

Comparison of Care in Hospital Outpatient Departments and Physician Offices

Final Report

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answering today's health policy questions

Study Overview

- Study Purpose
- Key Findings
- Overview of Study Approach
- Comparison of Patient Characteristics
- Comparison of Care Characteristics
- Conclusions
- Appendix: Data and Methodology

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STUDY PURPOSE

Study Purpose

- Patients may receive non-emergent medical care in a physician's office or a hospital outpatient department (HOPD).*
- Medicare pays different amounts for the same service depending on the setting of care.
- Congress is considering a Medicare Payment Advisory Commission (MedPAC) proposal that would cap payment for certain HOPD services at the physician rate.

*This study does not consider care provided in other outpatient settings such as Ambulatory Surgery Centers.

Study Purpose

- Under this proposal, Medicare payments to HOPDs would fall.
- Whether a payment differential is appropriate depends on differences between physician offices and HOPDs.
- It has been documented that HOPDs face greater regulatory requirements,* but less is known about the differences between the patients served and care provided. This study aims to fill that gap.
 - Do patients differ in ways that may drive costs?
 - Is the care delivered the same?

*American Hospital Association (2014). “Hospital Outpatient Department Costs Higher Than Physician Offices Due to Additional Capabilities, Regulations.” <http://www.aha.org/research/policy/infographics/pdf/info-hopd.pdf>.

Key Questions

- How do the patient populations treated in HOPDs and physician offices differ?
 - Demographics and socioeconomic status
 - Severity and complexity
- How does the delivery of care vary between settings?
 - Reason for visit
 - Services, treatments, and medications ordered or provided

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KEY FINDINGS

Key Findings: Comparison of Patient Characteristics

Relative to those treated in physician offices, patients receiving care in HOPDs are more likely to be:

- Black or Hispanic
- Self pay, charity care, or on Medicaid
- From areas with low household income, high rates of poverty, and low rates of college education
- Burdened with more severe chronic conditions, in terms of their effect on mortality
- Hospitalized, have an emergency department visit, and have higher Medicare spending prior to receiving ambulatory care

Key Findings: Comparison of Delivery of Care

Relative to care provided to patients treated in physician offices, care provided to patients treated in HOPDs is:

- More likely to be delivered to a new patient or referral
- More likely to be for the receipt of treatment
- Likely to include the provision or ordering of more treatments and services
- More likely to include care from a nurse

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OVERVIEW OF STUDY APPROACH

Study Overview

Study Question	Data Source	Approach
How do the patient populations treated in HOPDs and freestanding physician offices differ?	• 2008-2010 National Ambulatory Medical Care Survey (NAMCS) - survey of visits to non-federal employed office-based physicians. • 2008-2010 National Hospital Ambulatory Medical Care Survey (NHAMCS) - survey of visits to hospital outpatient departments. • 2012 Standard Analytical File of 5% sample of Medicare beneficiaries. Claims include inpatient, outpatient, skilled nursing facility, professional, and home health data .	Descriptive analysis of pooled NAMCS/NHAMCS sample. For claims analysis, descriptive analysis at the patient and claims level using information in the 90 days prior to an HOPD or physician office visit.
How does the delivery of care vary between settings?	• 2008-2010 NAMCS and NHAMCS	Descriptive analysis of pooled NAMCS/NHAMCS sample.

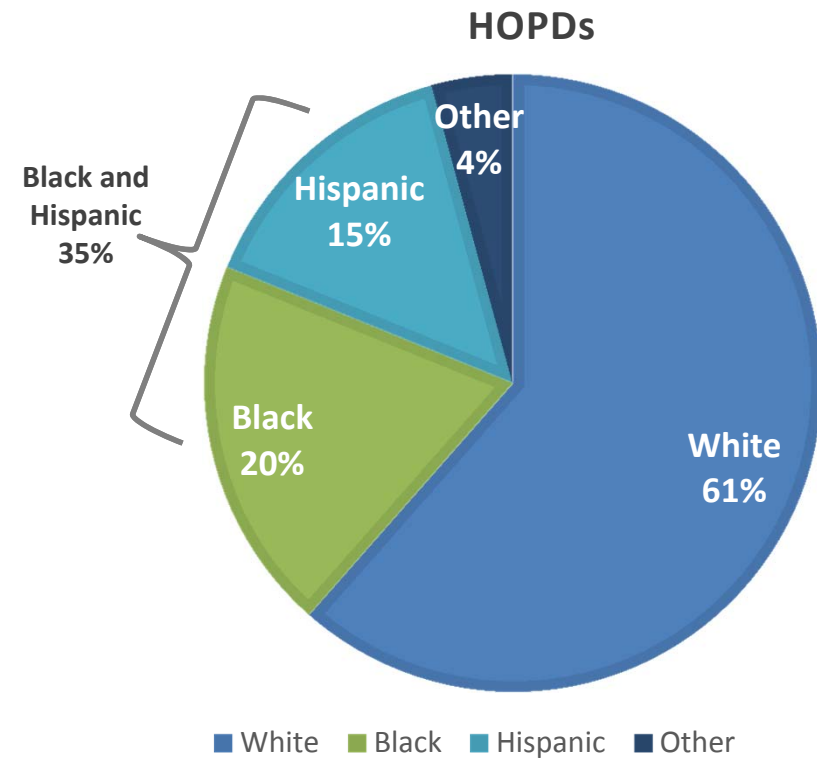
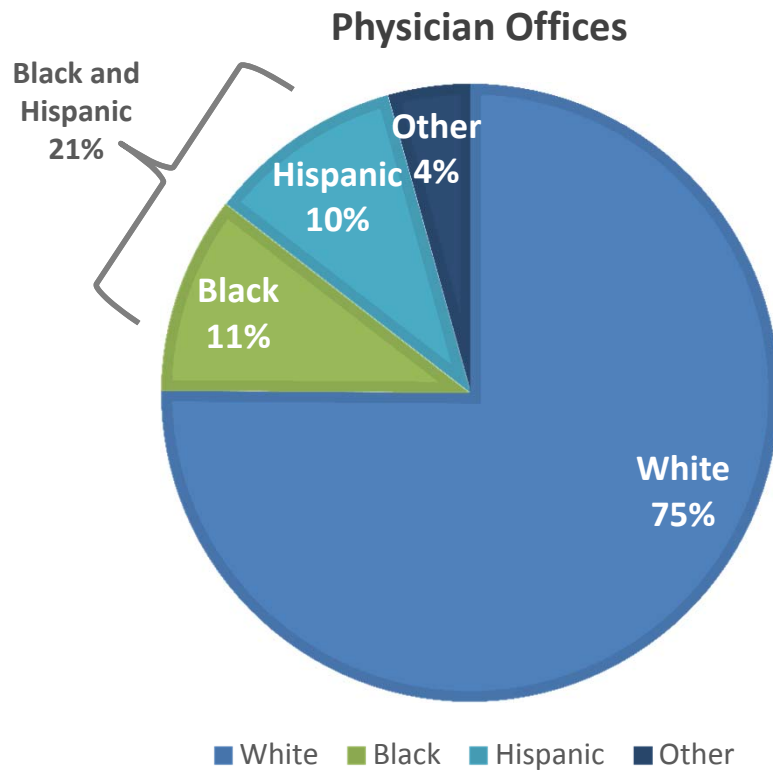
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HOW DO PATIENTS TREATED IN HOPDs DIFFER FROM THOSE TREATED IN PHYSICIAN OFFICES?

**Relative to patients seen in
physician offices, patients seen in
hospital outpatient departments
are...**

...1.7x More Likely to be Black or Hispanic (35%/21%)

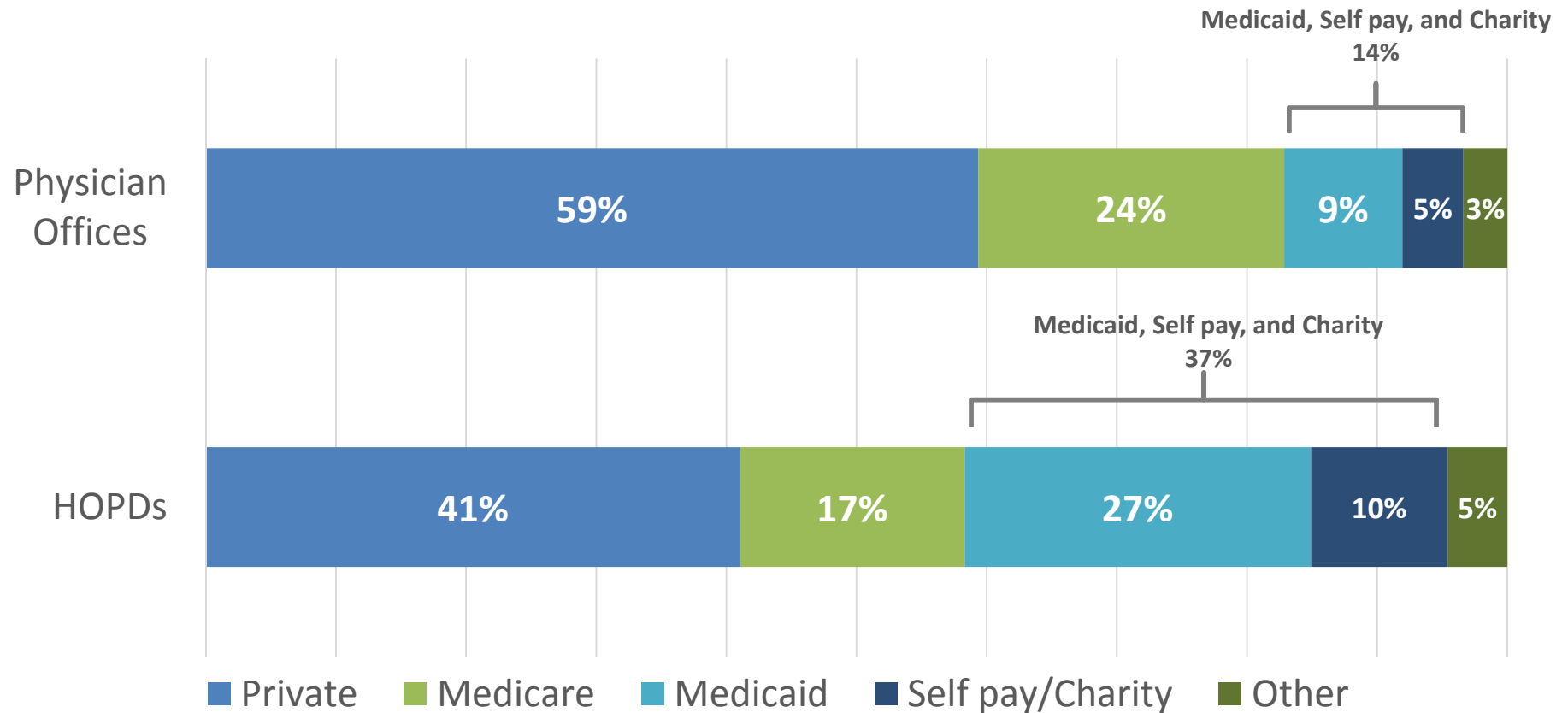
Patient Racial/Ethnic Composition*



*P < 0.001

...2.5x More Likely to be Medicaid, Self pay, or Charity (37%/14%)

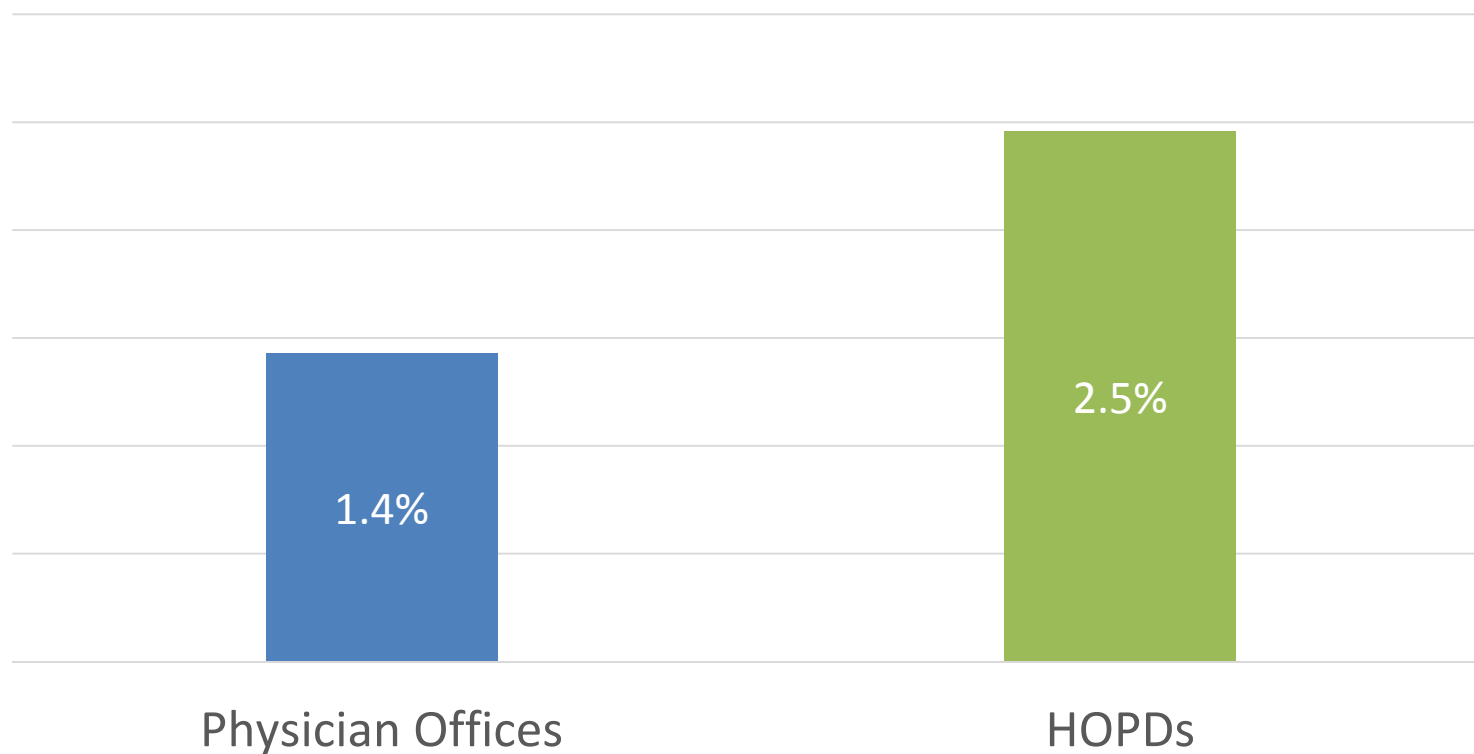
Payer Type Composition*



*P< 0.001

...1.8x More Likely to be Dual Eligible

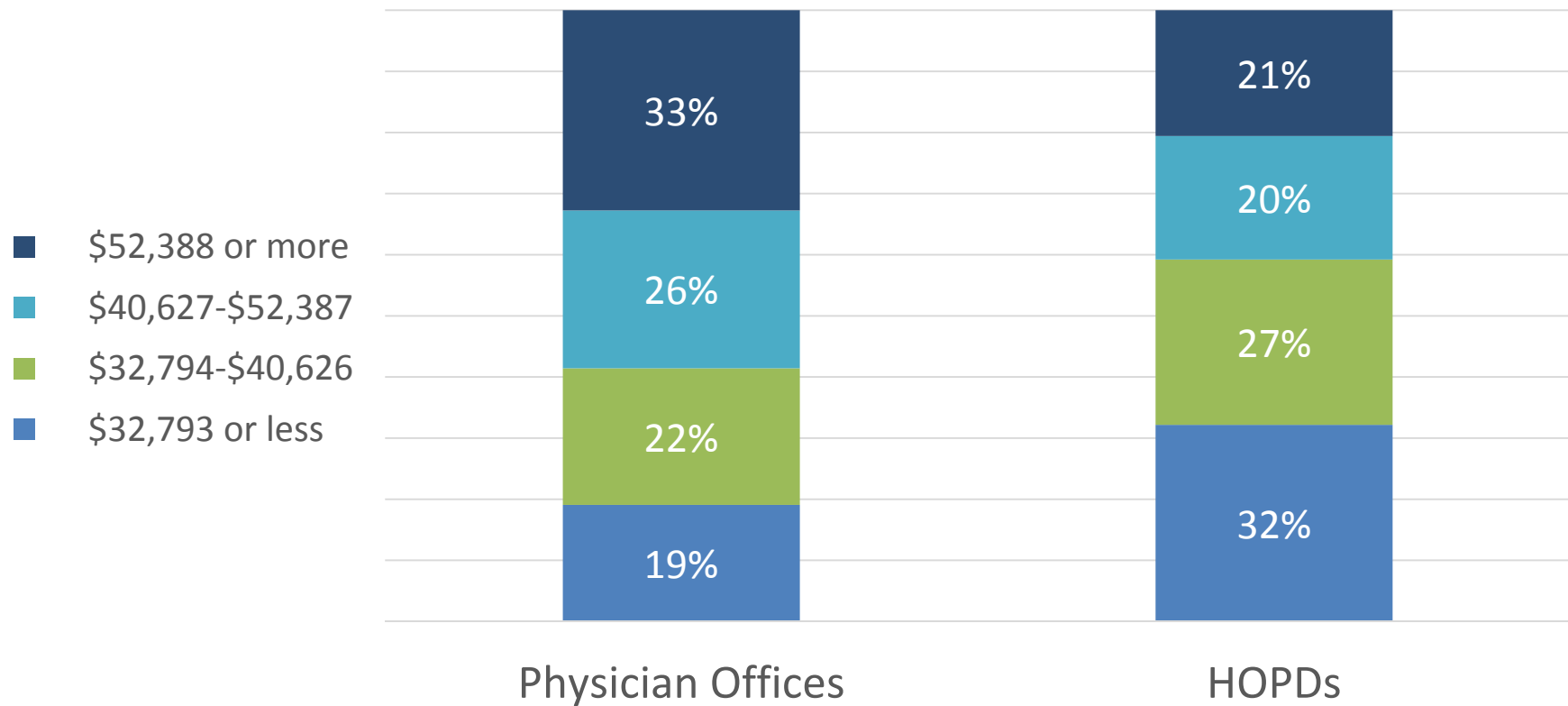
Percentage of Patients That Are on Medicare and Medicaid*



*P< 0.001

...1.7x More Likely to Live in Areas <\$33K in Median Income (32%/19%)

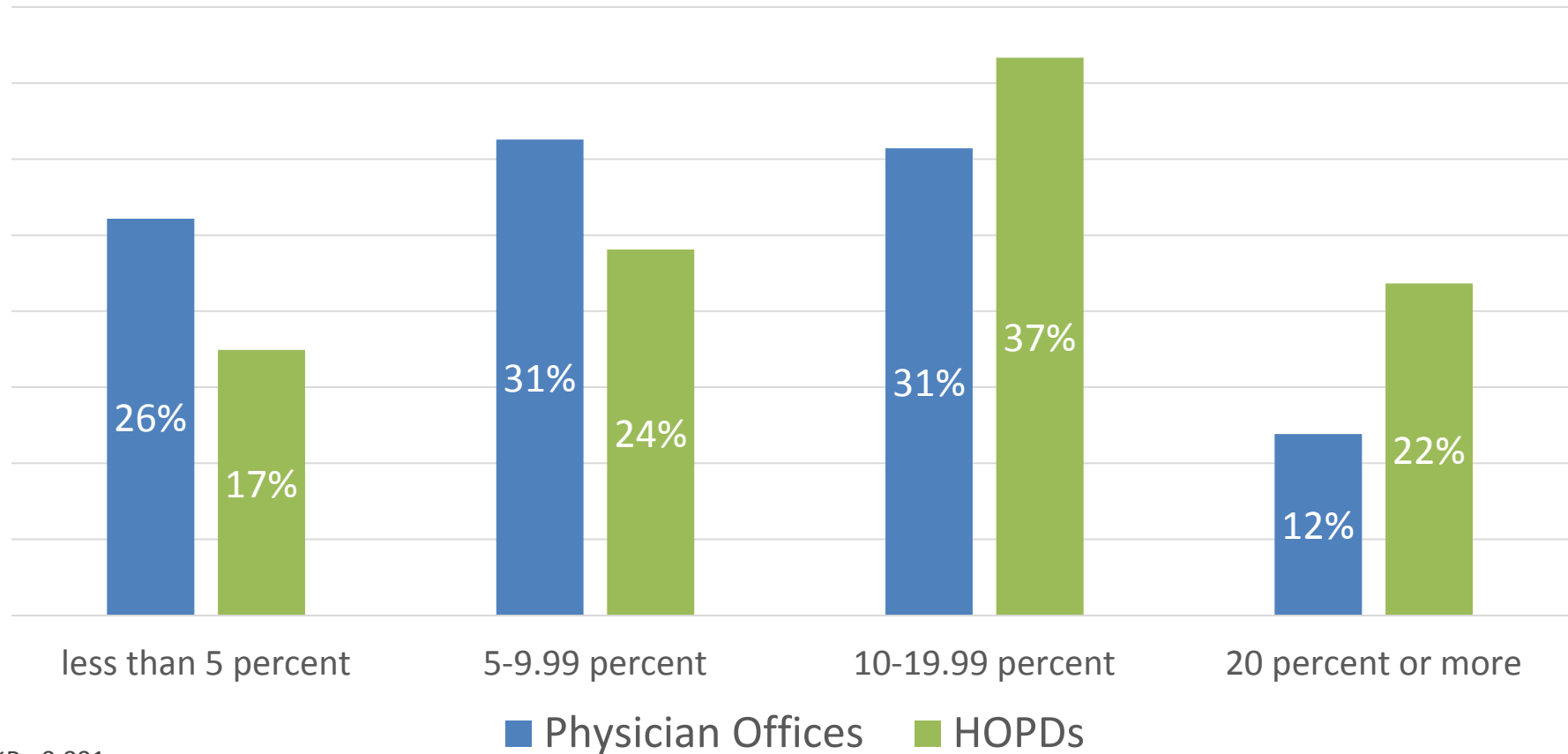
Median Household Income in Patient's Zip Code*



*P< 0.001; Categories based on national quartiles.

...1.8x More Likely to Live in High Poverty Areas (22%/12%)

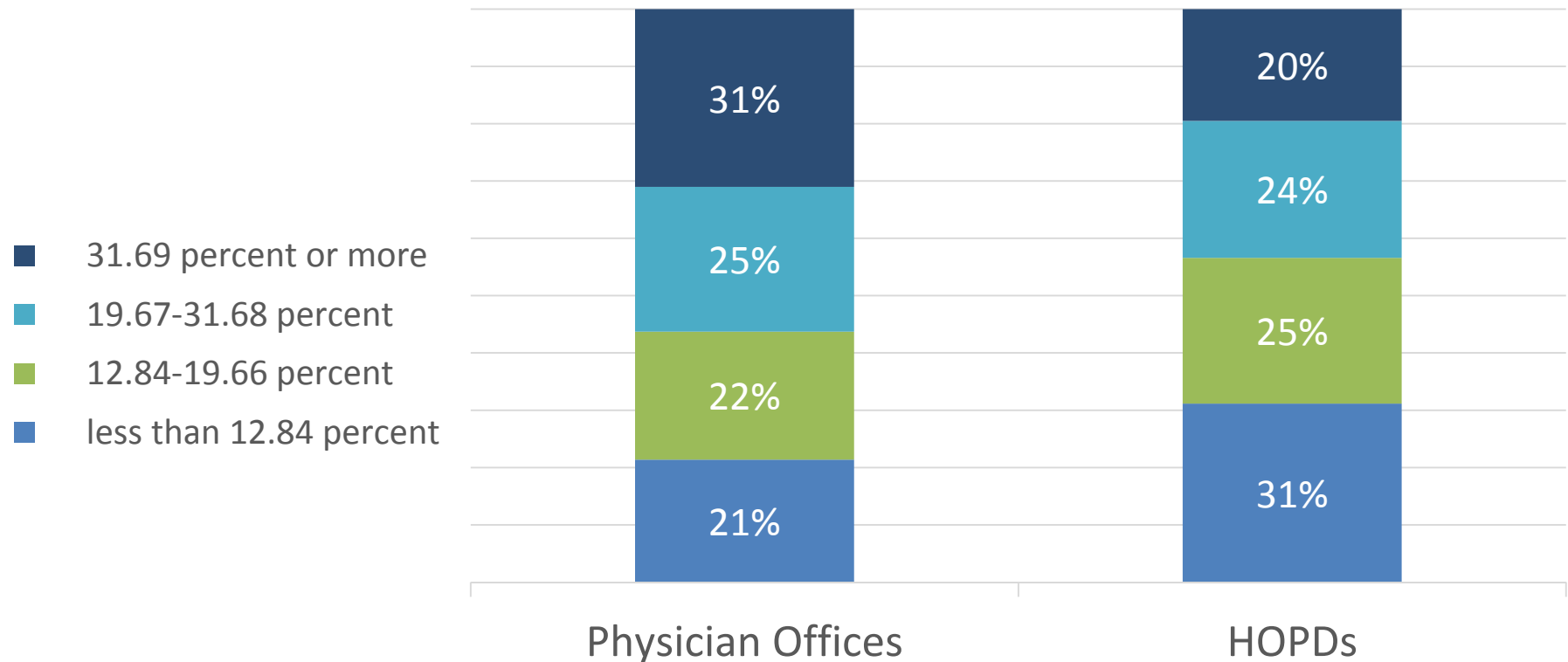
Percent Poverty in Patient's Zip Code*



*P < 0.001

...1.5x More Likely to Live in Areas with Low Rates of College Education (31%/21%)

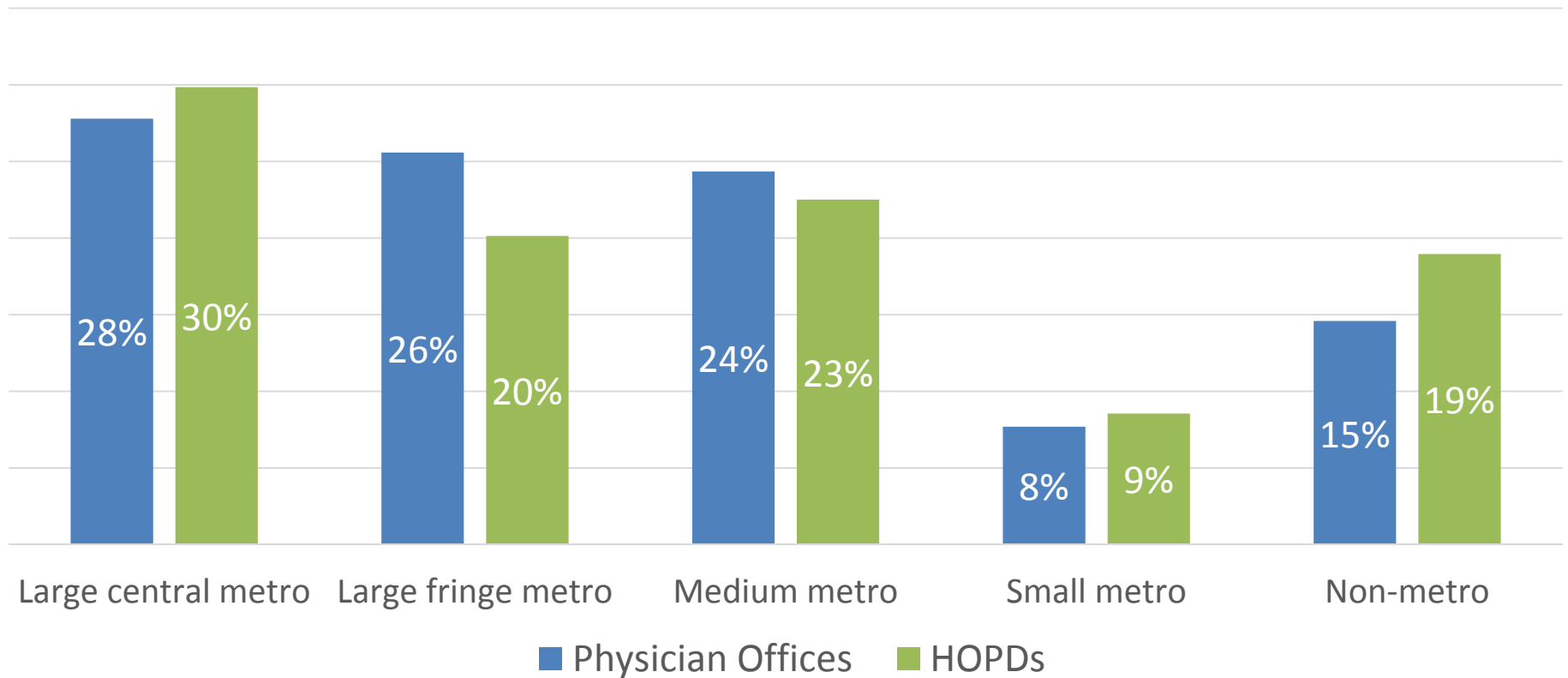
Percentage of Adults with Bachelor's Degree in Patient's Zip Code*



*P< 0.001; Categories based on national quartiles; Due to rounding, categories may not add to 100%

...Live in Areas with Similar Metropolitan Classifications

Urban Classification of Patient's Zip Code*



*P=0.211

Severity and Complexity Measures

- We measured patient severity and complexity using two indicators: Charlson Comorbidity Index, prior utilization
- Charlson Comorbidity Index predicts the ten-year mortality of patients, with higher scores predicting higher mortality.
 - It is computed by assigning higher weights to more severe conditions in terms of their effect on mortality.
- Prior utilization of care captures use and Medicare spending for hospital, skilled nursing facility, home health, hospital outpatient, and physician/professional care in the 90 days preceding a HOPD or physician office visit.

Across All Patients, Those Treated in the HOPD Have More Severe Chronic Conditions

- Patients seen in HOPDs and physician offices are similar in terms of the number of chronic conditions they have.
- However, the severity of chronic conditions as measured by the Charlson Comorbidity Score is higher for HOPD patients.

Indicator (Charlson Comorbidity Index)	Physician Offices	HOPDs
Average number of chronic conditions *	0.63	0.62
Average Charlson Comorbidity Score**	0.17	0.24

Chronic conditions captured in Charlson Score:

Congestive heart failure, Cardiac arrhythmias, Valvular disease, Pulmonary circulation disorders, Peripheral vascular disorders, Hypertension, Paralysis, Other neurological disorders, Chronic Pulmonary disease, Diabetes (uncomplicated), Diabetes (complicated), Hyperthyroidism, Renal failures, Liver disease, Peptic ulcer disease without bleeding, AIDS/HIV, Lymphoma, Metastatic cancer, Solid tumor without metastasis, Rheumatoid arthritis/collagen vascular disease, Coagulopathy, Obesity, Weight Loss, Fluid and electrolyte disorders, Blood loss anemia, Deficiency anemia, Alcohol abuse, Drug Abuse, Psychoses, Depression

*P=0.738

**P<0.001

Medicare Patients Seen in HOPDs Have Higher Charlson Scores

Charlson Score Based on Number of Visits and Care Setting for Medicare Beneficiaries (2012)

Number of HOPD or Physician Office Visits During Year	Care Setting for Ambulatory Care	
	Majority Physician Offices	Majority HOPDs
1	0.6	1.0
2-5	0.9	1.3
6-10	1.3	1.8
11-15	1.7	2.3
16-20	2.1	2.9
21-30	2.5	3.5
30 +	3.1	4.7
Mean Charlson Score	1.7	2.5

This table presents the average Charlson Scores by number of visits for Medicare Beneficiaries who received ambulatory care in either a physician office or an HOPD.

Patients who received ambulatory care in either setting in a given year are categorized as follows:

Majority Physician Offices: more than 50% of care was delivered in physician offices

Majority HOPDs: more than 50% of care was delivered in HOPDs

P< 0.001 in each category of number of visits.

Medicare Patients Seen in HOPDs Have Higher Prior Emergency Department Use

Emergency Department Utilization 90 Days Prior to Visit by Setting*

Care Setting Use Prior to Visit	Physician Offices	HOPDs
Percent with an Emergency Department (ED) Visit	14.5%	21.5%
Mean Number of ED Visits	0.21	0.33
Mean Number of ED Visits (Conditional on Having at Least 1 ED visit)	1.4	1.5

*P< 0.001

Medicare Patients Seen in HOPDs Have Higher Prior Acute Care Hospital Use

STCH Utilization 90 Days Prior to Visit by Setting*

Care Setting Use Prior to Visit	Physician Offices	HOPDs
Percent with a Short Term Acute Care Hospital (STCH) Stay	13.2%	20.0%
Mean Number of Stays in STCH	0.19	0.35
Total STCH Medicare Utilization Days (If at Least 1 STCH Stay)	5.0	6.6
Mean Number of STCH stays (If at Least 1 STCH Stay)	1.4	1.8
Total STCH payments (If at Least 1 STCH Stay)	\$9,015	\$11,420

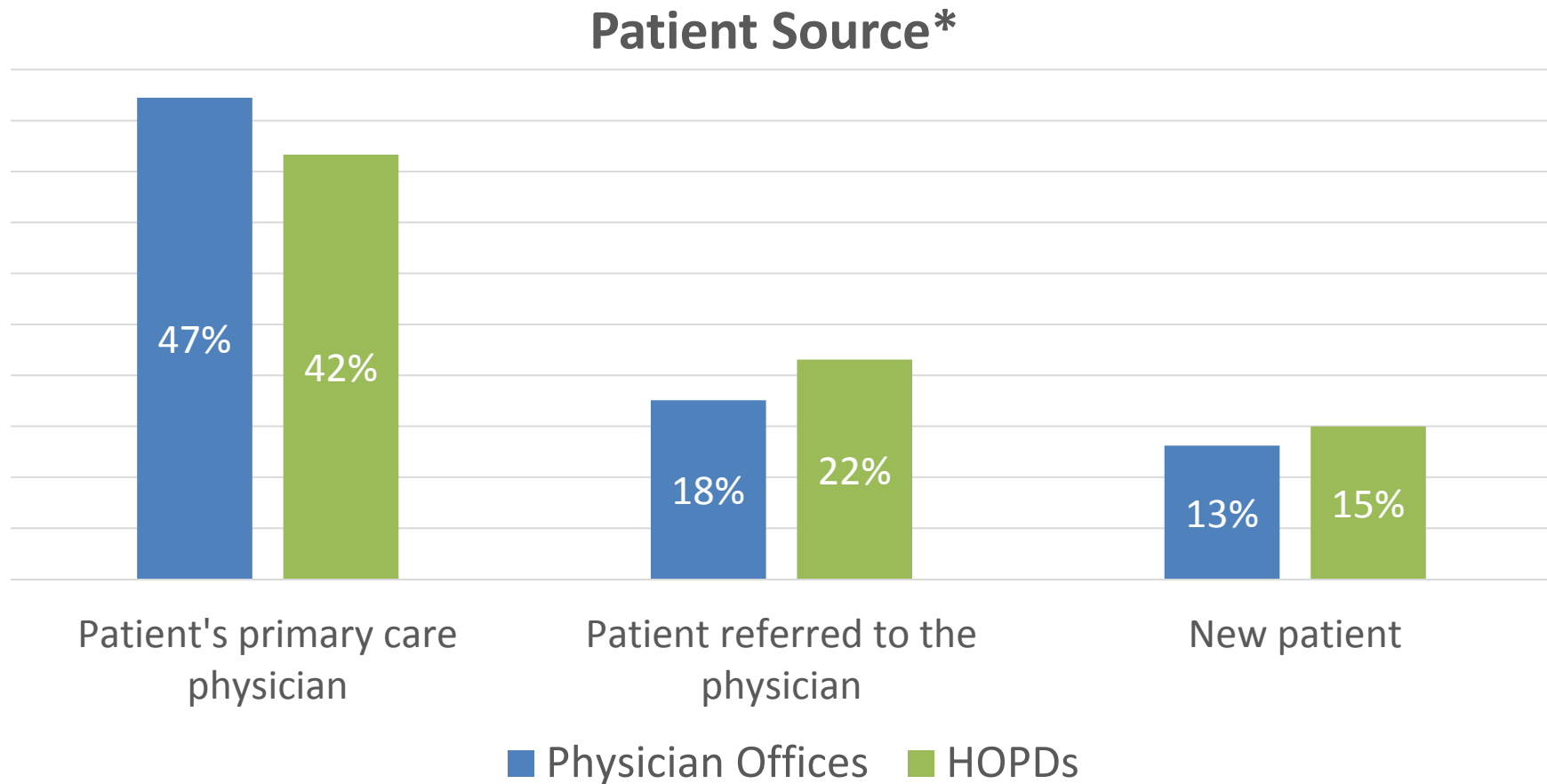
*P< 0.001

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HOW DOES THE DELIVERY OF CARE VARY BETWEEN HOPDs AND PHYSICIAN OFFICES?

**Relative to care received by
patients seen in physician offices,
care provided to patients seen in
hospital outpatient departments
is...**

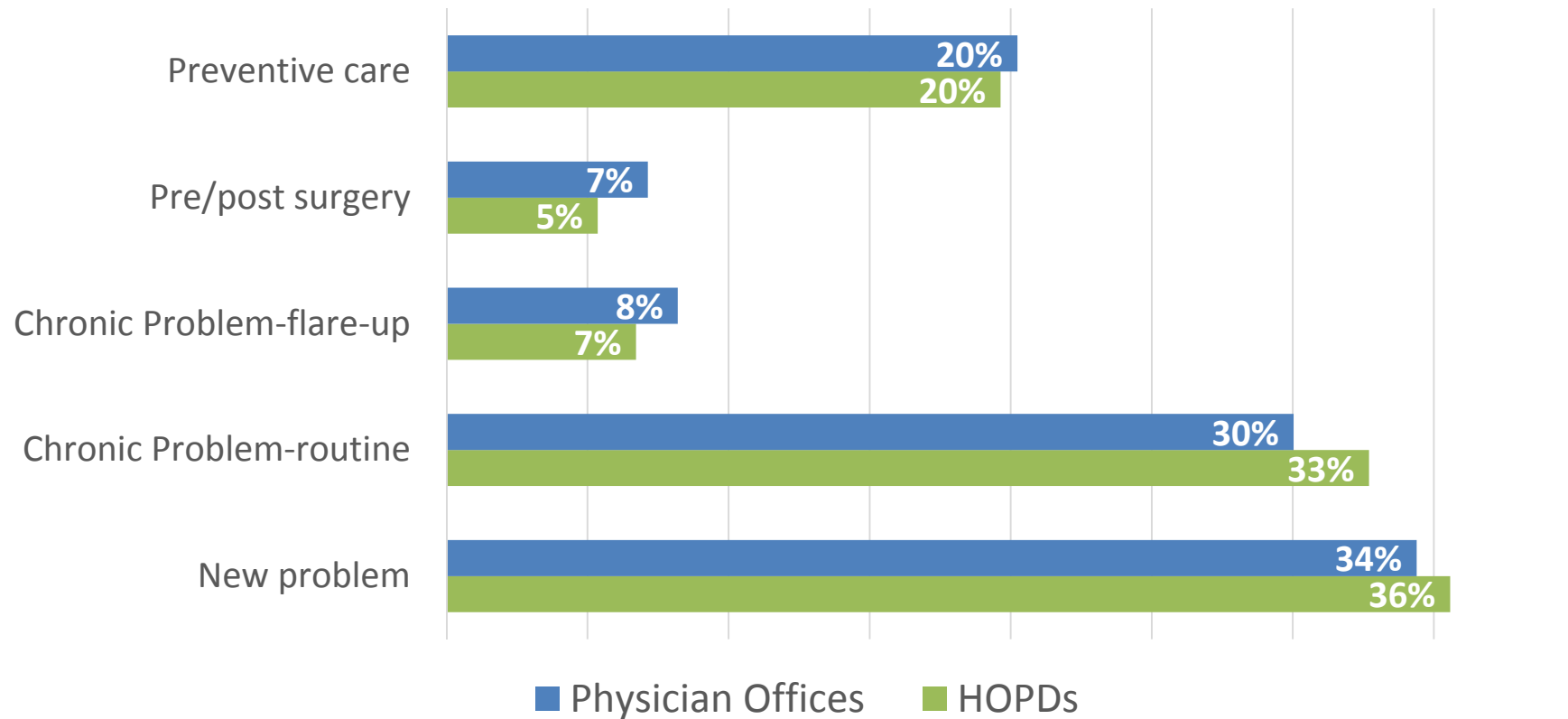
...More Likely to be Delivered to a New Patient or Referral



*Categories are not mutually exclusive ; $P < 0.05$

...1.1x More Likely to be for Routine Care for a Chronic Problem or Care for a New Problem (69%/64%)

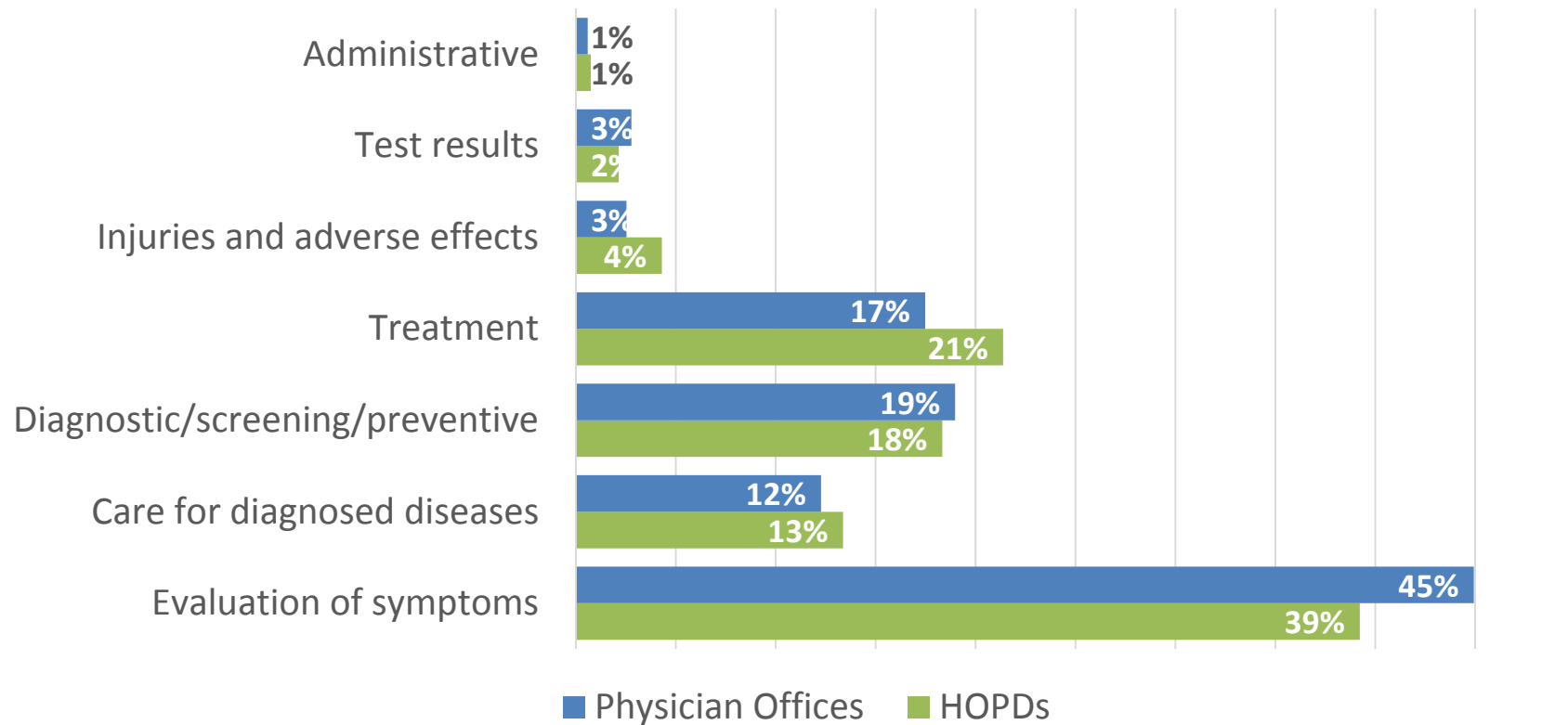
Provider Reason for Visit*



*P< 0.05

...1.2x More Likely to be Primarily for Receipt of Treatment (21%/17%)

Patient Reason for Visit*



*P< 0.001

Include More Services Ordered or Provided, on Average

Services and Treatments, Medications, and Education Provided or Ordered per Visit⁺

Service/Treatment Indicators	Physician Offices	HOPDs
Average number of services/treatments ordered or provided during visit*	3.8	4.2
Average number of medications ordered or provided during visit	2.5	2.7
Had any health education ordered or provided	40%	48%

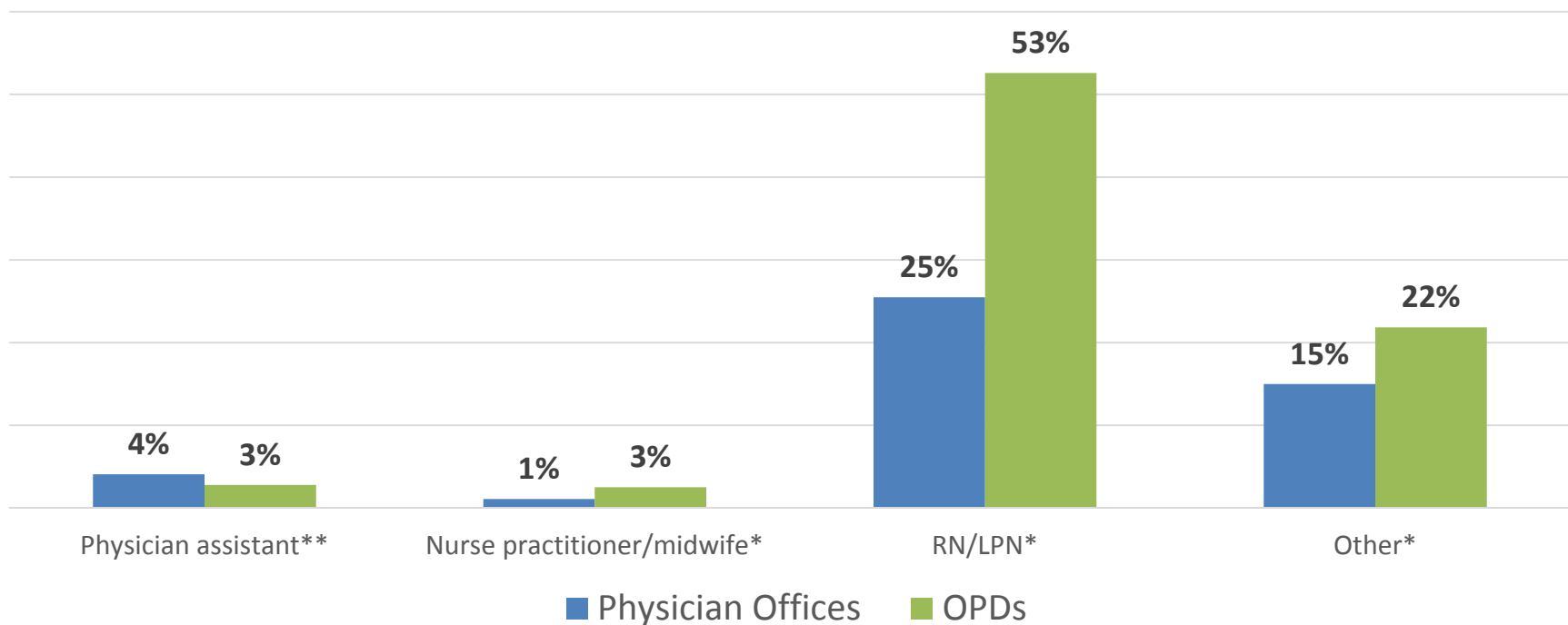
- In addition to more services and treatments, care provided in HOPDs involves more health education compared to care provided in physician offices.

*Based only on 2009 and 2010 data

⁺ P< 0.01 for services/treatments and health education ordered or provided; P=0.123 for number of medications ordered/provided.

...More Likely to Involve a Nurse in Addition to a Physician

Providers Seen During Visit Among Patients Who See a Physician⁺



⁺Categories are not mutually exclusive. *P< 0.001 **P=0.253

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CONCLUSIONS

Conclusions

- Our findings suggest key differences between patients treated in HOPDs and physician offices.
 - Patients treated in HOPDs are more likely to be uninsured or covered by Medicaid.
 - HOPD patients tend to come from communities with lower income, higher poverty rates, and lower educational attainment.
 - Patients treated in HOPDs tend to have more severe chronic conditions and, in Medicare, have higher prior utilization of hospitals and emergency departments.

Conclusions (Continued)

- Patients of higher complexity may require a greater level of care than patients of lower complexity.
- To the extent that these differences result in variations in the cost of care, site neutral payments may have adverse effects on patient access to care.

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APPENDIX: DATA AND METHODOLOGY

Data

- 2008-2010 National Ambulatory Medical Care Survey (NAMCS)
 - Survey of visits to non-federally employed, office-based physicians, excluding visits to anesthesiologists, pathologists, radiologists.
 - Visits to the following care settings were excluded from analysis: community health centers, non-federal government clinics, HMOs, and faculty practice plans.
- 2008-2010 National Hospital Ambulatory Medical Care Survey (NHAMCS)
 - Survey of visits to hospital outpatient departments (HOPDs) and emergency departments of non-federal, short-stay general hospitals.
 - In order to examine patient and care differences between physician office visits and HOPD visits, we limited our analyses to HOPD visits in the NHAMCS sample.
- Analysis dataset based on NAMCS/NHAMCS sample included
 - 78,686 visits to physician offices
 - 102,177 visits to HOPDs

Data

- 2012 Standard Analytical File of 5% sample of Medicare beneficiaries. Claims include:
 - Inpatient
 - Outpatient
 - Skilled nursing facility
 - Professional services (carrier file)
 - Home health agencies
- Analysis dataset based on claims data included
 - Medicare Beneficiaries who:
 - a. had Part A and Part B from Oct 2011 to Dec 2012
 - b. received services at least once in HOPD or physician offices from Jan 1, 2012 to Dec 31, 2012
 - 1,061,622 beneficiaries
 - 13,739,053 visits in physician offices; 2,839,588 services in HOPDs

Methodology: Descriptive Analysis

- Descriptive analysis of pooled NAMCS/NHAMCS sample
 - Differences between visits to HOPDs and physician offices were tested using t-test for continuous variables and Pearson chi-squared test for categorical variables.
 - Analysis was conducted using weights that take into account the complex sampling design of NAMCS and NHAMCS.
 - Patient-level weights were used in analyzing patient characteristics, and visit-level weights were used in analyzing visit characteristics.
 - Patient-level weights were constructed based on the methodology outlined by Burt and Hing (2007)¹ using visit-level weight and the number of times the patient was seen by the provider within the past year.

¹ Burt, C. W., & Hing, E. (2007). Making patient-level estimates from medical encounter records using a multiplicity estimator. *Statistics in Medicine*, 26(8), 1762–1774. doi:10.1002/sim.2797

Methodology: Descriptive Analysis

- Descriptive analysis of claims data
 - Analysis was conducted at the patient and claims level using information in the 90 days prior to an HOPD or physician office visit.
 - Charlson Score for Medicare Beneficiaries was calculated based on outpatient claims, inpatient claims, and carrier claims at the beneficiary level with the application of a hierarchy of comorbidities to avoid double-counting.
 - Emergency department utilization was identified by
 - HCPCS codes 99281-99285 and/or place of service for line item “23” in carrier file.
 - Revenue center codes 0450-0459, 0981 in outpatient and inpatient claims files.