Each year approximately 795,000 people in the United States (US) experience a new or recurrent stroke. It is estimated that an additional 3.4 million US adults will have a stroke by 2030, with the highest increase projected among Hispanic men. In New York State (NYS), a smaller percentage of Black and Hispanic adults are able to correctly identify five major signs and symptoms of stroke compared to White adults, although knowledge of calling 9-1-1 as the first action to take is similar (Figure 1). Spanish-speaking New York (NY) adults demonstrate significant disparities in knowledge of all five signs and symptoms of stroke compared to English-speaking NY adults (Figure 2). However, knowledge of calling 9-1-1 as the first action to take is comparable among English and Spanish-speaking New Yorkers.

Campaigns to educate the public about the common stroke warning signs and symptoms and calling 9-1-1 when someone is experiencing a stroke are important because timely transport to a designated stroke center is critical to receiving lifesaving therapies. In NYS, the rates in which non-Hispanic Black and Hispanic adults received therapy treatments (IVtPA and endovascular) were significantly lower than non-Hispanic Whites, indicating a need to increase awareness of stroke signs and symptoms by targeting culturally appropriate educational messages to these populations.

Figure 1. Awareness of all five stroke signs and symptoms and of calling 9-1-1 as the first action to take, NYS adults, by race/ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Percentage Aware of All 5 Signs and Symptoms</th>
<th>Percentage Calling 9-1-1 as the First Action to Take</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>87.1 ± 3.1</td>
<td>87.1 ± 3.1</td>
</tr>
<tr>
<td>Black</td>
<td>87.1 ± 3.1</td>
<td>84.8 ± 4.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>89.3 ± 2.7</td>
<td>89.3 ± 2.7</td>
</tr>
<tr>
<td>Other</td>
<td>84.8 ± 4.5</td>
<td>87.5 ± 2.7</td>
</tr>
</tbody>
</table>

Figure 2. Knowledge of stroke signs and symptoms and calling 9-1-1 as the first action to take, NYS adults, by interview language

<table>
<thead>
<tr>
<th>Language</th>
<th>Percentage Sudden Confusion or Trouble Speaking</th>
<th>Percentage Sudden Numbness/Weakness of Face, Arm or Leg</th>
<th>Percentage Sudden Trouble Seeing in One or Both Eyes</th>
<th>Percentage Sudden Trouble Walking, Dizziness or Loss of Balance</th>
<th>Percentage Severe Headache with No Known Cause</th>
<th>Percentage Calling 9-1-1 as First Action to Take</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>82.5 ± 2.5</td>
<td>49.3 ± 4.9</td>
<td>36.0 ± 4.5</td>
<td>49.3 ± 4.9</td>
<td>51.8 ± 4.9</td>
<td>87.5 ± 1.7</td>
</tr>
<tr>
<td>Spanish</td>
<td>90.0 ± 1.5</td>
<td>52.3 ± 2.5</td>
<td>46.7 ± 2.5</td>
<td>52.3 ± 2.5</td>
<td>81.5 ± 1.7</td>
<td>92.3 ± 1.5</td>
</tr>
</tbody>
</table>

Data Source: 2013, 2016 and 2017 Behavioral Risk Factor Surveillance System

**Public Health Opportunity**

**Actions for Public Health Partners and Health Care Providers**

- Educate patients on the major signs and symptoms of stroke (numbness or weakness of the face, arm or leg, especially on one side of the body; confusion, trouble speaking, or difficulty understanding speech; trouble walking, dizziness or loss of balance or coordination; trouble seeing in one or both eyes; or severe headache without a known cause) and on the importance of calling 9-1-1 as the first action to take when someone is having a stroke.
- Education and practice tools should be developed with health literacy targets appropriate to the linguistic needs and education levels of the targeted population.

For more information, please send an e-mail to BCDER@health.ny.gov with IFA #2019-14 in the subject line. To access other Information for Action reports, visit the NYSDOH public website: [http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/index.htm](http://www.health.ny.gov/statistics/prevention/injury_prevention/information_for_action/index.htm)