Trends in Connecticut Commercial Health Care Spending, 2015-2019

Health Care Cabinet
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Connecticut Healthcare Benchmark Initiative

1	**Cost Growth Benchmark**	Restrict annual healthcare spending growth across all payers to defined per capita values. The benchmark for 2022 is 3.2%.
2	**Primary Care Target**	Attain a 10% target for primary care spending as a percentage of total health care expenditures by 2025. Complement with a strategy to support improved primary care practice.
3	**Data Use Strategy**	This is a complementary strategy to the cost growth benchmark that leverages the state's APCD to analyze cost and cost growth drivers.
4	**Quality Benchmarks**	Attain annual quality benchmarks each year between 2022 and 2025. Benchmarks set for 2022 for Blood Pressure Control, HbA1c Control for People w/Diabetes and Follow-up After Hosp. for Mental Illness.

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3 Data Use Strategy

This is a complementary strategy to the cost growth benchmark that leverages the state's APCD to analyze cost and cost growth drivers.

- OHS hired Bailit Health to support the Executive Order work. Bailit Health's partner, Mathematica, produced an initial analysis last winter in order to **understand patterns in Connecticut healthcare spending**, and thereby perhaps **identify potential opportunities to slow spending growth** and meet the benchmark.
- Last summer Mathematica performed additional analyses at OHS' direction and reported results in the fall. Today we will review highlights from the findings.

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3 Data Use Strategy

This is a complementary strategy to the cost growth benchmark that leverages the state's APCD to analyze cost and cost growth drivers.

- The additional analyses focused on two areas of inquiry:
  1. how increases in hospital payments have been driving spending growth in the employer-sponsored coverage ("commercial") market, and
  2. why ED utilization is so much higher among communities with higher proportions of people of color and lower income persons with commercial coverage.

Overview of Analytic Population and Framework

- CT residents under age 65, as indicated, in 2015 - 2019
- Commercial (fully insured, and State employees and retirees)
- Exclusions (about 7% of members and claim lines per year):
  - Non-CT residents
  - Secondary payers, vision-only, and some student plans
  - Denied, reversed, and non-primary claim lines
  - Claim lines with negative payment or cost-sharing
  - Payments after runout period (after June 30th of following year)
- Also missing: non-claims-based payments, drug rebates, and retail pharmacy

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Per Member Per Month (PMPM) Total Commercial Spending & Out-of-Pocket Commercial Spending

Medical spending PMPM increased 21%, 2015-19

Payer	2015	2016	2017	2018	2019	2016	2017	2018	2019	Total change (%)
All-payer (unadjusted)	$375.47	$407.64	$421.05	$431.19	$454.19	8.6%	3.3%	2.4%	5.3%	21.0%

Notes:

1) The average annual increase was **4.9%.**
2) Average wage growth in CT for the same time period was **2.6%.**
3) Limited to CT residents under age 65.
4) Excludes retail pharmacy spend, a major contributor to spending growth in other states.

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Consumer out-of-pocket spending increased *much* faster than total spending

Payer	OOP spending for insured medical services (PMPM)					Annual OOP change (%)				Average annual change (%)		Total change (%)	
	2015	2016	2017	2018	2019	2016	2017	2018	2019	OOP	PMPM	OOP	PMPM
All-payer (unadjusted)	$44.26	$47.82	$53.83	$55.25	$56.70	8.0%	12.6%	2.6%	2.6%	6.5%	4.9%	28.1%	21.0%

Note:

1) The average annual increase in out-of-pocket spending was **6.5%**.
   - This includes patient co-insurance, deductible, and co-payment obligations. It does not include premium contributions.
2) This finding reflects changes in employer decisions on plan design, and employee plan selection.

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PMPM Commercial Spending, by Service
&
Relative Impact of Price and Utilization

Between 2015 and 2019 per capita spending growth varied significantly by service type

Service Category	2015 PMPM	2015 %	2018 PMPM	2018 %	2019 PMPM	2019 %	2018-2019 change (%)	Average annual change (%)	Total change (%)	Change in category as percent of total PMPM change
All services	$375.46	100.0	$431.19	100.0	$454.18	100.0	5.3	4.9	21.0	100.0
Professional	$167.77	44.7	$182.65	42.4%	$188.01	41.4	2.9	2.9	12.1	25.7
Inpatient acute	$77.79	20.7	$93.32	21.6%	$98.52	21.7	5.6	6.2	26.8	26.4
Outpatient	$124.40	33.1	$150.44	34.9%	$162.96	35.9	8.3	7.0	31.0	49.0
Other	$5.59	1.5	$4.78	1.1%	$4.69	1.0	-2.0	-4.3	-16.2	-1.2
ED*	$26.77	7.1	$32.63	7.6	$35.60	7.8	9.1	7.5	33.0	11.2

*ED includes both professional and outpatient ED claims if delivered in an ED, thus an overlap of professional and OP.

Notes: 1) Recall that Rx spending is not included in the analysis. It often represents around 25% of commercial spend. 2) Annual hospital spending growth is particularly high. By comparison, in RI insurer-reported data showed 2018-19 trends in per capita commercial hospital spending of 1% for IP services and 7% for OP (including ED) services.

Spending per service unit drove spending growth

Service Category	2019 Volume	2019 Spending per unit	Percent change in spending per unit					4-year percent change in volume
			2016	2017	2018	2019	Total 4-year	
Inpt. acute stay	33,683	$28,015	9.5	7.3	7.0	9.3	37.4	-10.2
Outpatient claim	1,011,124	$1,544	6.2	4.8	8.5	8.3	30.7	-2.4
Professional claim	8,270,885	$218	1.6	2.3	0.9	1.9	6.8	2.1
ED visit*	179,072	$1,904	10.0	7.9	9.1	11.4	44.3	-10.3

- Changes in spending per unit may be affected by changes in service mix and 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.

*ED includes both professional and outpatient ED claims if delivered in an ED

Notes: 1) Hospital price increases appear to be the primary driver of cost growth. 2) Professionals appear to have experienced very small annual fee increases. 3) This analysis does not isolate the impact of new services substituting for older ones at different price points, or for changes in site of service, e.g., surgery moving from inpatient to outpatient.

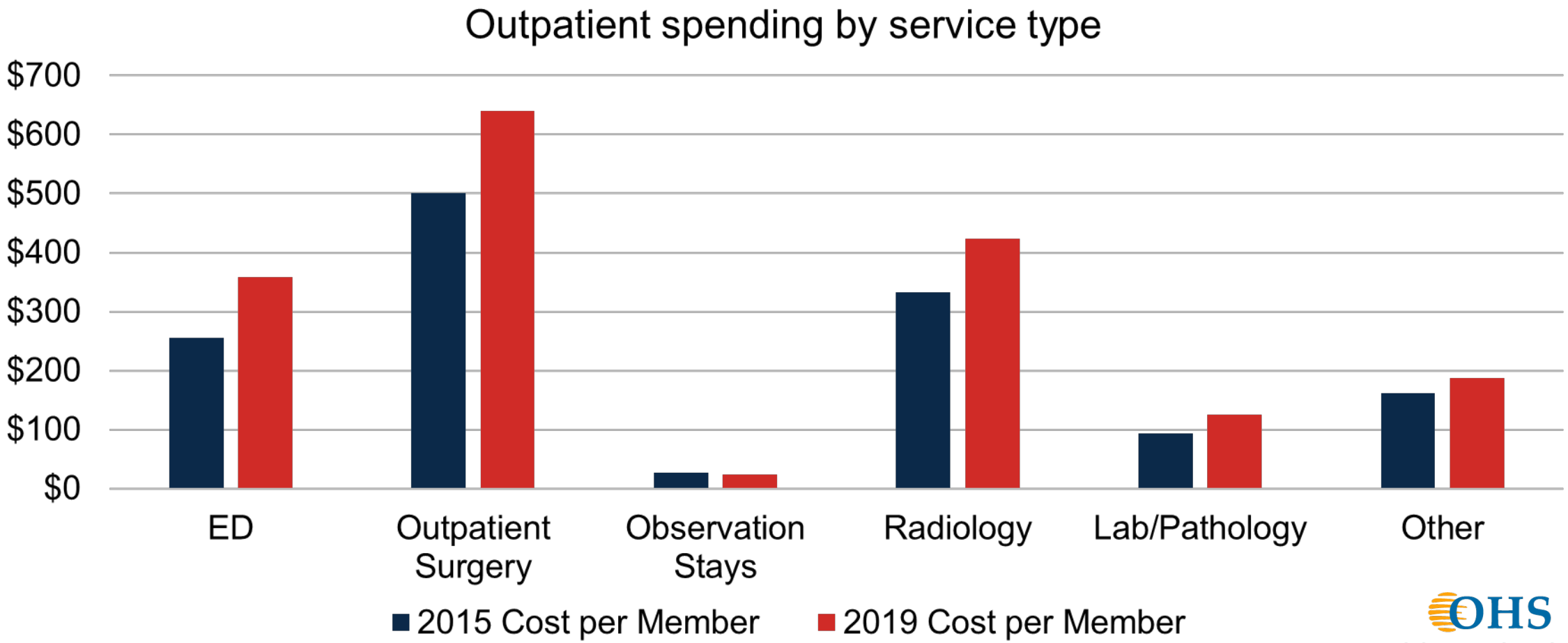
Hospital discharges were concentrated in a few systems; discharge volume changes were variable

- Two health systems represented **57%** of 2019 inpatient discharges. The two next largest systems represented 10% and 9% of 2019 inpatient discharges respectively. Together, these four systems represented **76%** of 2019 inpatient discharges.
- While discharge volume per 1000 members dropped 9% between 2015 and 2019, there was considerable variation across systems. Two systems had declines of only -0.4%, while two had a drop of -21.5% and -16.9% respectively.

Hospitals with the highest inpatient costs grew fastest, while those with the lowest grew slowest

- Of the ten hospitals with the **highest rates of growth in payment** per CMAD, five hospitals also had the highest cost per CMAD in 2019. Four of five were affiliated with the largest systems.
- Of the ten hospitals with the **lowest rates of growth in payment** per CMAD, five hospitals also had lowest cost per CMAD in 2019. Four of five were unaffiliated with the largest systems.

ED, outpatient surgery, and radiology make up the majority of outpatient facility spending.



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Across all major outpatient service types, changes in outpatient spending were driven by spending per unit not units per person

Service type	2015 – 2019 Percent Change			
	Spending per person	Units per member	Spending per unit	Interaction of both factors
ED	40.1%	-6.3%	49.5%	-3.1%
Outpatient surgery	28.1%	2.3%	25.2%	0.6%
Radiology	27.5%	0.0%	27.6%	0.0%
Lab/pathology	35.5%	-5.2%	42.8%	-2.2%

- For ED, spending per unit rose by almost 50 percent between 2015 and 2019.

Emergency Department Utilization

Methods: ED Utilization Analysis

- 2016 – 2019*
- Focus on disparities by age, gender, income, and race
- Deciles are based on resident zip code** and derived from Census data
  - Income Decile 1 is lowest income; Decile 10 is highest income
  - Race decile is defined by the percentage of people of color in the community; Race decile 1 is the highest portion of people of color; race decile 10 is lowest portion of people of color
- Professional and outpatient ED claims for the same member on the same date were grouped into ED visits

* 2015 excluded from most ED analyses because (1) the analysis used ICD-10 codes, which were introduced in late 2015 or (2) at least 1 lookback year was required to assign a chronic condition

** Zip codes mapped to Zip Code Tabulation Areas

ED utilization and PCP visits

- Members with ED visits were *more likely* to have had a PCP visit than those members without an ED visit (76% vs. 55%). Nothing changed in this respect between 2015 and 2019.
- Members in communities with higher proportions of people of color were less likely to have had a PCP visit. Nothing changed in this respect between 2015 and 2019.

Rates of ED use are especially high in six communities; Most are majority Black and Hispanic/Latino

Zip Code	Town	Median Household Income	Percent Black	Percent Hispanic/ Latino	ED visits per 1,000 members
All CT		**$ 86,945**	**9.4**	**13.8**	**976**
06120	Hartford	$ 27,324	51.7	43.0	1,802
06519	New Haven	$ 29,332	35.0	45.1	1,731
06704	Waterbury	$ 40,625	25.5	45.5	1,726
06226	Windham	$ 37,339	5.6	44.6	1,721
06380	Norwich	$ 38,319	10.6	17.8	1,710
06607	Bridgeport	$ 42,103	48.0	43.2	1,681

- Communities are defined by zip code.
- Limited to adults 18-64 and communities with >10,000 adult member months in sample.
- Includes four years of data, 2016-2019.

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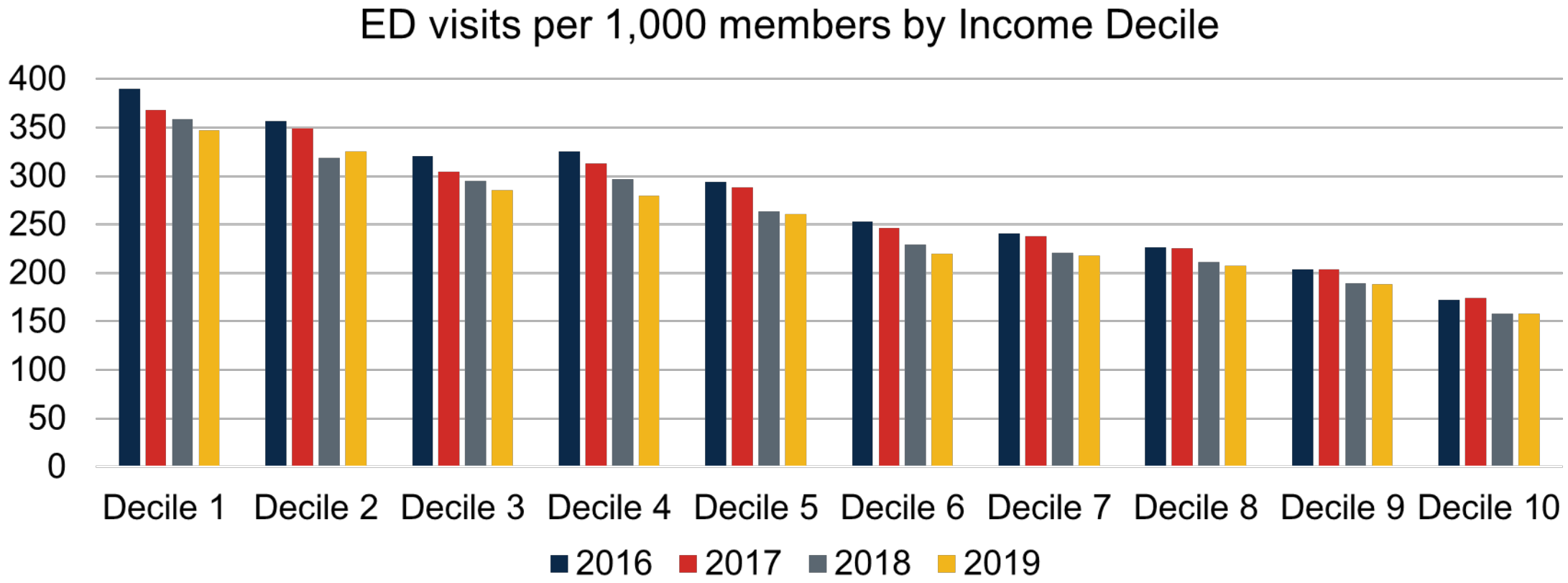
ED visits are declining, but remain higher among residents in lower income communities



- Includes CT residents ages 65 and under
- ED claims include professional and outpatient claims located in the emergency department. Multiple ED claims for the same member on the same date are grouped into one ED visits.

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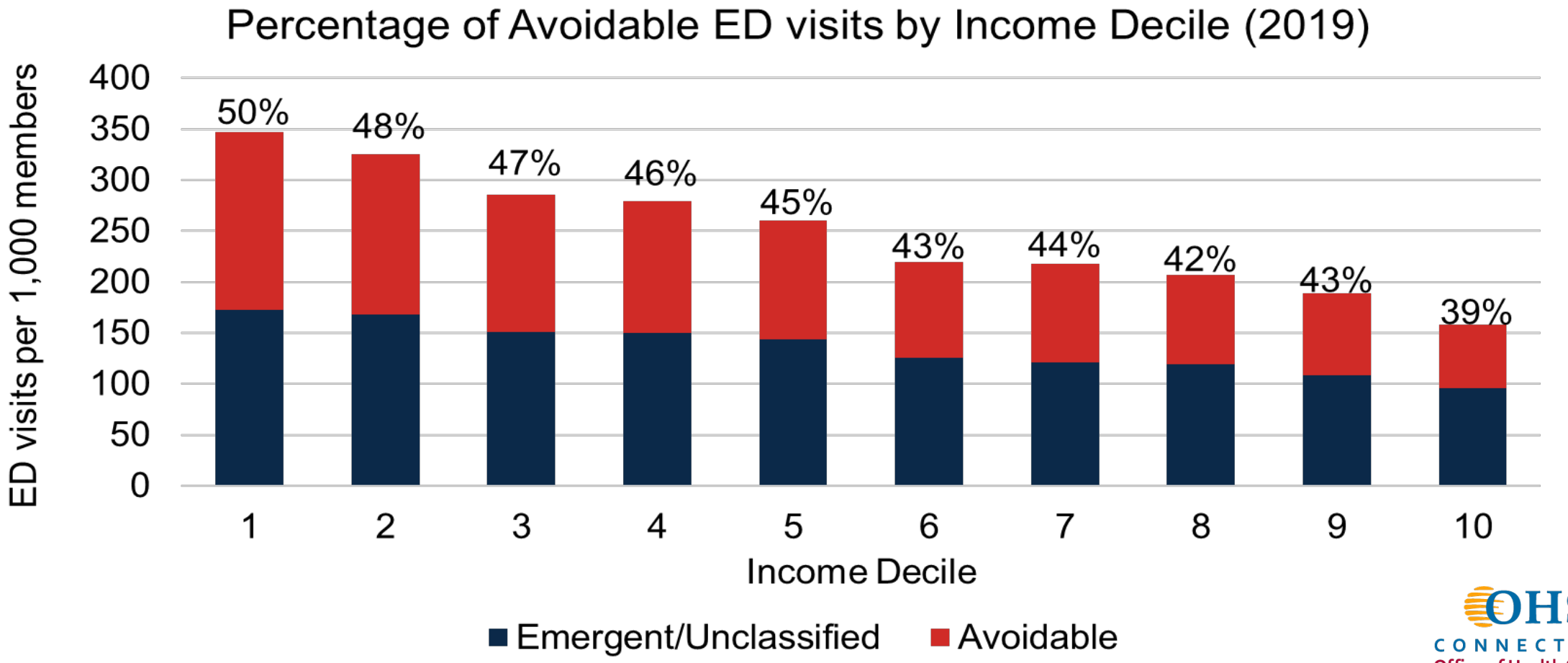
45% of ED visits were non-emergent or avoidable

Of these, nearly half (18-19% of all ED visits) were non-emergent

ED visit type *(subtype)*	Percentage of ED visits			
	2016	2017	2018	2019
Behavioral Health	3.5%	3.5%	3.7%	3.9%
All non-Behavioral Health	85.4%	84.2%	83.9%	83.3%
Emergent, ED needed, non-preventable	16.9%	16.9%	17.7%	17.7%
Emergent, injury	23.5%	23.0%	21.5%	21.5%
Emergent, ED needed, preventable	5.1%	5.0%	5.0%	4.9%
Emergent, primary care treatable	21.2%	21.1%	21.4%	21.1%
Non-Emergent	18.7%	18.3%	18.2%	18.0%
Unclassified	11.1%	12.3%	12.3%	12.8%
All preventable ED visits	45.0%	44.4%	44.7%	44.1%

A higher number and percentage of ED visits are avoidable for residents of lower income communities



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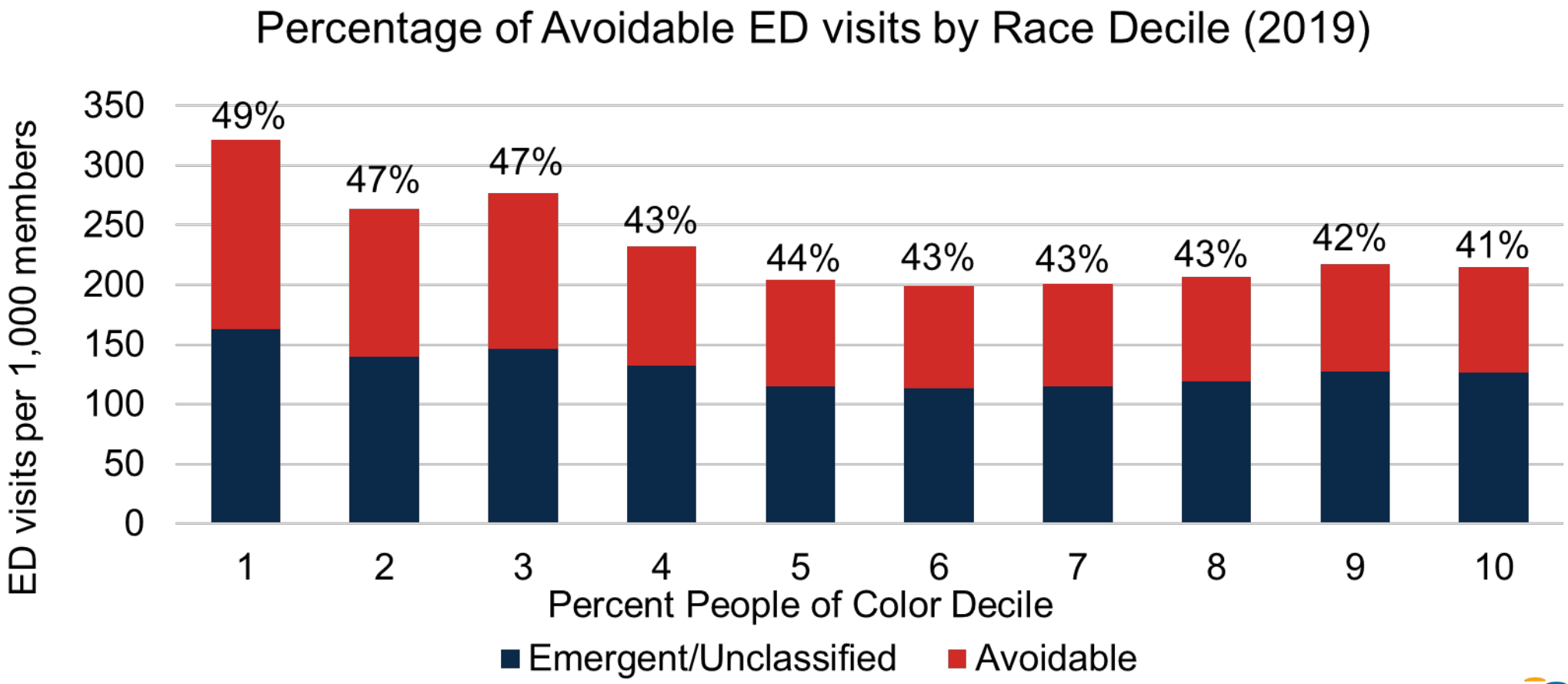
Residents of communities with higher percentages of people of color were more likely to have avoidable ED visits



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Certain diagnoses have notably higher ED rates in low-income communities

- **All ages**
  - Asthma (2.4x)*
  - Complications in pregnancy (2.3x)
  - Low back pain (2.1x)
  - Musculoskeletal pain, not low back pain (1.9x)
  - Viral infection (1.8x)

- Interpretation for asthma:
  (Rate in deciles 1&2)/(State rate) = 2.4.

- **Children (0-17)**
  - Asthma (2.7x)
  - Other specified upper respiratory infections (1.8x)
  - Otitis media (1.8x)
  - Respiratory signs and symptoms (1.8x)
  - Nausea and vomiting (1.7x)
- **Special interest (all ages)**
  - Influenza (All) (1.5x)
  - Non-traumatic dental (1.7x)

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In 2019, 70% of ED visits were by members with a chronic condition and nearly half by members with multiple chronic conditions

Chronic condition	Percent of population	Percent of ED visits	Number of ED visits	ED visits per 1,000 mbrs	Ratio 1:10	
					Income	Race
One or more conditions	34.9%	70.3%	74,531	336.2	2.1	1.5
Two or more conditions	18.6%	47.0%	49,793	421.5	2.0	1.5
No condition	38.0%	29.7%	31,439	130.1	1.7	1.2

Other ED visit disparity observations…

- Bottom income decile members were 2x more likely to have a chronic condition and were 2x as likely to have two chronic conditions, compared to top income decile members. Disparities were greatest for glaucoma and ischemic heart disease. There was not a great deal of variation by chronic condition.
- Members in the decile with the highest % of people of color were 1.5x more likely to have one chronic condition and two or more chronic conditions, compared to decile with the lowest %. There was not a great deal of variation by chronic condition.
- There is certain correlation between income and race. These data suggest that income is more explanatory than race.

Discussion