



*North Carolina*  
**State Health Plan**  
FOR TEACHERS AND STATE EMPLOYEES



## **Analysis of State Health Plan Utilization and Costs by Region**

*Board of Trustees Meeting*

June 3, 2016

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*A Division of the Department of State Treasurer*

# Presentation Overview

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- Study Approach and Demographics
- Analysis by Region
  - Spending
  - Utilization
  - Per Member Annual Costs

# Review of Approach

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- The State Health Plan and The Segal Company, the Plan's actuarial firm, broke the State into 16 regions based on the ACA Exchange for CY 2014 and CY 2015
  - Members were assigned to a region based on their address in the Plan's eligibility file
  - Active and *non-Medicare Advantage* retiree claims were included
- The Plan compared the regions by:
  - Utilization of services
  - Cost per unit
  - Per Member Per Year (PMPY) Cost

# North Carolina Regions



Region	Major City/Town	Region	Major City/Town	Region	Major City/Town
1	Asheville	6	Winston-Salem	12	Elizabeth City
2	Hickory	7	Greensboro	13	Raleigh
3	Boone	8	Southern Pines	14	Greenville
4	Charlotte	9	Fayetteville	15	Wilmington
5	Gastonia	10	Henderson	16	New Bern
		11	Durham		

# Statewide Demographics

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- Demographics for CY 2015
  - Most State Health Plan members are female, 61.8%; 38.2% are male
  - Among Plan members who live in NC and are in a BCBSNC-administered plan (i.e., Traditional 70/30, Enhanced 80/20, CDHP 85/15):
    - 19% are younger than 20
    - 19% are 20-35
    - 22% are 36-49
    - 31% are 50-64
    - 9% are 65 or older
  - 30.6% of members are dependents on the Plan with either a parent or spouse as the subscriber
  - Demographics were consistent in CY 2014
- Statewide Average Cost: Allowed PMPY was **\$5,466** (\$455.50 PMPM) in CY 2015; up 4.1% from CY 2014
  - Resulted in a loss ratio of 103% for the Plan's share of costs for members enrolled in the BCBSNC-administered plan options
    - CY 2014 loss ratio was also 103%
    - Dependents and non-Medicare retirees have the highest loss ratio

# Analysis by Region

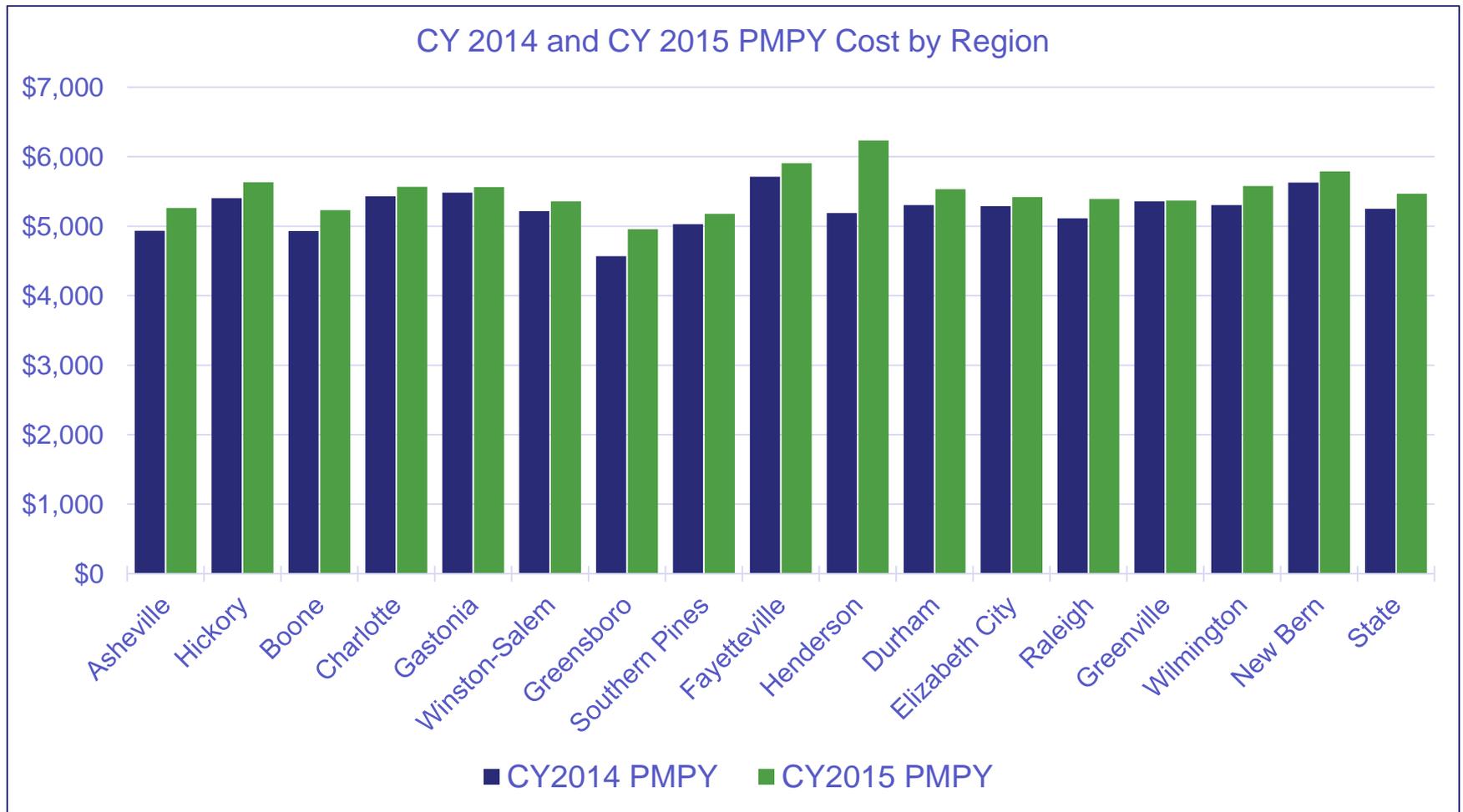
# Why Are Costs Higher in Some Places?

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## Common Theories

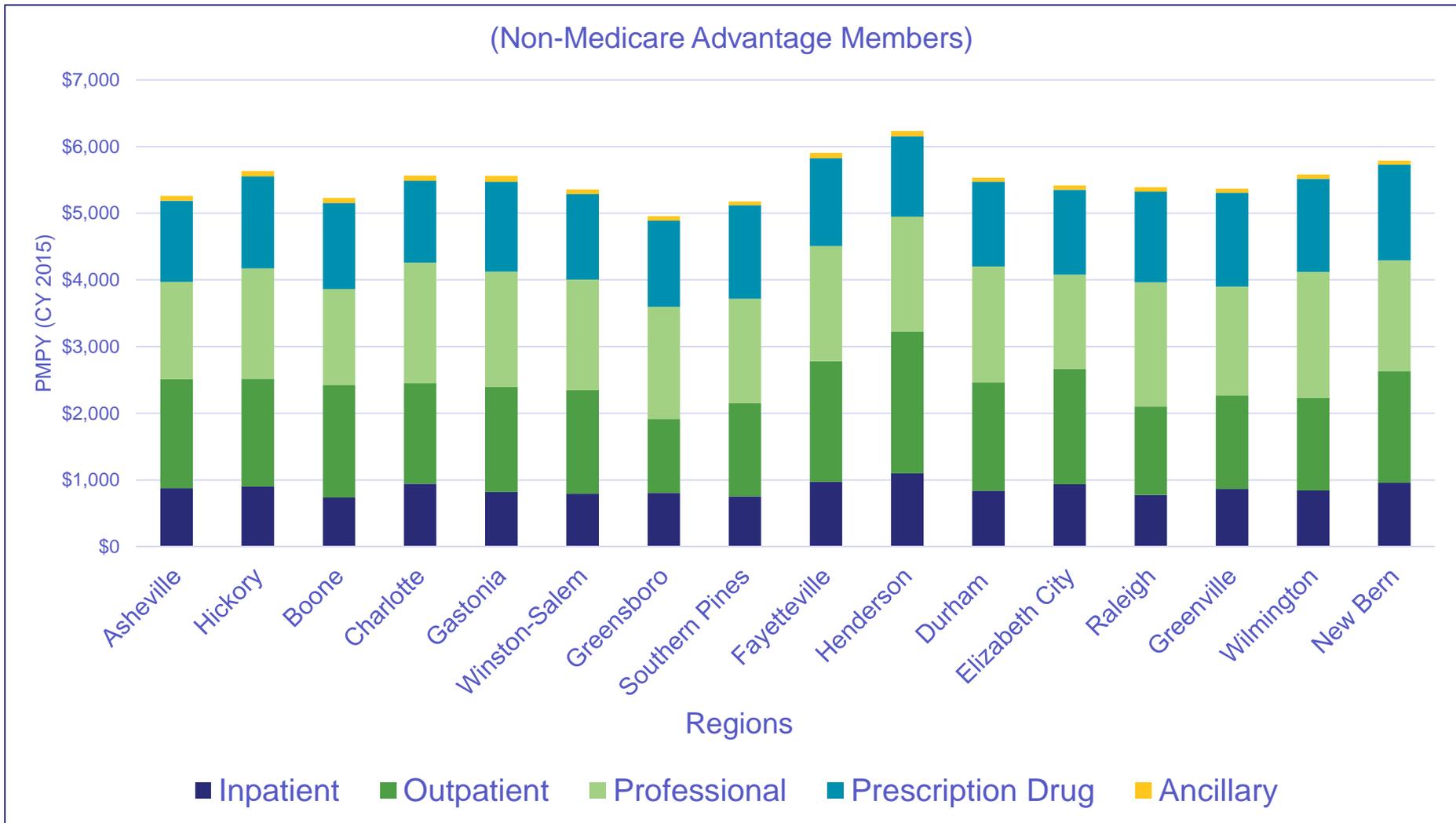
- Prices
  - Negotiated discounts from billed charge amount are not as good: **False.**
  - Unit prices are higher: **True.**
- Utilization
  - Less healthy membership in a region *leads to* higher utilization of services *which leads to* higher costs: **Mostly True.**
  - Higher utilization of costly, low-value services (e.g., emergency room, ambulance): **Mostly False.**

# PMPY Spending by Region\*



\* Regions identified by major city/town. See page 4 for map of regions and counties included.

# CY 2015 PMPY Spending by Service Category



# Regional Variance CY 2015

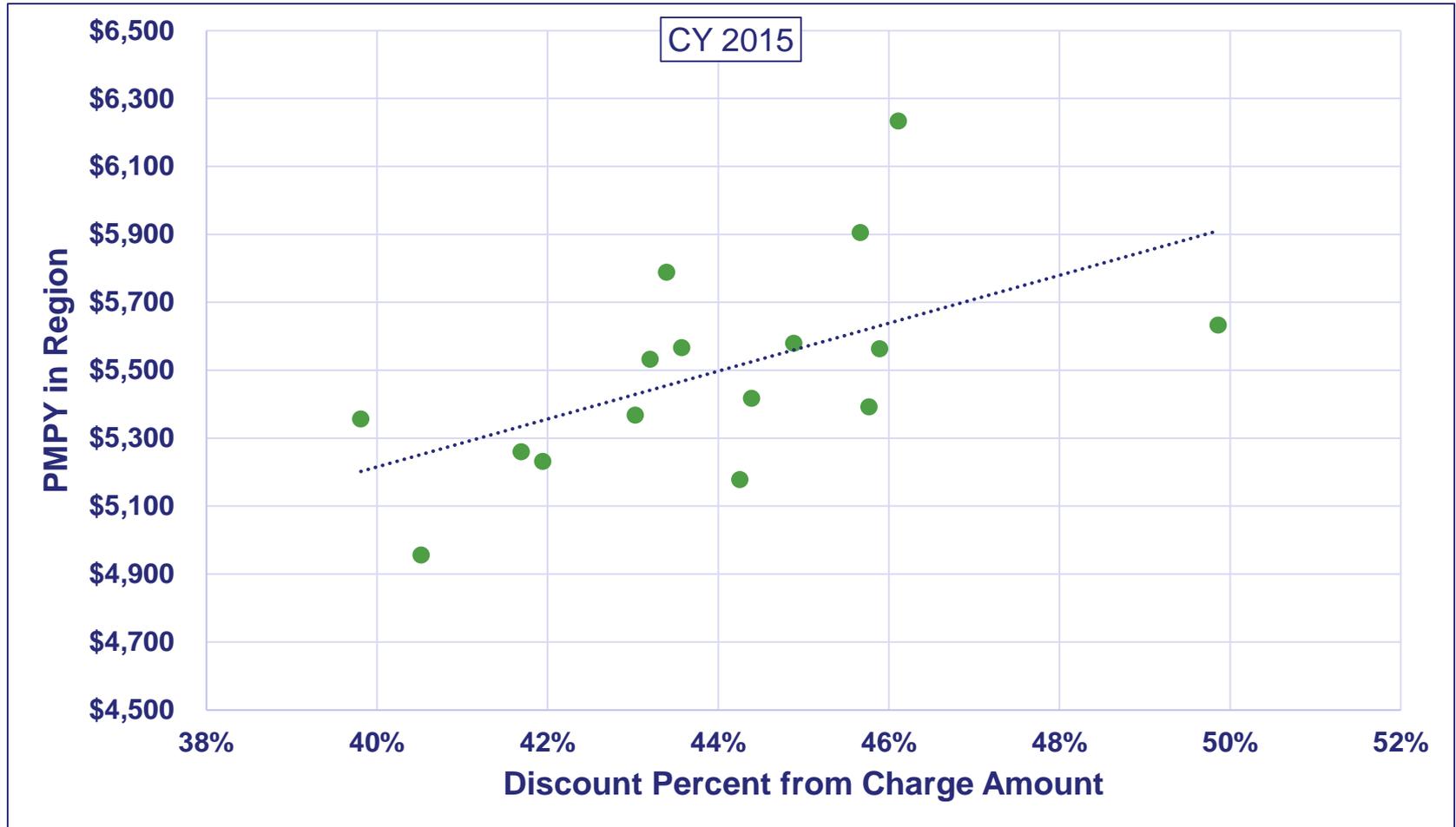
Region	PMPY (rank 1= lowest)	Overall Utilization	Cost Per Unit
Asheville	\$5,260 (4)	Low	Average
Hickory	\$5,632 (13)	High	Average
Boone	\$5,231 (3)	Average	Low
Charlotte	\$5,566 (11)	Average	High
Gastonia	\$5,563 (10)	Average	High
Winston-Salem	\$5,356 (5)	Average	Mixed
Greensboro	\$4,956 (1)	Average	Low
Southern Pines	\$5,178 (2)	Average	Mixed
Fayetteville	\$5,905 (15)	High	High
Henderson	\$6,233 (16)	Mixed	Mixed
Durham	\$5,532 (9)	Mixed	Mixed
Elizabeth City	\$5,417 (8)	Low	Mixed
Raleigh	\$5,392 (7)	Mixed	Mixed
Greenville	\$5,367 (6)	Average	Mixed
Wilmington	\$5,579 (12)	High	Average
New Bern	\$5,789 (14)	Average	Mixed

# Unit Costs and Utilization by Region and PMPM

(PMPM/Rank)		Utilization		
		High	Average/Mixed	Low
Unit Costs	High	Fayetteville (\$492/15)	Charlotte (\$464/11) Gastonia (\$464/10)	
	Average/Mixed	Hickory (\$469/13) Wilmington (\$465/12)	Henderson (\$519/16) New Bern (\$482/14) Durham (\$461/9) Raleigh (\$449/7) Greenville (\$447/6) Winston-Salem (\$446/5) So. Pines (\$431/2)	Elizabeth City (\$451/8) Asheville (\$438/4)
	Low		Boone (\$436/3) Greensboro (\$413/1)	

- Utilization of hospital-based services is probably a better predictor of cost than overall utilization
  - For example, Henderson has very low utilization of office visits and prescription drugs but very high hospitalization rates

# Aggregate Discount versus PMPY



- Better discounts do not necessarily lead to lower costs

# Key Takeaways

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- In general, the PMPY costs were consistent year over year
  - Henderson had the largest cost increase that is mainly driven by a large increase in hospitalizations
- PMPY costs are rising at various rates throughout the state but they are rising everywhere with the exception of Greenville
- Fayetteville is one of the highest cost markets, while Greensboro has been the lowest cost market in both CY 2014 and CY 2015
  - Fayetteville has high unit costs and high utilization
  - Greensboro is low in both

# Key Takeaways

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- The State Health Plan serves a very diverse set of members and providers
- Steep discounts don't necessarily lead to lower per member expenditures
- Inpatient costs are an important cost driver and unit cost is higher in the metropolitan areas where there is more competition
- Unit cost varies throughout the state on hospitalizations but there also appears to be variation in services like prescription drugs and ancillary services
- To control cost growth the state will need multiple strategies
  - Strategies to consider:
    - Quality-based payments
    - Unit cost
    - Discounts
    - Utilization

# Next Steps

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- Review CY 2016 data; look to see which patterns hold with another year of data
- Have discussions with BCBSNC regarding regions and where it appears we might have opportunity to reduce certain costs (inpatient, professional, etc.)
- Look for pilot project opportunities in areas where:
  - Member health is poor
  - Utilization patterns are not what we expect or want
    - ER too high
    - Preventive, PCP, and immunization too low

# Appendix: The 16 State Regions

# Region 1: Asheville/Western NC

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- Demographics
  - Higher percentage of males (41.3%) than average; about average age
  - Average proportion of dependents
- Cost: Allowed PMPY is **\$5,260**, 4th lowest among 16 regions
  - Cost growth: 6.6%, 3<sup>rd</sup> highest among 16 regions
  - Overall utilization is **low**
    - Low on: Inpatient Hospital; Physician; Pharmacy
    - High on: Outpatient Hospital; Ancillary
  - Cost per unit is **average**
    - Low on: Ancillary; Physician Services
    - High on: Inpatient Hospital

# Region 2: Hickory

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- Demographics
  - Average percentage of females (61.6%), average age
  - Above average proportion of dependents
- Cost: Allowed PMPY is **\$5,632**, 4<sup>th</sup> highest among 16 regions
- Cost growth: 4.2%, 8<sup>th</sup> highest among 16 regions
  - Overall utilization is **high**
    - Low on: Nothing
    - High on: Prescription Drugs
  - Cost per unit is **average**
    - Low on: Physician Services
    - High on: Ambulance and Anesthesia

# Region 3: Boone

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- Demographics
  - Highest percentage of males (44.3%), average age
  - Highest proportion of dependent members among regions
- Cost: Allowed PMPY is **\$5,231**, 3<sup>rd</sup> lowest among 16 regions
- Cost growth: 6.1%, 4<sup>th</sup> highest among 16 regions
  - Overall utilization is **average**
    - Low on: Inpatient Hospital; Physician
    - High on: Outpatient Hospital; Ancillary Services
  - Cost per unit is **low**
    - Low on: Inpatient Hospital; Outpatient Hospital; Physician Services
    - High on: Nothing

# Region 4: Charlotte

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- Demographics
  - Smallest percentage of males (35.8%) and probably the youngest group on average with 41.5% under 36
  - Average proportion of dependent members
- Cost: Allowed PMPY is **\$5,566**, 6<sup>th</sup> highest among 16 regions
- Cost growth: 2.5%, 4<sup>th</sup> lowest among 16 regions
  - Overall utilization is **average**
    - Low on: Hospital Outpatient; Prescription Drugs
    - High on: Physician Services
  - Cost per unit is **high**
    - Low on: Nothing
    - High on: Inpatient Hospital; Outpatient Hospital; Physician; Ancillary; Prescription Drugs

# Region 5: Gastonia

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- Demographics
  - Above average percentage of females (64.0%); slightly younger than average
  - Slightly above average proportion of dependents
- Cost: Allowed PMPY is **\$5,563**, 7<sup>th</sup> highest among 16 regions
- Cost growth: 1.5%, 2<sup>nd</sup> lowest among 16 regions
  - Overall utilization is **average**
    - Low on: Inpatient Hospital; Outpatient Hospital
    - High on: Physician Services; Prescription Drugs; Ancillary Services
  - Cost per unit is **high**
    - Low on: Physician Services
    - High on: Outpatient Hospital; Ancillary Services

# Region 6: Winston-Salem

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- Demographics
  - Below average percentage of males (36.8%); about average age
  - Average proportion of dependents
- Cost: Allowed PMPY is **\$5,356**, 5<sup>th</sup> lowest among 16 regions
- Cost growth: 2.7%, 5<sup>th</sup> lowest among 16 regions
  - Overall utilization is **average**
    - Low on: Inpatient Hospital; Physician Services
    - High on: Outpatient Hospital
  - Cost per unit is **mixed**
    - Low on: Outpatient Hospital; Ancillary Services
    - High on: Physician Services

# Region 7: Greensboro

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- Demographics
  - Above average percentage of females (64.3%); a little younger than average
  - Slightly below average proportion of dependents
- Cost: Allowed PMPY is **\$4,956**, lowest among 16 regions
- Cost growth: 8.4%, 2<sup>nd</sup> highest among 16 regions
  - Overall utilization is **average**
    - Low on: Outpatient Hospital; Prescription Drugs
    - High on: Inpatient Hospital
  - Cost per unit is **low**
    - Low on: Inpatient Hospital; Outpatient Hospital
    - High on: Nothing

# Region 8: Southern Pines

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- Demographics
  - Above average percentage of males (40.8%); above average age
  - Average proportion of dependents
- Cost: Allowed PMPY is **\$5,178**, 2nd lowest among 16 regions
- Cost Growth: 3.0%, 10<sup>th</sup> highest among 16 regions
  - Overall utilization is **average**
    - Low on: Inpatient Hospital; Ancillary Services
    - High on: Outpatient Hospital
  - Cost per unit is **mixed**
    - Low on: Physician Services
    - High on: Ancillary Services

# Region 9: Fayetteville

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- Demographics
  - Above average percentage of females (63.2%); above average age
  - Low proportion of dependents
  - Highest percentage of high cost claimants (0.21%)
- Cost: Allowed PMPY is **\$5,905**, 2<sup>nd</sup> highest among 16 regions
- Cost Growth: 3.4%, 9<sup>th</sup> highest among 16 regions
  - Overall utilization is **high**
    - Low on: Nothing
    - High on: Inpatient Hospital; Outpatient Hospital; Physician Services; Prescription Drugs; Ancillary Services
  - Cost per unit is **high**
    - Low on: Prescription Drugs
    - High on: Inpatient Hospital; Ancillary Services

# Region 10: Henderson

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- Demographics
  - Average percentage of males (38.2%); older members, low percentage of members under 36 years old
  - Lowest proportion of dependents in 16 regions
  - High proportion of high cost claimants
- Cost: Allowed PMPY is **\$6,233**, the highest among 16 regions
- Cost Growth: 20.1%, highest among 16 regions
  - Overall utilization is **mixed** (high for hospitalization, low for physician)
    - Low on: Physicians Services
    - High on: Inpatient Hospital; Outpatient Hospital; Ancillary Services
  - Cost per unit is **mixed**
    - Low on: Prescription Drugs
    - High on: Physician Services

# Region 11: Durham

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- Demographics
  - Slightly above average percentage of males (39.5%); younger members, high percentage of members under 36 years old
  - Above average proportion of dependents
- Cost: Allowed PMPY is **\$5,532**, the 8<sup>th</sup> highest among 16 regions
- Cost Growth: 4.3%, 7<sup>th</sup> highest among 16 regions
  - Overall utilization is **mixed**
    - Low on: Prescription Drugs
    - High on: Outpatient Hospital
  - Cost per unit is **mixed**
    - Low on: Inpatient Hospital; Outpatient Hospital
    - High on: Prescription Drugs; Physician Services

# Region 12: Elizabeth City

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- Demographics
  - Slightly above average percentage of males (39.5%); older members
  - Low proportion of dependents
- Cost: Allowed PMPY is **\$5,417**, the 8<sup>th</sup> lowest among 16 regions
- Cost Growth: 2.4%, 3<sup>rd</sup> lowest among 16 regions
  - Overall utilization is **low**
    - Low on: Physician Services
    - High on: Outpatient Hospital
  - Cost per unit is **mixed**
    - Low on: Outpatient Hospital
    - High on: Inpatient Hospital

# Region 13: Raleigh

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- Demographics
  - Average percentage of females (61.1%); slightly younger members
  - Above average proportion of dependents
- Cost: Allowed PMPY is **\$5,392**, the 7<sup>th</sup> lowest among 16 regions
- Cost Growth: 5.9%, 12<sup>th</sup> highest among the 16 regions
  - Overall utilization is **mixed**
    - Low on: Outpatient Hospital; Prescription Drugs
    - High on: Physician Services
  - Cost per unit is **mixed**
    - Low on: Inpatient Hospital
    - High on: Prescription Drugs

# Region 14: Greenville

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- Demographics
  - Average percentage of males (37.6%); average age
  - Average proportion of dependents
- Cost: Allowed PMPY is **\$5,367**, the 6<sup>th</sup> lowest among 16 regions
- Cost Growth: 0.2%, the lowest among 16 regions
  - Overall utilization is **average**
    - Low on: Outpatient Hospital
    - High on: Nothing
  - Cost per unit is **mixed**
    - Low on: Ancillary Services
    - High on: Outpatient Hospital

# Region 15: Wilmington

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- Demographics
  - Average percentage of females (61.4%) and slightly older than average
  - Average proportion of dependents
- Cost: Allowed PMPY is **\$5,579**, the 5<sup>th</sup> highest among 16 regions
- Cost Growth: 5.2%, 11<sup>th</sup> highest among 16 regions
  - Overall utilization is **high**
    - Low on: Outpatient Hospital; Ancillary Services
    - High on: Physician Services
  - Cost per unit is **average**
    - Low on: Inpatient Hospital
    - High on: Prescription Drugs

# Region 16: New Bern

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- Demographics
  - Slightly above average percentage of males (39.1%); slightly older membership
  - Slightly low proportion of dependents
  - 3<sup>rd</sup> highest percentage of high cost claimants (0.20%)
- Cost: Allowed PMPY is **\$5,789**, the 3<sup>rd</sup> highest among 16 regions
- Cost Growth: 2.9%, 6<sup>th</sup> lowest among 16 regions
  - Overall utilization is **average**
    - Low on: Ancillary Services
    - High on: Physician Services
  - Cost per unit is **mixed** (high for hospitalization, low for physician)
    - Low on: Physician Services
    - High on: Inpatient Hospital; Outpatient Hospital