

Health Outcomes in Cerebrovascular Disease Treatment Studies

Medicare Evidence Development & Coverage Advisory Committee (MEDCAC)

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Center for Clinical Standards and Quality
Coverage and Analysis Group



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Meeting Purpose

- The MEDCAC panel will examine health outcomes in studies for cerebrovascular disease treatment with a focus on new technologies should be of interest to CMS.

Clarification of the Scope

- The new technologies include a variety of new treatment products for cerebrovascular disease including drugs, biologics, and medical devices, etc.
- The scheduled MEDCAC meeting is on the topic of cerebrovascular disease, which is not related to Aduhelm.
- Cerebrovascular disease refers to all disorders in which an area of the brain is temporarily or permanently affected by bleeding or restricted blood flow.

Background

- Investigational Device Exemption (IDE)
- IDE studies of cerebrovascular disease treatment technologies have been quite common. We have received about 40 cerebrovascular disease treatment technologies IDEs since 2015.
- CMS reviewers often have challenges with the study protocols associated with the cerebrovascular disease treatment technologies.

Issues

- Evidence gaps: less long-term data with greater reliance upon intermediate and surrogate outcomes
- MEDCAC panel members will advise CMS about the following clinically meaningful health outcomes in assessments of innovative cerebrovascular disease treatment technologies:
 1. Mortality
 2. Stroke
 3. hospitalization and healthcare resource utilization
 4. Clinician-reported patient functioning
 5. Patient-reported outcome measures, such as EQ-5D, SF-36, SIS-16 to measure quality of life.

Voting questions

For each voting question, please use the following scale identifying your level of confidence with a score of 1 being low or no confidence and 5 representing high confidence.

<i>1</i> <i>Low</i> <i>Confidence</i>	<i>2</i>	<i>3</i> <i>Intermediate</i>	<i>4</i>	<i>5</i> <i>High</i> <i>Confidence</i>
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1. How confident are you that the following are standalone, meaningful primary health outcomes in research studies of cerebrovascular disease treatment technologies:
 - a. Major disabling stroke: defined as stroke in the treated vascular territory that results in a Modified Rankin Scale (mRS) ≥ 3 ;
 - b. Decrease in mRS of ≥ 2 points compared to baseline;
 - c. mRS of ≤ 2 or equal to pre-stroke mRS (if the pre-stroke mRS was > 2);
 - d. Other kinds of stroke, such as major ipsilateral stroke or morbid stroke.

Discussion:

- For each health outcome with greater than or equal to intermediate confidence (≥ 2.5), please discuss the appropriate length of follow-up post intervention for assessing this outcome;
- For each health outcome with greater than or equal to intermediate confidence (≥ 2.5), please discuss the appropriate cutoff points of mRS and NIHSS for assessing this outcome;
- Please discuss important considerations when using composite outcomes in research studies of cerebrovascular disease treatment technologies, which may include the combination of mortality, stroke, hospitalization/hospitalization equivalent events, and neurologic functional evaluations.

2. How confident are you that the following are standalone, meaningful primary health outcomes in research studies of cerebrovascular disease treatment technologies:

- a. Hospitalization length of stay for index procedure;
- b. Number of unscheduled re-admissions that are related to cerebrovascular disease
- c. Discharge disposition to rehabilitation (home vs. inpatient facility)?

Discussion:

- For each health outcome with greater than or equal to intermediate confidence (≥ 2.5), please discuss the appropriate length of follow-up post intervention for assessing this outcome (applies to “b.” only);
- Please discuss important considerations when assessing the merits of composite outcomes in research studies of cerebrovascular disease treatment technologies, which include the combination of mortality, stroke, healthcare resource utilization for index procedure, post-procedure and re-hospitalizations, and neurologic functional evaluation.

3. How confident are you that each of the following functional assessments are standalone, meaningful primary health outcome measures in clinical research studies of cerebrovascular disease treatment technologies:

- a. The Modified Rankin Scale (mRS);
- b. The National Institutes of Health Stroke Scale (NIHSS);

Discussion:

- For each health outcome with greater than or equal to intermediate confidence (≥ 2.5), please discuss the appropriate length of follow-up post intervention for assessing this outcome;
- For each health outcome with greater than or equal to intermediate confidence (≥ 2.5), please discuss the appropriate cutoff points for assessing this outcome;
- Please discuss important considerations when assessing the merits of composite outcomes in research studies of cerebrovascular disease treatment technologies, which include the combination of mortality, stroke, hospitalization/ hospitalization equivalent events, and neurologic functional evaluation;
- Are there any other functional assessments (e.g. the Barthel Index (BI), the Fugl-Meyer (FM) Upper and Lower Extremity scales) that we have not discussed whose use you believe would result in important information pertaining to meaningful primary health outcomes in clinical research studies of cerebrovascular disease treatment technologies?

4. How confident are you that using EQ-5D to measure quality of life:
- a. Is adequate measure which reflects the patient experience in the context of cerebrovascular disease studies;
 - b. Should be included as standalone, meaningful primary health outcome measure in research studies;
 - c. Should be included as a composite, meaningful primary health outcomes in research studies and;
 - d. Should be included as secondary health outcomes in research studies.

Discussion:

- Please discuss whether additional patient-reported measurement [e.g., Short Form-36 (SF-36), Stroke Impact Scale-16 (SIS-16)] should be considered to capture burdens associated with the cerebrovascular disease therapy under study.
- Please discuss the minimal clinically important differences (MCIDs) for the instruments;
- Please discuss the appropriate length of follow-up post intervention for assessing patient-reported measurements.