

Prepublication Requirements

• Issued June 20, 2023 •



Revised Advanced Thrombectomy-Capable Stroke Center Certification Requirements

The Joint Commission has approved the following revisions for prepublication. While revised requirements are published in the semiannual updates to the print manuals (as well as in the online *E-dition*®), accredited organizations and paid subscribers can also view them in the monthly periodical *The Joint Commission Perspectives*®. To begin your subscription, call 800-746-6578 or visit <http://www.jcrinc.com>.

Please note: Where applicable, this report shows current standards and EPs first, with deleted language struck-through. Then, the revised requirement follows in bold text, with new language underlined.

APPLICABLE TO THE ADVANCED THROMBECTOMY-CAPABLE STROKE CENTER CERTIFICATION PROGRAM

Effective January 1, 2024

Program Management (DSPR) Chapter

DSPR.01

The program defines its leadership roles.

Element(s) of Performance for DSPR.01

1. The program identifies members of its leadership team.



Requirement Specific to Thrombectomy-Capable Stroke Center Certification

- a. ~~The organization identifies a medical director who has knowledge and experience in the care of patients with stroke to provide administrative leadership and clinical guidance to the program.~~

Key: **D** indicates that documentation is required;

R indicates an identified risk area;

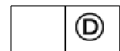
Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center appoints a physician with extensive knowledge and expertise in neurology and cerebrovascular disease as the thrombectomy-capable stroke center's (TSC) medical director to provide administrative leadership and clinical oversight to the stroke program.

Note: The TSC's medical director does not have to be board certified in neurology or neurosurgery but must have sufficient knowledge of cerebrovascular disease to provide administrative leadership, clinical guidance, and input to the stroke program.

b. The thrombectomy-capable stroke center appoints an individual who is qualified through education, training, or experience who collaborates with the medical director to define, implement, and direct the program.

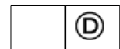
2. The program defines the accountability of its leader(s).



Requirement Specific to Thrombectomy-capable Stroke Center Certification

a. Written documentation shows support of the thrombectomy-capable stroke center by hospital or health system administration.

4. The program leader(s) identifies, in writing, the composition of the interdisciplinary team.



Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center identifies a core stroke team that includes, at a minimum, a nurse (or nurse practitioner or physician assistant) and a physician. Each member of the core stroke team has basic training in acute stroke care as defined by the thrombectomy-capable stroke center.

b. The thrombectomy-capable stroke center documents the roles and responsibilities for interdisciplinary team members including the core stroke team.

c. The thrombectomy-capable stroke center defines its interdisciplinary team so that it reflects the needs of its patients.

5. The program leader(s) participates in designing, implementing, and evaluating care, treatment, and services.



Key: **D** indicates that documentation is required;

R indicates an identified risk area;

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center documents the roles and responsibilities for members of the core stroke team.

7. The program leader(s) makes certain that practitioners practice within the scope of their licensure, certification, training, and current competency.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-capable Stroke Center Certification

a. Physicians and other licensed practitioners are trained, experienced, and privileged to diagnose and treat patients with stroke within the scope of their licensure, certification, training, current, and ongoing competency in accordance with applicable laws, regulations, and organizational requirements.

DSPR.02

The program is collaboratively designed, implemented, and evaluated.

Element(s) of Performance for DSPR.02

2. The interdisciplinary team implements the program.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The core stroke team approves the program’s education content for patients.
- b. The core stroke team determines the training and education content for staff based on staff’s roles and responsibilities.

3. The interdisciplinary team evaluates the program.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. At least quarterly, representatives of the interdisciplinary team meet to review performance of the stroke program and identify quality improvement opportunities. Documentation includes attendance records and meeting minutes.

DSPR.03

The program meets the needs of the target population.

Element(s) of Performance for DSPR.03

4. The services provided by the program are relevant to the target population.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center collaborates with emergency medical services (EMS) providers to make certain of the following:

- The program has access to treatment protocols utilized by EMS providers and pre-hospital personnel for emergency stroke care.

~~- The program has access to stroke protocols utilized by EMS providers that address transport of patients suspected of having a stroke to stroke centers, in accordance with law and regulation.~~

b. The thrombectomy-capable stroke center has the capacity to perform mechanical thrombectomy for the treatment of ischemic stroke 24 hours a day, 7 days a week.

c. The thrombectomy-capable stroke center has a stroke unit or designated beds for the acute care of stroke patients, and a neurointensive care unit or designated intensive care beds that are available 24 hours a day, 7 days a week for the care of complex stroke patients.

Note: Stroke units can be defined and implemented in a variety of ways. The stroke unit does not have to be a specific enclosed area with beds designated only for acute stroke patients; it may be a specified unit or number of beds to which most stroke patients are admitted.

d. The thrombectomy-capable stroke center performs the following types of imaging 24 hours a day, 7 days a week:

- Catheter angiography
- Computed tomography (CT) of the head
- Computed tomography angiography (CTA)
- Magnetic resonance imaging (MRI), including diffusion-weighted MRI
- Magnetic resonance angiography (MRA)

e. The thrombectomy-capable stroke center has a written agreement for transfer with at least one comprehensive stroke center that includes the following:

- Contact names
- Contact phone numbers
- Allows for timely transfer 24 hours a day, 7 days a week

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center collaborates with emergency medical services (EMS) providers to make certain of the following:

- The thrombectomy-capable stroke center has a relationship with EMS providers that includes notification when a patient with suspected stroke is being transported to the center.

- The thrombectomy-capable stroke center has access to protocols utilized by EMS providers and prehospital personnel for emergency stroke care and transport of suspected stroke patients to stroke centers.

b. The thrombectomy-capable stroke center performs the following types of imaging 24 hours a day, 7 days a week:

- Catheter angiography

- Computed tomography (CT) of the head

- Computed tomography angiography (CTA)

- Magnetic resonance imaging (MRI), including diffusion-weighted MRI

- Magnetic resonance angiography (MRA)

c. The thrombectomy-capable stroke center performs the following advanced imaging when indicated by patient need:

- Carotid duplex ultrasound

- Transesophageal echocardiography (TEE)

d. The thrombectomy-capable stroke center has the ability to complete initial laboratory tests on site 24 hours a day, 7 days a week.

Note: Laboratory tests include a complete blood cell count with platelet count, coagulation studies (such as prothrombin time and International Normalized Ratio), blood chemistries, and troponin.

e. The thrombectomy-capable stroke center has written protocols and processes for the admission, transfer, and discharge of stroke patients.

f. The thrombectomy-capable stroke center develops standardized protocols and processes for the timely assessment, diagnosis, and management of patients who present with or develop signs and symptoms of large vessel occlusion.

g. The thrombectomy-capable stroke center has the capacity to perform mechanical thrombectomy for the treatment of ischemic stroke 24 hours a day, 7 days a week.

h. The thrombectomy-capable stroke center has a stroke unit or designated beds for the acute care of stroke patients.

Note: Stroke units can be defined and implemented in a variety of ways. The stroke unit does not have to be a specific enclosed area with beds designated only for acute stroke patients; it may be a specified unit or number of beds to which most stroke patients are admitted.

i. The thrombectomy-capable stroke center has a written agreement for transfer with at least one comprehensive stroke center that includes the following:

- Contact names

- Contact phone numbers

- Allows for timely transfer 24 hours a day, 7 days a week

DSPR.05

The program determines the care, treatment, and services it provides.

Element(s) of Performance for DSPR.05

3. The program provides care, treatment, and services to patients in a planned and timely manner.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center has the ability to complete initial laboratory tests on site 24 hours a day, 7 days a week.

Note: Laboratory tests include a complete blood cell count with platelet count, coagulation studies (such as prothrombin time and International Normalized Ratio), blood chemistries, and troponin.

b. The thrombectomy-capable stroke center performs advanced imaging with multimodal imaging capabilities for the following when indicated by patient need:

- Carotid duplex ultrasound
- Transcranial ultrasonography
- Transesophageal echocardiography (TEE)

6. The program has a process to provide emergency/urgent care.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The organization has written documentation on the process used to notify the designated practitioners who respond to patients with an acute stroke.

b. A practitioner knowledgeable in the diagnosis and treatment of stroke responds to the patient's bedside within 15 minutes of notification.

Note: The organization may choose to maintain a consistent team or group of practitioners for this purpose, or it may choose to rotate this responsibility as needed. These practitioners may include physicians, nurse practitioners, and physician assistants as determined by the organization.

c. Emergency department licensed independent practitioners have 24-hour access either in person or via telemedicine to a physician who can provide timely, informed consultation for complex stroke care when additional clinical expertise is needed.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy capable stroke center has physicians or other licensed practitioners knowledgeable in the diagnosis and treatment of stroke who are responsible for responding to patients with an acute stroke 24 hours a day, 7 days a week.

b. The program has written documentation of the process, including expected response time parameters that are used to notify the designated physicians or other licensed practitioners who respond to patients with an acute stroke.

Note: The program develops acute stroke response time goals in alignment with current clinical practice guidelines and evidence-based practice.

c. Emergency department physicians and other licensed practitioners have 24-hour access, either in person or via telemedicine, to a physician who can provide timely, informed consultation for stroke care when additional clinical expertise is needed.

Note: If the emergency department physicians and other licensed practitioners are privileged in the diagnosis and treatment of stroke, then access to bedside or telemedicine consultation is not necessary.

7. The program provides the number and types of practitioners needed to deliver or facilitate the delivery of care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The following practitioners and staff are available 24 hours a day, 7 days a week:

- Emergency physicians
- Vascular neurologist
- Intensivist
- Diagnostic radiologist with complex stroke experience and/or a physician privileged to interpret computed tomography (CT) and magnetic resonance imaging (MRI) of the brain
- Certified radiology and MRI technologists
- At least one endovascular catheterization laboratory technician
- At least one endovascular registered nurse

b. A physician privileged to perform mechanical thrombectomy is available on site within 45 minutes, 24 hours a day, 7 days a week.

c. Practitioners with critical care privileges provide on-site, 24-hour care to patients in the neurointensive care unit or designated intensive care beds used for the care of complex stroke patients.

Note 1: Fellows with critical care experience are acceptable for meeting this requirement. In addition, residents with critical care experience, as determined and documented by the director of the residency program and medical director of the thrombectomy-capable stroke center, are acceptable for meeting this requirement.

Note 2: Advanced practice nurses (APNs) or physician assistants (PAs) with critical care experience are acceptable for meeting this requirement as an alternative to physicians, when the following conditions are met:

- APN or PA has additional education in critical care and has a minimum level of experience, as determined by the organization.

- Physicians with neurology and critical care experience are available for clinical backup 24 hours a day, 7 days a week.

d. Physical and occupational therapists provide assessments and therapy six days a week and are available on the seventh day to perform patient assessments.

e. One or more speech-language pathologists who are qualified to perform patient swallowing function assessments during the acute stroke phase are available seven days a week.

f. For thrombectomy-capable stroke centers that provide neurosurgical services, a written plan for neurosurgical coverage and a neurosurgical call schedule is readily available to staff.

Note: Availability can be demonstrated as on-site, on-call, or available remotely to meet patients' needs.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The following physicians, other licensed practitioners, and staff are available 24 hours a day, 7 days a week:

- Emergency physicians
- ~~Board-certified/eligible~~ vascular neurologist(s)
- ~~Neurointerventionalist(s)~~
- Intensivist(s)
- ~~Neuroradiologist or diagnostic radiologist(s) with experience in diagnosing patients with acute stroke~~
- Certified radiology and magnetic resonance imaging (MRI) technologists
- Endovascular catheterization laboratory technician(s)
- Endovascular registered nurse(s)

b. A physician privileged to perform mechanical thrombectomy is available on site within 30 minutes, 24 hours a day, 7 days a week.

c. Physicians with neurocritical care privileges provide on-site, 24-hour care to patients in the neurointensive care unit or designated intensive care beds used for the care of complex stroke patients.

Note: The intensivist, in conjunction with the program medical director determine who is competent to provide on-site neurocritical care 24 hours a day, 7 days a week to complex stroke patients in accordance with applicable law and regulation. There is written documentation of initial and ongoing competency, as determined by the organization. If advanced practice providers are utilized to meet this requirement there are physicians available for clinical backup 24 hours a day, 7 days a week either in-person, by phone, or via telemedicine

d. Qualified licensed practitioners provide physical therapy, occupational therapy, speech therapy, and swallowing function assessments in accordance with applicable state and federal law and regulation and organization policy.

e. For sites that provide neurosurgical services, the thrombectomy-capable stroke center has the following:

- A fully functional operating room (OR) facility that is available 24 hours a day, 7 days a week with the necessary staff for neurosurgical services
- All OR equipment necessary to perform neurosurgical procedures
- A written plan for neurosurgical coverage and a neurosurgical call schedule that is readily available to staff

f. Surgeons, neurosurgeons, and other neurosurgical staff are available on site within 30 minutes to perform and support the performance of emergent neurosurgical procedures 24 hours a day, 7 days a week.

Note: Unless otherwise noted, availability of licensed practitioners can be demonstrated as on site, on-call, or available remotely to meet patients' needs.

DSPR.06

The program has current reference and resource materials.

Key: **(D)** indicates that documentation is required; **(R)** indicates an identified risk area;

Element(s) of Performance for DSPR.06

1. Practitioners have access to reference materials, including clinical practice guidelines, in either hard copy or electronic format.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. Protocols and care paths (preprinted or electronic documents) are available in the emergency department, acute care areas, and stroke unit for the acute assessment and treatment of patients with ischemic or hemorrhagic stroke.

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. **Protocols, clinical practice guidelines, and orders** (preprinted or electronic documents) are available in the emergency department, acute care areas, and stroke unit for the acute assessment and treatment of patients with ischemic or hemorrhagic stroke.

Delivering or Facilitating Clinical Care (DSDf) Chapter

DSDf.01

Practitioners are qualified and competent.

Element(s) of Performance for DSDf.01

1. Practitioners have education, experience, training, and/or certification consistent with the program's scope of services, goals and objectives, and the care provided.

| | |
|--|---|
| | ⓓ |
|--|---|

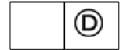
Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The organization's clinical staff has knowledge of the process used to notify designated practitioners of the need to respond to patients with an acute stroke.
- b. Emergency department practitioners demonstrate knowledge of IV thrombolytic therapy protocols for acute stroke, including the following:
- Treatment during the first three hours after the patient was last known to be well
 - Indications for use of IV thrombolytic therapy
 - Contraindications to IV thrombolytic therapy
 - Education to be provided to patients and families regarding the risks and benefits of IV thrombolytic therapy
 - Signs and symptoms of neurological deterioration after IV thrombolytic therapy
- c. Emergency department practitioners demonstrate knowledge of mechanical thrombectomy protocols for acute stroke.
- d. Registered nurses working in the stroke unit or the ICU that contains dedicated neurointensive care beds for complex stroke patients are knowledgeable about the stroke scale * used in the organization.
- Footnote *: An example of a stroke scale is the National Institutes of Health Stroke Scale (NIHSS).
-

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. Physicians and other licensed practitioners demonstrate knowledge and understanding of the program's protocols related to care, treatment, and services for stroke patients.
- b. The thrombectomy-capable stroke center's advanced practice providers have focused expertise in comprehensive neuroscience, stroke care, and care in intensive care units (ICU).
- c. The thrombectomy-capable stroke center has the following licensed practitioners and staff members providing care as indicated by patient need:
- Pharmacist with expertise in neurology and stroke care
 - Data collection personnel
 - Nurse case managers and social workers with expertise in neurology and stroke care
 - Nurse case managers and social workers with expertise in care coordination
 - Nurse case managers and social workers with knowledge of the different levels of rehabilitation and expertise in making referrals to the appropriate level of rehabilitation (for example, acute, subacute, outpatient)
 - Nurse case managers and social workers with knowledge of community resources (for example, respite care, Meals on Wheels, counseling services)
- d. The thrombectomy-capable stroke center is required to have staff trained to perform and interpret cardiac imaging tests, such as echocardiography.
- e. Registered nurses who care for stroke patients demonstrate comprehension of the stroke scale(s) used in the primary stroke center.
-

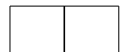
4. Orientation provides information and necessary training pertinent to the practitioner's responsibilities. Completion of the orientation is documented.



Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. The program provides initial orientation, education, and training that is pertinent to the program-specific stroke policies and procedures and individual licensed practitioners roles and responsibilities.

7. Ongoing in-service and other education and training activities are relevant to the program's scope of services.



Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. Members of the core stroke team, as defined by the organization, receive at least eight hours annually of continuing education in stroke care or other equivalent educational activity.

b. The medical director of the thrombectomy-capable stroke center program receives at least eight hours annually of continuing education in stroke care or other equivalent educational activity if they are not board certified in neurology.

c. Nurses working in the emergency department, as identified by the organization, are required to complete two hours of education per year on cerebrovascular disease, including acute stroke care.

d. Emergency department staff, as identified by the organization, participates in educational activities related to stroke diagnosis and treatment a minimum of twice a year.

Note: This requirement does not include emergency physicians. For more information, refer to Medical Staff (MS) Standard MS.12.01.01 in the Hospital Edition® or the Comprehensive Accreditation Manual for Hospitals.

e. Nurses providing stroke care, as identified by the organization, are required to attend a minimum of eight hours of education per year on cerebrovascular disease and stroke.

Note: Nurses providing stroke care include nurses working in the stroke unit, ICU that contains the dedicated neurointensive care beds for complex stroke patients, endovascular catheterization laboratory, and patient care units.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The program provides ongoing education and training activities that are pertinent to the licensed practitioners' roles and responsibilities when staff responsibilities change; when new or revised policies, procedures, or guidelines are implemented; and/or other intervals defined by the program.

b. Other staff in the organization who interact with stroke patients receive training on recognition of clinical signs and symptoms that require timely notification according to institution-specific policy and protocol.

DSDF.02

The program develops a standardized process originating in clinical practice guidelines (CPGs) or evidence-based practice to deliver or facilitate the delivery of clinical care.

Element(s) of Performance for DSDF.02

2. The selected clinical practice guidelines are based on evidence that is determined to be current by the clinical leaders.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center has written protocols based on clinical practice guidelines, including:
- ~~Protocols for emergent care of patients with ischemic stroke, including IV thrombolytic therapy and endovascular interventions~~
 - ~~Protocols for emergent care of patients with hemorrhagic stroke, including indications for transfer to a comprehensive stroke center~~
- b. ~~The dysphagia screen used by the program is an evidence-based bedside testing protocol approved by the organization.~~

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center has written protocols based on clinical practice guidelines, including time parameters, for the following:
- Emergent care of patients with ischemic stroke, including IV thrombolytic therapy and endovascular interventions with inclusion and exclusion criteria
 - Emergent care of patients with hemorrhagic stroke, including indications for transfer to a comprehensive stroke center
 - The transfer of complex stroke patients to higher levels of care
- b. The dysphagia screen used by the program is a validated tool approved by the interdisciplinary team.
- c. Protocols for IV thrombolytic therapy, when indicated, are reflected in orders or pathways, and utilized in the acute care of the stroke patient.
- d. Time parameters for stroke workup are included in a stroke assessment protocol or the emergency department stroke protocol.

3. The program leader(s) and practitioners review and approve clinical practice guidelines prior to implementation.

| | |
|--|-----|
| | (D) |
|--|-----|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. ~~Protocols for emergent care of patients with ischemic or hemorrhagic strokes are reviewed for current evidence at least annually using an interdisciplinary approach.~~
- b. ~~The thrombectomy-capable stroke center reviews EMS protocols at least annually.~~

Key: (D) indicates that documentation is required; (R) indicates an identified risk area;

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The interdisciplinary team reviews clinical practice guidelines and current evidence at least annually and revises protocols for stroke care to remain in alignment.

Note: Current evidence includes, but is not limited to clinical trials, current research, and scientific statements.

5. The program demonstrates evidence that it is following the clinical practice guidelines when providing care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. The organization's formulary or medication list must include an IV thrombolytic therapy medication approved by the US Food and Drug Administration for the treatment of ischemic stroke.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center's formulary or medication list includes an IV thrombolytic therapy for the treatment of acute ischemic stroke.

Note: If a program maintains more than one IV thrombolytic on formulary for the treatment of acute ischemic stroke, written protocols are in place that define medication selection and administration.

DSD.F.03

The program is implemented through the use of clinical practice guidelines selected to meet the patient's needs.

Element(s) of Performance for DSD.F.03

2. The assessment(s) and reassessment(s) are completed according to the patient's needs and clinical practice guidelines.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. An emergency department practitioner performs an assessment for a suspected stroke patient within 15 minutes of patient arrival in the emergency department.

–The NIH Stroke Scale (NIHSS) is used in the assessment of patients with acute stroke.

–Ongoing assessments of the patient are completed in accordance with the program's acute stroke protocols.

b. A blood glucose level is completed for any patient presenting with stroke symptoms.

c. The hospital has the ability to perform and read a non-contrast computed tomography of the head (head CT) within 45 minutes of patient presentation with stroke symptoms.

d. Laboratory tests, electrocardiogram (ECG), and chest x-ray are completed within 45 minutes of patient presentation with stroke symptoms, if ordered by the practitioner.

Note: Laboratory tests may include a complete blood cell count with platelet count, coagulation studies (such as prothrombin time and International Normalized Ratio), blood chemistries, and troponin.

e. All patients exhibiting stroke symptoms are screened for dysphagia prior to receiving any oral intake of medication, fluids, or food.

f. The stroke unit or designated beds has the capability of continuously and simultaneously monitoring the following:

- Blood pressure
- Heart rate and rhythm, with automatic arrhythmia detection
- Respirations
- Oxygenation via pulse oximetry or another modality

g. The stroke program provides for early assessment of rehabilitation needs for all patients admitted with stroke.

h. The thrombectomy-capable stroke center has a process to notify medical staff and other personnel about the deterioration of a stroke patient, which may include, but is not limited to, changes in vital signs and neurological status.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The **National Institutes of Health Stroke Scale (NIHSS)** is used in the assessment of patients with acute stroke.
 - b. Ongoing assessments of the patient are completed in accordance with the **thrombectomy-capable stroke center's acute stroke protocols**.
 - c. A blood glucose level is completed for any patient presenting with stroke symptoms.
 - d. **Laboratory and other diagnostic tests do not delay the administration of IV thrombolytic therapy.**
- Note:** Laboratory tests may include a complete blood cell count with platelet count, coagulation studies (such as prothrombin time and International Normalized Ratio), blood chemistries, and troponin.
- e. All patients exhibiting stroke symptoms are screened for dysphagia prior to receiving any oral intake of medication, fluids, or food.
 - f. The stroke unit or designated beds have the capability to continuously monitor the following:
 - Blood pressure
 - Heart rate and rhythm, with automatic arrhythmia detection
 - Respirations
 - Oxygenation via pulse oximetry or another modality
 - g. The **thrombectomy-capable stroke center** provides for early assessment of rehabilitation needs for all patients admitted with stroke.
 - h. The thrombectomy-capable stroke center has a process to notify medical staff and other staff about the deterioration of a stroke patient, which may include, but is not limited to, changes in vital signs and neurological status.

3. The program implements care, treatment, and services based on the patient's assessed needs.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. Brain magnetic resonance imaging (MRI), magnetic resonance angiogram (MRA), and computed tomography angiogram (CTA) scans are interpreted within two hours of completion, if these tests are ordered to be completed as soon as possible.
- b. The completion of laboratory tests, electrocardiogram (ECG), and chest x-ray should not delay the administration of IV thrombolytic therapy.
- e. Rehabilitation therapy is initiated as indicated by the patient assessment and may include speech-language pathology services, physical therapy, occupational therapy, or any combination of these therapies.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. A telemedicine link is initiated within 20 minutes of the emergency physician or acute stroke team determining it is necessary or within the time frame specified in the contract, whichever is sooner.

b. Rehabilitation therapy is initiated as indicated by the patient assessment and may include speech-language pathology services, physical therapy, occupational therapy, or any combination of these therapies.

DSDF.04

The program develops a plan of care that is based on the patient's assessed needs.

Element(s) of Performance for DSDF.04

4. The individualized plan of care reflects coordination of care with other programs, as determined by patient comorbidities.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. Based on prognosis and the patient's individual needs and preferences, patients are referred to palliative care when indicated.

b. Based on prognosis and the patient's individual needs and preferences, patients are referred to hospice or end-of-life care when indicated.

c. Based on prognosis, individual needs, and consultation with the family, patients are referred to community resources to facilitate integration into the community such as:

- Outpatient therapy, including physical therapy, occupational therapy, and speech-language pathology services
- Support groups
- Social services
- Vocational rehabilitation
- Behavioral health services
- Family therapy services
- Respite care services

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. Based on prognosis and the patient’s needs and preferences, patients are referred to palliative care, hospice, or end-of-life services when indicated.
- b. Based on prognosis and the patient’s and family’s needs and preferences, patients are referred to community resources to facilitate reentry into the community, such as the following examples:
 - Outpatient therapy, including physical therapy, occupational therapy, and speech-language pathology services
 - Support groups
 - Social services
 - Vocational rehabilitation
 - Behavioral health services
 - Family therapy services
 - Respite care services

DSDF.05

The program manages comorbidities and concurrently occurring conditions and/or communicates the necessary information to manage these conditions to other practitioners.

Element(s) of Performance for DSDF.05

1. The program coordinates care for patients with multiple health needs.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. Protocols for care related to patient referrals demonstrate that the program does the following:
 - Addresses processes for receiving transfers
 - Addresses processes for transferring patients to another facility
 - Evaluates the receiving organization’s ability to meet the individual patient’s and family’s needs
- b. For thrombectomy-capable stroke centers that treat and transfer acute stroke patients, written documentation includes time parameters and transfer procedures.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. Protocols for care related to patient referrals demonstrate that the thrombectomy-capable stroke center does the following:

- Addresses processes for receiving transfers
- Addresses processes for transferring patients to another facility
- Evaluates the receiving organization's ability to meet the individual patient's and family's needs

b. For patients transferring to a higher-level stroke center, patients should leave the organization within two hours of emergency department arrival or when medically stable. The program includes time parameters and transfer procedures to the stroke center.

DSDF.06

The program initiates discharge planning and facilitates arrangements for subsequent care, treatment, and services to achieve mutually agreed upon patient goals.

Element(s) of Performance for DSDF.06

1. In preparation for discharge, the program discusses and plans with the patient and family the care, treatment, and services that are needed in order to achieve the mutually agreed upon self-management plan and goals.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. ~~Post-hospital~~ **Posthospital** care is coordinated based on the assessment of the patient's and family's identified needs such as the following:

- Acute rehabilitation
- Long term acute care
- Skilled nursing/subacute care
- Outpatient services
- Home care
- Respite services
- Palliative care

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. **Posthospital** care is coordinated based on the assessment of the patient's and family's identified needs, such as the following:

- Acute rehabilitation
- Long term acute care
- Skilled nursing/subacute care
- Outpatient services
- Home care
- Respite services
- Palliative care

Key: **(D)** indicates that documentation is required;

(R) indicates an identified risk area;

4. The program provides education and serves as a resource, as needed, to practitioners who are assuming responsibility for the patient's continued care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center provides educational activities to ~~pre-hospital~~ personnel, as defined by the ~~organization~~.
- b. The thrombectomy-capable stroke center provides at least two ~~stroke-public~~ education activities per year.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center provides educational activities to prehospital personnel, as defined by the stroke center.
- b. The thrombectomy-capable stroke center provides at least two community education activities per year that focus on stroke prevention and care.
-

Supporting Self-Management (DSSE) Chapter

DSSE.01

The program involves patients in making decisions about managing their disease or condition.

Element(s) of Performance for DSSE.01

1. The program involves patients in decisions about their care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center obtains informed consent from patients when necessary.
- b. The thrombectomy-capable stroke center's written informed consent policy identifies the specific stroke interventions that require informed consent, in accordance with law and regulation. The following are discussed with the patient in the informed consent process:
 - Proposed stroke interventions and care for the patient.
 - Potential benefits, risks, and side effects of the proposed stroke interventions and care; the likelihood of the patient achieving their goals; and any potential problems that might occur as a result of the intervention.
 - Reasonable alternatives to the proposed stroke interventions and care. The discussion encompasses risks, benefits, and side effects related to the alternatives and the risks related to not receiving the proposed stroke interventions and care.
- c. The thrombectomy-capable stroke center's written policy describes how informed consent is documented in the medical record.
- d. The patient and family participate in planning posthospital care.

- 3. The program assesses the family and/or caregiver's readiness, willingness, and ability to provide or support self-management activities when needed.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The patient's family members, including the primary caregiver, have been assessed to determine their readiness to provide care to the patient.
- b. For patients returning home, the family members receive a comprehensive assessment to determine their skills, capacities, and resources to provide post-hospital care.

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

- a. For patients returning home, the family members are assessed to determine their skills, capacities, and resources to provide posthospital care.

DSSE.03

The program addresses the patient's education needs.

Element(s) of Performance for DSSE.03

- 5. The program addresses the education needs of the patient regarding their disease or condition and care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Key: **D** indicates that documentation is required; **R** indicates an identified risk area;

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. For patients returning home, education is provided to the patient and family on post-hospital care.
- b. Education and resources are provided to the patient and family about durable medical equipment (DME), when indicated.
- c. Education and resources are provided to the family about respite care, when indicated.
- d. Financial resource information is provided to the patient and family, when indicated.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. For patients returning home, education is provided to the patient and family on posthospital care for the following:
 - Durable medical equipment, when indicated by patient need
 - Respite care, when indicated by patient need
 - Financial resource information, when indicated by patient need.
- b. The TSC has a process to follow-up with patients that received mechanical thrombectomy at their organization and were discharged home
Note 1: The follow-up process may include addressing appointments, medication and therapy compliance, and risk of recurrent stroke including personalized risk factors.
Note 2: Follow-up may be conducted in person, via telemedicine, or via phone consultation.

Clinical Information Management (DSCT) Chapter

DSCT.04

The program shares information with relevant practitioners and/or health care organizations about the patient's disease or condition across the continuum of care.

Element(s) of Performance for DSCT.04

- 2. The program shares information with relevant practitioners and/or health care organizations to facilitate continuation of patient care.

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

- a. The results of diagnostic imaging and laboratory testing are communicated and available to the ordering physician and stroke team as applicable.

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. The results of diagnostic imaging and laboratory testing are actively communicated and available to the ordering physician or other licensed practitioner and stroke team as applicable.

DSCT.05

The program initiates, maintains, and makes accessible a medical record for every patient.

Element(s) of Performance for DSCT.05

5. The medical record contains sufficient information to document the course and results of care, treatment, and services.

| | |
|--|--|
| | |
|--|--|

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. ~~Stroke program practitioners~~ document all assessments and interventions provided for stroke patients, including date and time, in accordance with the organization's policy.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center has a process for obtaining the emergency medical system records documenting the care provided to the patient during the transfer to the thrombectomy-capable stroke center.
 b. The thrombectomy-capable stroke center's physicians and licensed practitioners document all assessments and interventions provided for stroke patients, including date and time, in accordance with the thrombectomy-capable stroke center's policy.

Performance Measurement (DSPM) Chapter

DSPM.01

The program has an organized, comprehensive approach to performance improvement.

Element(s) of Performance for DSPM.01

1. The program leader(s) identifies goals and sets priorities for improvement in a performance improvement plan.

| | |
|--|---|
| | D |
|--|---|

Key: **D** indicates that documentation is required;

R indicates an identified risk area;

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The program monitors its ability to administer IV thrombolytic therapy within 60 minutes to eligible patients presenting for stroke care.
- b. The program will meet its administration of IV thrombolytic therapy within 60 minutes to eligible patients presenting for stroke care at least 50% of the time.
- c. The program will select a minimum of two relevant patient care data elements related to mechanical thrombectomy to be monitored for internal or external benchmarking each year.

Note: The data elements may be chosen from information being monitored and documented in the stroke log. This is in addition to stroke core measures and the monitoring of performance of IV thrombolytic therapy.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center reviews its process for managing patients who present with stroke to identify opportunities to reduce the programs the time between patient arrival and the administration of IV thrombolytic therapy.
- b. The thrombectomy-capable stroke center sets a goal to administer IV thrombolytic therapy as timely and safely as possible, but no longer than 60 minutes after an eligible patient presents for stroke care.
- c. The thrombectomy-capable stroke center sets a goal to administer endovascular therapy within 90 minutes for direct arriving patients and within 60 minutes for patients transferred from another facility in 50% or more of eligible acute ischemic stroke patients.
- d. The thrombectomy-capable stroke center selects a minimum of two relevant patient care data elements related to mechanical thrombectomy to monitor for internal or external benchmarking each year.

Note: This is in addition to stroke core measures and monitoring the performance of IV thrombolytic therapy.

- 2. The program leader(s) involves the interdisciplinary team and other practitioners across disciplines and/or settings in performance improvement planning and activities.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. Stroke performance measures are analyzed by the stroke team and organization's quality department.
- b. The stroke program has a specified committee that meets a minimum of twice per year to evaluate protocols and practice patterns as indicated.

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The stroke team and thrombectomy-capable stroke center’s quality department analyze stroke performance measures.
- b. The thrombectomy-capable stroke center performs an interdisciplinary program-level review on, at a minimum, the following adverse patient outcomes:

- Death due to any cause within 72 hours of an endovascular procedure
- Symptomatic intracerebral hemorrhage

Note: Endovascular procedures include mechanical thrombectomy and intra-arterial thrombolytic therapy.

5. The program collects data related to its target population to identify opportunities for performance improvement.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center has documentation to reflect tracking of performance measures and indicators.
- b. The thrombectomy-capable stroke center collects data on, at a minimum, the following adverse patient outcomes:
 - All causes of death within 72 hours of mechanical thrombectomy
 - Symptomatic intracerebral hemorrhage following mechanical thrombectomy

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

- a. The thrombectomy-capable stroke center has documentation to reflect tracking of performance measures and indicators related to care that are not included in standardized measures.

6. The program analyzes its performance measurement data to identify opportunities for performance improvement.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center evaluates IV thrombolytic therapy data through the quality improvement process and by the stroke team.

b. The thrombectomy-capable stroke center demonstrates a 24-hour ~~post-procedure~~ stroke and death rate of less than or equal to 1% for diagnostic catheter angiography.

Note: Clinically silent acute lesions detected on diffusion-weighted magnetic resonance imaging (MRI) should not be included as complications.

~~e. The program monitors its IV thrombolytic complications, which include symptomatic intracerebral hemorrhage and serious life-threatening systemic bleeding.~~

~~Note 1: Symptomatic intracerebral hemorrhage is defined by a completed computed tomography (CT) within 36 hours that shows intracerebral hemorrhage along with a physician's note indicating clinical deterioration due to intracerebral hemorrhage.~~

~~Note 2: Serious, life-threatening systemic bleeding is defined as bleeding within 36 hours from the administration of IV thrombolytic therapy that required multiple transfusions and was accompanied by a physician's note attributing IV thrombolytic therapy as the reason for multiple transfusions.~~

~~d. The thrombectomy-capable stroke center program has a multidisciplinary program-level review that will focus on at least the following adverse patient outcomes:~~

~~-All causes of death within 72 hours of mechanical thrombectomy~~

~~-Symptomatic intracerebral hemorrhage following mechanical thrombectomy~~

~~Note: A multidisciplinary program-level review is defined as a review at the program level to assess causes of patient adverse outcomes with the aim of decreasing the incidence of such outcomes.~~

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center evaluates IV thrombolytic therapy data through the quality improvement process and by the stroke team.

b. The thrombectomy-capable stroke center demonstrates a 24-hour post procedure stroke and death rate of less than or equal to 1% for diagnostic cerebral catheter angiography.

Note: Clinically silent acute lesions detected on diffusion-weighted magnetic resonance imaging (MRI) should not be included as complications.

DSPM.03

The program collects measurement data to evaluate processes and outcomes.

Note: Measurement data must be internally trended over time and may be compared to an external data source for comparative purposes.

Element(s) of Performance for DSPM.03

Key: **D** indicates that documentation is required;

R indicates an identified risk area;

2. The program collects data related to processes and/or outcomes of care.

| | |
|--|--|
| | |
|--|--|

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. The program utilizes an audited registry to monitor stroke data and measure outcomes.

Note: See the Glossary for the definition of audited registry.

b. The stroke team log includes at least the following information:

- Practitioner response time to acute stroke patients
- Door to IV tissue plasminogen activator (tPA) time
- Door to time of skin puncture for mechanical thrombectomy
- Disposition of patient

Requirements Specific to Thrombectomy-Capable Stroke Center Certification

a. At a minimum, the stroke team log includes the following information for each entry:

- Licensed practitioner response time to acute stroke patients (See also DSPR.5, EP 6a; DSDF.3, EP 2a)
- Type(s) of diagnostic tests and acute treatment(s) used
- Time from patient arrival to the administration of IV thrombolytic therapy
- Patient complications
- Disposition of patient (for example, upon admission to the thrombectomy-capable stroke center, discharge, transfer to another organization)

b. The program utilizes an audited registry to monitor stroke data and measure outcomes.

Note: See the Glossary for the definition of audited registry.

c. The program monitors its IV thrombolytic complications, which include symptomatic intracerebral hemorrhage and serious, life-threatening systemic bleeding.

Note 1: Symptomatic intracerebral hemorrhage is defined by clinical deterioration and a brain image indicating parenchymal hematoma, subarachnoid hemorrhage, or intraventricular hemorrhage within 36 hours after the onset of treatment with IV or intraarterial thrombolytic therapy or mechanical endovascular reperfusion along with a physician's note documenting that the clinical deterioration is due to symptomatic intracerebral hemorrhage.

Note 2: Serious, life-threatening systemic bleeding is defined as bleeding within 36 hours from the administration of IV thrombolytic therapy that required multiple transfusions and was accompanied by a physician's note attributing IV thrombolytic therapy as the reason for multiple transfusions.

4. Data are aggregated at the program level.

| | |
|--|--|
| | |
|--|--|

Key: **D** indicates that documentation is required;

R indicates an identified risk area;

Requirement Specific to Thrombectomy-Capable Stroke Center Certification

a. The thrombectomy-capable stroke center monitors the percentage of complex stroke patients who were discharged home and received a follow-up phone call by a member of the organization's stroke team within seven days of discharge.
