

Regional variation in rates of cardiac procedures on the rise in Michigan

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Regional differences in rates of cardiac procedures have increased in Michigan over the past decade—not fully explained by differences in health risk factors, heart attack or cardiac mortality rates—according to a report released today by the Center for Healthcare Research & Transformation (CHRT). The report compares the state's hospital referral regions (HRRs) using claims data from Blue Cross Blue Shield of Michigan's (BCBSM's) under-65 commercial subscribers and Medicare data from The Dartmouth Atlas of Health Care in Michigan.

According to the report, even though overall rates for cardiac procedures (angioplasty and bypass surgery) declined by 19 percent for the BCBSM under-65 population, regional variation increased among HRRs: In 1997, the rate varied from 27 percent below the state average to 30 percent above; by 2008, the range was 37 percent below the state average to 48 percent above. Although variation is not necessarily of concern in and of itself, it can be of concern when it appears to be driven by factors other than individual patient characteristics and fully-informed decisions about the relative risks and benefits of invasive vs. noninvasive treatments.

CHRT's analysis found that the use of elective angioplasties (procedures classified as elective because they were performed to treat stable coronary artery disease, not heart attack or other immediately life-threatening conditions) appears to be one important factor in the variation in PCI use across HRRs. Areas of the state with lower procedure rates had a lower percentage of elective procedures; areas with higher procedure rates had a higher percentage of elective

procedures. Rates of elective angioplasty ranged from 18.8 percent in the Muskegon HRR to 55.4 percent in the St. Joseph HRR. (NOTE: To compare your geographic area with others in Michigan, see graph on p. 3)

Marianne Udow-Phillips, CHRT's director, notes that this study provides an opportunity for more discussion between clinicians and patients.

"Angioplasty and bypass are higher-risk, higher-cost options for treating stable heart disease than medical treatment," says Udow-Phillips. "We would hope that clinicians in communities with high rates of elective procedures would come together to look at the reasons behind those higher rates, and would discuss treatment options with their patients."

The report explores a range of possible explanations for regional variation in rates of cardiac procedures, including the supply of clinicians and catheterization labs, heart attack rates and cardiac risk factors (obesity and smoking), and cardiac mortality rates for each region. The report found:

- The number of cardiac catheterization labs in a region did appear to be associated with procedure rates, consistent with national literature.
- The number of cardiovascular surgeons in a region was not clearly associated with procedure rates.
- Health status and behaviors—including rates of heart attack, smoking, diabetes, obesity and hypertension—did not appear to be related to procedure rates.
- Cardiac mortality rates did not appear to be related to procedure rates.

Overall death due to cardiac disease declined 17 percent in Michigan between 1997 and 2008. With overall cardiac intervention rates also declining by 19 percent, CHRT's analysis suggests that declines in

cardiac death rates could be attributed to more effective medical and surgical management of heart disease, along with lifestyle changes that prevent the onset of cardiovascular disease.

"This information is very helpful for us at Blue Cross, as we continue to collaborate with physicians and hospitals across the state to look at ways to improve the safety and quality of cardiac care," says Thomas L. Simmer, M.D., senior vice president, Health Care Value and chief medical officer at Blue Cross Blue Shield of Michigan. "We believe we can associate the lower cardiac death rate and overall intervention rates in this study to the work of our cardiovascular consortium, a partnership with Michigan hospitals that perform heart surgery. This initiative has resulted in more appropriate, and safer, heart disease treatment in the state."

For patients, Udow-Phillips recommends gathering more information and asking more questions before undergoing an elective surgical procedure. "Nothing can substitute for a patient's active, informed participation in decisions about their own care."

Provided by University of Michigan Health System

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