

Comparison of Medicare Fee-for-Service Beneficiaries Treated in Ambulatory Surgical Centers and Hospital Outpatient Departments

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Berna Demiralp, PhD

Jing Xu, PhD

Elizabeth Hamlett, BS

Samuel Soltoff, BS, BS

Lane Koenig, PhD



answering today's health policy questions

Report Overview

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

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STUDY BACKGROUND AND PURPOSE

Study Background and Purpose

- Patients may receive outpatient surgical care in either Ambulatory Surgical Centers (ASCs) or Hospital Outpatient Departments (HOPDs).
- Currently, Medicare pays different rates for surgical care provided in the two settings, with HOPDs receiving higher reimbursement than ASCs.
- However, patient characteristics may differ across the settings in terms of demographics, severity and complexity of their comorbid conditions.
- This study examines how Medicare Fee-for-Service (FFS) beneficiaries receiving surgical care in HOPDs compare to those receiving care in ASCs.

Research Question

How do Medicare FFS beneficiaries receiving surgical care in HOPDs compare to beneficiaries treated in ASCs?

- Demographics and socioeconomic status
- Severity and medical complexity
- Prior healthcare utilization

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KEY FINDINGS

Key Findings

- Compared to Medicare FFS beneficiaries treated in ASCs, beneficiaries receiving surgical care in HOPDs are more likely to be:
 - Under 65 (eligible for Medicare based on disability, ESRD, or ALS)¹ and 85 or older
 - Black or Hispanic
 - Dual eligible
 - From lower-income areas
 - Burdened with more severe chronic conditions
 - Previously hospitalized
 - Cared for in an emergency department (ED) and have higher Medicare spending prior to receiving ambulatory care

1. Medicare beneficiaries under 65 are individuals with certain disabilities, end-stage renal disease, or amyotrophic lateral sclerosis (ALS). (<https://www.medicare.gov/sites/default/files/2018-11/10050-Medicare-and-You.pdf>)

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OVERVIEW OF STUDY APPROACH

Study Overview

- **Data Source:** 2016-2017 Medicare Inpatient, Outpatient, and Carrier Standard Analytical Files, and Denominator files.
- **Identifying ASC and HOPD Patients:** A patient is considered an HOPD (ASC) patient in a given year if more than 50% of ambulatory surgical care in that year is provided in HOPDs (ASCs).

Study Question	Characteristics	Level of Analysis
How do Medicare FFS beneficiaries receiving surgical care in HOPDs compare to beneficiaries treated in ASCs?	<ul style="list-style-type: none">• Demographics• Socioeconomic Status• Clinical Characteristics	Patient Level
	<ul style="list-style-type: none">• Prior Healthcare Utilization	Claim Level

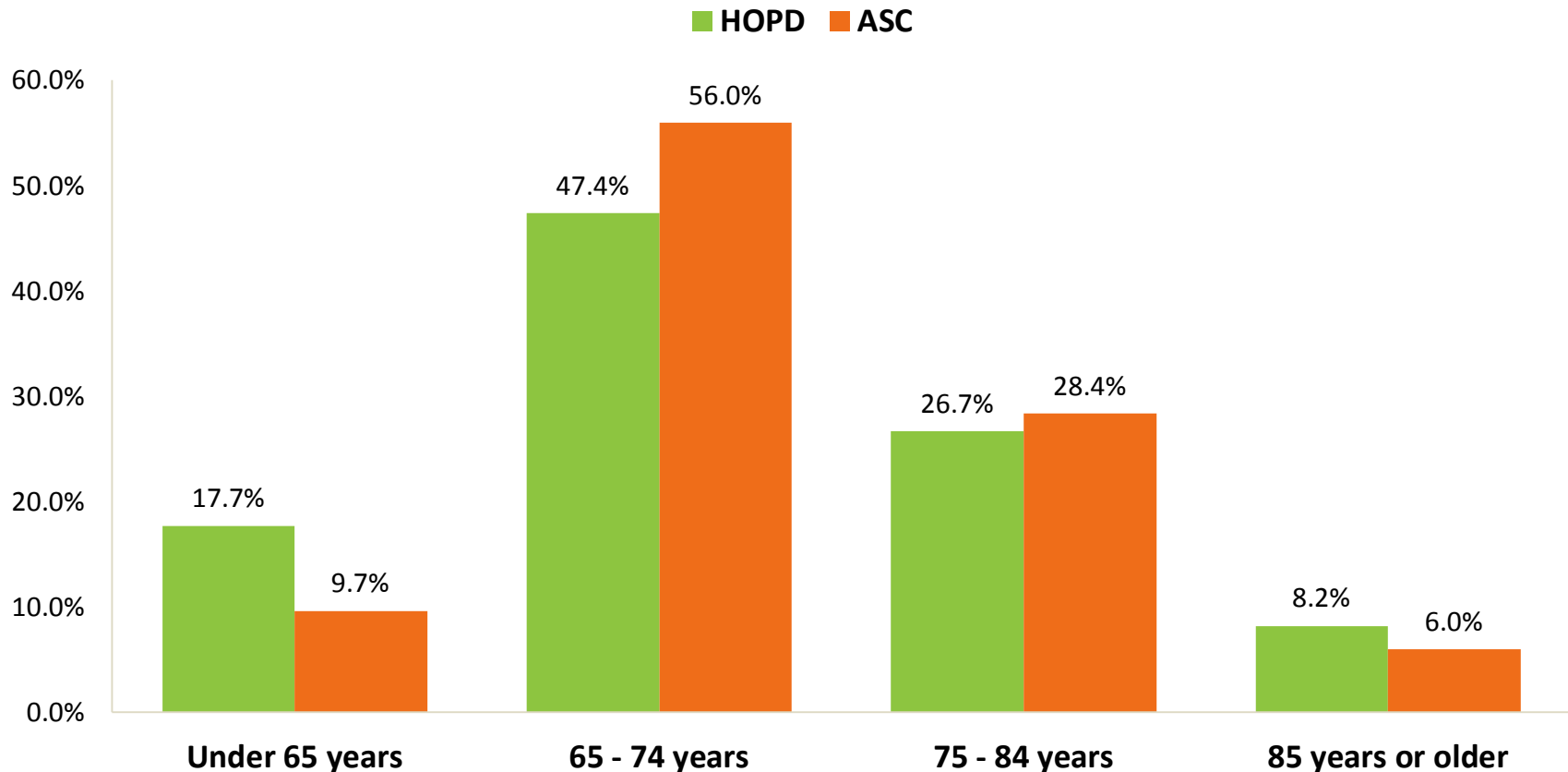
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HOW DO MEDICARE FFS BENEFICIARIES CARED FOR IN ASCs AND HOPDs DIFFER?

**Relative to Medicare FFS
beneficiaries treated in ASCs,
beneficiaries treated in HOPDs
are...**

1.8x More Likely to be Under 65 Years¹ and 1.4x More Likely to be 85 Years or Older

Beneficiary Age Composition

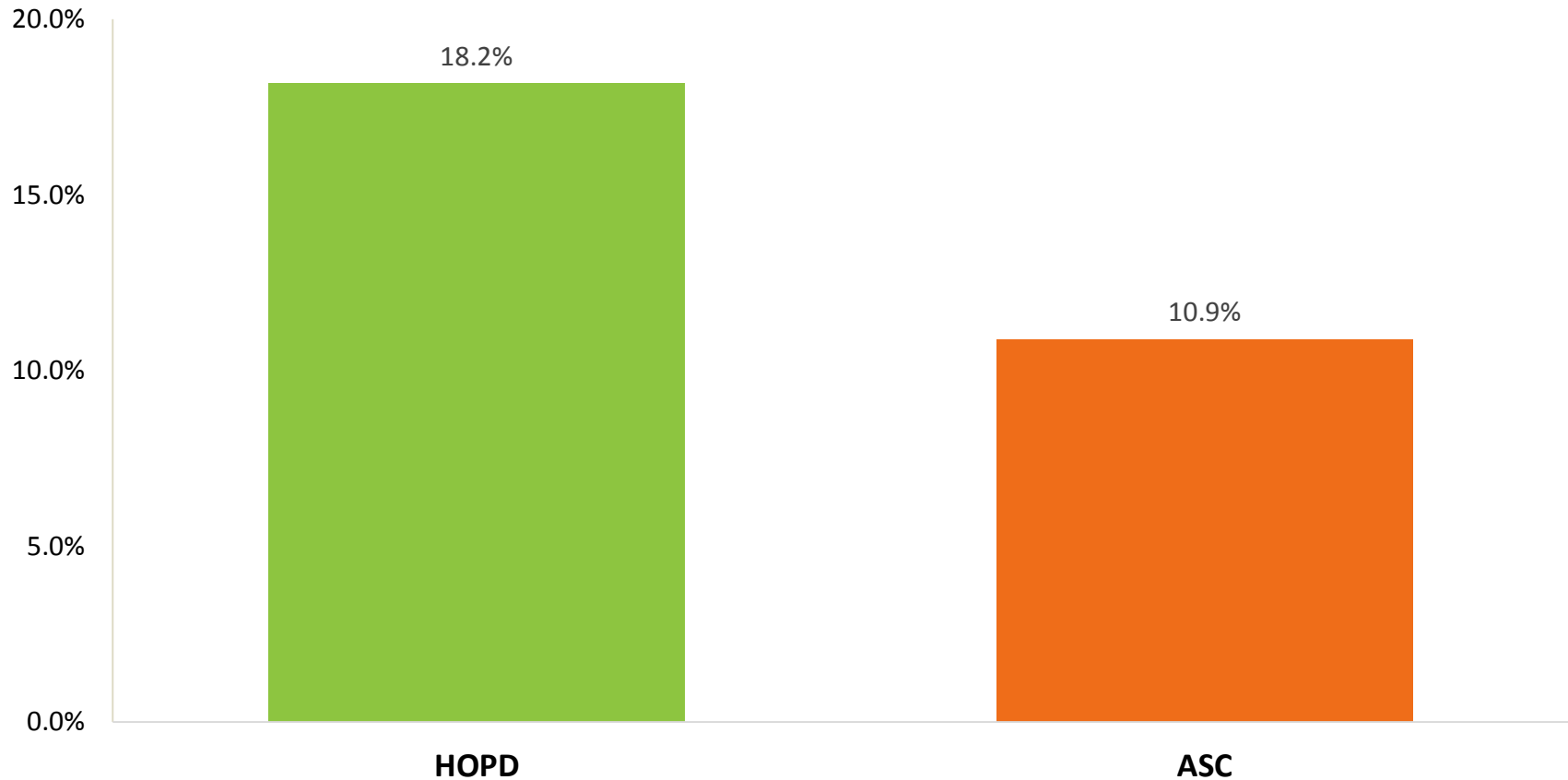


Source: KNG Health Consulting, LLC analysis of 2016 -2017 Medicare claims data.

1. Medicare beneficiaries under 65 are individuals with certain disabilities, end-stage renal disease, or amyotrophic lateral sclerosis (ALS). (<https://www.medicare.gov/sites/default/files/2018-11/10050-Medicare-and-You.pdf>)

1.7x More Likely to be Dual Eligible

Percentage of Beneficiaries That Are on Medicare and Medicaid



Source: KNG Health Consulting, LLC analysis of 2016 -2017 Medicare claims data.

Race/Ethnicity and Income

- Compared to the average Medicare FFS beneficiary treated in an ASC, the average beneficiary treated in an HOPD is
 - 1.3 times more likely to be Black or Hispanic
 - From a county with \$1,900 lower median household income.

Severity and Complexity Measures

- We measured patient severity and medical complexity using three types of indicators: Charlson Comorbidity Index, number of complications or comorbidities (CCs) and major CCs (MCCs), and prior utilization of care.
- The Charlson Comorbidity Index is a measure of patient severity computed by assigning higher weights to more severe conditions in terms of their effect on mortality.
 - The Charlson Comorbidity Index includes 17 medical conditions that are found to be associated with 1-year mortality. A weight of 1 to 6 is assigned to each condition based on mortality risk, and weights are added across conditions to calculate total score.^{1, 2}
 - The score is predictive of mortality, with 1-year and 10-year mortality rates greater than 50% for those with scores above 2. ^{1, 3}
- Prior utilization of care captures short-term acute care hospital stays and emergency department visits in the 90 days preceding an ASC or HOPD visit.

¹Charlson, M. E., Pompei, P., Ales, K. L., & MacKenzie, C. R. (1987). A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. *Journal of Chronic Diseases*, 40(5), 373-383.

²Quan, H., Sundararajan, V., Halfon, P. et al. (2005). Coding algorithms for defining comorbidities in ICD-9-CM and ICD-10 administrative data. *Med Care*. 2005 Nov; 43(11):1130-9.

³Hall, W. H., Ramachandran, R., Narayan, S., Jani, A. B., & Vijayakumar, S. (2004). An electronic application for rapidly calculating Charlson comorbidity score. *BMC Cancer*, 4(1), 94.

Medicare Patients Treated in HOPDs Are Sicker

- The severity of chronic conditions as measured by the Charlson Comorbidity Index is higher for beneficiaries seen in HOPDs.
- A greater percentage of HOPD patients have CCs and MCCs.

Indicator	ASC	HOPD
Average Charlson Comorbidity Index	2.16	3.12
% with at least one CC	52.8%	66.6%
% with at least one MCC	13.0%	23.0%

Medical conditions captured in Charlson Comorbidity Index: myocardial infarction, congestive heart failure, peripheral vascular disorders, cerebrovascular disease, dementia, chronic pulmonary disease, rheumatic disease, peptic ulcer disease, mild liver disease, diabetes without chronic complication, diabetes with chronic complication, hemiplegia or paraplegia, renal disease, any malignancy (including lymphoma and leukemia, except malignant neoplasm of skin), moderate or severe liver disease, metastatic solid tumor, AIDS/HIV.

Source: KNG Health Consulting, LLC analysis of 2016 -2017 Medicare claims data.

Medicare Patients Treated in HOPDs Have Higher Prior Emergency Department Use

Emergency Department Utilization 90 Days Prior to Visit by Setting

Emergency Department (ED) Use Prior to Visit	ASC	HOPD
Percent of ASC/HOPD Visits with a Prior ED Visit	12.5%	23.3%
Mean Number of ED Visits (Conditional on Having At Least 1 ED Visit)	1.37	1.54

Source: KNG Health Consulting, LLC analysis of 2016 -2017 Medicare claims data.

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

Short-term Acute Care Hospital Utilization 90 Days Prior to Visit by Setting

Short-term Acute Care Hospital (STCH) Use Prior to Visit	ASC	HOPD
Percent of ASC/HOPD Visits with a Prior STCH Stay	3.9%	11.5%
Mean Number of STCH Stays (Conditional on Having At Least 1 STCH Stay)	1.15	1.28
Total STCH Days (Conditional on Having At Least 1 STCH Stay)	4.10	6.27
Total STCH payments* (Conditional on Having At Least 1 STCH Stay)	\$11,975	\$16,844

* 2017 USD

Source: KNG Health Consulting, LLC analysis of 2016 -2017 Medicare claims data.

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CONCLUSIONS

Conclusions

- Our findings suggest key differences between Medicare FFS beneficiaries treated in ASCs and HOPDs.
- Medicare FFS beneficiaries primarily treated in HOPDs as compared to ASCs are more likely to
 - be under 65 (eligible for Medicare based on disability, ESRD, or ALS)¹, 85 or older, Black or Hispanic, and dual eligible.
 - come from communities with lower incomes.
 - have more severe chronic conditions and higher prior utilization of hospitals and emergency departments.
- Due to their higher medical complexity, HOPD patients may require a greater level of care than ASC patients.

1. Medicare beneficiaries under 65 are individuals with certain disabilities, end-stage renal disease, or amyotrophic lateral sclerosis (ALS). (<https://www.medicare.gov/people-like-me/disability/getting-medicare-disability.html#collapse-5776>)

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APPENDIX: DATA AND METHODOLOGY

Data and Study Population

- 2016-2017 Standard Analytical File of 5% sample of Medicare FFS beneficiaries. Claims include:
 - Inpatient
 - Outpatient
 - Professional services (Carrier file)
- The patient population consists of Medicare FFS beneficiaries who fulfill the following criteria:
 - Had at least one HOPD or ASC visit between Jan. 1, 2017 and Dec. 31 2017.
 - Had continuous enrollment in Medicare FFS Part A and Part B during study period.

Identification of HOPD and ASC Patients

- HOPD visits are identified as the visits (claims) in the Outpatient File that satisfy the following conditions:
 - Facility type code = 1 (hospital)
 - Not an observation stay claim or an ED claim
 - Had at least one of the Medicare-Approved ASC Surgical Procedure HCPCS codes that were common in both ASC and HOPD during study period
- ASC visits are identified as the visits (claims) in the Carrier File that satisfy the conditions below:
 - Provider specialty code=49 (ambulatory surgery center)
 - Type of service code=F (ambulatory surgery center)
 - Place of service code=24 (ambulatory surgery center)
 - Had at least one of the Medicare-Approved ASC Surgical Procedure HCPCS codes that were common in both ASC and HOPD during study period

Identification of HOPD and ASC Patients

- Identification of HOPD and ASC patient populations:
 - A patient is considered an HOPD (ASC) patient in a given year if more than 50% of the ambulatory surgical care in that year is provided in HOPDs (ASCs).
 - Only HOPD claims for HOPD patients and ASC claims for ASC patients are included in the analysis.

Methodology: Descriptive Analysis

- Demographic, socioeconomic, and clinical characteristics are examined at the beneficiary level.
- **Demographic characteristics:** Obtained from the Medicare Denominator File.
- **Socioeconomic characteristics of beneficiary's county of residence:** U.S. Census estimates of county-level characteristics based on 2013-2017 American Community Survey are used.
- **Clinical characteristics:** Charlson comorbidity index and number of CCs and MCCs are measured using diagnostic information from all outpatient and carrier claims that a patient had in 2017.

Methodology: Descriptive Analysis

- Prior utilization is examined at the visit level.
- **Prior utilization within 90 days prior to HOPD or ASC visit**
 - Emergency Department utilization (Emergency Department use is identified by revenue center codes 0450-0459, and 0981 in outpatient and inpatient claims files.)
 - Short-term acute care hospital utilization
- T-tests are conducted to assess differences in average patient characteristics between HOPDs and ASCs.
- All differences between HOPDs and ASCs presented in this report are statistically significant at the 0.1% level.