## Healthcare Benchmark Initiative Stakeholder Advisory Board

March 25, 2021 Meeting



### **Agenda**

| <u>Time</u> | <u>Topic</u>  |
|-------------|---|
| 12:00 p.m.  | I. Call to Order  |
| 12:05 p.m.  | II. Public Comment  |
| 12:15 p.m.  | III. Approval of February 10 <sup>th</sup> Meeting Minutes                    |
| 12:20 p.m.  | IV. Healthcare Benchmark Initiative Updates                                   |
| 12:25 p.m.  | V. Minimum Population Size for Reporting of Provider<br>Benchmark Performance |
| 12:30 p.m.  | VI. Mathematica Analysis Findings   |
| 1:25 p.m.   | VII. Wrap-Up and Next Steps   |
| 1:30 p.m.   | VIII. Adjourn   |

### **Call to Order**

### **Public Comment**

### **Approval of Previous Meeting Minutes**

### **Healthcare Benchmark Initiative Updates**

### **Updates**

- 1. On March 24, OHS held a public forum, "Using the Cost Growth Benchmark as a Tool to Improve Health Care Affordability"
  - Showcased consumer voices Angela Harris and Susan Millerick
  - Highlighted OHS efforts to address affordability
  - Reviewed select cost growth drivers in Connecticut
- 2. OHS will be making initial data request of payers to submit CY 2018-2019 data
- 3. OHS has met with an FQHC CFO in effort to secure data to track spending by uninsured persons

# Minimum Population Size for Reporting of Provider Benchmark Performance

### Criteria for When to Report Provider Benchmark Performance

- OHS will report individual payer and provider entity performance against the benchmark for 2021 cost growth in early 2023.
- In January the Technical Team recommended that OHS perform calculations of **statistical significance** when reporting benchmark performance to ensure accuracy of findings.
  - This is the methodology developed by Oregon for the same purpose.
- The Technical Team still needed to decide on whether there should be a minimum population threshold for Advanced Networks to be assessed against the benchmark.

# Technical Team Discussion of Minimum Attributed Lives for Public Reporting of Provider Performance

- The Technical Team expressed support for OHS not setting a specific minimum threshold for attributed lives at this time.
  - OHS will collect pre-benchmark data from payers this spring and analyze the data by the summer.
  - OHS will calculate confidence intervals based on the actual data submitted by payers for Advanced Networks.
  - OHS will then propose a recommendation for a minimum threshold for public reporting of 2021 provider performance (for reporting in 2023).
  - This threshold can be re-evaluated over time.

### **Mathematica Analysis Findings**

### Connecticut's Executive Order #5: Data Use Strategy

1



**Cost Growth Benchmark** 

Recommendations for a cost growth benchmark that covers all payers and all populations for 2021-2025.



2



**Primary Care Spend Target** 

Recommendations for getting to a 10% primary care spend as a share of total healthcare expenditures by CY 2025, applied to all payers and populations.

3



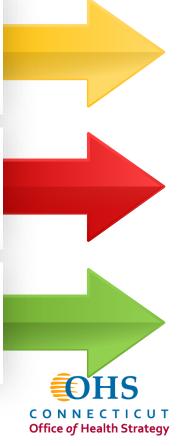
Data Use Strategy A complementary strategy that leverages the state's APCD, and potentially other sources, to analyze cost and cost growth drivers, and more.

4



**Quality Benchmarks** 

Recommendations for quality benchmarks applied to all public and private payers, effective 2022.



### Project Background & Purpose

- On behalf of OHS, Mathematica analyzed data from CT's APCD.
- Objectives: (1) to provide insight into cost drivers and (2) to support solutions for achieving cost growth benchmarks.



### Overview of All-Payer Claims Databases

- APCDs compile enrollment and claims data (including actual payments) submitted by payers.
- APCDs offer both advantages and disadvantages:
  - Claims data can be analyzed at a very **granular** level (by payer, by region, by provider type, by patient segment), etc.
  - Generally, payers do not report **non-claims costs**, e.g., shared savings or capitated payments made outside the claims system.
  - Clinical data only if captured in diagnoses coding. Variables such as blood pressure and BMI are not available in APCDs.
  - Significant **lag times** from service date to payment date, and from payment data to reporting date.



## Overview of Analytic Population and Framework

| Sample              | Commercial (fully insured, including State employees)   |
|---------------------|---|
|                     | CT residents under age 65 for most analyses   |
| Types of claims     | <ul> <li>Medical (no pharmacy)</li> </ul>   |
|                     | <ul> <li>Limited to claims paid by primary insurer (secondary payer claims are excluded)</li> </ul>                       |
|                     | <ul> <li>Excludes claims from vision-only plans and some student plans</li> </ul>   |
|                     | <ul> <li>2015-2018 dates of service with 6 months of runout per year</li> </ul>   |
|                     | Spending includes cost-sharing  |
| Focus areas         | <ul> <li>Spending (Total, PMPM, change over time, OOP)</li> </ul>   |
|                     | Spending by category of service   |
|                     | Utilization and spending per unit   |
|                     | Chronic conditions  |
| Stratifications and | data • Payer  |
| enrichment          | Age and gender  |
|                     | <ul> <li>Region, including comparisons between areas with higher/lower income and differing racial composition</li> </ul> |
| We include addition | nal notes on analytic populations and methods at the end of the presentation  |



### Notes on Study Populations

| Domain                       | Population   |
|------------------------------|--|
| Member months                | Commercial (fully insured and State employees)   |
| PMPM spending                | CT residents under age 65  |
| Spending by service category | • 2015 - 2018  |
| Utilization vs. PMPM growth  | <ul> <li>Excludes secondary payers, vision-only, and some student plans</li> </ul>                   |
|                              | <ul> <li>Excludes people with "Unknown" or "Other" gender</li> </ul>                                 |
|                              | • 2018 PMPM: \$435.55  |
| Spending within DRG          | Limited to ages 18-64  |
|                              | • 2015 & 2018 only   |
| Chronic conditions, regional | <ul> <li>Limited to ages 18-64 with continuous enrollment between 1/1/2017 and 12/31/2018</li> </ul> |
| variation                    | <ul> <li>2018 data only: 455,780 people (about 53% of 2018 commercial population)</li> </ul>         |
|                              | • 2018 PMPM=\$512.55   |



### **Analytic Findings Presented Today**

- Overview of the study population
- Per member per month (PMPM) costs
- Spending by category of service
- PMPM growth roles of utilization and spending per unit
- Prevalence and costs of chronic conditions
- Variation by county, income decile, and community racial composition



#### **Overview of the Study Population**



## From 2015 to 2018, Anthem lost market share but remained the largest payer

- Six major commercial payers, of which Anthem is the largest
- UnitedHealthcare is the second largest payer and gained market share
- Remaining 4 payers insured a bit more than a third of the fully insured commercial market in 2018
- State employees covered by Anthem and UHC

|                                    | Percentage of Commercial Member Months |           |            |           |                                     |  |  |  |  |
|------------------------------------|--|-----------|------------|-----------|-------------------------------------|--|--|--|--|
| Payer                              | 2015                                   | 2016      | 2017       | 2018      | 3 – year change (percentage points) |  |  |  |  |
| All commercial payers (#)          | 9,850,748                              | 9,760,902 | 10,155,889 | 9,827,697 | -0.7*                               |  |  |  |  |
| Anthem (commercial)                | 32.3                                   | 29.8      | 31.1       | 28.0      | -4.3                                |  |  |  |  |
| Anthem (state employees)           | 15.3                                   | 15.3      | 14.2       | 14.3      | -1.1                                |  |  |  |  |
| UnitedHealthcare (commercial)      | 12.5                                   | 12.1      | 13.0       | 16.0      | 3.5                                 |  |  |  |  |
| UnitedHealthcare (state employees) | 3.0                                    | 3.6       | 4.4        | 6.5       | 3.5                                 |  |  |  |  |
| Cigna                              | 14.1                                   | 14.8      | 14.3       | 14.3      | 0.2                                 |  |  |  |  |
| Aetna                              | 11.9                                   | 10.0      | 8.4        | 6.7       | -5.2                                |  |  |  |  |
| Connecticare                       | 9.6                                    | 11.8      | 10.9       | 10.7      | 1.1                                 |  |  |  |  |
| Harvard Pilgrim                    | 1.4                                    | 2.7       | 3.5        | 3.5       | 2.1                                 |  |  |  |  |

Note: Excludes members 65 and older and non-CT residents.

<sup>\*</sup> Calculated as member weighted average 3-year change



## Demographics were fairly stable between 2015 and 2018

- From 2015 to 2018, population aged slightly and trended toward female
- Reduction in share of commercial members in 0-25 age group

|                   | Percentage of Commercial Members |           |            |           |                                     |  |  |  |  |  |
|-------------------|----------------------------------|-----------|------------|-----------|-------------------------------------|--|--|--|--|--|
| Gender, Age group | 2015                             | 2016      | 2017       | 2018      | 3 – year growth (percentage points) |  |  |  |  |  |
| All <65 (#)       | 9,850,532                        | 9,760,458 | 10,155,535 | 9,827,541 | -                                   |  |  |  |  |  |
| 0-25              | 34.2                             | 33.6      | 33.0       | 32.7      | -1.5                                |  |  |  |  |  |
| 26-44             | 25.2                             | 25.3      | 25.8       | 26.3      | 1.1                                 |  |  |  |  |  |
| 45-64             | 40.6                             | 41.1      | 41.2       | 41.0      | 0.4                                 |  |  |  |  |  |
| Female            | 51.5                             | 51.5      | 51.6       | 51.8      | 0.4                                 |  |  |  |  |  |
| 0-25              | 16.7                             | 16.4      | 16.2       | 16.1      | -0.6                                |  |  |  |  |  |
| 26-44             | 13.2                             | 13.3      | 13.5       | 13.8      | 0.6                                 |  |  |  |  |  |
| 45-64             | 21.6                             | 21.9      | 22.0       | 21.9      | 0.3                                 |  |  |  |  |  |
| Male              | 48.5                             | 48.5      | 48.4       | 48.2      | -0.4                                |  |  |  |  |  |
| 0-25              | 17.5                             | 17.2      | 16.8       | 16.6      | -0.9                                |  |  |  |  |  |
| 26-44             | 12.0                             | 12.1      | 12.3       | 12.5      | 0.5                                 |  |  |  |  |  |
| 45-64             | 19.0                             | 19.2      | 19.2       | 19.0      | 0.0                                 |  |  |  |  |  |



#### **PMPM Costs**



## Medical spending PMPM increased 15% from 2015 to 2018

|           | Spending p | er membe | r per month | n (PMPM) | Ann  | ual change | e (%) | Total      |
|-----------|------------|----------|-------------|----------|------|------------|-------|------------|
| Payer     | 2015       | 2016     | 2017        | 2018     | 2016 | 2017       | 2018  | change (%) |
| All payer | \$377.66   | \$408.23 | \$421.97    | \$435.55 | 8.1  | 3.4        | 3.2   | 15.3       |

#### Notes:

- 1 Limited to CT residents under age 65.
- 2 Spending includes patient cost sharing.
- 3 Much higher trend in first year than next two.
- 4 From 2015-2018, PMPM spending increased for every payer, and for state employees.
- 5 The average annual increase was 4.9%



## Out-of-pocket spending increased faster than total spending

- From 2015 to 2018, OOP spending increased 26% compared to overall spending which increased 15.3%
- This finding was expected. It reflects changes in employer decisions on plan design, and employee plan selection.

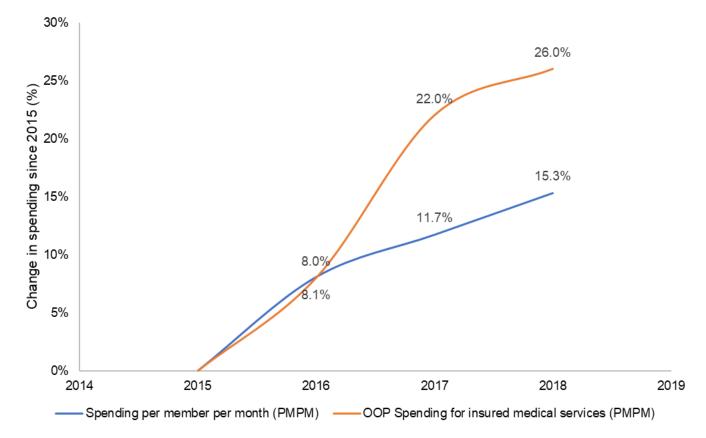
| Payer     | OOP Spe | nding for<br>services | medical | Annual OOP change (%) |      |      | Annual PMPM change (%) Total change (%) |      |      |      | ange (%) |             |
|-----------|---------|-----------------------|---------|-----------------------|------|------|---|------|------|------|----------|-------------|
| •         | 2015    | 2016                  | 2017    | 2018                  | 2016 | 2017 | 2018                                    | 2016 | 2017 | 2018 | ООР      | <b>PMPM</b> |
| All payer | \$44.21 | \$47.75               | \$53.94 | \$55.70               | 8.0  | 13.0 | 3.3                                     | 8.1  | 3.4  | 3.2  | 26.0     | 15.3        |

Notes: OOP PMPM is calculated as sum(copays + deductibles + coinsurance)/sum(member months). Percent change in "PMPM" columns is calculated as change in total PMPM, including insurance payments and out-of-pocket payments.



#### Out-of-pocket spending increased faster than total spending

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Notes: OOP PMPM is calculated as sum(copays + deductibles + coinsurance)/sum(member months). Percent change in "PMPM" columns is calculated as change in total PMPM, including insurance payments and out-of-pocket payments.

#### **Spending by Category of Service**



## In 2018, 99 percent of spending was in four service categories; each contributed to spending growth

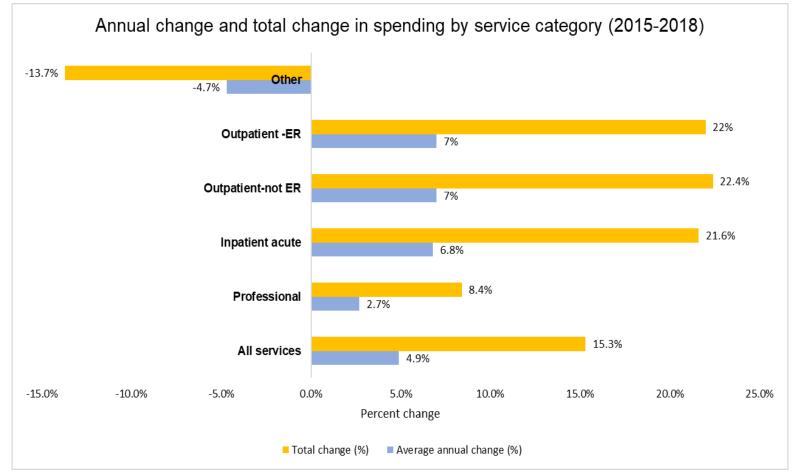
 Spending PMPMs for inpatient and outpatient hospital services grew faster than for professional services

|                     | 2015     | 5     | 2018     |       |                           |                     | Change in category as   |
|---------------------|----------|-------|----------|-------|---------------------------|---------------------|-------------------------|
| Service Category    | РМРМ     | %     | PMPM     | %     | Average annual change (%) | Total change<br>(%) | percent of total change |
| All services        | \$377.65 | 100.0 | \$435.55 | 100.0 | 4.9                       | 15.3                | 100.0                   |
| Professional        | \$170.03 | 45.0  | \$184.24 | 42.3  | 2.7                       | 8.4                 | 24.5                    |
| Inpatient acute     | \$77.58  | 20.5  | \$94.34  | 21.7  | 6.8                       | 21.6                | 29.0                    |
| Outpatient - not ER | \$73.86  | 19.6  | \$90.41  | 20.8  | 7.0                       | 22.4                | 28.6                    |
| Outpatient – ER     | \$50.62  | 13.4  | \$61.77  | 14.2  | 7.0                       | 22.0                | 19.2                    |
| Other               | \$5.55   | 1.5   | \$4.79   | 1.1   | -4.7                      | -13.7               | -1.3                    |

Categories of services derived from the CT APCD Data Dictionary claim type detail. Results are NOT age/gender-adjusted ER = emergency room; PMPM = per member per month



## Spending PMPMs for inpatient and outpatient hospital services grew faster than for professional services



## In 2018, more that half of out-of-pocket spending was for professional services

- Cost-sharing varied by type of service
- Patients paid 19 percent of the total cost of professional services and three percent of the total cost of inpatient services

|                     | Total    | ООР     | OOP PMPM in category as | OOP PMPM as percentage of |
|---------------------|----------|---------|-------------------------|---------------------------|
| Category of service | PMPM     | PMPM    | percentage of all OOP   | total PMPM                |
| All services        | \$435.55 | \$55.70 | 100.0                   | 12.8                      |
| Professional        | \$184.24 | \$34.04 | 61.1                    | 18.5                      |
| Inpatient acute     | \$94.34  | \$2.72  | 4.9                     | 2.9                       |
| Outpatient - not ER | \$90.41  | \$9.77  | 17.6                    | 10.8                      |
| Outpatient – ER     | \$61.77  | \$8.64  | 15.5                    | 14.0                      |
| Other               | \$4.79   | \$0.53  | 0.9                     | 11.0                      |

Categories of services derived from the CT APCD Data Dictionary claim type detail. Results are for 2018 and are not age/gender-adjusted.

ER = emergency room; PMPM = per member per month



#### PMPM Growth – Role of Utilization and Spending Per Unit



## The driving factor for PMPM growth was spending per unit, not number of units (service volume)

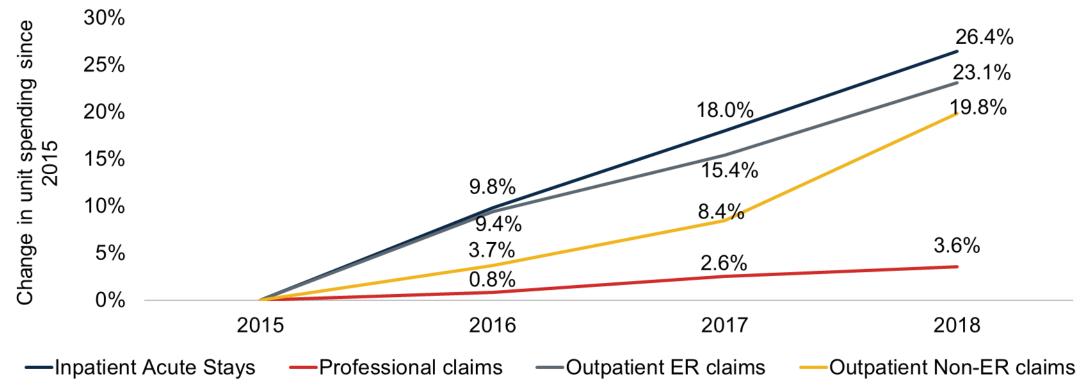
|                         | 2018      | 2018<br>Spending | Percen | t change | e in sper | nding per unit | 3-year percent change in |
|-------------------------|-----------|------------------|--------|----------|-----------|----------------|--------------------------|
| <b>Service Category</b> | Volume    | per unit         | 2016   | 2017     | 2018      | Total 3-year   | volume                   |
| Inpatient acute stay    | 36,164    | \$25,636         | 9.8    | 7.4      | 7.2       | 26.4           | -4.1                     |
| Outpatient – ER         | 356,647   | \$1,702          | 9.4    | 5.5      | 6.7       | 23.1           | -1.1                     |
| Outpatient – not ER     | 688,207   | \$1,291          | 3.7    | 4.6      | 10.5      | 19.8           | 1.9                      |
| Professional            | 8,471,604 | \$214            | 8.0    | 1.7      | 1.0       | 3.6            | 4.4                      |

Changes in spending per unit are affected by both changes in service mix and changes in service-level prices. Categories of services derived from the CT APCD Data Dictionary claim type detail. Includes CT residents under age 65. Results are not age-gender adjusted. Inpatient stay units defined as discharges, which can include multiple claims. Other category of service units defined as individual claims.

ER = emergency room; PMPM = per member per month



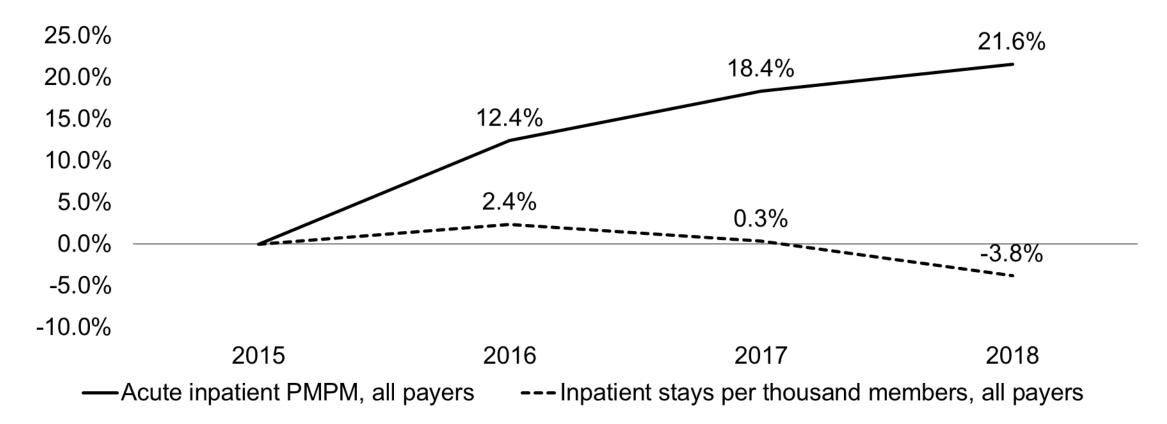
### Inpatient and outpatient unit spending per unit grew considerably faster than professional unit spending



Categories of services derived from the CT APCD Data Dictionary claim type detail. Results are not age-gender adjusted. Inpatient stay units defined as discharges, which can include multiple claims. Other category of service units defined as individual claims. ER = emergency room



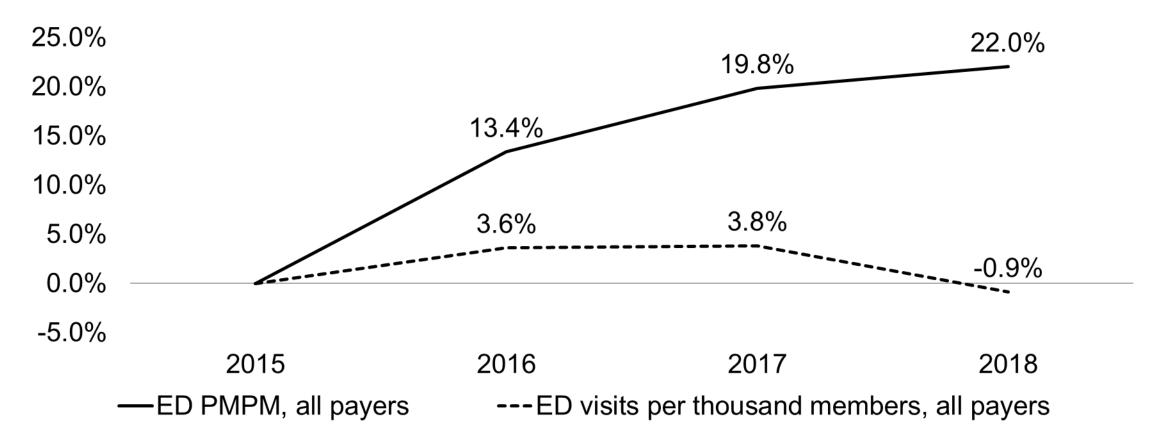
## Acute inpatient PMPM spending grew 22 percent while utilization went down



Note: Percent change for all years is relative to 2015.



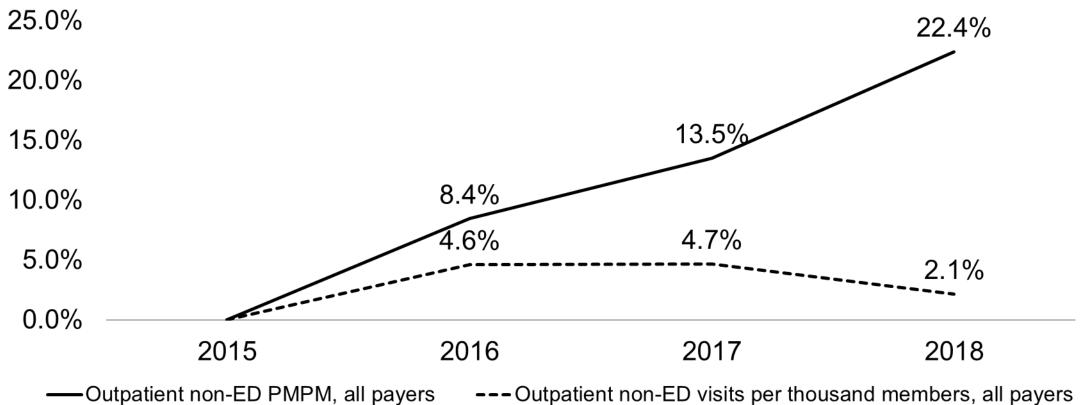
## Spending PMPM for emergency department visits grew 22 percent while utilization declined



Note: Percent change for all years is relative to 2015



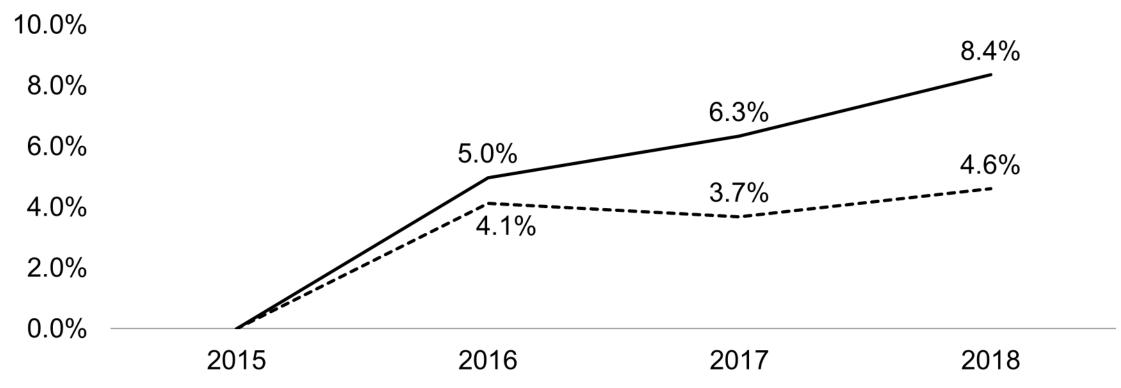
# Spending PMPM for outpatient visits (excluding ED) grew 22 percent, while utilization grew 2 percent



Note: Percent change for all years is relative to 2015.



## Spending PMPM for professional services grew 8 percent and utilization grew 5 percent

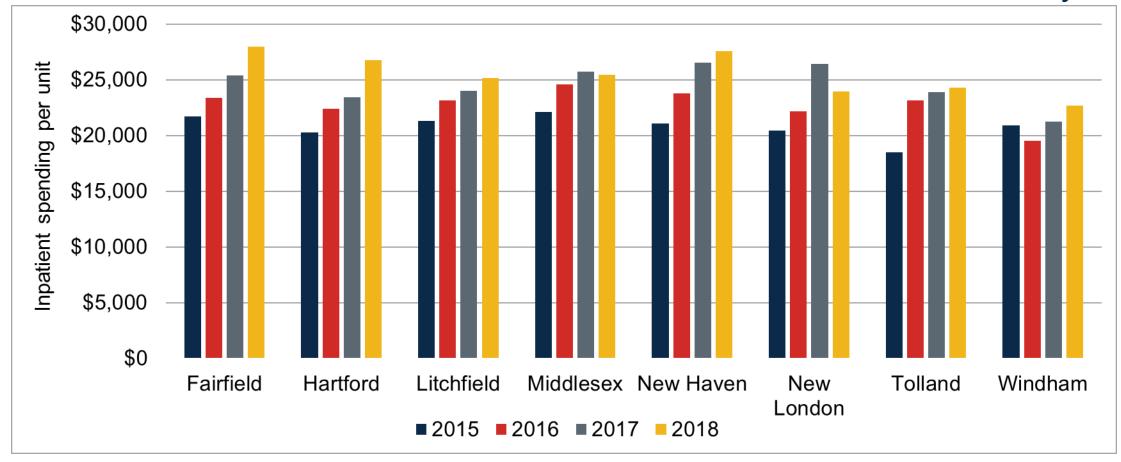


—Professional PMPM, all payers --- Professional claims per thousand members, all payers

Note: Percent change for all years is relative to 2015.



## Age-gender adjusted inpatient spending per unit was highest for residents of Fairfield and New Haven, lowest in Windham county



County is based on member residence, which will often differ from the county where care was received. Inpatient stay units defined as discharges, which can include multiple claims. Results are adjusted to control for differences in age-gender mix among counties.



## Within DRG, the changes in spending per inpatient stay were typically between 11% and 25%, with a median of 15%

#### **All DRGs**

Mean of DRG-level changes 18.1

Median of DRG-level changes 15.0

Interquartile range of DRG-level changes 11.1-25.4

|        |                                      | Average  | spending |                     | Number of stays |       | Stays per                |  |
|--------|--------------------------------------|----------|----------|---------------------|-----------------|-------|--------------------------|--|
| Select | ed individual DRGs                   | 2015     | 2018     | Mean percent change | 2015            | 2018  | thousand<br>members 2018 |  |
| 460    | Spinal Fusion Except Cervical        | \$50,817 | \$64,433 | 26.8                | 331             | 238   | 0.37                     |  |
| 470    | Major Hip and Knee Joint Replacement | \$29,088 | \$32,319 | 11.1                | 1,801           | 1,863 | 2.90                     |  |
| 775    | Vaginal Delivery                     | \$9,070  | \$10,228 | 12.8                | 3,337           | 2,738 | 4.27                     |  |
| 871    | Septicemia or Severe Sepsis          | \$27,855 | \$30,533 | 9.5                 | 365             | 556   | 0.87                     |  |
| 885    | Psychoses                            | \$13,386 | \$15,352 | 14.7                | 963             | 1,004 | 1.57                     |  |

Notes. The statistics reported for "All DRGs" are the weighted mean, weighted median, and weighted IQR of DRG-level changes, with weights equal to the number of cases in 2015. These statistics are not affected by changes in the mix of DRGs (service mix) between years. Individual DRGs were selected for display if they were common, costly, and relatively homogeneous (i.e., cases were similar within the DRG).

Limited to members 18-64 and DRGs with more than 10 cases in both 2015 and 2018. Mean percent change differs from inpatient acute spending change shown on Slide 20, because:

(1) the populations are different, and (2) the statistics are different (mean of DRG-level changes vs. mean change when all DRGs are combined.) See methods document for details.

DRG = diagnosis related group; IQR = interquartile range



#### **Prevalence and Costs of Chronic Conditions**



#### High cholesterol, high blood pressure, arthritis, and depression were common and associated with above-average costs

|                                      | 2018                   |       |                                      |  |  |  |  |  |
|--------------------------------------|------------------------|-------|--------------------------------------|--|--|--|--|--|
| Condition                            | Members with condition | %     | PMPY for members with this condition |  |  |  |  |  |
| All members                          | 455,780                | 100.0 | \$6,151                              |  |  |  |  |  |
| Hyperlipidemia                       | 73,081                 | 16.0  | \$11,842                             |  |  |  |  |  |
| Hypertension                         | 70,419                 | 15.5  | \$13,739                             |  |  |  |  |  |
| Rheumatoid Arthritis/Osteoarthritis  | 67,943                 | 14.9  | \$13,866                             |  |  |  |  |  |
| Depression                           | 50,979                 | 11.2  | \$13,501                             |  |  |  |  |  |
| Diabetes                             | 28,608                 | 6.3   | \$14,197                             |  |  |  |  |  |
| Anemia                               | 26,723                 | 5.9   | \$25,355                             |  |  |  |  |  |
| Acquired Hypothyroidism              | 25,918                 | 5.7   | \$12,911                             |  |  |  |  |  |
| Glaucoma                             | 18,035                 | 4.0   | \$9,004                              |  |  |  |  |  |
| Chronic Kidney Disease               | 17,732                 | 3.9   | \$24,029                             |  |  |  |  |  |
| Asthma                               | 17,500                 | 3.8   | \$16,887                             |  |  |  |  |  |
| One or more of 27 chronic conditions | 218,598                | 48.0  | \$10,336                             |  |  |  |  |  |
| Two or more of 27 chronic conditions | 115,855                | 25.4  | \$14,379                             |  |  |  |  |  |

Notes: This slide shows the 10 most common conditions. PMPY calculated as total costs for members with the condition divided by all members continuously enrolled from January 1, 2017 through December 31, 2018.



## People with one chronic condition often had one or more additional conditions

| Condition A              | Condition B                 | Percent of Total Population with | Percent of People with Condition A who |
|--------------------------|-----------------------------|----------------------------------|--|
| (Rank)                   | (Rank)                      | A & B                            | had Condition B                        |
| Hyperlipidimia (1)       | Hypertension (2)            | 8.2                              | 51.1                                   |
| Hyperlipidimia (1)       | Rheumatoid Arthritis (3)    | 4.6                              | 28.5                                   |
| Hyperlipidimia (1)       | Depression (4)              | 2.5                              | 15.7                                   |
| Hyperlipidimia (1)       | Diabetes (6)                | 3.7                              | 23.3                                   |
| Hypertension (2)         | Rheumatoid Arthritis (3)    | 4.7                              | 30.2                                   |
| Hypertension (2)         | Depression (4)              | 2.3                              | 15.2                                   |
| Hypertension (2)         | Diabetes (6)                | 3.8                              | 24.3                                   |
| Hypertension (2)         | Chronic Kidney Disease (9)  | 2.2                              | 14.5                                   |
| Rheumatoid Arthritis (3) | Depression (4)              | 2.6                              | 17.7                                   |
| Diabetes (6)             | Chronic Kidney Disease (9)  | 2.4                              | 37.8                                   |
| Any chronic condition    | Any other chronic condition | 25.4                             | 53.0                                   |

Notes: This slide shows the 10 most common pairs of 25 chronic conditions. Rank indicates the relative prevalence of the condition with 1 being most common.



# Variation by County, Income Decile, and Community Racial Composition



## PMPMs varied by county and were highest among residents of New Haven and New London counties

The lowest total spending PMPM were among residents in Tolland and Windham counties

|            | Median    |       | Rac       | 2018   | 2018  |       |          |         |         |
|------------|-----------|-------|-----------|--------|-------|-------|----------|---------|---------|
|            |           |       | Hispanic/ | 2018   | OOP   | OOP   |          |         |         |
| County     | income    | Asian | Black     | Latino | Other | White | PMPM     | PMPM    | percent |
| All        | \$97,310  | 4.4   | 9.8       | 15.7   | 2.6   | 67.5  | \$512.55 | \$57.49 | 11.2    |
| Fairfield  | \$114,461 | 5.2   | 10.5      | 19.3   | 2.5   | 62.4  | \$527.26 | \$70.27 | 13.3    |
| Hartford   | \$92,383  | 5.2   | 12.8      | 17.6   | 2.5   | 61.9  | \$486.78 | \$48.53 | 10.0    |
| Litchfield | \$98,146  | 1.8   | 1.6       | 6.0    | 1.6   | 89.0  | \$482.82 | \$61.45 | 12.7    |
| Middlesex  | \$108,334 | 3.0   | 4.9       | 6.0    | 1.7   | 84.3  | \$502.90 | \$54.74 | 10.9    |
| New Haven  | \$88,178  | 3.9   | 12.4      | 17.6   | 2.5   | 63.6  | \$543.92 | \$56.50 | 10.4    |
| New London | \$89,209  | 4.1   | 5.3       | 10.3   | 4.4   | 75.9  | \$529.84 | \$56.28 | 10.6    |
| Tolland    | \$108,236 | 4.6   | 2.8       | 5.3    | 2.2   | 85.0  | \$468.84 | \$42.52 | 9.1     |
| Windham    | \$80,323  | 1.3   | 1.8       | 11.5   | 2.4   | 83.1  | \$474.68 | \$42.52 | 9.0     |

Limited to enrollees continuously enrolled from January 2017 through December 2018, which accounts for higher PMPM relative to previous slides. PMPM and OOP PMPM are adjusted to control for differences in age-gender mix among counties. Median income and racial distribution from 2018 American Community Survey 2018 5-year estimates.



## ED use is higher among residents of lower income communities

- Correlation between median income and ED visits per 1,000 members = -0.93
- Similar trend with inpatient visits, but less variation (correlation coefficient = -0.71)

| Income |                       | ED visits per | Inpatient stays per |
|--------|-----------------------|---------------|---------------------|
| Decile | Decile range          | 1,000 members | 1,000 members       |
| All    | \$14,433 - \$250,001  | 493.8         | 56.8                |
| 1      | \$14,433 - \$49,699   | 804.7         | 65.6                |
| 2      | \$49,816 - \$60,044   | 774.6         | 66.7                |
| 3      | \$60,056 - \$68,919   | 582.1         | 70.3                |
| 4      | \$69,026 - \$78,125   | 640.0         | 60.8                |
| 5      | \$78,165 - \$88,054   | 643.4         | 56.2                |
| 6      | \$88,086 - \$97,542   | 541.6         | 57.0                |
| 7      | \$97,585 - \$108,227  | 497.7         | 55.3                |
| 8      | \$108,250 - \$122,422 | 456.9         | 54.3                |
| 9      | \$122,565 - \$146,506 | 391.1         | 52.2                |
| 10     | \$146,794 - \$250,001 | 321.9         | 55.3                |

Limited to enrollees continuously enrolled from January 2017 through December 2018. Utilization numbers are age-gender adjusted to control for differences in age-gender mix among deciles. Median income from 2018 American Community Survey 2018 5-year estimates. Income decile 1 includes people living in the lowest 10 percent of zip codes, when ranked by income.

## Chronic conditions are more common among residents of lower income communities

Higher prevalence of conditions among lower-income residents

|        | ED visits |             | Percentage with condition |           |         |      |            |          |        |  |
|--------|-----------|-------------|---------------------------|-----------|---------|------|------------|----------|--------|--|
| Income | per 1,000 | One or more | Two or more               | Hyper-    | Hyper-  |      |            |          |        |  |
| Decile | members   | conditions  | conditions                | lipidemia | tension | RA   | Depression | Diabetes | Asthma |  |
| 1      | 804.7     | 50.3        | 29.5                      | 17.6      | 21.1    | 15.0 | 10.3       | 11.4     | 5.6    |  |
| 2      | 774.6     | 52.1        | 31.1                      | 18.9      | 21.2    | 17.8 | 10.4       | 10.8     | 5.4    |  |
| 3      | 582.1     | 49.4        | 28.4                      | 17.4      | 19.3    | 14.8 | 10.7       | 9.2      | 4.5    |  |
| 4      | 640.0     | 50.1        | 28.6                      | 17.2      | 18.5    | 15.4 | 11.3       | 8.3      | 4.6    |  |
| 5      | 643.4     | 50.5        | 28.1                      | 18.0      | 18.1    | 16.0 | 12.6       | 7.8      | 4.4    |  |
| 6      | 541.6     | 50.3        | 28.2                      | 17.5      | 18.5    | 16.1 | 11.9       | 7.5      | 4.2    |  |
| 7      | 497.7     | 49.4        | 26.3                      | 16.6      | 16.1    | 15.4 | 12.0       | 6.2      | 4.0    |  |
| 8      | 456.9     | 47.7        | 24.9                      | 15.9      | 15.0    | 15.1 | 11.3       | 5.5      | 3.5    |  |
| 9      | 391.1     | 46.2        | 23.1                      | 15.0      | 13.2    | 14.0 | 11.2       | 4.7      | 3.5    |  |
| 10     | 321.9     | 43.1        | 20.1                      | 13.0      | 9.3     | 13.1 | 9.5        | 3.5      | 2.6    |  |

Income decile 1 includes people living in the lowest 10 percent of zip codes, when ranked by income. Except asthma, conditions displayed are the most prevalent statewide (asthma is 10<sup>th</sup> most prevalent). Chronic condition rates derived following Chronic Condition Warehouse algorithms applied to claims, and only include members with 2017 and 2018 claims where diagnosis was present. Rates may therefore be understated. RA = rheumatoid arthritis. ED visits per 1,000 members are adjusted to control for difference in age-gender mix among deciles; chronic condition rates NOT adjusted for age-gender.

#### ED use is also more common among residents of communities with a lower percentage of white residents, as are some chronic conditions

|                             |                  | Median        |             |                      | Percentage with condition |                        |                   |          |        |
|-----------------------------|------------------|---------------|-------------|----------------------|---------------------------|------------------------|-------------------|----------|--------|
| Decile                      | Percentage white | family income | PMPM (adj.) | ED visit rate (adj.) | One or more conditions    | Two or more conditions | Hyper-<br>tension | Diabetes | Asthma |
| All                         | 0 – 100          | \$97,310      | \$526.69    | 494                  | 0.48                      | 0.25                   | 15.5              | 6.3      | 3.8    |
| 1                           | 0 – 31           | \$45,663      | \$545.33    | 736                  | 0.51                      | 0.30                   | 22.2              | 11.8     | 5.6    |
| 2                           | 31 – 50          | \$68,060      | \$561.26    | 606                  | 0.49                      | 0.27                   | 18.1              | 8.6      | 4.5    |
| 3                           | 50 – 61          | \$82,466      | \$562.29    | 591                  | 0.50                      | 0.28                   | 17.3              | 7.9      | 4.6    |
| 4                           | 61 - 71          | \$105,442     | \$494.28    | 477                  | 0.48                      | 0.26                   | 15.2              | 6.7      | 3.7    |
| 5                           | 71 – 77          | \$103,407     | \$497.68    | 494                  | 0.48                      | 0.26                   | 16.1              | 6.6      | 3.9    |
| 6                           | 77 – 82          | \$122,067     | \$499.30    | 434                  | 0.47                      | 0.25                   | 14.1              | 5.4      | 3.5    |
| 7                           | 83 – 87          | \$149,181     | \$506.68    | 413                  | 0.46                      | 0.23                   | 13.6              | 5.0      | 3.5    |
| 8                           | 87 – 91          | \$127,302     | \$481.19    | 457                  | 0.47                      | 0.24                   | 14.1              | 5.0      | 3.4    |
| 9                           | 91 – 94          | \$118,223     | \$484.70    | 493                  | 0.48                      | 0.25                   | 14.7              | 5.0      | 3.5    |
| 10                          | 94 – 100         | \$112,875     | \$526.69    | 476                  | 0.49                      | 0.26                   | 15.4              | 5.1      | 3.7    |
| Ratio of 1st to 10th decile |                  | 0.40          | 1.09        | 1.55                 | 1.03                      | 1.17                   | 1.44              | 2.33     | 1.51   |

Decile 1 includes people living in the lowest 10 percent of zip codes, when ranked by percent white, i.e., communities with a lower percentage of white residents. Conditions displayed are both prevalent and show pronounced disparities by race. Chronic condition rates derived following Chronic Condition Warehouse algorithms applied to claims, and only include members with 2017 and 2018 claims where diagnosis was present. Rates may therefore be understated. ED visit rate and PMPM are adjusted to control for differences in age-gender mix among deciles; chronic condition rates are NOT adjusted for age-gender.



#### **Next Steps in the Analysis**

- OHS is taking steps to expand upon this initial analysis.
- Future analysis may:
  - 1. Delve deeper into hospital spending growth
    - Understand what drove hospital price growth, 2015-2018, considering changes in price, demographics, acuity, and service intensity/service mix
    - Analyze variation in hospital pricing and price growth by hospital and DRG
  - 2. Expand upon Mathematica's analysis
    - Add 2019 data
    - Add pharmacy data
    - Add Medicaid data (and then later, Medicare data)
    - Add clinical risk adjustment
  - 3. Analyze variation in ED utilization by race and income stratum
- What recommendations would the Board like to offer?

#### Wrap-Up

#### Stakeholder Advisory Board Meeting Schedule

- The next Stakeholder Advisory Board meeting scheduled to take place April 20<sup>th</sup> will be cancelled.
- The Board will meet next on June 29th.

