

# What Health System Characteristics are Associated with Overuse of Health Care in the US?

## Why This Study Is Important

Researchers identified factors that contribute to health care overuse across 676 health systems. Overuse of care refers to services that may be unnecessary and increase costs. Health care may be considered low-value when there is a chance the care may harm a patient physically, psychologically, and financially. This wasteful care contributes to high health care costs in the United States. Many decisions about care are made at the health system level and this study's novel methodology demonstrates new associations between system factors and overuse. All patients should receive care that is more beneficial than harmful and this study's findings may support future research and interventions to advance high-quality care delivery.

## What This Study Found

- Health systems associated with overuse had a higher number of beds, more incorporated medical groups, and were more likely to be investor-owned.
- Health systems strongly associated with less overuse had more primary care physicians (PCPs). Additionally, health systems that were involved in teaching or where there was a higher burden of uncompensated care were lower in overuse.
- Integrated health care delivery systems and health systems known for their commitment to high-value care were also associated with lower overuse.

Segal JB, Sen AP, Glanzberg-Krainin E, Hutfless S. Factors Associated With Overuse of Health Care Within US Health Systems: A Cross-sectional Analysis of Medicare Beneficiaries From 2016 to 2018. *JAMA Health Forum*. 2022;3(1):e214543. doi:10.1001/jamahealthforum.2021.4543

## What These Findings Mean

The study's findings support recent observations of similar relationships between health system characteristics and overuse. Previous research also found that teaching hospitals and the density of PCPs were associated with less overuse.

To conduct this research the team updated the overuse index (OI) they previously developed to investigate drivers of overuse, develop interventions to address it, and evaluate interventions. This tool could be valuable for a health system that wants to monitor its performance over time. The OI is adaptable to other levels of investigation, such as state or region.

Future research is needed to understand the drivers of overuse at the health system level. This may require additional data collection, such as for understanding systems that have characteristics associated with overuse but are not overusing.

## More About This Study

This cross-sectional study examined 100% of Medicare beneficiaries with claims from 2016 to 2018 across 676 US health care systems, consisting of 3,839 hospitals and affiliated outpatient sites. The researchers categorized health systems into 5 categories according to their standardized OI. The researchers updated the OI they previously developed to use the *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10)* codes, and to describe low-value care at the health system level rather than regionally. The OI includes 17 indicators across medical specialties. The indicators are not individually important but together operate like the Consumer Price Index by utilizing a market basket of indicators. The researchers expect health systems overusing the indicator procedures are likely overusing health services overall. Examples of indicators include preoperative chest X-rays and MRIs for low back pain.

For more information about this study, contact Jodi Segal at [jsegal@jhmi.edu](mailto:jsegal@jhmi.edu). For more information about the NIHCM Foundation Investigator-Initiated Research Grant Program, contact Cait Ellis at [cellis@nihcm.org](mailto:cellis@nihcm.org).