TENNESSEE STROKE REGISTRY QUARTERLY REPORT

Volume 1, Issue 1 March 2018

This report is published quarterly (March, June, September, and December) using data from the Tennessee Stroke Registry. The annual report for the 2017 data will be published in May 2018.

Inside this report

- Data on diagnosis, gender distributions, age distribution, arrival modes, insurance status, last known well to arrival, and medical history
- Data from July 2017 to September 2017
- Contact information for the Tennessee Stroke Registry
Background

The Tennessee Stroke Registry (TSR) was created in 2009 through the Tennessee Stroke Registry act of 2008. In July 2017, the legislation was updated with Tennessee House Bill 123, requiring all certified comprehensive and primary stroke centers in Tennessee to share their data with the TSR in order to improve stroke care in the state. The bill requires data to be provided from hospitals on a quarterly basis. The data are uploaded to the American Heart/American Stroke Association’s Get With the Guidelines data system, Quintiles. This report provides a summary of the TSR data for the first quarter of the fiscal year, July through September 2017. The data are aggregate data from the 30 hospitals currently reporting to Quintiles. In this report, illustrations are made on similarities and differences between the first quarter of 2017’s data and data from 2016. However, it should be noted that the number of hospitals reporting data in 2016 compared to the first quarter are quite different, where only 13 hospitals reported their data in 2016 versus 30 hospitals in Quarter 1 of 2017. In the future, these data can be used to make recommendations to improve stroke care.
**Data and distributions**

*Diagnosis*

Overall, the patterns and distributions for the first quarter are similar to what was shown in past TSR reports. The total number of stroke cases for the quarter was 3,882. The most common cases were ischemic strokes at 75% of strokes reported to the registry. Hemorrhagic strokes, which include transient ischemic attack (TIA), subarachnoid hemorrhage (SAH), and intracerebral hemorrhage, composed 19% of cases, with ischemic strokes being the majority of cases.

*Gender distributions*

Gender distributions were consistent with data from the 2016 report, with similar percentages of male and female cases for ischemic stroke, and slightly higher percentages of female cases for TIA (57% versus 43%) and slightly more male cases for intracerebral hemorrhage (51% versus 48%). However, the gender differences in strokes were not as pronounced for subarachnoid hemorrhage as they were in the first quarter of 2016: in 2016, 61% of subarachnoid hemorrhage cases strokes were female but in 2017 only 57% were female.
Age distributions

The most common age group experiencing strokes were those from ages 66-85, with 46% of all cases in this bracket. The prevalence of strokes overall increased by age, with only 7% of cases occurring from in those aged 18-45. This pattern was similar for all stroke types except subarachnoid hemorrhage, where 62% of cases occurred in those ages 46-65. There was a decrease for SAH strokes in the 18-45 age group during the first quarter of 2017 (July –September) compared to data from the 2016 report. Only 10.8% of SAH strokes were in this age group in the first quarter of 2017, versus 20.1% in 2016. In accordance with this decrease in strokes in the younger age bracket, there was a change in mean age for SAH strokes from Quarter 1 of 2016 to 2017, from 57.9 in 2016 to 60.4 in 2017.
Co-morbidities

The top three co-morbidities among stroke patients were hypertension with 76.1%, dyslipidemia at 39.7%, and diabetes mellitus at 34.7%.

Arrival mode

In the 2016 annual report, we saw that there were more stroke patients arriving via transfer from another hospital than by private transport for ischemic strokes. In this quarter the reverse was true, with 33.5% of patients arrived via private transport versus 27.4% from another hospital.
**Transportation times**

Similar transport times for the various types of transportation were reported in the first quarter of 2017 as in 2016 annual report, with private transport experiencing longer transportation times on average from home/scene in comparison to Emergency Medical Services (EMS) transport. Most patients arrived at the hospital in over 300 minutes via private transportation (77.3%) while only 55.5% of patients via EMS services arrived in that time frame. Meanwhile, 15.1% of patients arrived to the hospital via EMS services in less than 60 minutes.
Insurance status

The majority of stroke patients had Medicare (55.6%). This reflects that the most common age group experiencing strokes are those from ages 66-85.

Contact Information

For more information about the Tennessee Stroke Registry and how to participate, contact:

Megan Quinn, TSR manager, or Natalie Stanley, TSR graduate assistant.
Email (preferred): strokeregistry@etsu.edu or stanley1@etsu.edu
Phone: (423) 439-4427

Local GWTG Representative:
Angel Paylings
Director, Quality & Systems Improvement, Tennessee
Angel.Paylings@heart.org

We look forward to working with you to improve stroke care in Tennessee.