Planning waiver or in PACE were excluded from the study. In addition, enrollees were included in analyses only if they were eligible for at least six months during the history year and three months in the analysis year allowing for discontinuities in enrollment. Encounters for enrollees who met the eligibility criteria were processed by the groupers in the CGS.

PPEs Risk-Adjustment

PPV and PPA risk-adjustments were based on the Clinical Risk Group model, which accounts for variability in chronic illness burden across different groups of enrollees. In PPV and PPA analyses, administrative data from the history year were used to assign enrollees to one mutually exclusive clinical group (ACRG3). Each ACRG3 is associated with a norm derived from data in the base year (calendar year 2019) that reflects the average cost of services incurred by an enrollee, compared to the costs of other ACRG3s. These ACRG3 norms are applied to the data in the analysis year to estimate the expected number of preventable at-risk events for each enrollee. PPR risk-adjustment used data from the analysis year and combined four factors: All-Patient Refined Diagnosis Related Groups (APR DRGs), severity of illness, mental health status, and age. Each combination of these four factors was associated with a norm from the base year to estimate the number of expected preventable at-risk readmissions.

Potentially Preventable Emergency Department Visits (PPVs)

Encounters for visits to an outpatient or ambulatory setting during the analysis year were assigned to an Enhanced Ambulatory Patient Group (EAPG) based on significant procedure, ancillary procedure, or principal diagnosis code. Each EAPG was assigned a weight reflecting the service costs relative to the average costs associated with a set of common ambulatory services. The PPV grouper determined which service records covered preventable at-risk ED events and the EAPG weight indicated the relative costliness of that event. The weighted number of actual PPVs was computed as the sum of the EAPG weights for at-risk ED events which the grouper deemed potentially preventable. This weighted count of actual PPVs incorporates the relative cost of potentially preventable emergency department visits into the final value.

Potentially Preventable Hospital Admissions (PPAs)

Encounters with an inpatient hospital admission in the analysis year were assigned to an All-Patient Refined Diagnosis Related Group (APR DRG) that uses the admission's principal diagnosis code or surgical procedure codes. APR DRGs consolidate the multitude of reasons for a hospital visit into a

manageable set of clinical categories. Each APR DRG was assigned a weight reflecting the relative cost and amount of hospital resources used, compared to the average cost and resource use of hospital services. Summing APR DRG weights for at-risk hospital admissions deemed to be potentially preventable by the PPA grouper delivered the number of weighted actual PPAs. This weighted count of actual PPAs incorporates the relative cost of potentially preventable hospital admissions into the final value.

Potentially Preventable Hospital Readmissions (PPRs)

The PPR grouper analyzed encounters in the analysis year for hospital admissions and flagged the ones that it considered at-risk preventable readmissions. PPR measures are unweighted, unlike PPV (EAPG) and PPA (APR DRG) measures, and do not differentiate between the cost and resources required to provide care to a patient upon readmission to the hospital. Actual PPRs were recorded as the count of at-risk admissions leading to at least one readmission deemed by the PPR grouper to be potentially preventable.

Statewide Rate

A statewide rate was calculated for each PPE. These statewide rates serve as both global measures of health care preventables and points of reference for grouped PPE rates (e.g., health plans). The statewide rate is expressed as the number of preventable events over the number of enrollee months for the year. This approach normalizes PPE rates to account for variable Medicaid populations year-to-year. The statewide PPV rate is the sum of the EAPG weighted preventable at-risk emergency department visits divided by the sum of the enrollee months in the analysis period. Similarly, the statewide PPA rate is the sum of the APR DRG weighted preventable at-risk hospital admissions divided by the sum of the enrollee months in the analysis period. The statewide PPR rate is the count of preventable at-risk initial hospital admissions that resulted in at least one hospital readmission divided by the count of all at-risk hospital admissions. The statewide PPV and PPA rates are weighted by the costliness of the events, whereas the statewide PPR rate is unweighted.

Rates Reported

PPVs and PPAs

Risk-adjusted weighted PPV and PPA rates were estimated by health plan, plan region, hospital, eligibility group and age. These rates were calculated by dividing a weighted count of actual events by a count of expected events, providing the number of potentially preventable events accounting for differences in cost and illness burden. Multiplying these rates by the statewide rate and a factor of 1,000 provided standardized PPV and PPA rates, expressed as the number of risk-adjusted weighted potentially preventable events per 1,000 enrollee months.

For facility level PPV and PPA rates, there was no member population to provide risk-adjustment. Instead, a weighted percentage was calculated by dividing the weighted count of actual events (i.e., at-risk events determined to be potentially preventable by the groupers) by the weighted count of at-risk events.

PPRs

Risk-adjusted PPR rates were estimated by health plan, plan region, hospital, eligibility group and age. These rates were calculated by dividing the unweighted count of admissions that resulted in at least one potentially preventable readmission by the expected admissions determined to be at-risk for readmission. These rates were standardized by factoring in the statewide rate and multiplying by a factor of 1,000 to obtain the number of risk-adjusted potentially preventable readmissions per 1,000 admissions.

Top 10 Conditions

The top 10 conditions contributing to the statewide PPV and PPA rates during the analysis period were based on a ranking of the weighted counts of actual events by EAPG and APR DRG, respectively. For PPRs, the top 10 conditions were based on a ranking of the counts of potentially preventable readmissions for each APR DRG.

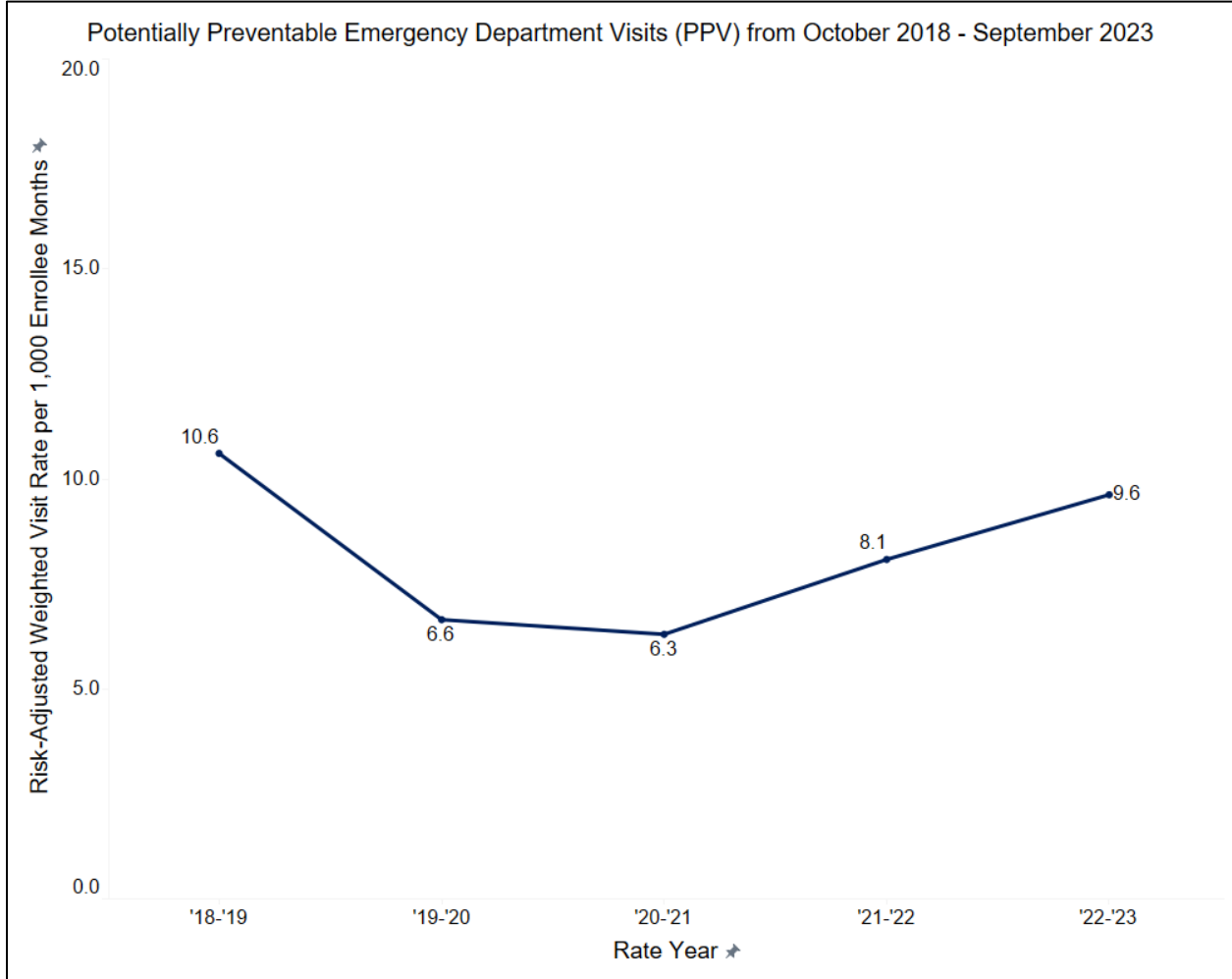
Potentially Preventable Emergency Department Visits (PPVs)

Potentially preventable ED visits are associated with ambulatory or residential nursing care sensitive conditions, that could have been treated in a lower-cost care setting or avoided all together. PPVs are health events that could have been prevented with appropriate utilization of care or improved ambulatory care coordination. For example, PPVs may be reduced or eliminated by increasing utilization of primary care or urgent care facilities, improving patient monitoring and medication management, and reducing traumatic injuries in residential nursing care facilities.

Monitoring PPVs and assessing changes in PPVs over time provides a measure of health care quality. Lower PPV rates indicate better performance (lower incidence of preventable ED visits), whereas higher rates indicate opportunities to improve care access and quality through reduced ED visits. The next series of figures compares data on PPVs. The analyses determine the statewide PPV rate and regional PPV rates, rank the top 10 health conditions that contribute to PPVs, break down PPV rates for health plans and plan regions and finally, examine PPV rates for different eligibility and age groups. This report evaluates PPV rates from rate year 2018-2019, the beginning of the second Statewide Medicaid Managed Care contract period, to the most recent complete rate year 2022-2023.

1. PPVs and STATEWIDE RATES

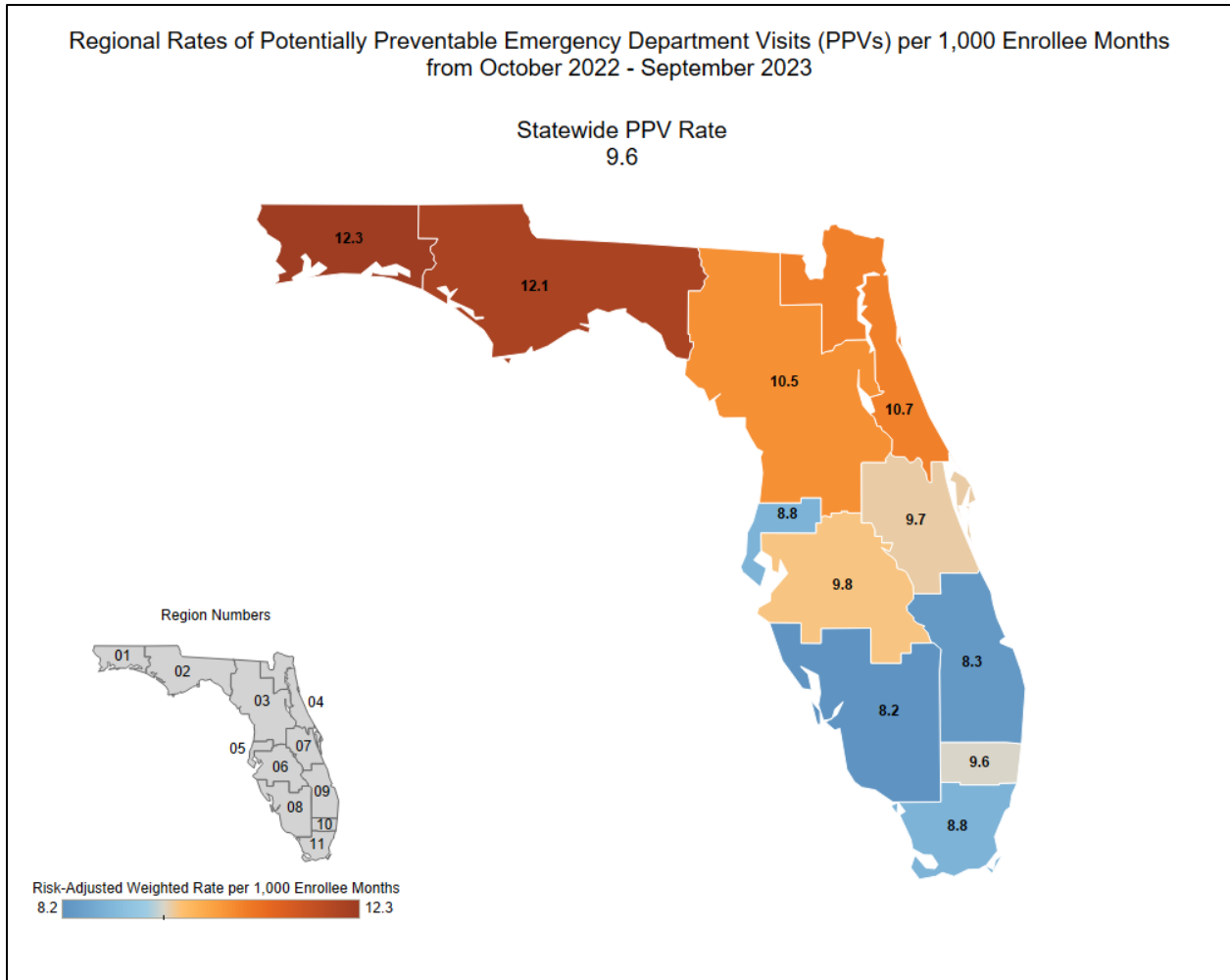
What is the statewide risk-adjusted weighted PPV rate per 1,000 enrollee months and how does it change from one rate year to the next?



The statewide risk-adjusted weighted PPV rate per 1,000 enrollee months varied between 6.3 and 10.6 across rate years. Potentially preventable emergency department visits decreased from 2018-2019 to 2020-2021 (-4.3; -40.5%), followed by an increase between 2020-2021 and 2022-2023 (+3.3; +52.3%). Overall, the statewide PPR rate showed a decreasing trend from 10.6 in 2018-2019 to 9.6 in 2022-2023 (-1.0; -9.4%).

2. PPVs and 2022-2023 REGIONAL MAP

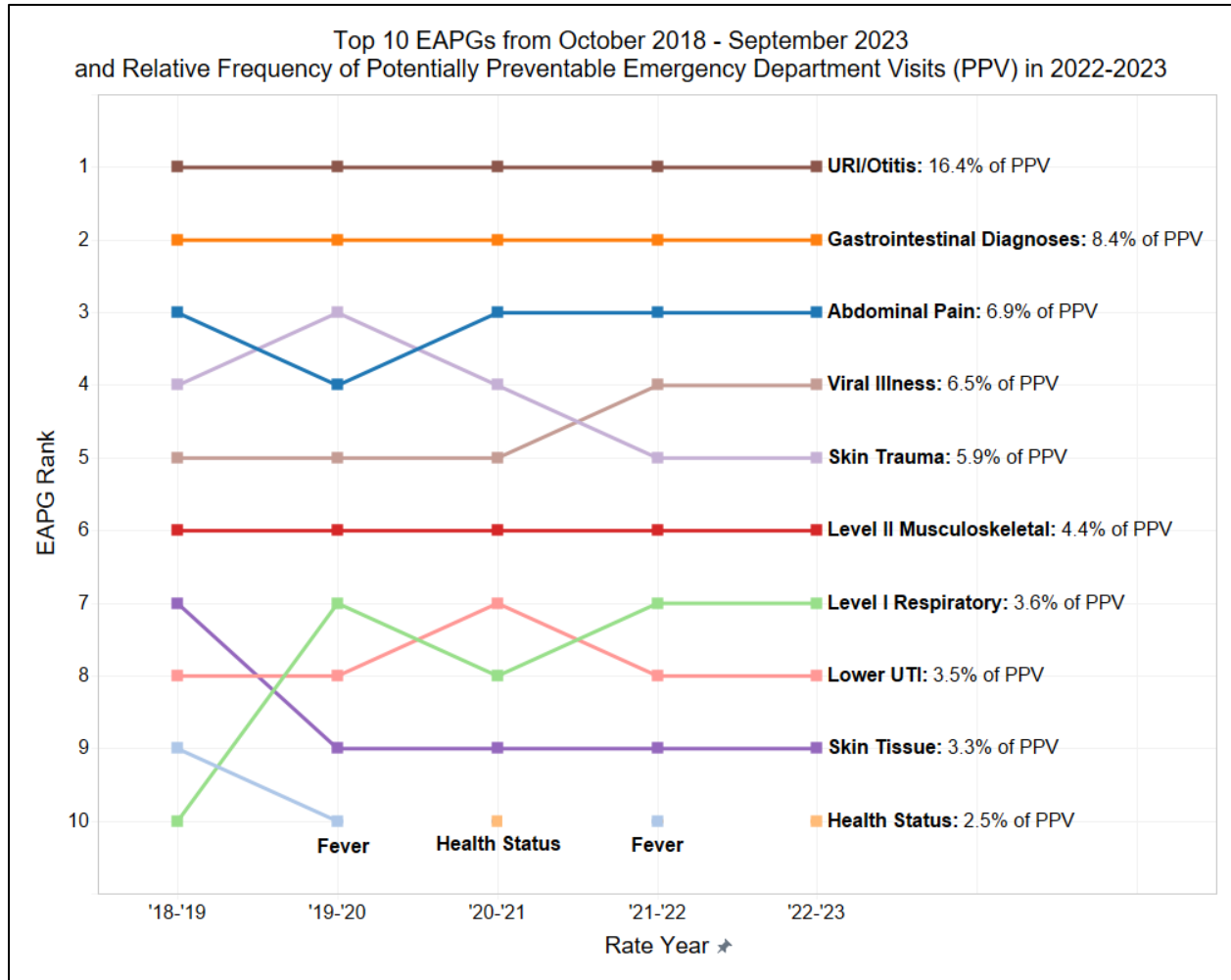
From October 1, 2022, to September 30, 2023, what is the risk-adjusted weighted PPV rate per 1,000 enrollee months for each plan region and how does it compare to the statewide risk-adjusted weighted PPV rate?



The risk-adjusted weighted PPV rate per 1,000 enrollee months exceeded the statewide risk-adjusted weighted rate in six regions. Regions seven (+1.0%), six (+2.1%), three (+9.4%), four (+11.5%), two (26.0%), and one (+28.1%) showed a higher PPV rate. PPV rates were lower than the statewide rate in regions 10 (+0.0%), 11 (-8.3%), five (-8.3%), nine (-13.5%) and eight (-14.6%). The average relative cost of potentially preventable ED visits was at the statewide level in regions seven and 10, highest in region one, and lowest in region eight.

3. PPVs and TOP 10 HEALTH CONDITIONS

What are the health conditions that cause potentially preventable Emergency Department visits? The PPV analysis addresses this question by using the Enhanced Ambulatory Patient Group associated with an ED visit, ranking EAPGs for each rate year, and tracking changes in rank order of the top 10 EAPGs by rate year.

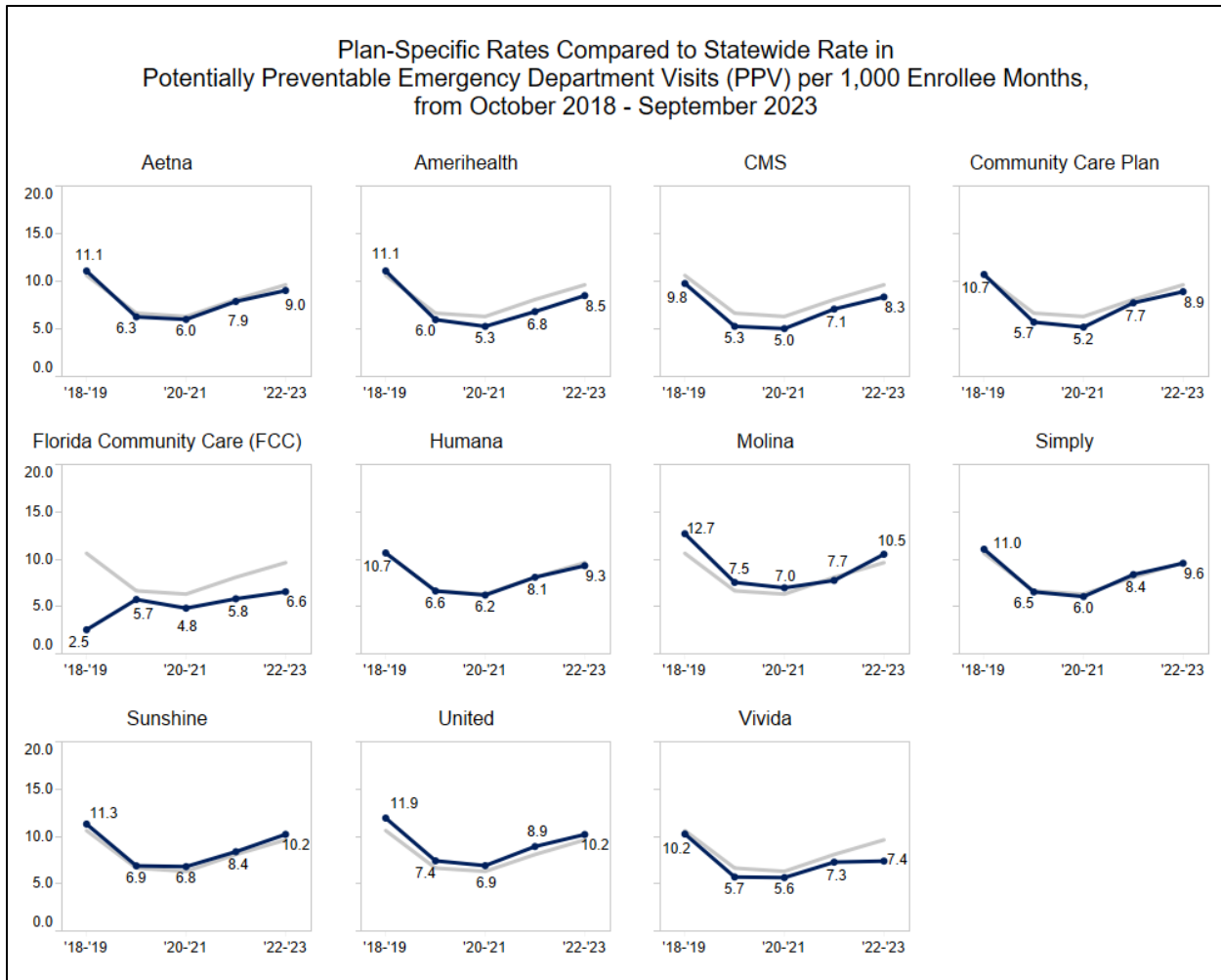


Note: Health status refers to EAPG 871, signs, symptoms & other factors influencing health status

The top 10 potentially preventable conditions accounted for 61.4% of potentially preventable ED visits in 2022-2023, with ear/nose/throat infections taking the top spot (16.4% of PPVs). The ranking of preventable conditions within each year's top 10 remained consistent across rate years; six conditions changed by one rank or less (upper respiratory infection/otitis; gastrointestinal diagnoses; abdominal pain; viral illness; level 2 musculoskeletal conditions; lower urinary tract infection). Skin related health conditions (skin trauma; skin tissue) decreased in rank over the rate years, whereas the level I respiratory EAPG increased. In total, 11 EAPGs were represented in the top 10 EAPGs across rate years, with fever and health status moving in and out of 10th place between 2020-2021 and 2022-2023.

4. PPVs and HEALTH PLANS

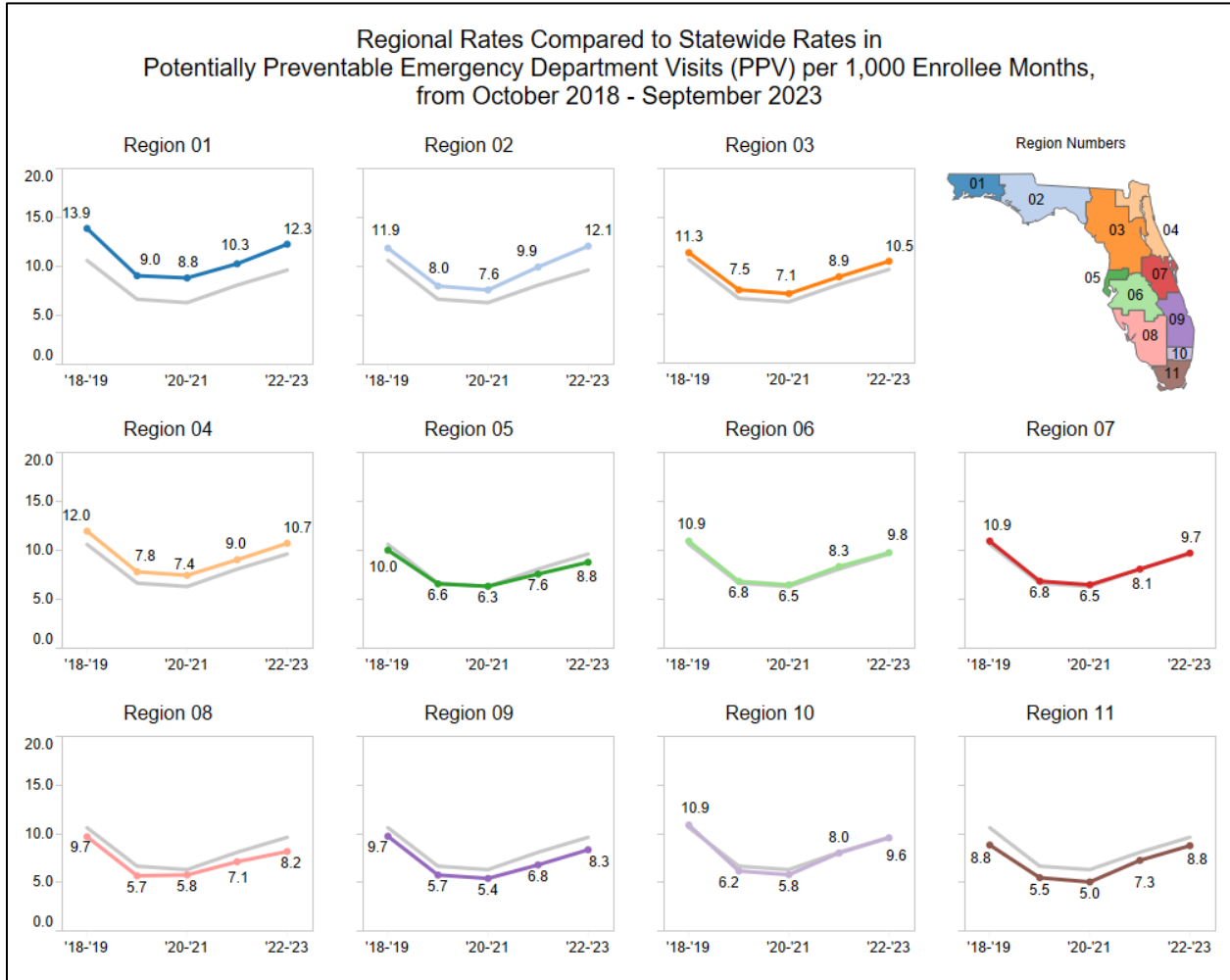
What is the risk-adjusted weighted PPV rate per 1,000 enrollee months for health plans and how does it change year to year and compare to the statewide rate? Health plans with rates below the statewide rate (rate values placed below the trend line) exhibit lower average relative cost than health plans whose rates exceed the statewide rate (rate values placed above the trend line). The figure shows PPVs for five rate years from 2018-2019 to 2022-2023.



Most plans experienced similar year-to-year changes in risk-adjusted weighted PPV rates per 1,000 enrollee months, with values ranging from 2.5 to 12.7. Most health plans' year-to-year changes in PPVs conformed to the statewide rate trend, with the lowest rate in rate year 2020-2021. The PPR rate for each health plan tended to exhibit a relatively consistent difference with the statewide rate over the rate years which put the plan PPV rate at, below, or above the statewide rate.

5. PPVs and PLAN REGIONS

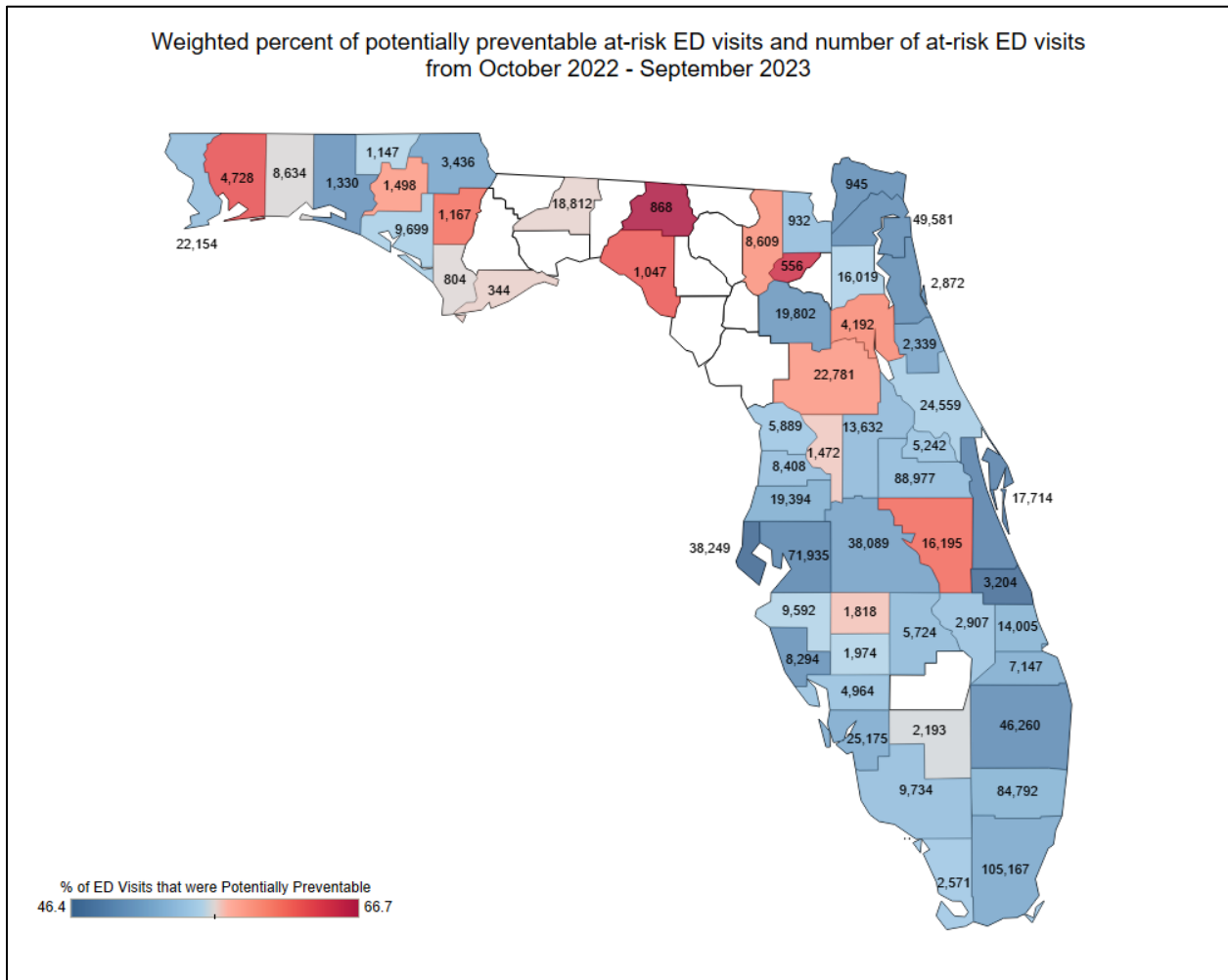
Do health plan regions show different trends in risk-adjusted weighted PPV rates per 1,000 enrollee months? This analysis assesses how PPV rates within plan regions compare to the statewide PPR rate. Rate values are placed below or above the region trendline to indicate higher or lower performance. The figure shows PPVs for five rate years from 2018-2019 to 2022-2023.



All plan regions experienced year-to-year changes in risk-adjusted weighted PPV rates per 1,000 enrollee months consistent with the statewide rate. Some regions saw year-to-year PPV rates that were higher than the statewide rate, including regions one, two, three, and four. Regions, eight, nine, and 11 maintained PPV rates lower than the statewide rates over the rate years.

6. PPVs and HOSPITAL COUNTIES

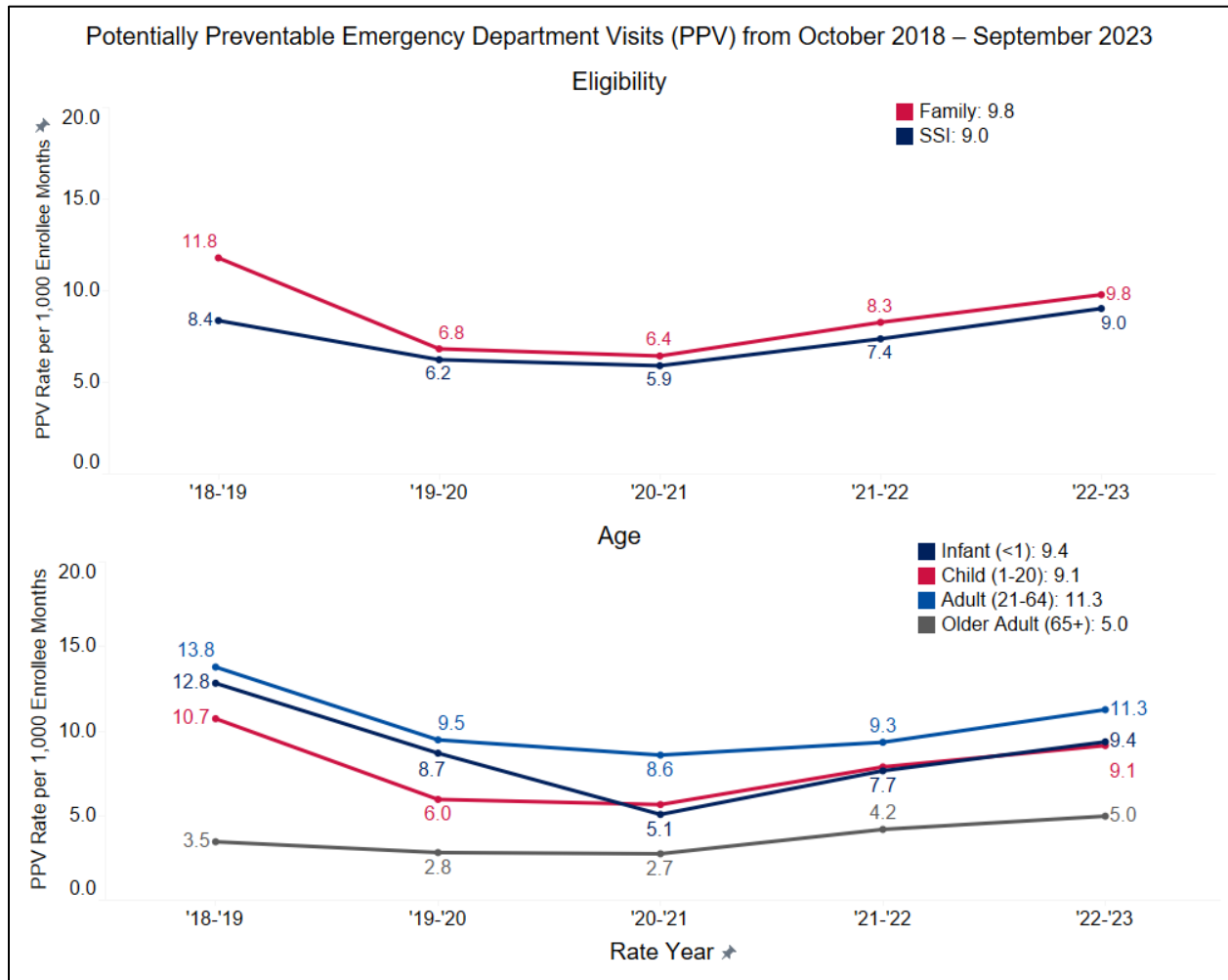
Does the weighted percent of potentially preventable at-risk ED visits vary among hospitals? To assess the range in weighted percent of potentially preventable at-risk ED visits among hospitals, this analysis grouped hospitals by county. A county-level map for the 2022-2023 rate year shows the weighted percent of PPVs per hospital county in color (lower rates in blue and higher rates in red). Numbers in this hospital county map show the total number of at-risk ED visits in each county except for counties with fewer than 30 at-risk events. **Appendix 1** lists each hospitals' weighted percent of potentially preventable at-risk ED visits summarized by county for each rate year from 2018-2019 to 2022-2023.



The weighted percent of potentially preventable at-risk ED visits (shown in color) ranged between 46.4% and 66.7% across Florida's counties with hospitals. Hospital counties with a higher percent tended to be in North and Central Florida compared to counties with a lower percent. The lower the weighted percent of potentially preventable at-risk ED visits for a hospital county, the higher the number of at-risk ED visits (printed on the hospital county map). A lower percent was generally seen in counties with higher population density and greater urban development.

7. PPVs and ELIGIBILITY and AGE

Do risk-adjusted weighted PPV rates per 1,000 enrollee months, from October 1, 2022, to September 30, 2023, vary by eligibility or age? For this analysis Medicaid eligibility was divided into SSI- and Family-related eligibility. The Medicaid enrollee age range was captured in four groups: infants (< 1 year old), children (1-20 years old), adults (21-64 years old), and older adults (65+ years old).



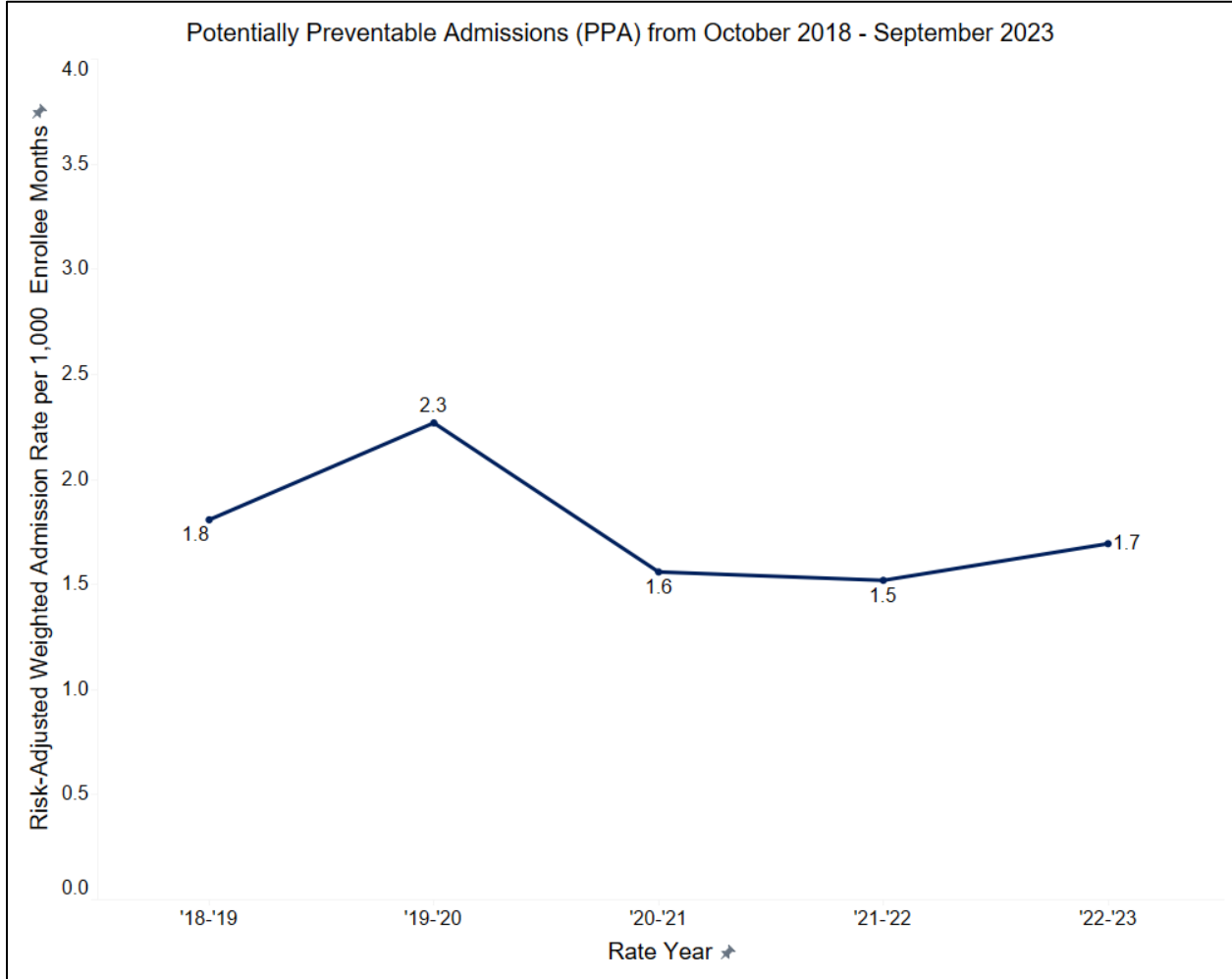
Potentially Preventable Hospital Admissions (PPAs)

Potentially preventable hospital admissions are inpatient hospital admissions for health conditions that could have been prevented by treating the health condition in an outpatient setting. These admissions could have been avoided with better patient care coordination, more efficient ambulatory care, or more utilization of outpatient care.

Monitoring PPAs and assessing changes in PPAs over time provides a measure of health care quality. The next series of figures compares data on PPAs. Lower PPA rates indicate better performance (lower incidence of preventable hospital admissions), whereas higher rates indicate opportunities to improve care access and quality through reduced admissions. The analysis provides the statewide PPA rate and regional rates, ranks the top 10 health conditions that contribute to PPAs, breaks down PPA rates for health plans and plan regions, and finally, examines PPA rates for different eligibility and age groups. The report evaluates PPA rates from rate year 2018-2019, the beginning of the second Statewide Medicaid Managed Care contract period, to the most recent complete rate year (2022-2023).

8. PPAs and STATEWIDE RATES

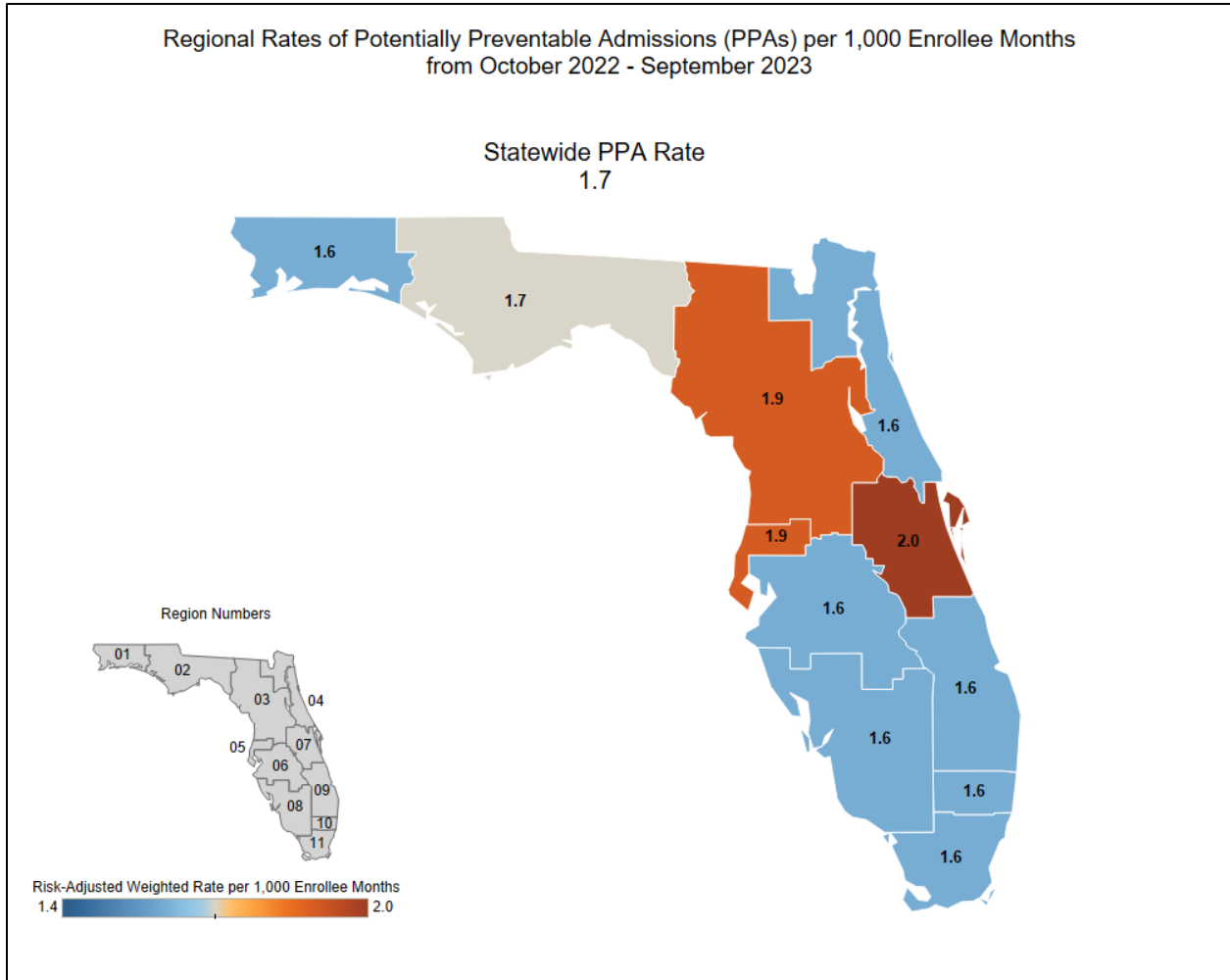
What is the statewide risk-adjusted weighted PPA rate per 1,000 enrollee months and how does it change from one rate year to the next?



The statewide risk-adjusted weighted PPA rate per 1,000 enrollee months varied between 1.5 and 2.3 across rate years. The largest increase in potentially preventable admissions occurred between 2018-2019 and 2019-2020 (+27.8%), followed by the largest decrease in 2020-2021 (-30.4%). The rate gradually decreased to 1.5 in 2021-2022 (-6.3%), before increasing to 1.7 (+13.3%) in 2022-2023. Overall, the statewide PPA rate slightly decreased from 1.8 in 2018-2019 to 1.7 in 2022-2023 (-5.6%).

9. PPAs and 2022-2023 REGIONAL MAP

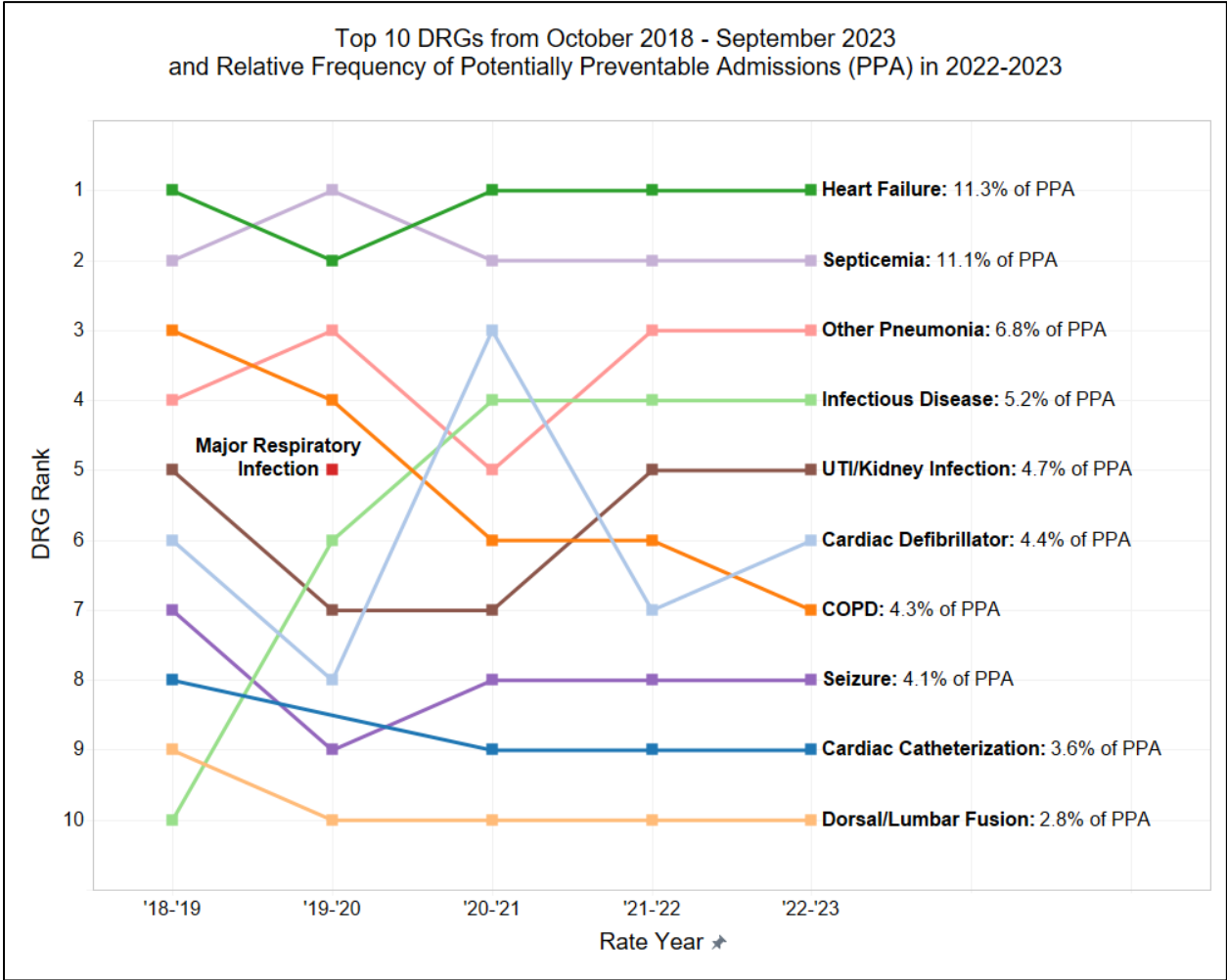
What is the risk-adjusted weighted PPA rate per 1,000 enrollee months, from October 1, 2022, to September 30, 2023, for each plan region and how does it compare to the statewide risk-adjusted weighted PPA rate?



The risk-adjusted weighted PPA rate per 1,000 enrollee months exceeded the statewide risk-adjusted weighted rate in three regions. Regions three (+11.8%), five (+11.8%), and seven (+17.6%) showed a higher PPA rate. PPA rates were lower than the statewide rate in regions one (-5.9%), four (-5.9%), six (-5.9%), eight (-5.9%), nine (-5.9%), 10 (-5.9%), and 11 (-5.9%). The average relative cost of potentially preventable admissions was at the statewide level in region two, highest in region seven, and lowest in regions one, four, six, eight, nine, 10, and 11.

10. PPAs and TOP 10 HEALTH CONDITIONS

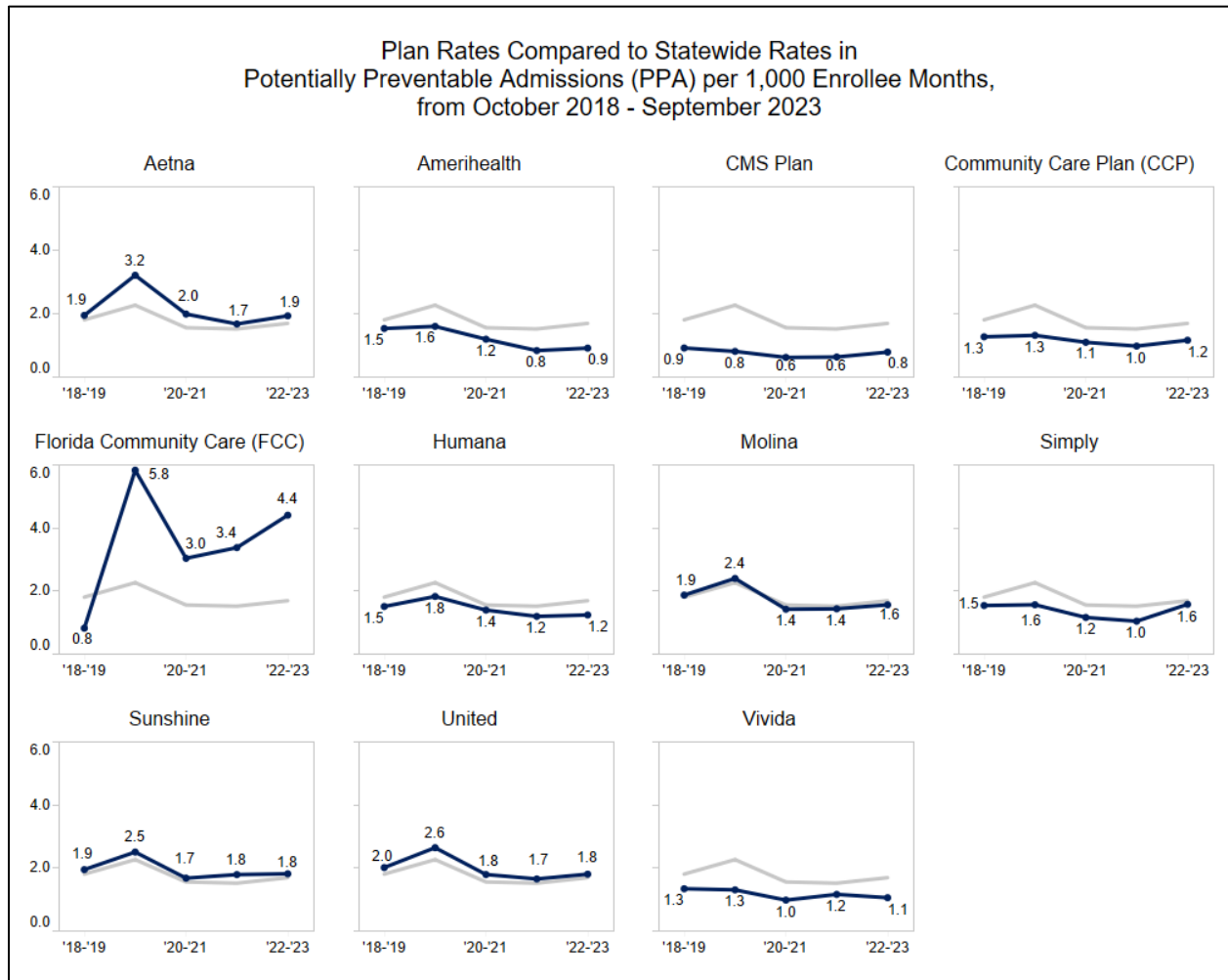
What are the health conditions that result in potentially preventable hospital admissions? The PPA analysis used the Diagnosis Related Group associated with a hospital admission, identified the top 10 DRGs for each rate year, and tracked changes in rank order by rate year.



The top 10 potentially preventable conditions accounted for 58.3% of potentially preventable hospital admissions in 2022-2023, with heart failure taking the top spot (11.3% of PPAs). Minor changes to the top (heart failure, septicemia, other pneumonia) and bottom ranked potentially preventable conditions across rate years occurred (urinary tract infection/kidney infection, seizure, cardiac catheterization, dorsal/lumbar fusion). COPD dropped out of the top three DRGs and was the sixth most frequent DRG in 2022-2023. Infectious disease climbed from the 10th most frequent DRG in 2018-2019 to fourth in 2022-2023. Major respiratory infection was only represented in the top 10 in rate year 2019-2020, replacing cardiac catheterization.

11. PPA and HEALTH PLANS

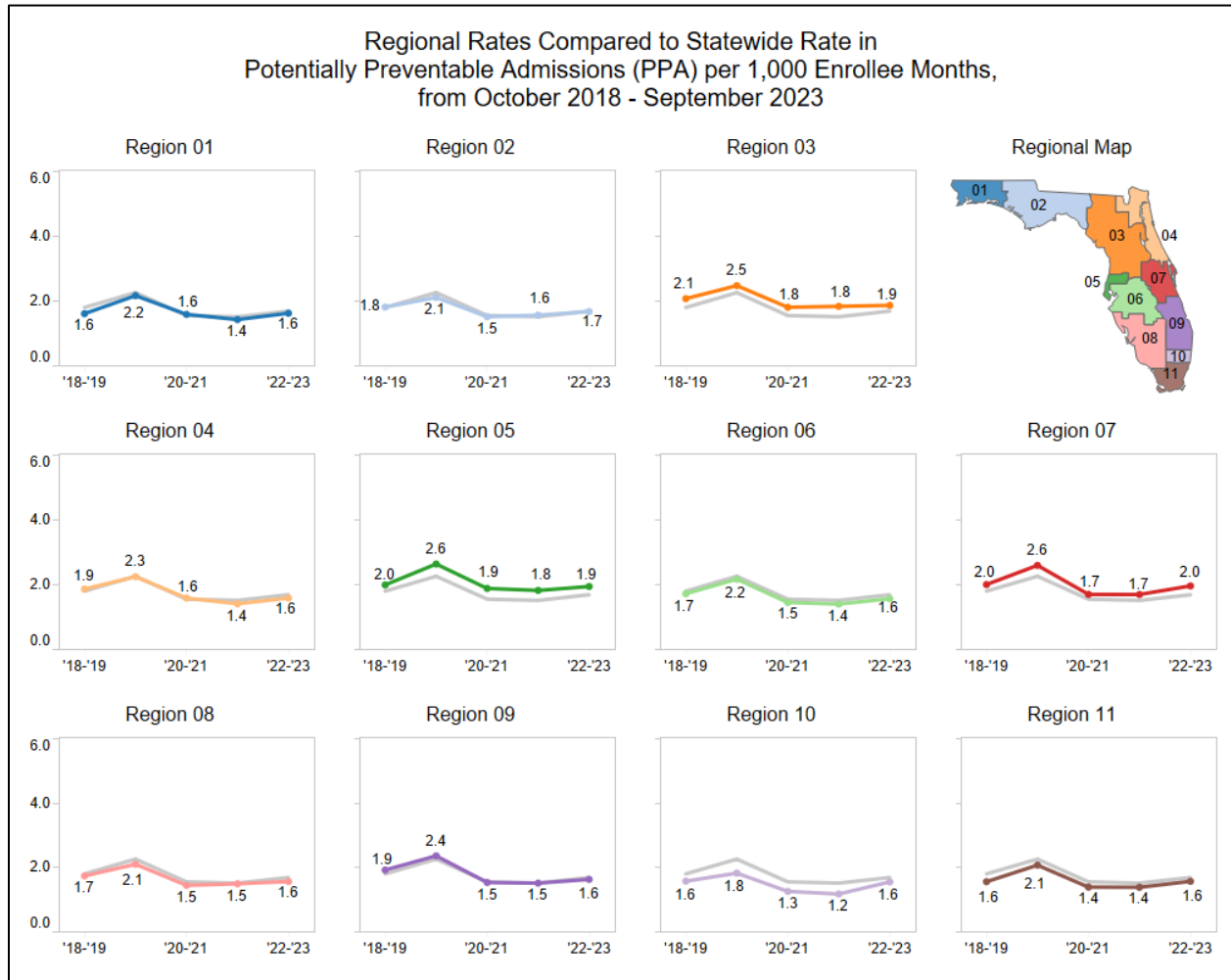
What is the risk-adjusted weighted PPA rate per 1,000 enrollee months for health plans and how does it change year to year and compare to the statewide rate? Health plans with rates below the statewide rate (rate values placed below the trend line) exhibit lower average relative cost than health plans whose rates exceed the statewide rate (rate values placed above the trend line). The figure shows PPAs for five rate years, from 2018-2019 to 2022-2023.



This data shows variability in the risk-adjusted weighted PPA rates per 1,000 enrollee months, both across and within health plans. PPAs varied from less than one to nearly six potentially preventable hospital admissions per 1,000 enrollee months over the rate years. Year-to-year PPA rate changes for most plans aligned with the statewide rate trend. Some of the plans consistently showed lower rates than the statewide rate over the rate years and others showed higher rates.

12. PPAs and PLAN REGIONS

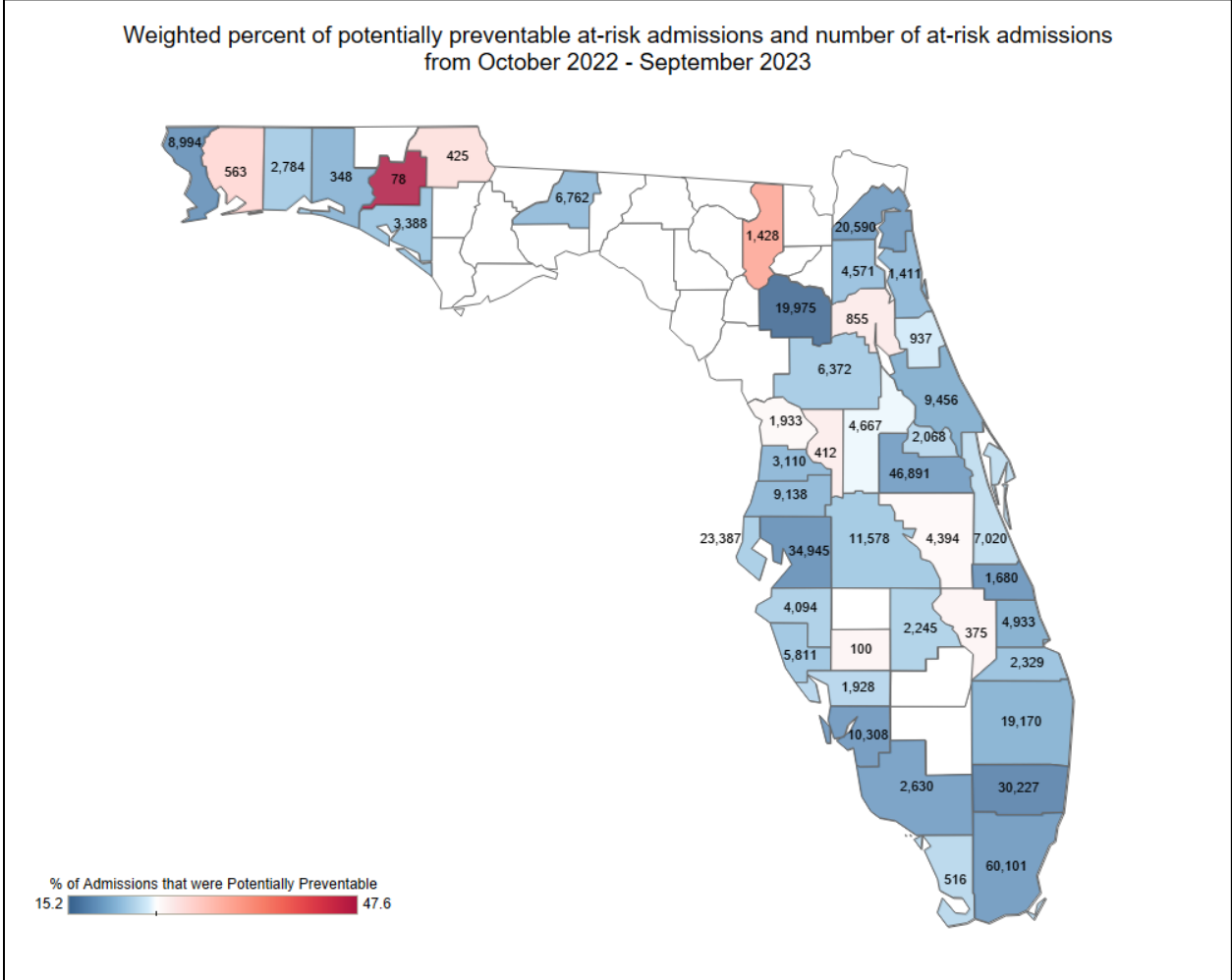
Do risk-adjusted weighted PPA rates per 1,000 enrollee months differ among health plan regions? This analysis assesses how PPA rates within a region compared to the statewide PPA rate with rate values placed below or above the region trendline, indicating higher or lower average relative cost. The figure shows PPAs for five rate years from 2018-2019 to 2022-2023.



Risk-adjusted weighted PPA rates per 1,000 enrollee months for specific plan regions tended to conform to the overall statewide trend. Several regions experienced rates consistently higher and lower year-to-year compared to the statewide rate. In regions three, five, and seven, PPAs were higher than the statewide rate in each year measured. Conversely, regions one, two, six, eight, 10, and 11 typically experienced lower rates of PPA than observed statewide.

13. PPAs and HOSPITAL COUNTIES

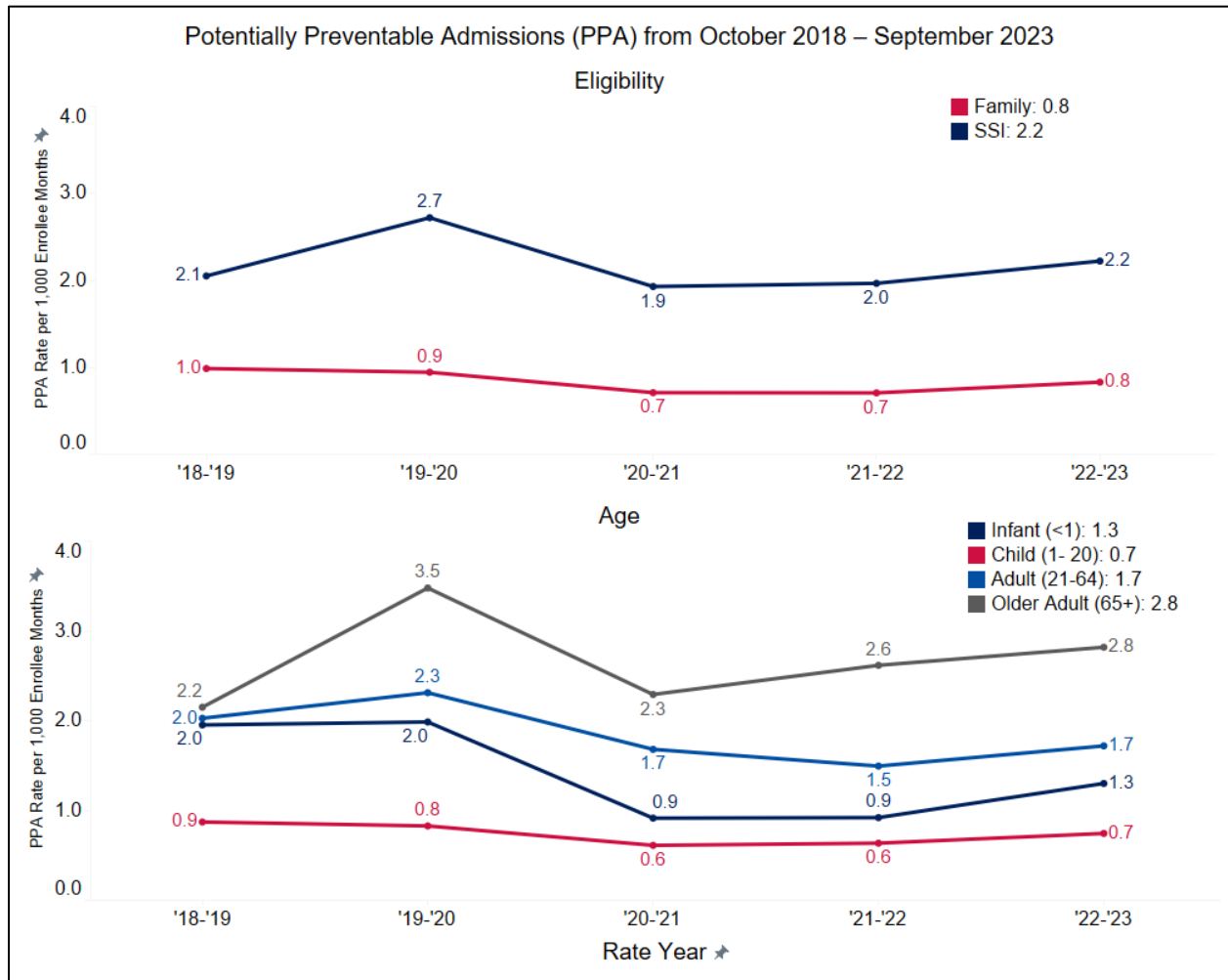
Does the weighted percent of potentially preventable at-risk admissions vary among hospitals? To assess the range in weighted percent of potentially preventable at-risk admissions among hospitals, this analysis grouped hospitals by county. A county-level map for the 2022-2023 rate year shows the weighted percent of PPAs per hospital county by color (lower rates in blue and higher rates in red). Numbers in this hospital county map show the total number of at-risk admissions in each county except for counties with fewer than 30 at-risk events. **Appendix 2** lists hospitals' weighted percent of potentially preventable at-risk admissions summarized by county for each rate year from 2018-2019 to 2022-2023.



The weighted percent of potentially preventable at-risk hospital admissions (shown in color) ranged between 15.2% and 47.6% across Florida's counties with hospitals. Hospital counties with a higher percent tended to be in North Florida compared to counties with a lower percent. The lower the weighted percent of potentially preventable at-risk admissions for a hospital county, the higher the number of at-risk admissions (printed on the hospital county map). A lower percent was generally seen in counties with higher population density and greater urban development.

14. PPAs and ELIGIBILITY and AGE

Do risk-adjusted weighted PPA rates per 1,000 enrollee months, from October 1, 2022, to September 30, 2023, vary by eligibility or age. For this analysis Medicaid eligibility was divided into SSI- and Family-related eligibility. The Medicaid enrollee age range was captured in four groups: infants (< 1 year old), children (1-20 years old), adults (21-64 years old), and older adults (65+ years old).



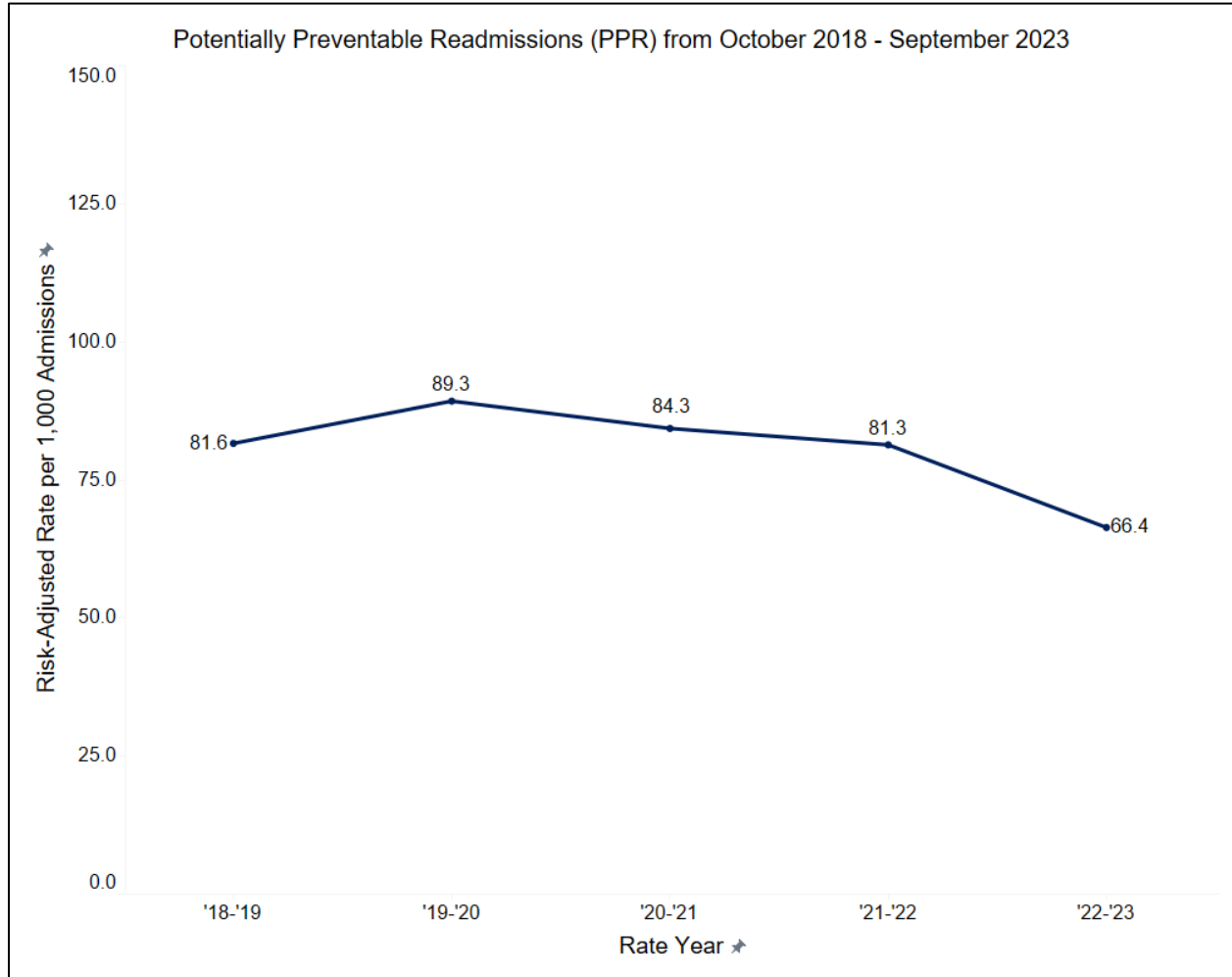
Potentially Preventable Hospital Readmissions (PPRs)

Potentially preventable hospital readmissions are hospital admissions that are clinically related to an initial hospital admission occurring within the past 30 days, that could have been prevented with discharge planning, post-discharge follow-up, or improvements to care quality and coordination.

Monitoring PPRs and assessing changes in PPRs over time provides a measure of health care quality. Lower PPR rates indicate better performance (lower incidence of preventable hospital readmissions), whereas higher rates indicate opportunities to improve the quality of care through reduced readmissions. The next series of figures presents data on PPRs, including the statewide PPR rate and regional rates, the top 10 health conditions that contribute to PPRs, PPR rates for health plans and plan regions and finally, PPR rates for different eligibility and age groups. This report evaluates PPR rates from rate year 2018-2019, the beginning of the second Statewide Medicaid Managed Care contract period, to the most recent complete rate year (2022-2023).

15. PPRs and STATEWIDE RATES

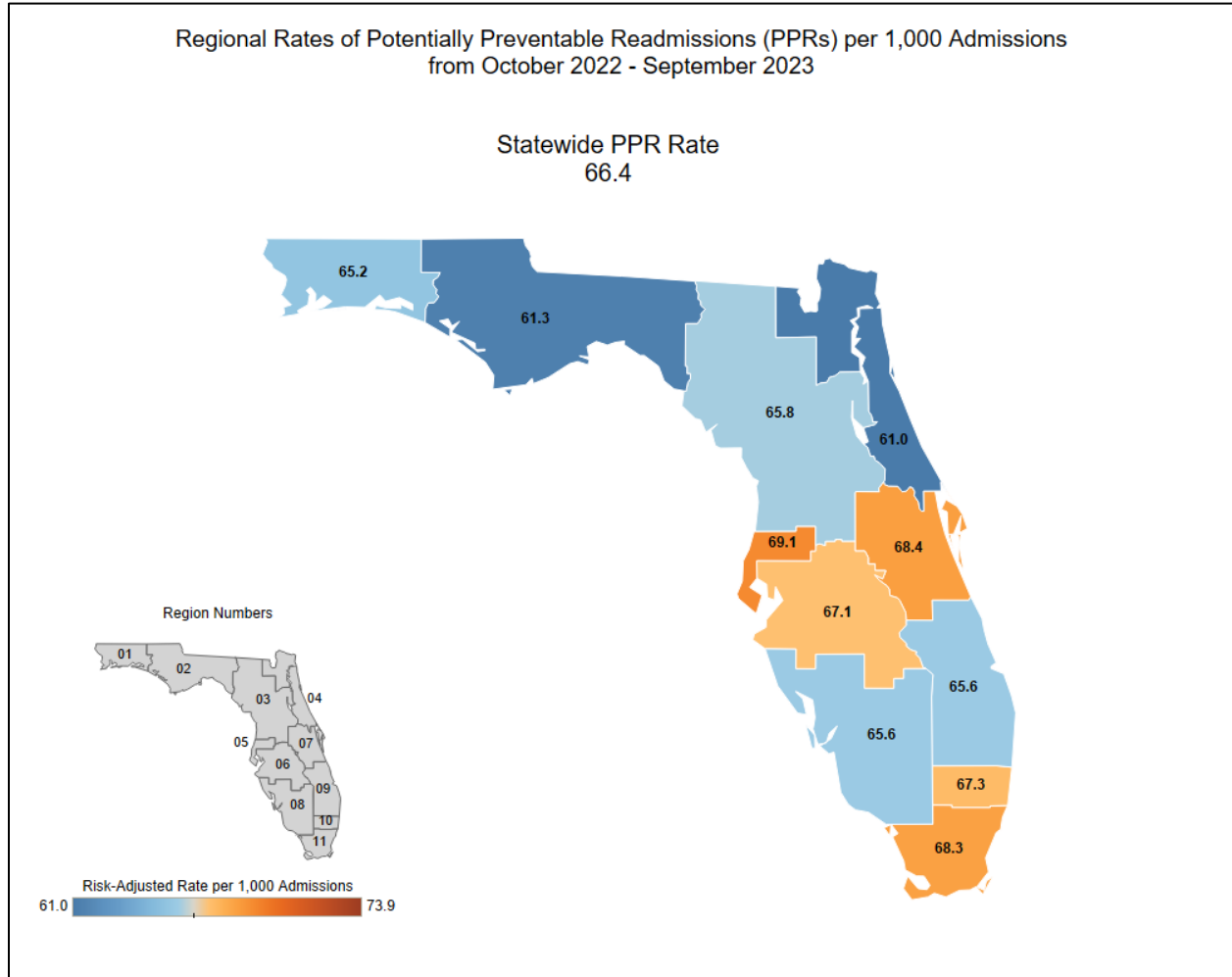
What is the statewide risk-adjusted PPR rate per 1,000 admissions and how does it change from one rate year to the next?



The statewide risk-adjusted PPR rate per 1,000 admissions varied between 66.4 and 89.3 across rate years. The potentially preventable readmission rate increased between 2018-2019 and 2019-2020 (+9.4%). This PPR rate increase was offset by a similar size decrease (-9.0%) between 2019-2020 (89.3) and 2021-2022 (81.3). The PPR rate continued to decrease in 2022-2023 (-18.3%). Overall, the statewide PPR rate showed a decrease from 81.6 in 2018-2019 to 66.4 in 2022-2023 (-18.6%).

16. PPRs and 2022-2023 REGIONAL MAP

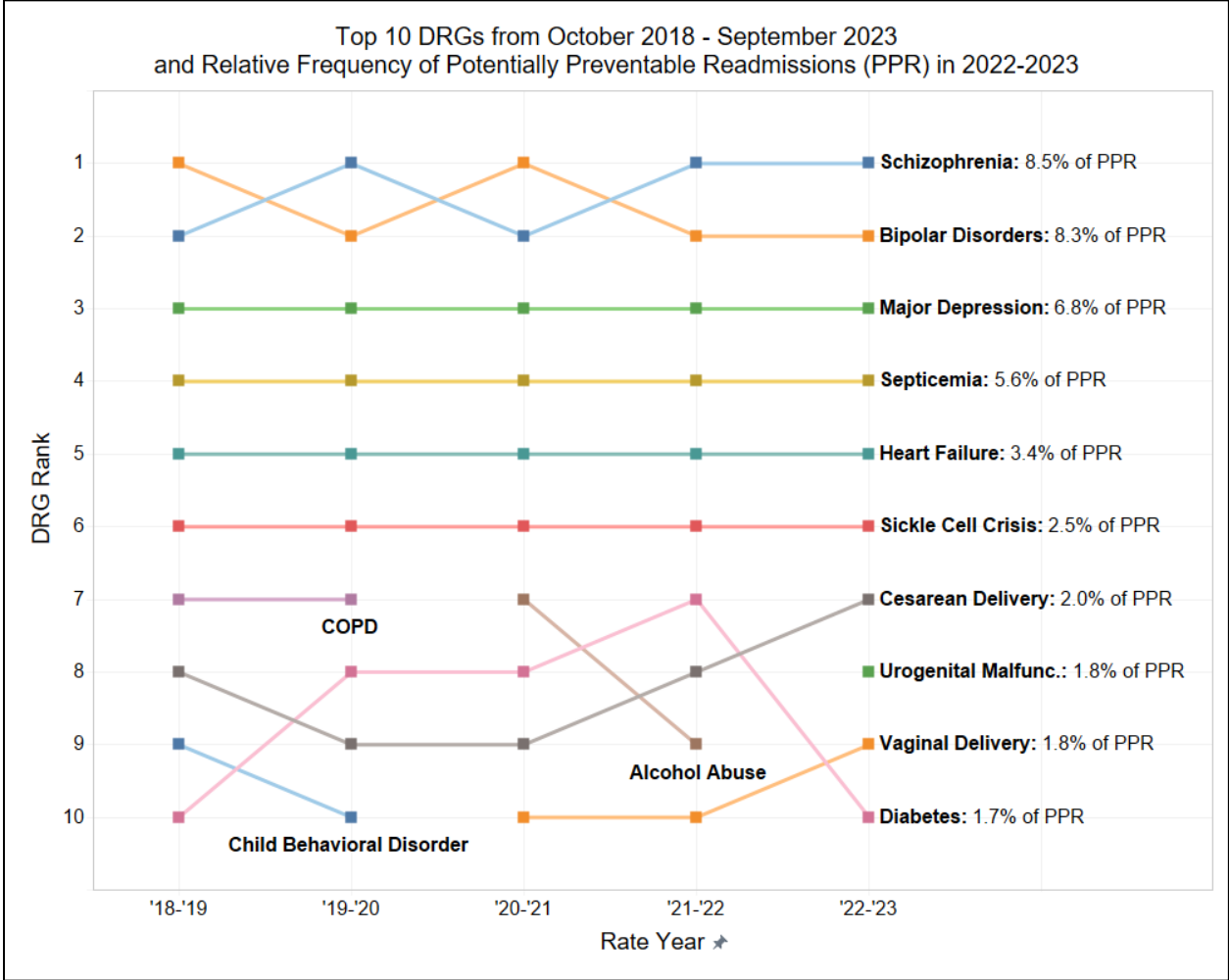
What is the risk-adjusted PPR rate per 1,000 admissions for each plan region from October 1, 2022, to September 30, 2023, and how does it compare to the statewide risk-adjusted PPR rate?



The risk-adjusted PPR rate per 1,000 admissions exceeded the statewide risk-adjusted rate in five regions. Regions six (+1.1%), 10 (+1.4%), 11 (+2.9%), seven (+3.0%), and five (4.1%) showed a higher PPR rate. PPR rates were lower than the statewide rate in regions three (-0.9%), eight (-1.2%), nine (-1.2%), one (-1.8%), two (-7.7%) and four (-8.1%). The occurrence of potentially preventable readmissions was highest in region five and lowest in region four.

17. PPRs and TOP 10 HEALTH CONDITIONS

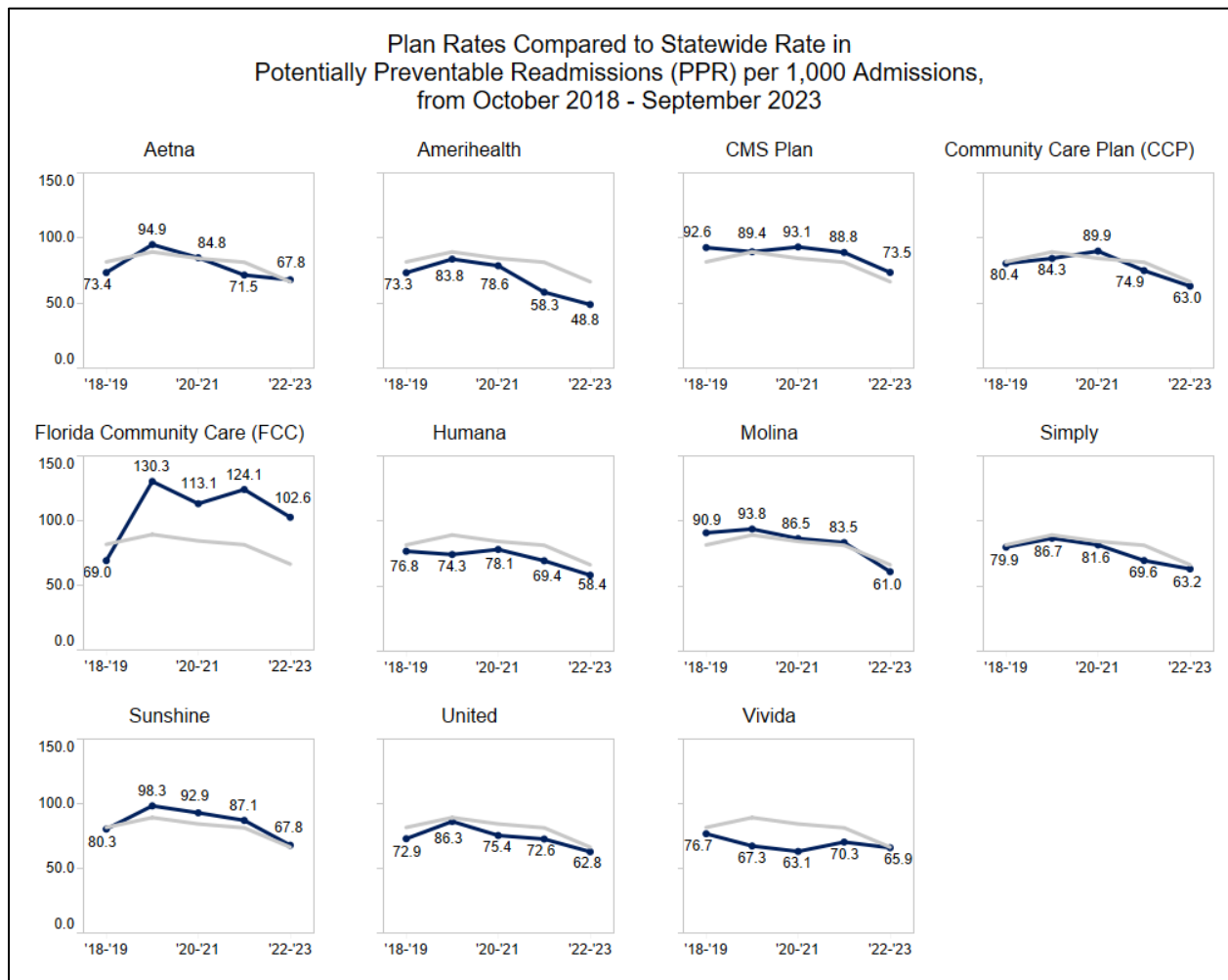
How do health conditions contributing to potentially preventable hospital readmissions change over time? The PPR analysis examined this question by using the Diagnosis Related Group associated with a hospital readmission, ranking DRGs for each rate year, and tracking changes in rank order of the top 10 DRGs by rate year.



In rate year 2022-2023, the top 10 conditions leading to a potentially preventable readmission accounted for 42.4% of all potentially preventable readmissions, with mental health disorders (schizophrenia, bipolar disorders, major depression) taking the top three spots (23.6% of PPRs). The data reflects relatively stable ranks for the top six conditions with the bottom four conditions exhibiting much higher variability in ranking. Septicemia ranked the highest among somatic disorders in fourth place followed by heart failure in fifth place. Rate year 2022-2023 saw an increase in readmissions related to childbirth (Cesarean delivery, vaginal delivery) and a decrease in diabetes readmissions compared to the previous year. Chronic obstructive pulmonary disease, alcohol abuse, and child behavioral disorder dropped out of the top ten conditions after two years.

18. PPRs and HEALTH PLANS

What is the risk-adjusted PPR rate per 1,000 admissions for health plans and how does it change year to year and compare to the statewide rate? Health plans with rates below the statewide rate (rate values placed below the trend line) exhibit higher performance than health plans whose rates exceed the statewide rate (rate values placed above the trend line). The figure shows PPRs for five rate years from, 2018-2019 to 2022-2023.

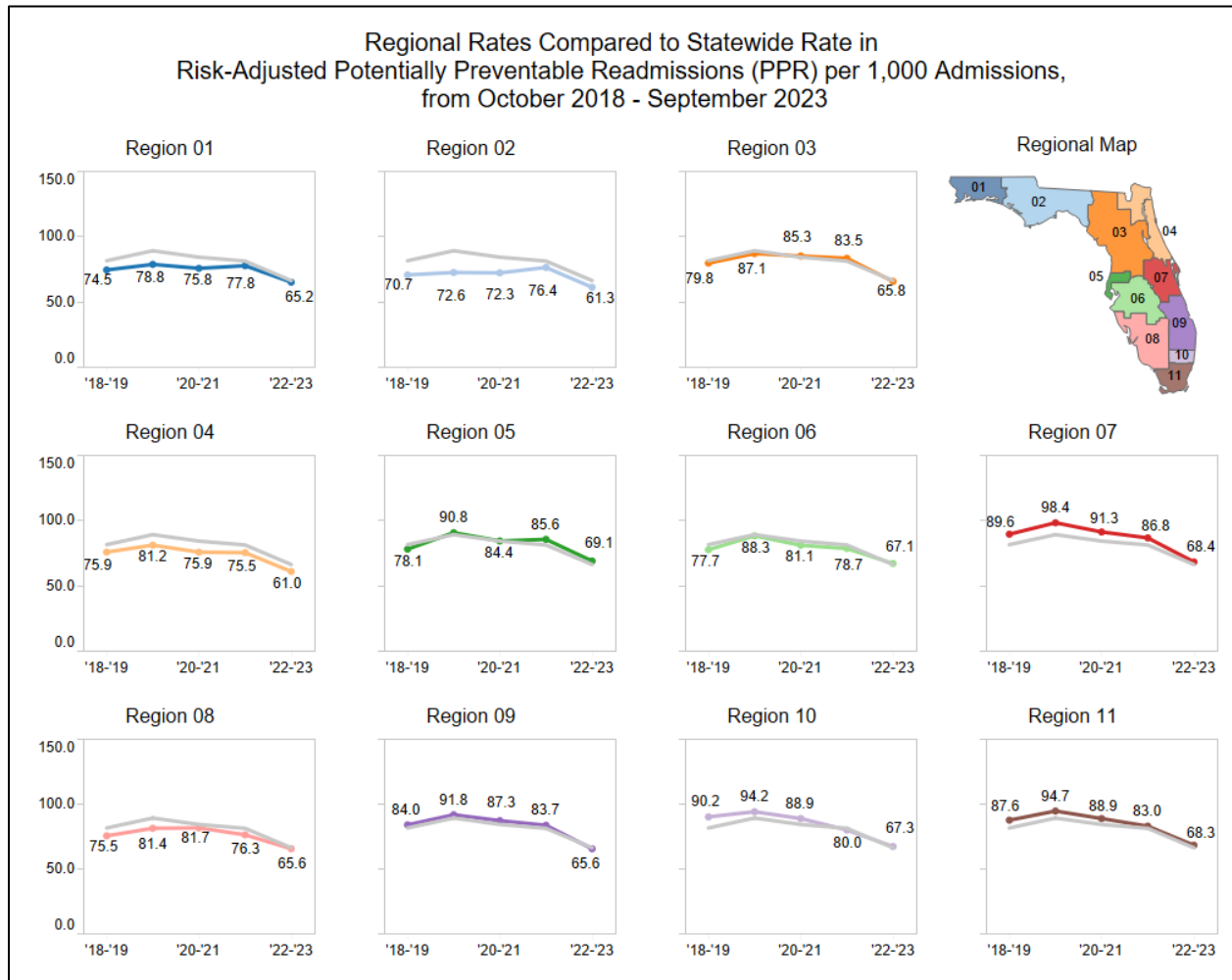


Note: Vivida, acquired by Simply, did not have a full year's worth of data for 2022-2023

This data shows variations in risk-adjusted PPR rates per 1,000 admissions, both across and within health plans. The health plan PPR rates varied between 48.8 and 130.3 across rate years. Most health plans' year-to-year changes in PPRs conformed to the statewide rate trend. Health plans tended to exhibit either consistently higher or lower rates of PPR than the statewide rate. All health plans showed a decrease in their PPR rate between 2021-2022 and 2022-2023, ranging from 5.2% to 26.9%.

19. PPRs and PLAN REGIONS

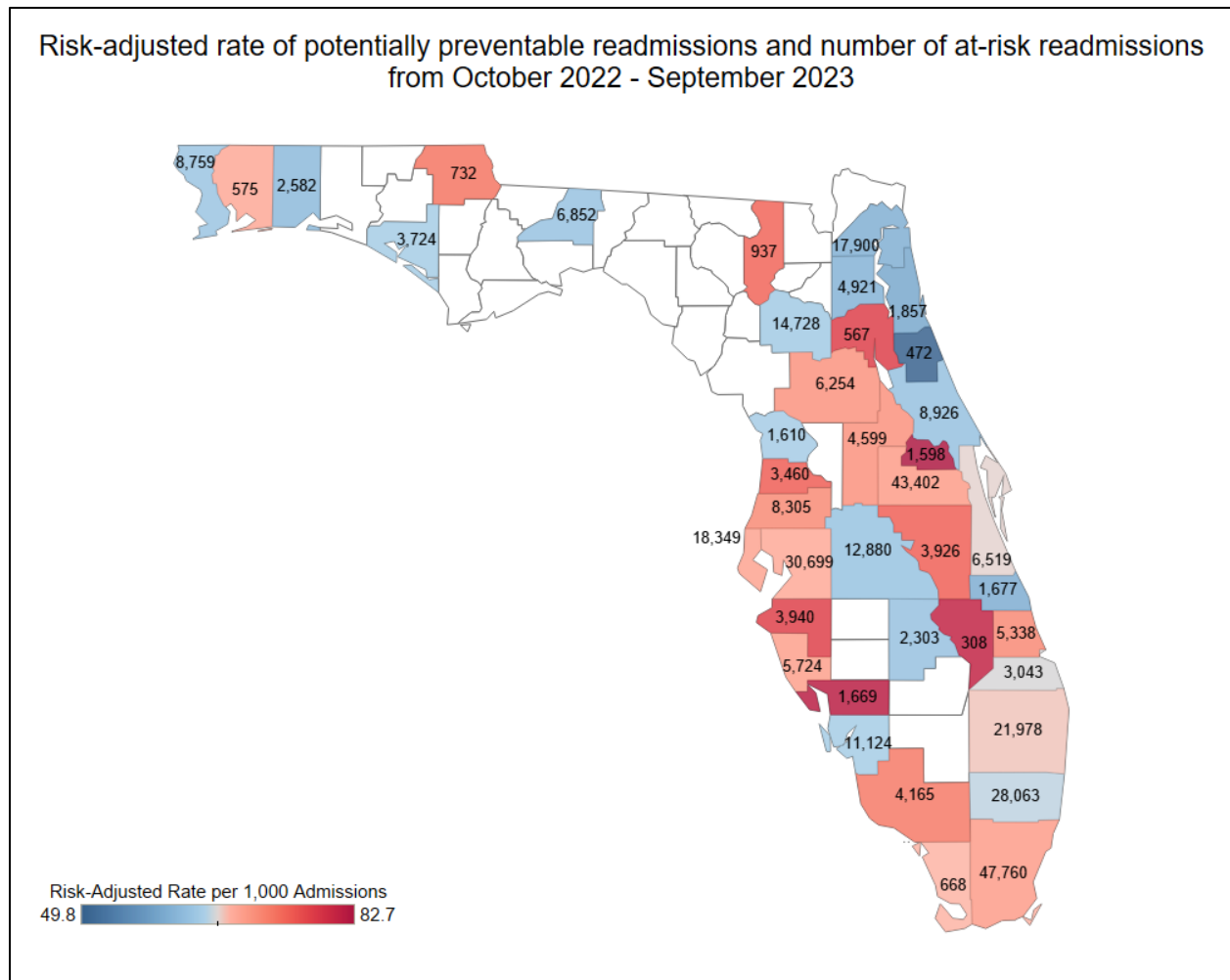
Do health plan regions show different trends in risk-adjusted PPR rates per 1,000 admissions? This analysis assesses how risk-adjusted PPR rates within each region compared to the statewide PPR rate. Rate values are placed below or above the region trendline to indicate higher or lower performance. The figure shows PPRs for five rate years from 2018-2019 to 2022-2023.



Most plan regions' risk-adjusted PPR rates per 1,000 admissions conformed to the overall statewide trend. The largest one-year increase in PPRs occurred in region five in 2019-2020 (+16.3%), and the largest decrease occurred in region nine in 2022-2023 (-21.6%). Several regions experienced PPR rates consistently higher (regions seven, 11) or lower (regions one, two, four, eight) than observed statewide, whereas the remaining region rates were more variable.

20. PPRs and HOSPITAL COUNTIES

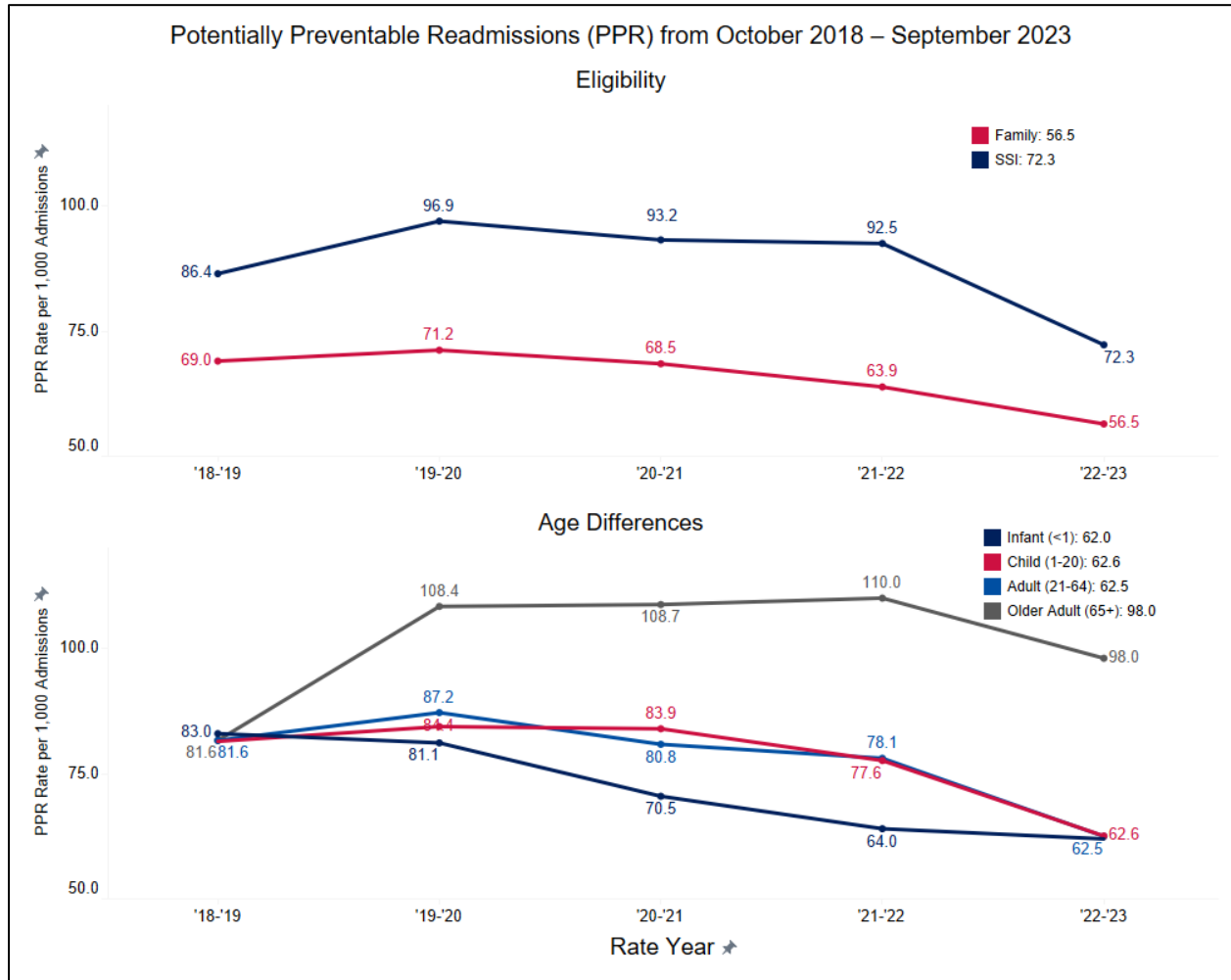
Does the risk-adjusted rate of potentially preventable at-risk readmissions per 1,000 admissions vary among hospitals? This analysis grouped hospitals by county to assess the range in risk-adjusted PPR rates among hospitals. A county-level map for the 2022-2023 rate year shows the risk-adjusted PPR rate per hospital county by color (lower rates in blue and higher rates in red). Numbers in this hospital county map show the total number of at-risk readmissions in each county except for counties with fewer than 30 at-risk events. **Appendix 3** lists hospitals' risk-adjusted PPR rate summarized by county for each rate year from 2018-2019 to 2022-2023.



The risk-adjusted rate of potentially preventable hospital readmissions per 1,000 admissions (shown in color) ranged between 49.8 and 82.7 across Florida's counties with hospitals. Hospital counties with a higher PPR rate tended to be in Central and South Florida compared to counties with a lower rate. The higher the PPR rate for a hospital county, the higher the number of at-risk readmissions (printed on the hospital county map). A higher PPR rate was generally seen in counties with higher population density and greater urban development.

21. PPRs and ELIGIBILITY and AGE

Do risk-adjusted PPR rates per 1,000 admissions from October 1, 2022, to September 30, 2023, vary by eligibility or age. For this analysis Medicaid eligibility was divided into SSI- and Family-related eligibility. The Medicaid enrollee age range was captured in four groups: infants (< 1 year old), children (1-20 years old), adults (21-64 years old), and older adults (65+ years old).



Observations and Conclusions

This Annual Report on Potentially Preventable Events in Florida Medicaid presents data on Emergency Department visits and hospital admissions broken down by managed care rate year (October 1 to September 30) from 2018-2019 to 2022-2023, the most recent complete rate year in the Agency's PPE analysis. The analysis focused on health care events that were deemed potentially preventable by Solventum's software for potentially preventable Emergency Department visits (PPVs), hospital admissions (PPAs), and hospital readmissions (PPRs). This software flags events "at-risk" of being prevented and a subset of those at-risk events as potentially preventable. Standardized PPE rates were computed taking into account the health status of the population and the costliness of the potentially preventable events when appropriate.

Statewide PPV, PPA and PPR rates varied over rate years and were lower in the final year (2022-2023) than the first year (2018-2019) with intervening years showing measure-specific trends.

The PPV grouper employs enhanced ambulatory patient groups to assess the health conditions that contribute to ED visits. Both the PPA and PPR grouper make use of diagnosis related groups to determine the main health condition responsible for a hospital admission. An assessment of the top 10 preventable conditions across rate years revealed that in 2022-2023, upper respiratory infection was the number one EAPG associated with PPVs, heart failure was the number one DRG associated with PPAs, and schizophrenia was the number one DRG associated with PPRs. With a few exceptions, preventable condition rankings remained consistent across rate years.

PPVs were generally associated with EAPGs causing pain such as infections (nose/ear/throat infections, viral illness, urinary infection), abdominal disorders (gastrointestinal pain and diagnosis) or disorders of other body systems. Cardiac disorders (heart failure, cardiac defibrillator, cardiac catheterization) were the largest contributor to PPAs followed by infections (septicemia, pneumonia, infectious disease, urinary and kidney infection) and chronic disorders (COPD, seizure). PPRs were associated first and foremost with mental disorders (Schizophrenia, bipolar disorder, major depression) followed by chronic disorders (sickle cell crisis, diabetes) and disorders that suggest medical complications (septicemia, heart failure, Cesarean delivery, vaginal delivery, urogenital malfunction).

Health plans' PPV, PPA, and PPR rates and year-to-year changes closely resembled the statewide trend. Health plan rates below the statewide rate are consistent with the idea that plan enrollees experienced fewer potentially preventable events and, in case of PPVs and PPAs, were relatively less costly on average. Plan rates above the statewide rate indicate a greater number of potentially preventable events and, in case of PPVs and PPAs, were relatively more costly on average. Relative differences between plans' year-to-year rates and the statewide rate varied across measures of PPEs. Plan rate variability may be in part due to differences in the Medicaid eligibility characteristics of plans' membership and the associated lines of business (e.g., the proportion of long-term care members or special needs members). These findings suggest that each type of PPE offers a unique set of challenges to providing high-quality health care.

Most plan regions experienced year-to-year changes in PPVs, PPAs, and PPRs consistent with the statewide trends for each measure. Considering each PPE measure individually, regions one, two, three, and four in North Florida performed worse on PPVs in each year than the state overall. The PPVs in other regions were better or on par. For PPAs, regions three, five, and seven and for PPRs, regions seven and 11 were the only regions that showed consistently higher rates than the

statewide rate. At a more granular level, measures of PPEs by hospital county were in agreement with the variability observed in regional rate patterns. Regional differences in PPEs may be influenced by a multitude of factors such as differences in population density, availability of primary or urgent care, travel distances to acute care hospitals, or socioeconomic circumstances in addition to the quality of care provided.

Appendix 1: PPVs and hospital counties

The table lists the weighted percent of at-risk ED visits which were potentially preventable. The data is broken down by hospital county and rate year. Percents are not shown for counties with fewer than 30 at-risk events.

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
ALACHUA	3	50.1	47.7	50.1	47.1	50.7
BAKER	4	56.6	54.4	56.6	52.4	53.8
BAY	2	50.6	48.6	50.6	50.9	54.8
BRADFORD	3	57.5	62.2	No Data	No Data	No Data
BREVARD	7	48.9	48.3	50.7	46.6	49.2
BROWARD	10	51.5	47.5	51.8	50.0	52.3
CALHOUN	2	67.3	60.8	67.3	59.7	61.3
CHARLOTTE	8	54.0	53.7	54.0	53.1	54.4
CITRUS	3	52.9	49.4	52.9	53.0	54.5
COLLIER	8	53.0	51.5	53.0	49.5	53.7
COLUMBIA	3	59.4	57.7	61.0	58.7	59.5
DADE	11	52.3	52.1	49.9	52.3	55.4
DESOTO	8	59.2	58.3	59.2	56.2	55.7
DUVAL	4	51.1	48.3	51.1	48.2	49.6
ESCAMBIA	1	55.6	52.0	55.6	51.6	53.9
FLAGLER	4	54.7	52.4	54.7	50.4	51.4
FRANKLIN	2	59.1	57.9	59.1	53.8	56.8
GULF	2	57.9	54.0	57.9	52.3	56.5
HARDEE	6	60.7	56.0	60.7	59.5	57.1
HENDRY	8	55.9	57.1	55.9	56.5	56.3
HERNANDO	3	53.5	50.0	53.5	51.4	54.3
HIGHLANDS	6	52.7	50.8	52.7	52.6	54.4
HILLSBOROUGH	6	48.0	44.1	47.2	44.7	47.7
HOLMES	2	64.5	61.6	64.5	59.1	55.7
INDIAN RIVER	9	53.3	49.8	53.3	47.5	46.7
JACKSON	2	55.7	53.7	55.7	52.1	51.7
LAKE	3	54.2	53.5	54.2	51.2	53.2
LEE	8	51.8	47.2	51.8	49.0	49.9
LEON	2	50.3	50.3	50.3	53.0	54.9
LEVY	3	69.7	No Data	No Data	No Data	No Data
MADISON	2	62.3	61.4	62.3	60.0	66.7
MANATEE	6	54.6	53.8	54.6	54.2	55.1
MARION	3	59.9	55.9	59.9	57.6	59.4
MARTIN	9	51.0	48.3	51.0	48.4	52.3
MONROE	11	55.3	51.1	55.3	53.8	54.4

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
NASSAU	4	53.1	50.9	53.1	48.3	49.6
OKALOOSA	1	58.1	55.4	58.1	56.0	55.7
OKEECHOBEE	9	55.6	50.4	55.6	52.2	54.0
ORANGE	7	53.6	51.1	53.3	51.6	54.4
OSCEOLA	7	56.2	53.9	56.3	55.7	59.1
PALM BEACH	9	49.7	47.1	49.7	45.7	49.3
PASCO	5	53.8	50.3	53.8	50.7	52.3
PINELLAS	5	49.4	46.7	49.4	46.3	48.6
POLK	6	55.9	49.3	55.9	49.2	52.5
PUTNAM	3	60.4	58.6	60.4	57.2	59.9
SANTA ROSA	1	60.1	59.7	60.1	57.0	61.1
SARASOTA	8	54.7	51.9	54.7	50.0	52.8
SEMINOLE	7	53.1	52.3	53.1	54.1	53.9
ST JOHNS	4	52.1	43.9	52.1	47.1	49.6
ST LUCIE	9	52.2	50.2	52.2	50.2	53.5
SUMTER	3	53.3	53.2	53.3	51.6	57.0
SUWANNEE	3	56.9	56.0	No Data	No Data	No Data
TAYLOR	2	58.3	55.0	58.3	55.8	62.6
UNION	3	63.8	54.4	63.8	58.3	64.8
VOLUSIA	4	56.5	54.5	56.5	52.2	54.8
WALTON	1	59.9	58.3	59.9	57.1	50.2
WASHINGTON	2	51.9	53.8	51.9	54.7	59.0

Appendix 2: PPAs and hospital counties

The table lists the weighted percent of at-risk admissions which were potentially preventable. The data is broken down by hospital county and rate year. Percents are not shown for counties with fewer than 30 at-risk events.

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
ALACHUA	3	17.6	29.1	17.8	13.8	10.5
BAKER	4	63.4	No Data	53.1	47.4	52.0
BAY	2	12.6	20.5	18.0	16.5	20.0
BRADFORD	3	44.2	41.5	No Data	No Data	No Data
BREVARD	7	20.4	24.7	19.5	22.8	23.2
BROWARD	10	14.7	16.3	14.2	15.5	16.4
CALHOUN	2	No Data	47.2	47.5	61.7	No Data
CHARLOTTE	8	17.4	18.9	18.9	19.9	16.0
CITRUS	3	22.3	24.7	23.0	28.5	26.8
COLLIER	8	11.5	15.8	15.9	20.5	17.4
COLUMBIA	3	30.7	33.2	29.3	33.5	34.8
DADE	11	15.3	16.4	13.8	15.6	18.1
DESOTO	8	39.2	27.0	24.5	26.3	31.3
DUVAL	4	14.4	20.4	15.8	18.7	14.1
ESCAMBIA	1	12.2	15.1	12.6	20.2	18.7
FLAGLER	4	25.5	26.9	17.2	17.0	20.6
GULF	2	14.0	11.6	15.2	13.6	16.4
HENDRY	8	39.1	52.5	33.6	40.8	38.3
HERNANDO	3	19.8	23.3	19.7	19.5	19.8
HIGHLANDS	6	20.2	28.1	19.5	25.3	24.7
HILLSBOROUGH	6	16.4	14.9	13.0	14.0	14.3
HOLMES	2	45.4	60.2	19.7	38.7	35.9
INDIAN RIVER	9	11.3	14.5	10.6	13.2	15.5
JACKSON	2	29.2	27.9	20.8	25.6	27.9
LAKE	3	27.7	28.5	34.1	20.7	24.1
LEE	8	14.2	14.2	12.9	15.6	16.2
LEON	2	21.4	17.5	12.8	13.2	16.4
MADISON	2	72.1	63.6	No Data	No Data	No Data
MANATEE	6	17.8	27.9	20.9	16.1	17.9
MARION	3	11.2	19.2	13.2	22.2	19.7
MARTIN	9	13.4	20.3	18.4	17.0	21.4
MONROE	11	14.6	26.3	14.2	19.1	25.9
NASSAU	4	19.3	28.1	25.5	20.9	19.8
OKALOOSA	1	21.9	29.0	25.5	26.7	24.3
OKEECHOBEE	9	22.9	26.7	25.1	19.0	27.2

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
ORANGE	7	12.9	20.6	13.6	19.8	19.8
OSCEOLA	7	21.1	33.5	25.1	27.9	27.9
PALM BEACH	9	19.0	21.0	17.1	19.4	19.3
PASCO	5	18.8	17.4	16.7	19.1	17.9
PINELLAS	5	19.3	23.3	20.1	21.1	21.5
POLK	6	22.8	24.2	17.5	22.0	21.0
PUTNAM	3	24.8	26.8	25.7	25.6	26.9
SANTA ROSA	1	35.9	39.3	43.8	39.8	43.8
SARASOTA	8	15.3	25.4	22.1	16.7	22.9
SEMINOLE	7	15.4	19.9	15.0	17.5	13.6
ST JOHNS	4	18.0	20.6	21.9	21.2	20.9
ST LUCIE	9	9.9	12.4	10.8	10.8	13.4
SUMTER	3	24.8	26.4	25.2	29.8	31.0
SUWANNEE	3	65.7	68.3	No Data	No Data	No Data
TAYLOR	2	45.9	31.7	37.2	42.6	53.3
VOLUSIA	4	15.8	15.7	13.8	14.1	21.9
WALTON	1	31.7	23.7	14.9	18.2	21.8
WASHINGTON	2	38.7	56.4	43.1	47.8	53.6

Appendix 3: PPRs and hospital counties

The table below lists the risk-adjusted rate of potentially preventable re-admissions. The data is broken down by hospital county and rate year. Rates are not shown for counties with fewer than 30 at-risk events.

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
ALACHUA	03	85.2	94.5	95.0	90.8	64.1
BAKER	04	80.3	76.6	83.2	80.0	64.8
BAY	02	60.3	72.1	65.5	70.7	63.2
BRADFORD	03	85.5	87.8	87.6	85.3	67.7
BREVARD	07	75.9	89.6	88.5	81.3	65.2
BROWARD	10	90.2	94.2	88.9	80.0	67.3
CALHOUN	02	57.6	89.0	54.8	58.3	54.7
CHARLOTTE	08	82.3	86.0	87.7	93.5	75.8
CITRUS	03	76.6	77.5	75.5	73.3	60.7
CLAY	04	71.6	77.0	77.5	60.1	55.2
COLLIER	08	80.8	83.2	91.0	73.1	66.2
COLUMBIA	03	83.0	87.7	88.3	79.1	63.8
DADE	11	87.7	94.9	89.2	83.4	68.5
DESOTO	08	73.9	73.4	77.4	57.8	61.7
DIXIE	03	65.6	84.6	70.8	78.0	65.5
DUVAL	04	78.4	82.9	76.6	79.9	61.1
ESCAMBIA	01	77.7	83.2	77.0	73.0	67.0
FLAGLER	04	75.3	80.3	64.4	69.2	54.4
FRANKLIN	02	41.6	55.6	63.0	68.6	82.6
GADSDEN	02	65.5	79.0	80.6	76.9	49.5
GILCHRIST	03	77.1	80.2	62.8	76.4	73.8
GLADES	08	111.8	141.0	86.8	115.8	90.7
GULF	02	74.6	66.1	111.9	67.5	78.3
HAMILTON	03	65.7	50.7	85.3	87.9	65.2
HARDEE	06	74.8	64.8	74.9	76.6	71.0
HENDRY	08	72.1	57.5	82.0	86.4	54.9
HERNANDO	03	77.0	92.7	82.5	81.0	63.0
HIGHLANDS	06	59.7	82.7	81.9	77.6	70.1
HILLSBOROUGH	06	78.6	87.6	81.1	80.1	67.9
HOLMES	02	84.6	46.5	64.6	62.6	60.8
INDIAN RIVER	09	54.5	80.6	90.4	67.1	56.8
JACKSON	02	57.8	64.4	59.3	74.1	67.7
JEFFERSON	02	59.3	80.7	76.6	73.1	54.1
LAFAYETTE	03	93.1	90.1	81.9	67.3	49.3
LAKE	03	77.9	91.3	89.6	84.1	67.9

County	Region	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
LEE	08	74.8	81.1	77.3	72.3	62.9
LEON	02	87.1	79.0	79.0	88.0	61.8
LEVY	03	75.2	87.7	76.5	73.3	75.0
LIBERTY	02	73.0	41.7	77.4	43.1	59.0
MADISON	02	64.3	78.4	67.0	64.1	61.4
MANATEE	06	76.4	101.1	82.1	88.4	69.7
MARION	03	82.4	80.2	82.3	86.8	66.9
MARTIN	09	88.7	86.2	84.7	81.3	60.4
MONROE	11	82.3	83.1	72.5	66.3	60.5
NASSAU	04	77.8	69.7	71.2	81.8	58.3
OKALOOSA	01	72.2	67.3	72.9	87.6	64.1
OKEECHOBEE	09	74.2	81.5	77.6	82.1	68.5
ORANGE	07	96.1	104.4	96.9	91.4	68.8
OSCEOLA	07	88.0	91.6	81.5	84.7	69.1
PALM BEACH	09	86.8	93.4	87.3	86.1	65.7
PASCO	05	70.3	87.3	77.6	81.0	66.8
PINELLAS	05	82.0	92.6	88.0	88.2	70.4
POLK	06	78.9	86.3	80.8	72.9	64.3
PUTNAM	03	76.7	80.7	82.6	74.8	61.7
SANTA ROSA	01	70.8	76.3	77.2	79.6	60.9
SARASOTA	08	71.0	82.5	81.9	76.2	66.5
SEMINOLE	07	89.0	96.6	85.1	79.5	71.0
ST JOHNS	04	70.5	80.4	68.9	79.9	69.8
ST LUCIE	09	87.2	94.4	88.1	83.4	69.0
SUMTER	03	69.8	86.2	90.9	73.9	71.4
SUWANNEE	03	79.6	105.8	84.3	102.0	74.1
TAYLOR	02	59.4	50.1	63.2	68.5	61.4
UNION	03	87.5	99.9	83.3	60.6	51.3
VOLUSIA	04	72.1	80.6	77.1	70.7	61.8
WAKULLA	02	56.2	58.3	83.7	83.7	65.7
WALTON	01	65.6	88.3	72.0	80.4	65.3
WASHINGTON	02	72.7	80.3	65.9	58.2	52.1