

# American Heart Association/American Stroke Association MEDCAC Panel on Health Outcomes in Cerebrovascular Disease Treatment Studies

Irene Katzan MD  
Neurological Institute,  
Cleveland Clinic



American  
Heart  
Association.

# Disclosure

- Irene Katzan MD has no financial or intellectual conflicts of interest to disclose

# Question 1 – Modified Rankin Scale (mRS) as a Meaningful Primary Outcome

- AHA/ASA expert reviewers have intermediate confidence in the specific definitions of mRS as a meaningful primary health outcome
  - mRS > 3 - appropriate if evaluating a treatment for population limited to severe strokes
  - Decrease in mRS of  $\geq 2$  points compared to baseline – modest confidence if this refers to premorbid mRS
- Although there is a theoretical rationale to compare the post-stroke mRS to a premorbid score, premorbid mRS measurement has only marginal reliability
- 90 days was felt to be an appropriate follow-up period

## Question 2 – Hospitalization Length of Stay, Re-admissions, and Discharge Disposition as Meaningful Primary Outcome Measures

- AHA/ASA expert reviewers have low confidence in using utilization measures as primary outcome measures in clinical trials of stroke interventions
- Many confounding factors at both the patient and hospital levels, including socioeconomic factors, medication adherence, family support, insurance
- Discharge disposition is best considered as a surrogate measure for functional status at 3 months in studies where direct assessment of functional status is not possible
- One year felt to be ideal follow-up period for measures of health care utilization

## Question 3 – Functional Assessments as Meaningful Primary Outcome Measures

- AHA/ASA expert reviewers have **relatively high confidence** in mRS and NIHSS
- **mRS**: Important to also include other relevant secondary outcomes or the use of composite outcome that includes a measure of health status
  - Shift analysis and utility-adjusted mRS provides more information than a dichotomous mRS outcome
- **NIHSS**: primarily used for study inclusion criterion and detection of improvement/deterioration compared to baseline. Best included in composite outcome or to define neurological complications
- **Fugl-Meyer Upper and Lower Extremity scales**: useful as primary outcomes specifically for intervention trials targeting motor function for patients with chronic stroke

## Question 4 – Using EQ-5D to Measure Quality of Life

- AHA/ASA expert reviewers had **intermediate confidence** in the use of the EQ-5D instrument as a secondary outcome measure in stroke trials
- AHA/ASA has long advocated for the inclusion of patient-reported health status in clinical research
- Lack of validated assessment tools to determine premorbid patient-reported health is a limiting factor
- Important to include health status or quality of life measures as secondary outcome(s) or in a composite outcome measure in most stroke studies
- Chosen patient-reported outcome should reflect whether the intervention is intended to provide narrow benefit (e.g. specifically on motor function) or a holistic benefit (in which case a score with more heterogenous components included is preferred)

## Question 4 – Using EQ-5D to Measure Quality of Life (continued)

### Variety of viewpoints on PROMs:

- **ED-5D**: easy to administer, provides health utility index, but does not cover relevant domains
- **SIS-16**: psychometrically robust, but measures only physical domains and has more ceiling effects than the PROMIS physical function
- **SF-36**: covers many domains relevant to stroke survivors, but length and the proprietary nature are disadvantages compared to newer tools
- **PROMIS Global Health**: recommended by the International Consortium for Health Outcomes Measurement, should be considered in future trials
- **PROMIS Physical Function**: Computer adaptive testing allows precision and improved efficiency. Consider use in future clinical trials



*Thank You.*

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