Does Insurance Coverage Make a Difference in Acute Coronary Syndromes?

Calvin JE, Roe MT, Chen AY, et al. Insurance coverage and care of patients with non–ST-segment elevation acute coronary syndromes. Ann Intern Med 2006;145:739–48.

Study Overview

Objective. To compare patterns of care for non–ST-segment elevation acute coronary syndromes (NSTE ACS) by insurance type.

Design. Retrospective cohort study.

Setting and participants. Patients presenting with NSTE ACS who were entered into the CRUSADE (Can Rapid risk stratification of Unstable angina patients Suppress ADverse Outcomes with Early implementation of the ACC/AHA guidelines) study between January 2001 and March 2005. There were 37,345 NSTE ACS patients aged < 65 years and 59,550 NSTE ACS patients aged ≥ 65 years. Data, including demographics, clinical characteristics, medical therapies and major contraindications, use and time of cardiac procedures, laboratory results, and in-hospital outcomes, were abstracted from the medical record. Patients were categorized based on primary insurance status (ie, Medicaid, Medicare, or health maintenance organization [HMO] or private insurance).

Main outcome measures. The primary outcome measures were (1) use of guideline-recommended treatments, including short-term (< 24 hr) medications, invasive cardiac procedures, and discharge medications and interventions; and (2) in-hospital outcomes, including death, reinfarction, cardiogenic shock, and congestive heart failure.

Main results. In patients aged < 65 years, Medicaid was the primary payer for 18.7%. Medicare was the primary payer for 67.5% of patients aged ≥ 65 years. Medicaid patients were less likely than HMO or private insurance patients to receive short-term medications, invasive procedures, and discharge medications and interventions. Medicaid patients also had higher mortality rates compared with patients with HMO or private insurance (2.9% versus 1.2%; adjusted odds ratio, 1.33 [95% confidence interval {CI}, 1.08–1.63]). In patients aged ≥ 65 years, use of medications and invasive procedures was similar for patients with Medicare and patients with HMO or private insurance. Mortality rates between Medicare patients and HMO or private insurance patients were not significantly different (6.2% versus 5.6%; adjusted odds ratio, 1.08 [95% CI, 0.99–1.18]).

Conclusions. Medicaid patients presenting with NSTE ACS were less likely to receive evidence-based therapies and had worse in-hospital outcomes, including mortality, as compared with HMO or private insurance patients. However, evidence-based care and outcomes did not differ by insurance type in patients aged ≥ 65 years.

Commentary

Previous studies have found that racial and gender disparities affect both quality of care and mortality in patients with NSTE ACS [1,2]. This study by Calvin et al contributes further evidence of health care disparities—in this case as a result of health care insurance status—and found that NSTE ACS patients who are insured by Medicaid received fewer guideline-recommended treatments at admission and discharge, had longer delays in receiving invasive procedures, and had worse in-hospital outcomes. However, these results were not found in Medicare patients who were studied using the same criteria.

Overall, the study by Calvin et al was well done using the CRUSADE database and an appropriate sample of patients. The endpoints were clinically relevant, and the authors adjusted for some relevant patient characteristics and hospital differences with an interaction term—a level of complexity not seen in other studies. In this study, Medicaid patients were more commonly African American, female, and had more comorbid conditions. Although adjustment for these variables was performed, there were several unmeasured variables that might also contribute to poorer outcomes, such as socioeconomic status, education level, and income. Medicaid patients may be receiving suboptimal care because they have more comorbid conditions that preclude the use of evidence-based therapies, they receive care at centers that provide generally lower quality of care, or they are not cared for as often by a cardiologist.

Applications for Clinical Practice

This study highlights a gap in care based on insurance status as a proxy for racial, gender, and socioeconomic differences. Although more studies should be performed to evaluate why this gap exists, this study underscores the fact that an underserved population that could benefit from better access to higher quality care. Public policy should begin to examine how Medicaid is structured in order to align financial incentives to ensure the best quality care is available for everyone.

—Review by Robert L. Huang, MD

References

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2. Blomkalns AL, Chen AY, Hochman JS, et al. Gender disparities in the diagnosis and treatment of non–ST-elevation acute coronary syndromes: large-scale observations from the CRUSADE (Can Rapid risk stratification of Unstable angina patients Suppress ADverse outcomes with Early implementation of the ACC/AHA guidelines) National Quality Improvement Initiative. J Am Coll Cardiol 2005;45:832–7.

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