

Significant mismatch between PCI capable-hospitals and need

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There is an imbalance between the rapid growth of cardiac catheterization laboratories, which provide percutaneous coronary intervention (PCI) procedures, relative to the growth in the overall U.S. population, as well as patients who experience an acute heart attack, or ST-elevation myocardial infarction (STEMI), according to a study presented March 25 at the 61st annual American College of Cardiology (ACC) scientific session.

PCI is the preferred [treatment strategy](#) for patients who undergo STEMI. However, distance and access to PCI remains a determining factor in the choice between PCI, fibrinolytics and hybrid strategies.

"The prevalence of STEMI has decreased over time, while the prevalence of PCI centers has increased significantly. While clinical outcomes with PCI have continued to improve, we are tasked with the challenge of ensuring proper access to care for all at-risk Americans," said study co-investigator Timothy D. Henry, MD, an interventional cardiologist at the Minneapolis Heart Institute (MHI) at Abbott Northwestern Hospital in Minneapolis and director of research with the Minneapolis Heart Institute Foundation. "We found that there is a significant mismatch between PCI-capable facilities, and actual need."

In this study, the researchers compared changes in U.S. PCI capacity and access during the last eight years. Using geospatial and statistical analyses of data from the American Hospital Association, the [Centers for Disease Control and Prevention](#) and the U.S. Census Bureau, they

analyzed PCI capacity relative to population density and STEMI prevalence.

The investigators found that PCI centers have grown 12.9 percent over the last eight years, while overall population has grown only 8.3 percent during this same period and STEMI rates have declined. The median number of PCI facilities per million capita across all states is currently 6.95, and ranges from 3.2 in Vermont (lowest) to 12.1 in West Virginia.

Henry explained that the central portion of the U.S. is the most densely concentrated while the upper western region poses significant distance and access issues—the greatest potential distance to the nearest PCI in that region is nearly 185 miles. States varied widely in capacity, access, and the distance between patients and PCI.

Thus, the study authors reported that PCI growth is most rapid in the east, where capacity is already sufficient and the lowest in the west where PCI capacity remains the lowest. "Efficient and equitable STEMI systems require geographical balance, which highlights a need for changes in both policy and protocols at regional levels," they wrote.

"Unfortunately, our findings reveal that the growth of PCI centers has not been planned and rationale, but driven by economic factors, leading to an excess of PCI facilities in areas where they are not needed," said Henry. "There is a significant disparity between the geographic areas of the U.S. that still require STEMI care, and where those services are provided, which raises concern about a lack of access to care for a treatable patient population."

Provided by Minneapolis Heart Institute Foundation

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