

## Characteristics and Outcomes of Stroke Patients Transferred to Hospitals Participating in the Michigan Coverdell Acute Stroke Registry

The following is a synopsis of “Characteristics and Outcomes of Stroke Patients Transferred to Hospitals Participating in the Michigan Coverdell Acute Stroke Registry” published in May 2016 in *Circulation: Cardiovascular Quality and Outcomes*.



### What is already known on this topic?

Stroke patients require timely and appropriate care to minimize adverse outcomes due to stroke. Some stroke patients require treatment and care at hospital facilities with advanced stroke care capabilities. Guidelines on the integration of stroke systems of care encourage the transfer of stroke patients from an initial receiving hospital to a more advanced and specialized stroke care hospital, particularly for acute or complex stroke cases. However data on the characteristics and outcomes of stroke patients that are transferred between hospitals is limited.

### What is added by this article?

The authors of this study compared the characteristics and outcomes of acute stroke patients from the Michigan Stroke Registry based on patient transfer status. Overall, transferred stroke patients had unique demographic and medical characteristics and poorer outcomes.

**Prevalence of patient transfers.** Transfer of stroke patients is prevalent, with 19% of Michigan stroke patients being transferred between hospitals as recorded by the Michigan Coverdell Stroke Registry between 2009 and 2011. Almost all of these patients were transferred to a Primary Stroke Center or a teaching hospital which may have higher capacity for care of stroke patients.

**Transfer patient characteristics and outcomes.** Patients who were younger than 60, male, white, or had a more severe or hemorrhagic stroke were more likely to be transferred. Patients who lived in nursing homes, had another condition, or had a stroke in the past were less likely to be transferred for stroke care.

Hemorrhagic stroke patients had much higher mortality compared to ischemic stroke patients. This trend was consistent among transferred patients. Transferred patients had higher in-hospital mortality and were more likely to have complications. Transferred patients have a mixture of characteristics that are unique compared to other stroke patients. Their unique characteristics and poorer outcomes are important considerations for developing integrated stroke systems of care.

### What are the implications of these findings?

It is important for hospitals to quickly identify stroke patients who may need care in a more advanced facility and transfer these patients to specialized care settings. Transferred patients represent a complex combination of characteristics that affect patient outcome. The findings from this study show that a stroke patient's transfer status is an important characteristic that may influence care decisions. The authors assert that stroke registries should expand their data collection to include the transfer time and reason for transfer.

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## Resources

Centers for Disease Control and Prevention Stroke Resources

<http://www.cdc.gov/Stroke/index.htm>

American Heart Association/American Stroke Association

<http://www.strokeassociation.org/STROKEORG/>

Public Health Grand Rounds: Mind Your Risks and Act FAST  
to Prevent and Treat Strokes

<http://www.cdc.gov/cdcgrandrounds/archives/2016/may2016.htm>

## Citation

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*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.*

National Center for Chronic Disease Prevention and Health Promotion  
Division of Heart Disease and Stroke Prevention

