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Cardiac patients receive comparable care from physicians, advanced practice providers

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Patients with coronary artery disease, heart failure, and atrial fibrillation receive comparable outpatient care from physicians and advanced practice providers— physician assistants and nurse practitioners - although all clinicians fell short in meeting performance measures, according to a study published today in the *Journal of the American College of Cardiology*.

Adopting a collaborative care delivery model has been identified as one way to help ease the burden of physicians faced with an influx of patients insured under the Affordable Care Act and a projected shortage of primary care physicians and specialists, which is expected to reach 90,000 by 2020.

Using data from the National Cardiovascular Data Registry PINNACLE Registry, researchers assessed records throughout 2012 from 648,909 patients receiving care in 90 practices with 1,234 providers. Their goal was to determine compliance with established performance measures, including use of beta-blockers in patients with a history of heart attack, antiplatelet use, smoking screening and interventions to encourage smokers to quit, effective cholesterol control, referral to cardiac rehabilitation, and use of anticoagulation in patients with atrial fibrillation.

Of that group, 459,669 patients were treated by physicians in practices that also had physician assistants and/or nurse practitioners and 43,351 patients were treated by alternative providers from those practices. The

number of providers totaled 883—716 physicians and 167 advanced practice providers—in 41 practices. Researchers also compared quality of care among patients being treated by physician assistants and nurse practitioners with those being treated in physician-only practices (189,240 patients).

After adjusting for many factors, including provider gender, number of patients, and duration of time in the registry, as well as patients' age, gender, insurance status, and number of outpatient visits, researchers found that compliance with performance measures for coronary artery disease, heart failure, and atrial fibrillation were comparable across all practice types and clinicians.

The study found a higher rate of screening for smoking and interventions to encourage smokers to quit as well as a higher rate of referral to cardiac rehabilitation among advanced practice providers than among physicians (rate ratio of 1.14 for smoking interventions and 1.40 for referral to cardiac rehabilitaion), although the absolute differences were small. The rate ratio represents the rate of compliance with a performance measure among advanced practice providers divided by the rate of compliance with a performance measure among physician providers, adjusting for practice, provider and patient characteristics. Compliance with all measures, however, was low among both groups: 12.1 percent for advanced practice providers and 12.2 percent for physicians.

"Our findings indicate that a collaborative care delivery model which employs both physicians and advanced practice providers appears to provide a care quality that is comparable to a physician-only model," said Salim S. Virani, M.D., Ph.D., the study's lead author and staff cardiologist at the Michael E. DeBakey Veterans Affairs Medical Center in Houston.

"Our results also have health care policy implications," he said. "It should be reassuring that the quality of care for uncomplicated outpatient cardiovascular disease is at least equivalent between advanced practice providers and physicians, even in states with independent scope of practice laws for advanced practice providers and between practices with both advanced practice providers and physicians compared with physician-only practices."

"I am uncertain that these findings can be generalized across the varied health systems of the United States," said Valentin Fuster, M.D., Ph.D., editor-in-chief of the *Journal of the American College of Cardiology*. "However, I am certain that team-based delivery models will provide the basis of the highest quality care."

In an accompanying editorial, Robert A. Harrington, M.D., Arthur L. Bloomfield Professor and chairman of the department of medicine at Stanford University, said the study generally supported team-based care between advanced practice providers and physicians, though there were several limitations worth noting that needed to be addressed by future research.

According to Harrington, future studies should include information about the organization of the care delivery teams and nurse practitioners and physician assistants to provide insight about potential differences in quality of care from these professionals. There were also an insufficient number of advanced practice providers to directly compare them and understand differences in quality of care, especially as both groups are educated differently and governed by different state regulations. Harrington also said there was a need for data on quality beyond processes of care, "a direct link between care and patient outcome is needed, given the societal investment into the care of patients" with heart disease. Harrington said an economic analyses is needed to "compare the change in cost with team care to changes in patient

outcomes" and he said electronic data should be shared across "health systems instead of relying on disease-specific registries" to study major public health questions.

The cardiovascular community can serve as a model for health policymakers, who "must be obliged to incorporate strong evidence into the deliberations and decisions that ultimately govern medical practice," he said.

Provided by American College of Cardiology